CHHATRAPATI SHAHU INSTITUTE OF BUSINESS EDUCATION AND RESEARCH, KOLHAPUR (CSIBER)

Criteria – III
Document Evidence(s) as per SOP

Metric No	Metric Details	Documents Required for Verification
3.4.3	3.4.3 ***Number of research papers per teacher in the Journals notified on UGC website during the last five years***	• The HEI should provide the link landing to the paper/article. • The HEI should provide the link to the journal website. • The HEI should provide screenshots of research articles clearly showing the title of the article, affiliation, name of the journal, year and authors name if the links and DOI number are not available. • The HEI should indicate in the data template against each paper about the presence of the paper in the UGC CARE list/Scopus/Web of Science/other clearly.

2016 – 17

ISSN 0974-763X

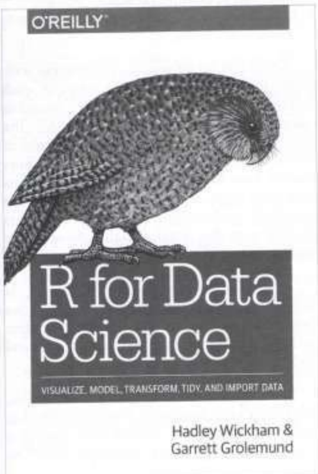
SOUTH ASIAN JOURNAL OF MANAGEMENT RESEARCH (SAJMR)

Volume 9 Number 1 January 2017

CONTENTS

Chhatrapati Shahu Institute of Business Education and Research (CSIBER)
(An Autonomous Institute)
University Road, Kolhapur- 416 004 Maharashtra State, India.

BOOK REVIEW



Book Title:
R for Data Science: Visualize, Model, Transform, Tidy, and Import Data

Authors:
Garrett Grolemund, Hadley Wickham

Publisher:
O'Reilly Media, Inc.

Publication date:
25 Dec 2016

ISBN-10: 1491910399
ISBN-13: 9781491910399

Paperback: 518 pages

This book gives clear understanding of discovering natural laws in the structure of data, and how to use the versatile R programming language for data analysis.

After reading this book, You'll learn about:
- Data Wrangling—how to manipulate datasets to reveal new information
- Data Visualization—how to create graphs and other visualizations
- Exploratory Data Analysis—how to find evidence of relationships in your measurements
- Modeling—how to derive insights and predictions from your data
- Inference—how to avoid being fooled by data analyses that cannot provide foolproof results

Through the course of the book, you'll also learn about the statistical worldview, a way of seeing the world that permits understanding in the face of uncertainty, and simplicity in the face of complexity.

The first chapter is Introduction where the authors give clear idea about what readers can learn from the book?, then they discuss about how the book is organized?, and also they discuss about what readers won't learn from the book?. The first chapter gives clear idea about what are the prerequisite for reading the book?. Here they discuss R and RStudio, how the code is executed? How to get help for problems encountered? At the end they acknowledge the persons who helped them in writing the book.

The book is divided in to four parts namely Explore, Wrangle, Program and Communicate.The first part Explore has 7 points Introduction, Data Visualization, Workflow Basics, Data Transformation, Workflow scripts, Exploratory Data Analysis and Workflow Projects.

The first part starts with, Data Visualization, this chapter focusses on ggplot2, one of the core

ISSN (Print) : 2229-5429

INTERNATIONAL JOURNAL OF INFORMATION SYSTEMS

(A Journal of SIMCA)

IMPACT FACTOR
4.105

Volume VII Issue II, February 2017

RESEARCH JOURNAL

Index **Pg. No.**

Indexed By:

TOGETHER WE REACH THE GOAL

J-Gate
Largest E-Journal Gateway

ISSN (Print) : 2229-5429, Volume VII Issue II, February 2017

Comparative study of different decision tree classification techniques

Mr. R. M. Huddar

Dept. Of Computer studies,
CSIBER, Kolhapur

***Abstract*— In today's world due to availability of huge storage devices and technologies at lower cost it becomes possible to store huge amount of data at lower cost. In banking sector due to digitization huge amount of data is generating, to store this huge amount of data is not problem but to extract useful information from this data is challenging task. There are various data mining tools available for extraction and prediction of information extracted from this data. One of the technologies to classify data and represent it is usage of decision tree. This paper is focused on comparison of various decision tree classification algorithms using WEKA tool.**

***Keywords*— digitization, data mining, extraction, prediction, classification, decision tree, marketing**

I INTRODUCTION

The development of Information technology has generated large amount of databases and huge data in various areas. The research in databases and information technology has given rise to an approach to store and manipulate this precious data for further decision making. Data mining is a process of extraction of useful information and patterns from huge data. Data mining technologies are used in various areas like in healthcare for diagnosis and prediction of disease based on symptoms, product design, customers buying behavior based on previous history and customer attributes, In banking data mining is used for different purposes. One of the most widely used areas of data mining for the banking industry is marketing. The banks marketing department can analyze customer's data for to find out potential customers for different types of products. Data mining is widely used for risk management in the banking industry. Bank professionals has to know whether the customers they are dealing with reliable or not based on historical data available with them and decide whether to approve demanded loan amount or not. Another important data mining application in banking is in fraud detection. Data mining helps to analyze day by day transactions of customers and find out the fraudulent actions and report them. In today's competitive market customer retention is an important than that of acquisition. One of the important applications of data mining in banking is customer relationship management. Data mining helps for customer acquisition, increase customer value and retention of existing customers.

In today's competitive world to stay in the business and make profit apart from regular banking, Banks introduced new services and products which will attract customers to their banks. Due to technological changes and involvement of digital banking, internet applications in the banking services throughout the world, the traditional face-to-face customer contacts are being replaced by electronic points of contact to reduce the time and cost of processing an application for various products [1].

II DATA MINING

Data mining is a technology used for to extract and predict useful information from huge amount of generated data. Various types of data mining techniques are clustering, classification and association. Clustering is the task of grouping a set of objects in such a way that objects in the same cluster are more similar to each other than to those in other groups. There are various types of clustering algorithm used like Centroid-based clustering, Hierarchical clustering, Distribution based clustering, Density based clustering.

Association is a rule-based machine learning method for discovering interesting relations between variables in large databases. It is intended to identify strong rules discovered in databases using some measures of interestingness.

Classification consists of predicting a certain outcome based on a given input. Classification is a supervised machine learning algorithm; it consists of predicting a certain outcome based on a given input. In order to predict the outcome, the algorithm processes a training set containing a set of attributes and the respective outcome, usually called goal or prediction attribute. The algorithm tries to discover relationships between the attributes that would make it possible to predict the outcome. Next the algorithm is given a data set not seen before, called prediction set, which contains the same set of attributes, except the goal attribute, The algorithm analyses the input and produces a prediction. The prediction accuracy defines how good the algorithm is.

Various classification techniques are decision tree, Neural network and Naive Bayes. A decision tree is a flow chart like structure in which each internal node represents a test on an attribute, each branch represents the outcome of the test and each leaf node represents a class label, the paths from root to leaf represent classification rules [4].

CORRELATING R & D EXPENDITURE AND SCHOLARLY PUBLICATION OUTPUT USING K-MEANS CLUSTERING

R. S. Kamath [1], R. K. Kamat [2] and S.M. Pujar [3]

[1] Department of Computer Studies, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, India
[2] Department of Electronics, Shivaji University, Kolhapur, India
[3] Indira Gandhi Institute of Development Research, Gen AK Vaidya Marg, Goregaon East, Mumbai, India

ABSTRACT

History of humanity especially post renaissance era depicts the contribution of research and its output In terms of publication, patents and technology transfer paving the way for the societal prosperity. Scientific writing and research publication are fundamental components indicative of academic excellence and supposedly committed to the Research and Development (R&D) funding. Thus the budget allocation and expenditure thereof towards R&D is considered to be a vital parameter for the advancement in science and technology and also for social and economic well being. In view of the tall aspirations of society and government at large it becomes indispensable to investigate whether the scholastic output is going hand in hand with the R & D budget spillover or otherwise. We present in this communication a systematic clustering approach based on K-means algorithm to reveal the impact of R&D expenditure on the extent of research publications. Two independent sources of data, Research and development expenditure i.e. percentage of Gross Domestic Product (GDP) and Scientific and technical journal articles, are brought together in this comprehensive study. From an empirical perspective, present study found that there exist a positive linear correlation between R & D Expenditure and number of research publication.

KEYWORDS

R&D Expenditure, Publications, Correlation, Clustering, Dataset, Analysis

1. INTRODUCTION

The following meaningful quote by astronomer Carl Sagan “Somewhere, something incredible is waiting to be known,” essentially portrays the psyche of a passionate researcher, how however fails to perform in the crunch of diminishing R & D budgetary allocation. It is without any doubt that the investment towards R&D influences innovations and in turn stimulates the growth of a country [11]. However the relationship between the percentage of GDP spent on the R&D vis-à-vis the quantity as well as quantity of scholarly journal articles published has been a topic of inquiry through the globe. There are number of studies reported in the past investigating the correlation of productivity in the academic research community in the light of the research expenditure [1, 2, 10].

Igor Prodan has reported the model which portrays influence of R & D expenditures on number of patent applications in selected OECD countries and central Europe [4]. Research confirms the positive correlation between the two. Meo and Usmani have presented impact of R&D spending on research publications, patents and high technology exports among 47 European countries [3]. This research collected the information regarding per capita GDP, R&D expenditure with the conclusion that R&D expenditure and research publications are the most significant contributing factors towards a knowledge economy.

Janodia has compared expenditure on R & D and patents of India among SAARC and BRICS countries [5]. The study revealed that it is essential to raise R&D expenditure to motivate research activities leading to innovation, increasing patenting and larger number of publications. Dietmar reported the effect of R&D spending on its productivity in German manufacturing firms [7]. The result of the study suggested that spillovers affect industries in a heterogeneous manner. Yet

DOI: 10.5121/ijitmc.2017.5101

Vol 6 Issue 11 Dec 2016

ISSN No : 2230-7850

International Multidisciplinary Research Journal

Indian Streams Research Journal

Welcome to ISRJ

RNI MAHMUL/2011/38595 ISSN No.2230-7850

Indian Streams Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial board.Readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India
Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.isrj.org

Indian Streams Research Journal

ISSN: 2230-7850 Impact Factor : 4.1625(UIF) Volume - 6 | Issue - 11 | December - 2016

MANAGEMENT OF SOLID WASTE IN SUGAR INDUSTRY

Dr. Kadam S. D.[1] and Mrs. Kadam S. S.[2]
[1]Department of Environmental Science and Management
Chh. Shahu Institute of Business Education and Research, Kolhapur.
[2]D. R. K. College of Commerce, Kolhapur.

ABSTRACT

Sugar industry are mainly based on agricultural crops like sugarcane and beet. These industries at the time of processing raw cane generates very big amount of solid waste in the form of simple to complex in nature. These industries generating 258.74 kg of bagasse, 33.77 kg of press mud, 0.0142 kg of sludge, 34.30 kg of molasses per metric tone of sugarcane crushed respectively. Near about 2% ash is generated after burning of 1 kg bagasse. These all solid waste is organic in nature and highly degradable so as it is commonly disposed on the ground. This unscientific disposal of solid waste creates land, air, water and soil pollution problems as well as ground water pollution.

KEYWORDS: *Solid waste, Bagasse, molasses, press mud, pollution, management.*

INTRODUCTION:

From the end of 20th and beginning of 21st century sugar industries are becoming hen of golden egg for farmers in Maharashtra. As on today more than 173 co-operative and 23 number of private sugar industries in Maharashtra. These all sugar industries are crushing about 67.13 million tons of sugarcane per year. This all sugar manufacturing industries are producing various types of solid waste and it is disposed or dumped on ground unscientifically which further becomes the cause of environmental pollution. This solid waste primarily in the form of organic and inorganic in nature and it is generated in different sugar manufacturing sections in sugar industry. Some of the following major sources are generating solid waste in sugar industry.

Sources of solid waste in sugar industry:

a) Milling section – In this section cutted piece of sugarcane is converted into fibers are crushed and juice is extracted. Here the juice (liquid) and fibrous solid material (bagasse) is generated. This bagasse is a organic waste and it is hugely generated in sugar industry.

b) Juice filtration section – Separated sugarcane juice contains huge amount of fine bagasse particles, volatile and colloidal particles which separated with the help of cloth filtration where juice and solids are separated. Separated solids contain juice hence it is again sent to de-juicing section where all juice is extracted and separate the impurities in the form of solids are called press mud.

c) Crystallization Section – After evaporating juice, it is converted into syrup and then this syrup is feeded to crystallizer where granulated sugar is produced. Produced sugar is separated and sent it for bagging. At the end of sugar separation small quantity of semi liquid dark brown colored waste (Molasses) is generated in this section.

d) Metallic Solid Waste- From the unloading section of sugarcane to sugar production section there are so many sub-sections and from this sections lots of metallic scrap is generated.

e) Boiler Section- In this section huge amount of bagasse is used as fuel and after burning of bagasse it produce bagasse ash as a solid waste in the sugar industry.

f) Another type of solid waste - like Plastic bag, PVC waste, Rubber pipes, Thermocol, e-waste and Fiber waste is generated in industry.

g) Sludge- At the last where waste water is treated in effluent treatment plant (E.T.P.), from this unit vast quantity of sludge is generated which is dried in sludge drying bed and converted into dry sludge cake as solid waste.

Above this all type of solid waste is not properly and scientifically managed by the sugar industries. This unscientific management practices of solid waste results into pollution of air, water, land, soil and affects animal and plant health. Now technology has made development to convert this type of solid waste into economic resources through its reuse, recycle, reduce and reconvert (4R) them into raw material for further use. This practice are highly needed for sustainable development and keeping our earth safe and clean.

MATERIAL AND METHODS :

For the present study on solid waste management in sugar industry, field visits are made for various sugar industries and observations are make for types of solid waste and their management practices. Some data and information's are collected from their register and some information's collected through interviews of unit in-charge of sugar industry. For understanding the further uses of various types of solid waste, subsidiary sites where these solids are used that sites also visited and related information's are collected from its users. The processed compost sample was collected and analyzed in laboratory for physico-chemical characteristics with the help of methods prescribed by APHA (1998). Another byproduct and their related economic recovery information's are collected from concerned managers.

RESULTS AND DISCUSSION :

Sugarcane is main raw material required to sugar industry which is produced by the farmers. After its harvesting it is transported to sugar industry and here after unloading, it is processed for cutting in small pieces and further it sent for converting into fiber in fiber section. These fibers then after processed in milling section with addition of water to extract maximum juice and here the juice and bagasse is separated. The quantity of bagasse 285.74 kg is produced per metric ton of sugarcane crushed. Then this juice is filtered for separation of colloidal , volatile and soil particles where bagasse is directly dumped on dumping land site with the help of conveyor belt and this is the first solid waste is generated by sugar industry (Photo plate 2).

From the juice filtration which solids are collected, they contains juice and to achieve more recovery of sugar production, these solids re-again processed in rotary vacuum where juice and solids are separated and it is second most important solid waste generated about 33.77 kg/MT of sugarcane crushed by sugar industry and it is called as press mud(Photo plate 1).

After processing of sugarcane juice with addition of various chemicals it sent for evaporation where it is converted into dark brown color syrup and then it is feeded to crystallizers where white granulated sugar is produced. In this section after separation of sugar, small quantity of brown colored syrup remains inside the pan which is poor in carbohydrates is separately collected and stored. It is third important solid waste generated by the sugar industry and it is called as molasses (Photo plate 3) Near about 34.30 kg. of molasses is generated per metric ton of sugarcane crushed.

Above these solids are considered as solid waste but today these waste must be considered as a byproduct because with the help of scientific development in technology it is made possible to convert them into economic product for their further uses. Following table 1.Shows types and quantity of solid waste generated by sugar industry. The another type of solid waste is generated in sugar industry is ash. The main sources of ash produced in sugar industry from boiler house and co-generation plant. In these two units sugar industries are using bagasse as fuel and from the burning of 1kg of bagasse it generates near about 2% ash in sugar industry. Generally this ash is used or dumped for land filling purpose which further becomes cause of soil, water and air pollution.

Table 1 : Types and quantity of solid waste generated by sugar industry.

Sr. No	Types of solid waste	Quantity of solid waste in kg/MT of sugarcane crushed.
1	Bagasse	285.74
2	Press mud	33.77
3	Molasses	34.30
4	Sludge from ETP	0.0142
5	Ash	2% /kg of bagasse burning

Source: From sugar industry office record.

SCIENTIFIC MANAGEMENT OF SUGAR INDUSTRY SOLID WASTE :

Above this waste are traditionally disposed on ground or used for land filling and this unscientific solid waste management practices are harmful to environment and ecosystem. They make air pollution, land pollution and water pollution. So it is now needed to manage them scientifically to avoid environmental degradation. For scientific use and management of press mud it is treated with different bacterial culture about 36 to 40days with maintaining temperature in between 50-60oC. and it is converted into best quality of compost. This compost contains 32-37% moisture, black in color, odour free and it is highly applicable in any crop field for improving soil fertility and crop yield. Following table 2 shows the physico-chemical characteristics of compost. These characteristics of compost are idle and very much needed to meet the requirement of crop. It also helps to maintain soil pH, its fertility and productivity as well as it helps to avoid soil salinity with increasing water holding capacity of soil. It is best substitute organic manure for avoiding use of chemical fertilizers and achieve more economy of the crop yield. This ready compost is sold by compost producers in market at Rs. 300-400/MT. Photo plate No. 1 shows the manufacturing process of compost with using spent wash which is generated in distillery industries.

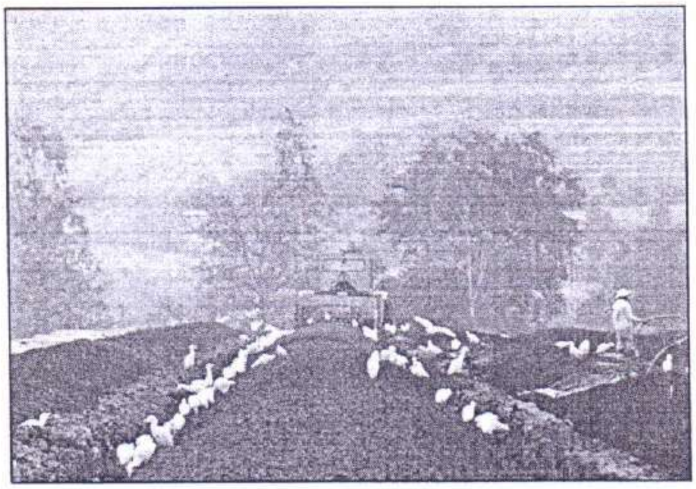


Photo plate 1: Manufacturing process of compost with using press mud and spent wash.

Table No. 2 : Physico-chemical characteristics of Compost.

Sr. No	Parameters	Values
1	Color	Black
2	Odor	Odorless
3	Conductivity (μMhos/S)	1280-1415
4	Moisture (%)	32-37
5	Ash(%)	32-34
6	pH	7.4-7.6
7	Chlorides (mg/l)	285-390
8	COD (mg/l)	210-258
9	BOD (mg/l)	55-65
10	Nitrogen (%)	1.7- 2.30
11	P as P2O5 (%)	1.8-1.9
12	K as K2O (%)	2.3- 3.4
13	Organic Carbon (%)	25.0-28.20

In the view of scientific management practices of solid waste, bagasse have high calorific value and its availability on site, it is used by the sugar industry as a fuel for boiler house for generating steam. As on today most of the sugar industries are self-sufficient in electric power requirement due to establishment of their own co-generation power plant. This co-generation plant mainly based on use of bagasse as a fuel. The advance development in scientific technology made it possible to use of the bagasse as a fuel in co-generation plant to produce steam and this steam is supplied to the turbines to produce electric power. The excess bagasse remains with them is sold in market at cost of Rs. 1800-2000/MT and it is used in manufacturing of particle board by particle board manufacturers (Photo plate-2and 6). After burning of bagasse in boiler house and in co-generation unit, the vast quantity of ash is produced and it is separately collected and stored on site.

Photo plate 2 : Bagasse is sent to particle board manufacturing industries.

The low quality bagasse i.e. bagasse dust remains on site which is highly required by the soil bricks manufacturers where they are mixing it with soil and homogenize it. The use of bagasse dust in soil works as a binding material. Photo plate 4 and 5 shows the use and mixing of bagasse dust in soil by bricks manufacturers.

Photo plate 4 : Bagasse dust is used in manufacture of soil bricks.

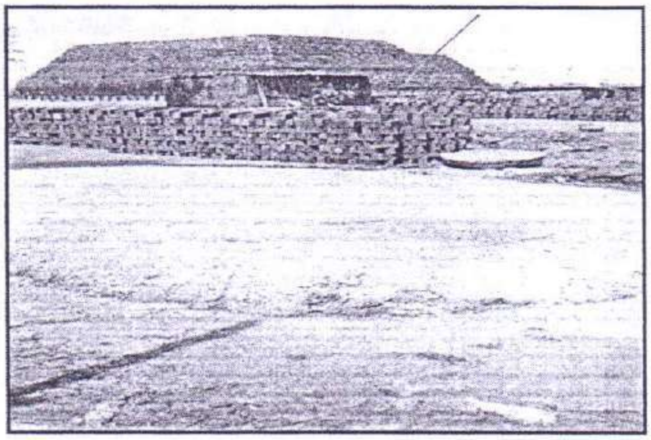


Photo plate 5: Bagasse dust is mixed with soil mud for manufacture of soil bricks.

In sugar industry boiler house and co-generation units are producing ash as a solid waste. This ash is rich in carbon and it can be useful to farmers as a catalytic agent in farm soil practices. The another use of ash is made in manufacturing of soil bricks (Photo plate-7). Number of bricks manufacturers using ash as a binding material as well as getting fine plane surfaces to bricks and reduce the weight and minimize the soil quantity required for bricks manufacturing.

Photo plate 7 : Bagasse Ash is used in manufacture of soil bricks.

Photo plate 8 : Dry sludge cake generated from ETP.

Molasses is the final last semi solid waste is generated in sugar industry. This molasses contains 50-52 % of total reducing sugars and it is highly required by the distillery industries for the production of ethyl alcohol. This ethyl alcohol is mainly required in various industries as a preservative, for the production of other alcohol based chemicals as well as in beer and liquor manufacturing industries. Photo plate 3 shows the diluted molasses and then this diluted molasses is loaded in fermenter where it is fermented with addition of yeast. After complication of fermentation period it is sent for distillation where alcohol is stripped out and it is stored in storage tanks.

In sugar industry lots of water is used for steaming, cooling, washing and cleaning purpose. From this all processes lots of waste water is generated and it contains high amount organic and inorganic substances. Hence it is needed to treat and reduce the strength of pollutants. This waste water is treated in effluent treatment plant (ETP) where these pollutants converted into sludge. This sludge is drain out from the bottom of ETP and dried on drying bed (Photo plate-8). This dry sludge cake is rich in nutrient and it is used by the farmers as best manure in farm practices.

Above such practices are highly required in industrial sector for the scientific use and management of solid waste and environmentally sustainable development. These practices are essential for reducing air, water, soil and land pollution as well as it also helps to generate income from other sources which improves net profit of industries.

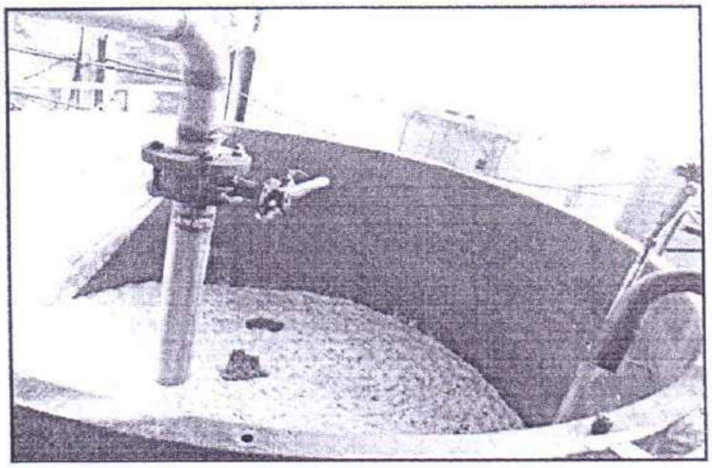


Photo plate 3 : Molasses is used in distillery industries.

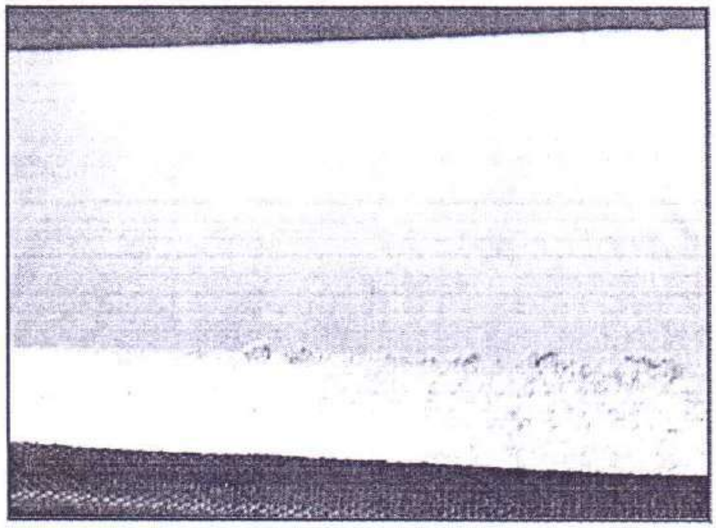


Photo plate 6 : Use of bagasse in manufacture of partical boards.

REFERENCES :

1.Anindita Basak, 2009. Environmental studies, Pub. by Dorling Kindersley (India) Pvt. Ltd.

2.APHA., 1998. Standard methods for the examination of water and waste water., 20th Edition, Washington, DC 20005-2605.

3.Commissioner of Sugar federation, Govt. of Maharashtra, Report-2016-17.

4.Environmental Pollution Control Journal., 1998. Pub. by Anil Kharbanda, New Delhi.

5.Ludwig, Sasse, 1998. Decentralised wastewater treatment in developing countries. BORDA Publication, Germany.

6.Rao,. M.N. and A.K. Datta. 1978. Waste water treatment. Pub. by Oxford and IBH CO., Delhi.

7.Sharma, P.D. 2012. Ecology and Environment. Eleventh revised edition, Pub. by Rastogi, Meerut.

IJARR, 1(11), 2016; 14-21

IJARR International Journal of Advanced Research and Review

www.ijarr.in

CHALLENGES OF ZERO POLLUTION IN SUGAR INDUSTRY

D. S. Mali

Associate Professor, P. G. Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Email: malids@siberindia.edu.in

ABSTRACT

Sugar Industry is one of the major agro-based industries in India. Sugar Industry complex comprises of Sugar factory, Distillery, Liquor unit, Cogeneration and other bagasse based industries. Generally such units are located in rural area and are surrounded by agricultural fields. It is necessary to safeguard the soil and water and air quality of the region to protect agricultural productivity and health of workers and local population. The industry should take all necessary steps to prevent environmental pollution. Challenge of achieving zero pollution in Sugar Industry complex can be met if water conservation, waste minimization, recycling of wastes and by product recovery systems are planned and implemented scientifically.

Key Words: Coagulation, press mud, sulphitation, zero pollution and by-product recovery

INTRODUCTION

Sugar is usually manufactured by cutting the sugarcane into pieces and crushed in a series of rollers to extract the juice, in a mill house. The milk of lime and sulfur dioxide gas is then added to the juice and after heating all the colloidal and suspended impurities are coagulated; much of the color is also removed during this treatment. The coagulated juice is then clarified to remove the suspended solids in the form of sludge. This sludge is then further filtered through a filter press and then disposed off as a solid waste i. e. press mud. Color of the juice is completely bleached out in this process. The clarified juice is then heated and concentrated in evaporators and vacuum pans. The partially crystallized syrupknown as massecuite, is then transferred to the crystallizers where completely crystallization of sugar occurs. The fresh effluent from the sugar mill decomposes rapidly after a few hours of stagnation. The rapid depletion of oxygen due to biological oxidation followed by anaerobic stabilization of the waste causes a secondary pollution of offensive odor, black color and fish mortality in the water body in which the waste is disposed off.

MATERIAL METHODS

Rain water harvesting: Rain water is a precious water resource as it is freely available and water quality is good with minimum total dissolved salts. Sugar factory complex has a large area and must provide adequate arrangements for collecting all rain water from the factory premises and store it for utilization in process. The total amount of collectable rainwater can be easily calculated by determining area and runoff computations.

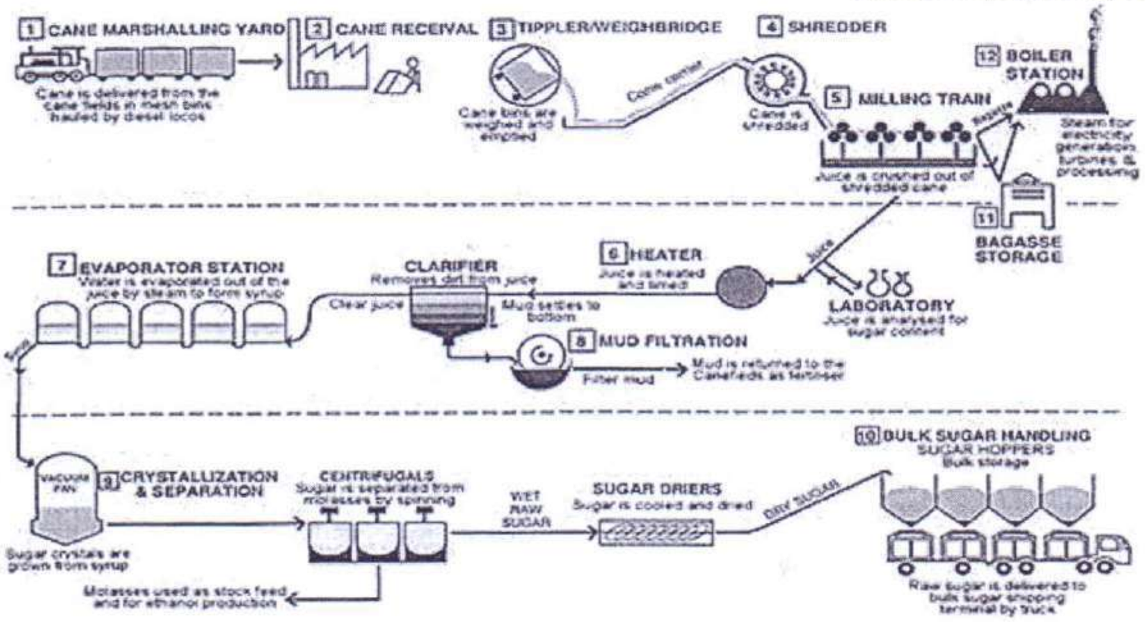


Fig. No. 1 Flow diagram showing the manufacturing process of sugar

If a sugar industry complex has 50 hectares of land where 20,000 sq m is the area of the main building, Godowns, Housing colony with proper rainwater harvesting system (runoff coefficient 0.9) and impervious roads are 30,000 sq m with side gutters (runoff coefficient 0.7) and open area is around 45 hectares (runoff coefficient 0.5), the reservoir capacity can be calculated as below.

Assuming the rainfall in the area as 100 cm per year.

1. Runoff contributed from buildings - 20,000 x 0.90 x 100/100 = 18,000 cum.
2. Runoff contributed from roads - 30,000 x 0.70 x 100/100 = 21,000 cum.
3. Runoff contributed from area - 45,000 x 0.50 x 100/100 = 22,250 cum.

Total 18,000+ 21,000+ 22250 = 61,250 cum.

Say 60,000 cum.

If all the water can be collected at one point, impervious pond of 60,000 cum capacity (150m x 200m average size x 2m depth) can be constructed for this purpose. Alternatively the water can be allowed to percolate to improve the ground water table.

The stored water can be reused for manufacturing process during the crushing season, by installing pumps and a distributaries network. In fact, the same storage tank can be used also to collect excess condensate and other recycling water. If groundwater table is recharged, the yield of the wells would substantially increase and can meet the additional demand of water during the crushing season.

Minimizing water requirement in sugar industry: Sugar cane contains 85% of water and during the process of sugar manufacturing major portion of this water is converted to vapor condensate and can be reused by providing proper interception and collection. This would reduce the external water requirement. Minimizing water consumption in sugar industry shall automatically reduce the waste water generation.

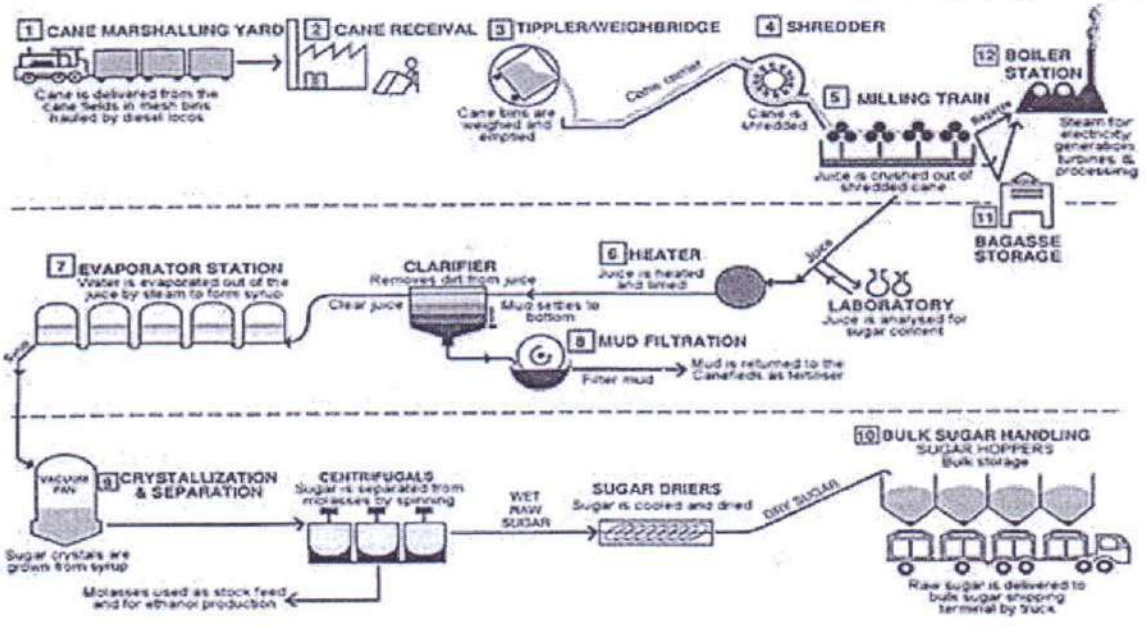


Fig. No. 1 Flow diagram showing the manufacturing process of sugar

If a sugar industry complex has 50 hectares of land where 20,000 sq m is the area of the main building, Godowns, Housing colony with proper rainwater harvesting system (runoff coefficient 0.9) and impervious roads are 30,000 sq m with side gutters (runoff coefficient 0.7) and open area is around 45 hectares (runoff coefficient 0.5), the reservoir capacity can be calculated as below.

Assuming the rainfall in the area as 100 cm per year.

1. Runoff contributed from buildings - 20,000 x 0.90 x 100/100 = 18,000 cum.
2. Runoff contributed from roads - 30,000 x 0.70 x 100/100 = 21,000 cum.
3. Runoff contributed from area - 45,000 x 0.50 x 100/100 = 22,250 cum.

Total 18,000+ 21,000+ 22250 = 61,250 cum.

Say 60,000 cum.

If all the water can be collected at one point, impervious pond of 60,000 cum capacity (150m x 200m average size x 2m depth) can be constructed for this purpose. Alternatively the water can be allowed to percolate to improve the ground water table.

The stored water can be reused for manufacturing process during the crushing season, by installing pumps and a distributaries network. In fact, the same storage tank can be used also to collect excess condensate and other recycling water. If groundwater table is recharged, the yield of the wells would substantially increase and can meet the additional demand of water during the crushing season.

Minimizing water requirement in sugar industry: Sugar cane contains 85% of water and during the process of sugar manufacturing major portion of this water is converted to vapor condensate and can be reused by providing proper interception and collection. This would reduce the external water requirement. Minimizing water consumption in sugar industry shall automatically reduce the waste water generation.

Table No. 1 Water conservation techniques

Sr. No.	Station	Option Suggested
1	Milling Plant	Use fully hot condensate instead of fresh water supplement.
2	Boiler feed water	Overflow of all condensate from the vapor cells, first body evaporator and condensate pan shall be connected to a small storage tank instead of allowing to over flow into the gutters.
3	Clarification House a) Compressors b) Sulfur Burner	 a)Recirculation the cooling waters b) Use treated effluent water for cooling purpose and connects it to spray pond to reduce the temperature.
4	Oliver Filter	Instead of using fresh water spray pond water may be used to create vacuum at vacuum pump and barometric condensers.
5	Boiling & Centrifuge Section	Instead of allowing fresh water to go to spray pond after cooling at vertical crystallizes and massecuite allow it to go to service tank
6	Preparation of seed and mixtures	Use hot water instead of fresh water
7	Cooling waters	Mill drive, mill bearing, power house turbines, fiberisers, compressor, cooling waters and vertical crystallizers
8	Tap connections	Keep bear minimum
9	Excess condensate	Mini cooling tower

Water recycling in the process: If the following practices are followed, it is possible to eliminate the entire process water requirements in a Sugar Industry.

1. Analyze all Cooling Waters, Condensates, Spray pond overflow regularly.
2. Use only Hot Condensates for Mill Imbibitions and Mill Sanitation.
3. Operate the ETP efficiently and use this water as Cooling Water for Wet-Scrubbers, Spray pond Make-up Water and Sulphur Burner Cooling System etc.
4. At Oliver Filters, water is required to create vacuum for pumps and Barometric Condensers. Spray pond Overflow is being used for this purpose instead of fresh water.
5. Vertical Crystallizer and compressor cooling waters may be directly connected to service Water Reservoir.
6. Provide limited water taps at different sections for washing purpose and provide storage tanks for drinking purpose.
7. Maintain Spray pond Water Quality so that it can be reused continuously. Similarly, maintain the quality of Condensates by avoiding entrainment.

In case, some of the streams are found to be contaminated which is mainly due to entrainment, it can be treated by simple techniques such as pH correction by adding lime, sand filtration or passing through activated charcoal. The other major contaminant is high temperature of condensates which is required to be reduced. It can be achieved either by providing a cooling tower or connecting to a storage pond.

Table No. 2 Waste minimization options

Sr. No.	Station	Pollution Source	Preventive Action	Recycle & reuse
1	Cane Yard	Cane Trash & Dung	Collect as early as possible	Compost
2	Bagasse Storage Yard	Bagasse	Collect at the end of the season	Compost
3	Milling Section	Oil & Grease	Collect in trays & store in drums	Sell as low grade lubricants or burn in boilers after mixing with bagasse
		Floor washings	Adopt dry cleaning, Give proper slope to floors	--------
		Leakages & Spillovers	Use mechanical seals for all pump glands	Collect leakages & spillages in a pit and recycle into process
		Cooling Waters	Collect desuperheater & mill bearing cooling water	Recycle
4	Cane carrier	Bagasse	Use closed transfer system	Cover the drains so that bagasse do not enter into drains
5	Sulfur Burner	SO_2	Operate scrubber efficiently	Provide mask to operators
6	Lime Station	Lime Solution	Provide proper slope to the drain	Allow it to mix with the effluent
7	Clarificatio n and vacuum filters	Leakages from pumps, glands & pipe overflow	Install overflow alarms & provide mechanical seal	Recycle cooling water
8	Boiler house	Boiler Blow down	Maintain Boiler condition & also feed water quality	Use it for irrigation along with other effluents
		Stack Emissions	Adjust air fuel ratio, Check APC performance	Fly ash can be used as soil conditioner/ Brick Mfg/ composting
9	Crystallizer & Pan Boiling	Leakages from pumps, Spillovers	provide mechanical seal, Recycle all cooling water, avoid overloading of equipments	Recycle cooling water, collect spillages & recycle in the process
10	Evaporator & juice heating	Sugar Entrainment	Provide additional external catchers for the last body evaporators & all	Recycle water if there is no entrainment and incase there is, and then use it for irrigation.

			vacuum pans, use poly baffle stainless steel instead of umbrella type save-all, pump gland shall be provide with mechanical seal to prevent leakages	
11	Cleanings of vessels, boilers and laboratory washings	High BOD & COD, Chemicals as NaOH, SulphamicAcid, Lead	Recycle NaOH for next cleaning, Provide standby units to have continuous operations, Store the effluent in a holding tank to avoid shock loads on ETP	Controlled loading in ETP from a storage tank. Segregate laboratory effluents and join to storage tank
12	Press mud	Soil Conditioner	Immediate Disposal	Use as a filler material in Composting
13	Molasses	Bye Product	Use only steel tanks	Provide mixing & cooling arrangements to avoid auto combustion
14	Fugitive emission	Sugar Dust, SO_2	Dust collectors, Scrubber	Recycle
15	Vibrating & Heavy Machinery	Sound	Use silencer pads & closed rooms	Provide earplugs & earmuffs to workers and also change the work environment frequently
16	Bagasse	Dust & Fire	Provide proper ventilation for storage and also stand posts in case of fire	Store it far away from the industry

RESULT AND DISCUSSION

Spent wash resulting from distillery is high in organic contents and can be mixed with sugar factory press mud and converted to compost bagasse cilo and boiler ash as filler materials. Biogas recovery is other alternative where the effluent needs further aerobic treatment and costly RO system for removal of dissolved salts.

Adequate measures should be taken to remove particulates from stack gases by installing ventury scrubbers and the collected ash can be used as filler in compost.

1. If Rainwater is harvested and stored for reuse, the additional water requirements of Sugar Industry during the season and off season can be met.
2. By adopting recycling and reuse techniques within the Industry more than ninety percent of water requirement can be met.
3. By adopting waste minimization techniques along with water conservation, sugar industry complex can achieve zero pollution level, would be self sufficient in water requirements and can produce valuable byproducts.

Table No. 3 Wastewater generations from 4000 tones per day sugar factory

Sr. No.	Sources	Quantity (m3 / day)
1	Mill bearings (Ex-cooling)	160
2	Hot liquor pumps gland – cooling	240
3	Daily cleaning and washing	160
4	Laboratory Use	9.6
5	Domestic	144
6	Spray condensate	163
7	Excess condensate	320
8	Boiler blow-down	120
9	Periodical cleaning	120
10	Leakage's and steam trap	160
11	**Total**	**1696 i. e. 1700**

Table No. 4 Sugar factory raw effluent

Sr. No.	Parameter	Value
1	pH	5.5 to 6.3
2	Sulfates	800 mg/ l
3	Chlorides	300 mg / l
4	D. O.	1 to 2 mg / l
5	Oil & grease	25 mg / l
6	BOD	1000 to 1500 mg / l
7	COD	2500 to 3500 mg / l
8	Total solids	7000 mg / l
9	Total dissolve solids	5500 mg / l

CONCLUSION

The salient observations made in the present study can be summarized as follows:

1. Waste generated during cleaning can be stored and by using proportioning it can be released in the ETP. It is noted that this waste is comparatively stronger to other waste streams in sugar industry.
2. Cleaning should be carried out daily or as frequently as possible because this will help to reduce the quantity of waste.
3. Recirculation and recycle of water which is less contaminated in the production process is going to reduce the total quantity of waste water
4. It is observed during the study that the leakages of water and spill out of oil & grease and other chemicals give rise to generation of wastewater; therefore this should be avoided as far as possible.
5. Best option for treatment of sugar distillery complex is waste minimization in sugar industry followed by activated sludge process and final disposal of treated effluent by irrigation.

REFERENCES

1. Agnihotri, A. S., Integrated chemical-biological treatment of biorefractory organics in industrial wastewater. Ph.D. thesis, *Indian Institute of Technology*, Bombay (1997).
2. Allen, S. J., Khader, K. Y. and Bino, M., Electro-oxidation of dyestuffs in wastewaters. *J. Chem. Tech. Biotech.*, 62(2), 111-117 (1995).
3. Arceivala, S.J., Wastewater treatment for pollution control; 2nd Edition, *Tata McGraw-Hill India*, 20-23 (1998).

4. Bal, A. S. and Dhagat, N. N., Up flow anaerobic sludge blanket reactor-A Review. *Indian. J. Environ. Healt,*. 43 (2); 1-83 (2001).
5. Bardiya, M. C., Hashia, R. and Chandan, S., Performance of hybrid reactor for anaerobic digestion of distillery effluent. *Journal. IAEM,* 12 (3), 237-239 (1995).
6. Basargekar, S. S., Incineration – Technology for effective disposal of industrial waste. *Chem. Age of India*, 36(4), 231-241 (1989).
7. Beltran,F. J., Gonzalez, M. and Gonzalez, J. F., Industrial advanced oxidation Part-I. UV radiation in presence and absence of hydrogen peroxide; *Wat. Res*, 31(10), 2405- 2414 (1977)
8. Berchmans, L. J. and Vijayavalli, R., Electrochemical oxidation as tool for pollution control: Effect of anodic oxidation on treatment of distillery effluent. *Indian. J. Environ. Hlth.,* 31(4),309-313, (1989).
9. Bhide, A. D. and B. Sundareshan, Solid Waste Management in Developing Countries, Indian National Scientific Documentation, (1983)
10. Chen, C. P. J., Cane sugar hand book, 11th Edition., *Wiley Interscience, New York.*, 34-37. (1985)
11. Chiang, L.C., Chang, J. E. and Wen, T. C. N., Indirect oxidation effects in electrochemical oxidation treatment of landfill leachate, *Wat. Res.*, 29(2), 671-678 (1995).
12. CPCB, MoEF, New Delhi, Management of distillery wastewater, Resource Recycling Series: RERES/4/2001-2002
13. Deodhar, A. and Shingare, K. K., Bio-earth composting - Solid State fermentation process for distillery spent wash. *Process and Plant Engg*, 7 (3), 85-86 (1989).
14. Dhananjay S. Mali, Aerobic Composting of Spent Wash, J. of Ecotoxicology & Environmental Monitoring 12(2) 101-104(2002).
15. Donini, J. C., Kan, J., Azynkarczuk, J., Hassan, T. A. and Kar, K. L., Operating cost of electro coagulation. *Can. J. Chem. Eng.,* 72(6), 1007-1012 (1994).
16. Gahr, F., Hermanutz, F. and Oppermann, W., Ozonation - an important technique to comply with new German laws for textile wastewater treatment. *Wat. Sci. Technol*; 30(3), 255-263 (1994)
17. Gotaas, H. B., Composting Sanitary Disposal and Reclamation of Organic Waste, W. H. O. Palais DES Nations Geneva, (1956).
18. Gupta, M. P. and Bhattacharya, P. K., Studies on color removal from bleach plant effluent of a kraft pulp mill. *J. Chem. Tech. Biotechnol.* 35(B), 23-32,(1985).
19. Inamdar, S. N., Sprannihilator - A zero pollution system for treatment of distillery spent wash. *Process and Plant Eng.,* 7(3), 91-92 (1989).
20. Kambe, S. D., Rao, B. S., and Patil, P. L., Aerobic Composting of Spent Wash, Proceedings VIII Southern Regional Conference of Microbial Inoculate Organized by M. P. A. U., Rahuri at Pune, (1990).
21. Kang, S.F., Liao, C. H. and Hung, H. P., Pre-oxidation treatment of dye manufacturing wastewater in the presence of ultra violet light and ferrous ions. *J. Haz. Mat* 65(B), 317-333 (1999)
22. Lawrence, A W. and McCarty, P. L., Kinetics of methane fermentation in anaerobic treatment. *J. Wat. Pollut. Control Fed.* 41(2), 1-17 (1996).
23. Lin, S. H. and Lin, C. M., Treatment of textile effluents by ozonation and chemical coagulation. *Wat. Res.*, 27(12), 1743-1748 (1993).
24. Lin, S. H. and Lo, C. C., Fenton process for treatment of desizing wastewater. *Wat. Res.*, 31(8), 2050-2056.(1997)
25. Lin, S. H. and Peng, C.F., Treatment of textile wastewater by electrochemical method. *Wat. Res.*, 28(2), 277-282 (1994).
26. Mall, I., D., Waste utilization and management in sugar and distillery plants. *Chem. Engg. World.* 30(1), 51-59 (1995)

27. Mameri, N., Yeddou, A. R., Lounici, H., Belhoncine, D., Grib, H. and Bariou, B., Defluoridation of Septentrional Sahara water of North Africa by electro coagulation process using bipolar electrodes. *Wat.Res.* 32(5), 1604-1612 (1998).
28. Mosey, F. E., Mathematical modeling of the anaerobic digestion processes: Regulatory mechanisms for the formation of short chain volatile fatty acids from glucose. *Wat. Sci. Technol.*, 15 (8/9), 209-232 (1983).
29. Murphy, O. J., Hitchens, G. D., Kaba, L. and Verostko, C. E., Direct electrochemical oxidation of organics for wastewater treatment. *Wat.Res*. 26(4), 443-451 (1992).
30. Oehr, K., Electrochemical decolorization of Kraft mill effluents. *J. Wat. Pollut. Control Fed.* 50(1), 286-298 (1978).
31. Oldham, W. K. and Rush, R.J., Color removal in Kraft mill wastewater with magnesium. *J. Wat. Pollut. Control Fed.* 50(1), 40-45 (1978).
32. Park, T. J., Lee, K. H. Jung, E. J. and Kim, C. W., Removal of refractory organics and color in pigment wastewater with Fentons oxidation. *Wat. Sci. Technol.,* 39(10-11), 189- 192 (1999)
33. Pavlostathis, S. G. and Giraldo-Gomez, E., Kinetics of anaerobic treatment. *Wat. Sci. Technol.*, 24(8), 35-59 (1991).
34. Perkins,W. S., Walsh, W. K., Reed, I. E., and Namboodri, C. G. A demonstration of reuse of spent dye bath water following color removal with ozone. *Textile Chemist and Colorist.,* 28(1), 31-37 (1995)
35. Ramendra, and Manisha, A., Anaerobic aerobic fermentation- A proven biotechnology for distillery effluent treatment. *Indian. J. Environ. Protection*, 12(11), 835-838 (1992).
36. Rao, B. S., et al, Aerobic Composting of Spent Wash, Proceedings of National Seminar on Sugar factory and Allied Industrial Waste – A New Focus, held at Vasant Dada Sugar Institute, Manjari, Pune, (1988).
37. Rao, B. S., et al, Laboratory Manual for Environmental Quality Testing, EPRF, Sangli, (1991).
38. Rao, N. N., Somashekhar, K.M. and Szpyrklowisz, L., Electrochemical oxidation of Tannery wastewater. *J.Chem Technol. Biotechnol.* 76 (3), 1124-1131 (2001).
39. Rapson, B., Sullivan, D. P. and Brothers, J. A., How to clarify Kraft effluent with seawater and lime. *Pulp and Paper Con.* 78(1), 88-90 (1975).
40. Smith de Sucre, V. and Watkinson, J.P., Anodic oxidation of phenol for wastewater treatment. *Canadian J Chem Engg*, 59, 52-59 (1981).
41. Solozhenko, E. G., Soboleva, N. M., and Gonecharuk, V. V., Decolorization of azodye solutions by Fenton's oxidation. *Wat. Res.* 29(9), 2206-2210 198 (1995).
42. Standard Methods for the Examination of Water and Wastewater American Public Health Association (A P H A), Washington D. C. (1992).
43. Szpyrkowicz, L., Naumczyk, J. and Grandi F. Z., Electrochemical treatment of tannery wastewater using Ti/Pt and Ti/Pt/Ir electrode. *Wat. Res*., 29(2), 517-524 (1995)
44. Tsai, C. T., Lin, S. T., Shue, Y. C. and Su, P. L., Electrolysis of soluble organic matter in leachate from landfills. *Wat. Res.*, 31(12), 3073-3081 (1992).
45. Veeramani, H., Workshop series on environmental management, Pollution control systems for process industries, CESE, *Indian Institute of Technology*, Bombay (1993).
46. Vijayaraghavan, K., Ramanujam, T. K. and Balasubramanian, N., In situ hypochlorous acid generation for the treatment of distillery spent wash. *Ind. Eng. Chem. Res.,* 38, 2264- 2267 (1999).
47. Wassertec.(2002),Website:htpp://www.o3.co.za. pdf
48. Website: htpp:// www.biowise.org.uk/docs/2001/publications/AD_review.pdf
49. Wheatly, A.D., Fisher, M.B. and Grobicki, A.M., Application of anaerobic digestion for the treatment of industrial wastewater in Europe. *J. Chartered Institute of Wat and Env. Management*. 11(1); 39-46 (1997).
50. Wilcock, A., Brewster, M. and Tinchar, W., Using electrochemical technology to treat textile wastewater: Three case studies. *American Dyestuff Reporter*., 25,15-25 (1992).

Vol 7 Issue 3 April 2017

ISSN No : 2230-7850

International Multidisciplinary Research Journal

Indian Streams Research Journal

Executive Editor
Ashok Yakkaldevi

Editor-in-Chief
H.N.Jagtap

Welcome to ISRJ

RNI MAHMUL/2011/38595 **ISSN No.2230-7850**

Indian Streams Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial board.Readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India
Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.isrj.org

ISSN: 2230-7850 IMPACT FACTOR : 5.1651(UIF) VOLUME - 7 | ISSUE - 3 | APRIL - 2017

INDIAN STREAMS RESEARCH JOURNAL

TALENT MANAGEMENT STRATEGIES:- A CASE STUDY OF MENON AND MENON LTD.

Dr. Bindu N. Menon
Associate Professor, CSIBER, Kolhapur.

ABSTRACT

This study is mainly concentrate mainly the identification of talent management practices in Menon and Menon Limited and how it is related to different demographic factors . This study also highlighted the various factors help to attract and retain the talented employees. Job security is ranked first to attract and retain the talented employees. Talent management strategies is identified with the help of satisfaction with the employee benefits and policies, commitment to values, customer focus, innovation, development plans for staff, managing performance and quality commitment.

KEYWORDS- *Talent Management Strategies , identification, different demographic factors .*

INTRODUCTION :

Talent management is an Organization's commitment to recruit, retain, and develop the most talented and superior employees available in the job market. So, talent management is a useful term when it describes an Organization's commitment to hire, manage, develop, and retain talented employees. Organizations know that they must have the best talent in order to succeed in the hyper competitive and increasingly complex global economy. Along with the understanding of the need to hire, develop, and retain talented people, organizations are aware that they must manage talent as a critical resource to achieve the best possible results.

Systematic method of data collection and analyzing the same is the main factor for the validity of any research.

Bassi and Company (2006) pointed that high scores in leadership practices, employee engagement, knowledge, accountability, workforce organization and learning capacity of human capital management posted higher stock market return and better safety records. Richard S Wellins and Audrey B. Smith conducted a study and highlighted nine best practices of talent management. These factors are as follows:-

Talent management strategy tightly aligned with business strategy, talent management professional need to move from a seat at the table to setting the table, the role of success profiles, the talent pipelines is only as strong as it weakest link, it is not a democracy, potential, performance and readiness are not the same thing, talent management is all about the right people in the right jobs, talent management is more about how's than what and software does not equal talent management. Cummings T and Worley C (2001) define organization development as a system wide application of behavioural science knowledge to the planned development, improvement and reinforcement of the strategies, structures and processes that lead to organizational effectiveness.

STATEMENT OF THE PROBLEM

Menon and Menon Ltd., is one of the flagship companies in the field of Auto Component manufacturing in Kolhapur region in Maharashtra. Attracting and retaining the talent is the key for the success of an organization and this has resulted war for the talent. The main issue of this study is to understand the Talent Management Practices in Menon and Menon Ltd., Therefore, statement of the problem is "Talent Management Practices with reference to Menon and Menon Limited, Kolhapur".

OBJECTIVE OF THE STUDY

1) To determine the demographic factors and its influences on talent management practices of employees.
2) To identify the reasons to attract, motivate, reward and retain the talented employees..

HYPOTHESIS OF THE STUDY

Hypothesis No.1 :- There is no relationship between designation and talent management practices.
Hypothesis No.2 :- There is no relationship between age and talent management practices.
Hypothesis No.3 :- There is no relationship between experience and talent management practices.

Research Design

Explorative Research Design is used for the study.

Data Collection Method

Primary data have been collected by issuing Questionnaires directly to the respondents by using survey method.

Twelve variables were considered under this study towards the impact of talent management practices

Sample selection

Researcher considered Menon and Menon Ltd as sample unit, out of this unit, 73 managerial employees were selected. By considering the model of the study managerial and officers only considered for the study. The total population for this study is 1551. All the respondents were contacted in person to clarify any doubt in filling up the questionnaire. Stratified random sampling method used to select the data. Here strata is considered on the basis of departments.

Sample selection on the basis of designation

Designation	Universe of the Study	Sample Size
Manager	56	30
Officer	95	43

Scale

The Researcher adopted scale from Richard S.Willins (2007), used the revised and modified version of the scale. The Questionnaire was prepared with a five point Liker Scale. The scale ranged from strongly disagrees to strongly agree. The scores for rating have been assigned as five for strongly agree, four for agree, three for neutral, two for disagree and one for strongly disagree. Highest score indicated that best opinion on employees on the impact of talent management practices.

Data Analysis

The data was analyzed with the help of mean score, standard deviation, chi-square test , kendall's tau b non parametric correlation and Ranking Techniques . The data has been entered into SPSS. The analysis were drawn by using SPSS and EXCEL

Limitations of the Study

Sample survey was selective means and the Researcher chosen respondents are only part of the study.

The study mainly based on the facts given by the respondents on the basis of their beliefs, attitudes and their values.

Some of the respondents were reluctant to provide information due to fear.

Table No. 1 Cronbach's Alpha Reliability Score

Indicator	Cronbach's alpha
Talent Management	0.889
Designation of Employees	0.816
Age of Employees	0.781
Experience of Employees	0.756

The Cronbach's Alpha scores were found to be well above the acceptable value of 0.70.

HYPOTHESIS TESTING

Table No.2 Relationship between Designation of Employees and Talent Management Practices

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Designation of Employees * Talent Management	73	100.0%	0	0.0%	73	100.0%

Designation of Employees * Talent Management Crosstabulation

Count

		Talent Management			Total
		3	4	5	
Designation of Employees	Supervisor	0	8	11	19
	Officer	1	12	20	33
	Manager	0	8	13	21
Total		1	28	44	73

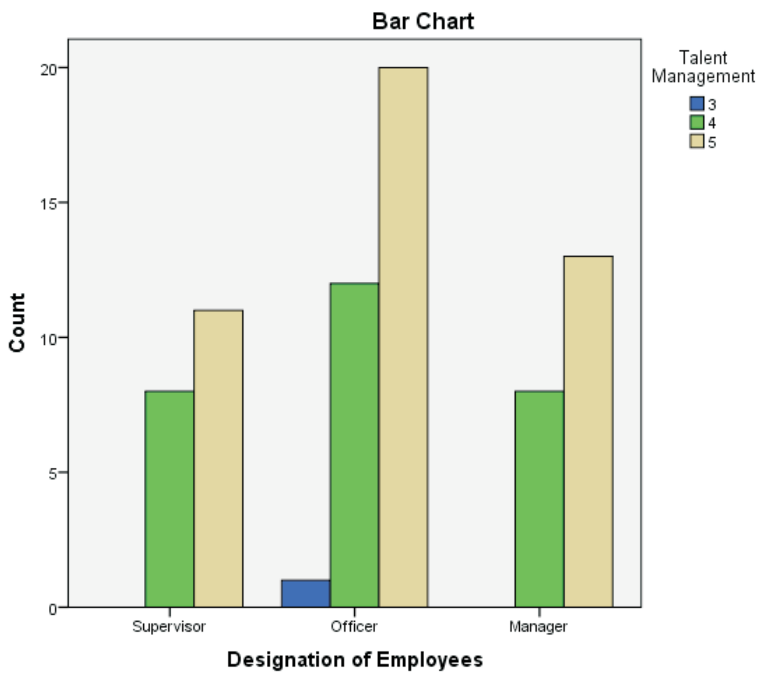
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.344[a]	4	.854
Likelihood Ratio	1.718	4	.787
Linear-by-Linear Association	.062	1	.804
N of Valid Cases	73		

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Ordinal by Ordinal	Kendall's tau-b	.028	.108	.261	.794
	Spearman Correlation	.030	.115	.253	.801[c]
Interval by Interval	Pearson's R	.029	.110	.247	.805[c]
N of Valid Cases		73			

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.
c. Based on normal approximation.



Hypothesis No.1 :- There is no relationship between designation and talent management practices.

The calculated value of chi square is more that .5 it shows that hypothesis is rejected. It indicates that there is a relationship between designation and talent management practices.

Table No. 3 Relationship between Age of Employees and Talent Management Practices

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Age of Employees * Talent Management	73	100.0%	0	0.0%	73	100.0%

Age of Employees * Talent Management Crosstabulation

Count

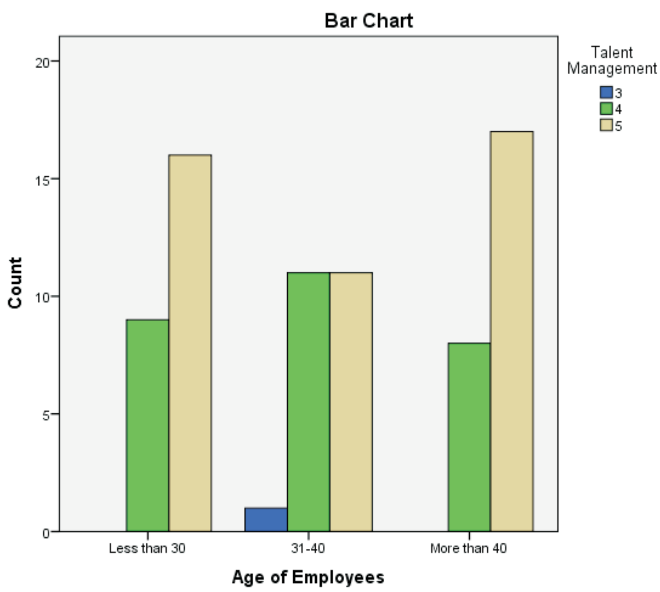
		Talent Management			Total
		3	4	5	
Age of Employees	Less than 30	0	9	16	25
	31-40	1	11	11	23
	More than 40	0	8	17	25
Total		1	28	44	73

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.908[a]	4	.419
Likelihood Ratio	4.055	4	.399
Linear-by-Linear Association	.073	1	.787
N of Valid Cases	73		

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Ordinal by Ordinal	Kendall's tau-b	.031	.106	.293	.770
	Spearman Correlation	.033	.113	.280	.780[c]
Interval by Interval	Pearson's R	.032	.108	.269	.789[c]
N of Valid Cases		73			

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.
c. Based on normal approximation.



Hypothesis No.2 :- There is no relationship between Age of Employees and talent management practices.
The calculated value of chi square is less than that .5 it shows that hypothesis is accepted. It indicates that there is no relationship between Age of employees and talent management practices.

Table No. 4 Relationship between Experience of Employees and Talent Management Practices

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Expereince * Talent Management	73	100.0%	0	0.0%	73	100.0%

Expereince * Talent Management Crosstabulation

Count

		Talent Management			Total
		3	4	5	
Expereince	2-5 Years	1	13	21	35
	5-10 Years	0	4	3	7
	More than 10 years	0	11	20	31
Total		1	28	44	73

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.255[a]	4	.689
Likelihood Ratio	2.594	4	.628
Linear-by-Linear Association	.309	1	.578
N of Valid Cases	73		

a. 5 cells (55.6%) have expected count less than 5. The minimum expected count is .10.

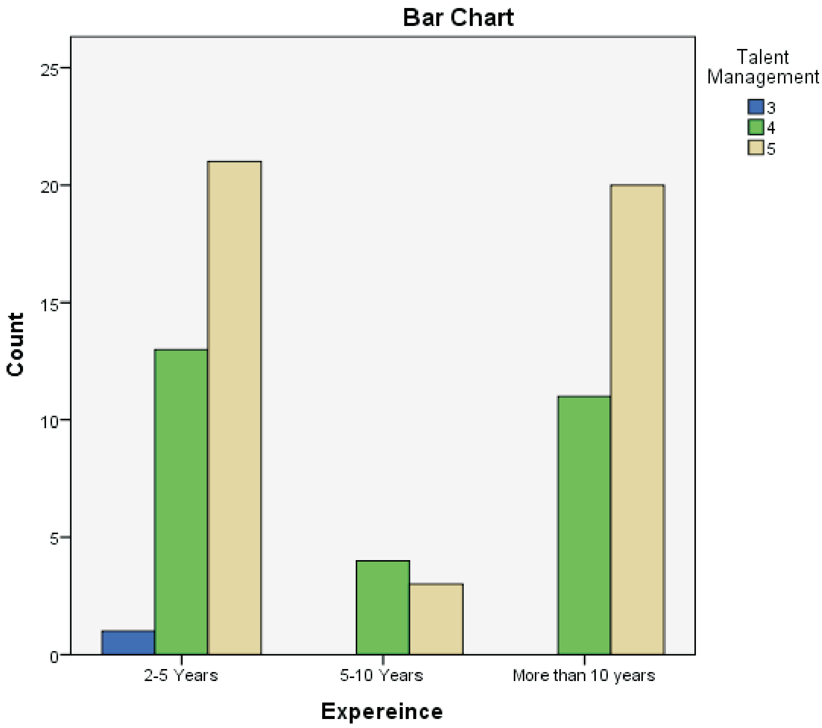
Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Ordinal by Ordinal	Kendall's tau-b	.049	.111	.435	.663
	Spearman Correlation	.050	.116	.423	.673[c]
Interval by Interval	Pearson's R	.065	.115	.553	.582[c]
N of Valid Cases		73			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.



Hypothesis No.3 :- There is no relationship between Experience of employees and talent management practices. The calculated value of chi square is more that .5 it shows that hypothesis is rejected. It indicates that there is a relationship between experience of employees and talent management practices.

Table No.5 Attracting and Retaining Top Performers

Sr.No	Factor	Total Score	Rank
1	Basic Pay	296	II
2	Health care Benefits	182	IV
3	Retirement Benefits	199	III
4	Educational Benefits	92	V
5	Job Security	326	I

Objective No.2 :- To identify the causes to attract and retain the talented employees

In this study five factors were considered such as basic pay, health care benefits, retirement benefits, educational benefits and job security. To identify the ranking factors Ranking Technique was used. Job Security is ranked first with a score of 326, it is followed by basic pay, retirement benefits, health care benefits and educational benefits with the score of 296, 199, 182 and 92 respectively. It indicates that job security and basic pay play important role to attract and retain the talented employees

Findings

Objective No.1:- To determine the demographic factors and its influences on talent management practices of employees.

Out of the three independent factors like employee age, designation and experience it is identified that the impact of talent management practices are perceived to be more, the respondents whose age range from below thirty and above 40 years. Independent factors like age, designation and experience with the less impact of talent management practices.

Objective No.2 To identify the reasons to attract, motivate, reward and retain the talented employees.

With the help of Ranking Technique it is identified that the factors which mostly influence the employees to attract, motivate, reward and retain the talented employee are job security, basic pay, retirement benefits, health care benefits and educational benefits Most of the respondents are more preference to their job security and least preference to their educational benefit. It is observed that there is significant relationship (positive) between attracting and retaining top performance and the selected factors like job security and basic pay.

SUGGESTIONS

It is found that employees are satisfied with the Talent Management Practices adopted by the company. To attract and retain more and more talent in the organization is important as a part of continuous improvement. The following are some suggestions to prepare a competitive talent pool:-

An organisation's staffing system should be consistent, integrated and strategically focused. Qualified personnel have better grasping power, they can understand the techniques of work better and can easily adapt to changes. Proper staffing enhances the employee productivity, efficiency etc.

The organisation must conduct continuous training programmes for their employees. This helps to increase the skill and efficiency which result in better quality and quantity of production.

It is possible to implement a new ERP system, which is fully computerized and free from all errors in recruitment, selection performance evaluation, which is helpful for manager to take proper decision and to prepare good HR modules, it will increase organizational productivity.

It is possible to develop the organization as a learning organization by providing proper working environment for learning by the mindset of employees.

Organisation should encourage the open and effective communication between the employees, it is possible through proper training and counseling programme for managerial level employees.

Give more focus on continuous improvement programme, employees become more committed to their organization. Commitment leads them to exhibit proper role behavior and these results in overall reduction in operating expenses and higher profitability.

Encourage informal associations like Quality circles which help to increase the morale of the employees and bring cordial relations in the organization. Identify the shining stars and develop that employees .

CONCULSION

Careful planning give more weightage for to develop talent pool in the organization, which is required for talent management to become ingrained in an organization's culture and practices. Only when this happens it is possible for talent management practices to be both effective and sustainable.

Organizations were highlighted with effective talent management practices have been at it for years — consistently demonstrating their commitment to developing great talent. And over time, this commitment has translated into a strong base of talent and a pipeline of leaders with a demonstrable impact on business results. Innovative ideas, strong execution, and a foundation of clear metrics can enable many more talent management professionals to create a talent mindset that will prepare their organizations to face the challenges ahead. Talent Management has never been more of an immediate concern than it is right now. But in the rush to fill a perceived talent management void, organizations must be careful not to rush into implementing initiatives or programmes that are more about taking action than about implementing a well crafted solution.

BIBILOGRAPHY

1.Bassi L and Mc Murrer (2006), Human Capital and organizational performance, next generation metrices as a catalyst for change: Mc Bassi and Company, white paper, www.mcbassi.com
2.Berger, L. and Berger, D. (2004) The Talent Management Handbook. New York: McGraw Hill
3.Boudreau, J. W. and Ramstad, P. M. (2006) Talentship and HR measurement and analysis: from ROI to strategic change. Human Resource Planning. Vol. 29,V No. 1, pp25–33
4.Brittain, S. (2006) Talent Management. Selection and Development Review, Vol. 22, No. 3, June
5.Cummings T and Worley (2001), Organisational Development and Change, Cincinnati, OH, South Western

6.Dychwald, K. (2006) Workforce Crisis: How to beat the coming shortage of skills and talent. Boston, MA: Harvard Business School Press

7.McKinsey & Company (2010, March). Building organizational capabilities: McKinsey Global Survey results. McKinsey Quarterly.

8.Menon Bindu (2012), A Framework for Mapping Talent Management Strategies, Time Book.

9.Richard S. Wellness (2007), Nine practices for effective talent management, White paper

10.Tansley, C. (2011). What do we mean by the term "talent" in talent management?. Industrial & Commercial Training. 43(5), 266-274.

11.Tarique, I. & Schuler. R., S. (2010). Global talent management: Literature review, integrative framework, and suggestions for further research. Journal of World Business. 45(2), 122-133.

12.Vladescu, A. (2012). The possibility of implementing talent management in the public sector. Management & Marketing, 7(2), 351-362.

13.Zhang S. & Bright, D. (2012). Talent definition and talent management recognition in Chinese private-owned enterprises. Journal of Chinese entrepreneurship. 4(2), 143-163

ISSN 2278-0319

Research Journal for Resurrection in Intellectual Disciplines

International Registered and Recognized Research Journal in Higher Education for all Subjects

Chief Editor
Dr. Khanderavaji S. Kale

RESURRECTION

CONTENTS

Page No-1 to 9
Research Paper
Research Journal for
Resurrection in intellectual Discipline
ISSN 2278-0319,Vol-21, Issue-1, May., to July,-2017 (Quarterly)

Hypothesis Testing

Amar Dinkar Ekal
Assistant Professor,
CSIBER, Kolhapur.

Introduction

Hypothesis testing is the second side of a two-sided inference coin, confidence interval estimation being the first side. We want to make inferences to a population on the basis of sample data; we can perform the analysis in either of two ways. We proceed with calculating a point estimate of a population parameter and then form a confidence interval around this point estimate. In this way we bring no preconceived ideas to the analysis but instead let the data "speak for themselves" in telling us where the true parameter is likely to be.

In contrast, an researcher often has a particular theory, or hypothesis, that he or she would like to test. This hypothesis might be that a new packaging design will produce more sales than the current design, that a new drug will have a higher cure rate for a given disease than any drug currently on the market, that people who smoke cigarettes are more susceptible to heart disease than nonsmokers etc. In this case the researcher typically collects sample data and checks whether the data provide enough evidence to support the hypothesis.

Statistical Testing Procedure

The statistical testing of a hypothesis consists of the following steps:

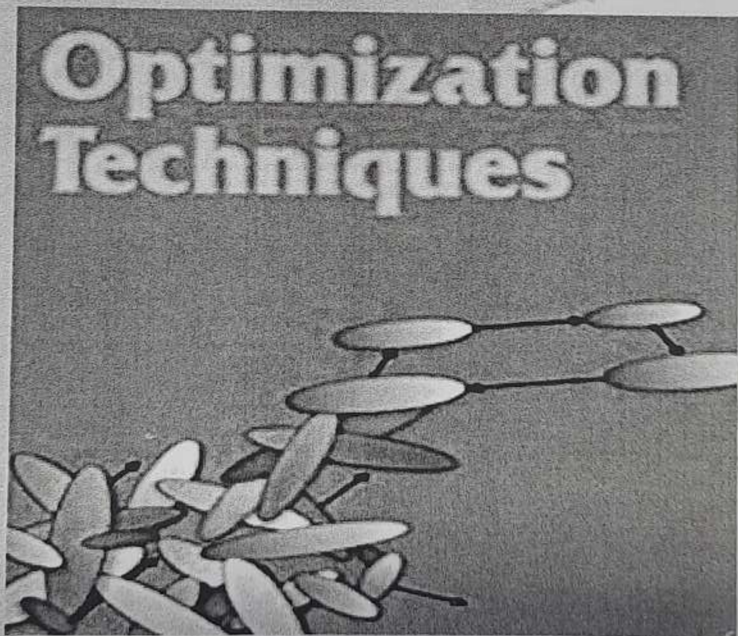
1. State the null and alternative (research) hypothesis.
2. Select the appropriate statistical test.
3. Select the desired level of significance.
4. Compute the appropriate statistic from the sample data.
5. Select the correct type of probability distribution.
6. Compute the significance test value.
7. Obtain the critical test value.
8. Compare & Make the decision.

Concepts in Hypothesis Testing

Before we plug into the details of specific hypothesis tests, it is useful to discuss the

INDIAN STREAMS
RESEARCH JOURNAL
International Recognition Multidisciplinary Research Journal
Volume - 7 | Issue - 4 | May - 2017
5.1651(UIF) 2230-7850

OPTIMIZATION TECHNIQUES IN MANAGEMENT EDUCATION : PREMIUM SOLVER AS A TOOL FOR OPTIMIZATION



Amar Dinkar Ekal

Amar Dinkar Ekal

Assistant Professor, CSIBER, Kolhapur.

ABSTRACT:- Business organizations put a high value on reliable information about the future: future sales, future costs, future patterns of consumer demand, future prices of supplies. Many management problems arise simply because the future is unkn....

Editor - In - Chief - H. N. Jagtap

ISSN: 2230-7850 IMPACT FACTOR : 5.1651 (UIF) VOLUME - 7 | ISSUE - 4 | MAY - 2017

INDIAN STREAMS RESEARCH JOURNAL

OPTIMIZATION TECHNIQUES IN MANAGEMENT EDUCATION: PREMIUM SOLVER AS A TOOL FOR OPTIMIZATION

Amar Dinkar Ekal
Assistant Professor, CSIBER, Kolhapur .

Abstract

Business organizations put a high value on reliable information about the future: future sales, future costs, future patterns of consumer demand, future prices of supplies. Many management problems arise simply because the future is unknown or has a high degree of uncertainty about it. In present paper, we are discussing methods to predict future values of some key business variables by considering the general principles of forecasting and quantitative analysis. Quantitative analysis is the scientific approach to managerial decision making. Whim, emotions and guesswork are not part of the quantitative analysis approach. The approach starts with data. Like raw material for a factory, this data is manipulated or processed into resulting information that is value able to people in making decisions. The processing and manipulating of raw data into meaningful information is the heart of quantitative analysis. Computers have been instrumented in the increasing use of quantitative analysis. Management Science also is the scientific discipline devoted to the analysis & solution of complex decision problems. Management science is aided by a diverse collection of computer based methods and tools for building, manipulating and solving various models, which is referred as decision technology. These methods and tools include spreadsheets, data management, data analysis, special software for implementing management approach. In present discussion we are using Premium Solver for optimization models.

KEY WORDS: *Quantitative Analysis, Management Science, Decision Technology.*

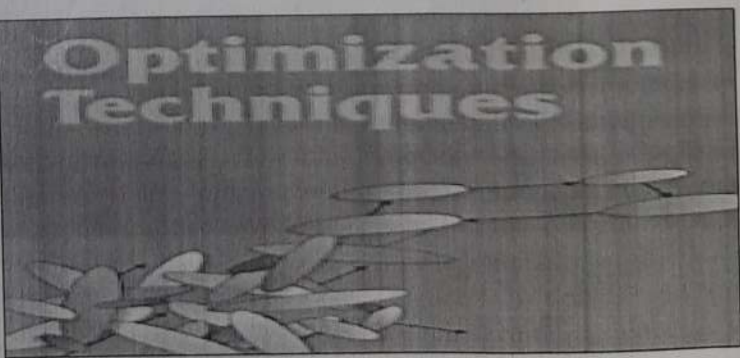
1.1 INTRODUCTION

All organizations are faced at one time or many times with making decisions involving limited resources or ensuring that certain requirements must be satisfied. We often formulate these decision problems as optimization models that seek to maximize or minimize some objective function satisfying a set of constraints.

An important category of optimization models is called mathematical programming. In a mathematical programming, constraints are expressed mathematically using en-equalities (≤ or ≥) and equalities. The term programming was coined because these models find the best program or course of action to follow. We will deal with four important types of mathematical programming model.

Linear models- those in which all constraints are linear functions of the decision variables, all of which can assume any continuous value;

Multi-objective models- linear models that have more than one objective to meet or conflicting goals that must be resolved;



ISSN: 2230-7850 IMPACT FACTOR : 5.1651 (UIF) VOLUME - 7 | ISSUE - 4 | MAY - 2017

INDIAN STREAMS RESEARCH JOURNAL

OPTIMIZATION TECHNIQUES IN MANAGEMENT EDUCATION: PREMIUM SOLVER AS A TOOL FOR OPTIMIZATION

Amar Dinkar Ekal
Assistant Professor, CSIBER, Kolhapur .

Abstract

Business organizations put a high value on reliable information about the future: future sales, future costs, future patterns of consumer demand, future prices of supplies. Many management problems arise simply because the future is unknown or has a high degree of uncertainty about it. In present paper, we are discussing methods to predict future values of some key business variables by considering the general principles of forecasting and quantitative analysis. Quantitative analysis is the scientific approach to managerial decision making. Whim, emotions and guesswork are not part of the quantitative analysis approach. The approach starts with data. Like raw material for a factory, this data is manipulated or processed into resulting information that is value able to people in making decisions. The processing and manipulating of raw data into meaningful information is the heart of quantitative analysis. Computers have been instrumented in the increasing use of quantitative analysis. Management Science also is the scientific discipline devoted to the analysis & solution of complex decision problems. Management science is aided by a diverse collection of computer based methods and tools for building, manipulating and solving various models, which is referred as decision technology. These methods and tools include spreadsheets, data management, data analysis, special software for implementing management approach. In present discussion we are using Premium Solver for optimization models.

KEY WORDS: *Quantitative Analysis, Management Science, Decision Technology.*

1.1 INTRODUCTION

All organizations are faced at one time or many times with making decisions involving limited resources or ensuring that certain requirements must be satisfied. We often formulate these decision problems as optimization models that seek to maximize or minimize some objective function satisfying a set of constraints.

An important category of optimization models is called mathematical programming. In a mathematical programming, constraints are expressed mathematically using en-equalities (≤ or ≥) and equalities. The term programming was coined because these models find the best program or course of action to follow. We will deal with four important types of mathematical programming model.

Linear models- those in which all constraints are linear functions of the decision variables, all of which can assume any continuous value;

Multi-objective models- linear models that have more than one objective to meet or conflicting goals that must be resolved;

3. *Integer models*- linear models for which some or all of the decision variables must have integer (whole number) values for an optimal solution to be realistic; and
4. *Nonlinear models*- those for which the objective function and/or constraint functions are not linear.

1.2 Premium Solver

Premium Solver is an add-in included with Excel for solving linear programs and other types of optimization problems. Solver may be used to solve problems with up to 200 decision variables, 100 regular constraints and 400 simple constraints (lower and upper bounds on the decision variables).

To begin Solver, select *Tools* from the main menu and the *Solver.* The *Solver Parameter* dialog box will appear. The *Set Target Cell* box should contain the cell location of objective. In the *By Changing Cells* box, you specify the location of the decision variables. Finally, constraints are specified in the *Subject to the constraints* box by clicking on *Add. Change* allows you to modify a constraint already entered, and *Delete* allows you to delete a previously entered constraint. *Reset All* clears the current problem and resets all parameters to their default values. *Options* invokes the Solver options dialog box, in which you have to specify *Assume Non-Negative, Assume Linear Model.*

1.3 Mathematical Models For Optimization

An optimization model seeks to identify the best values of decision variables to achieve some objectives. Most optimization models have constraints, limitations, requirements or other restrictions that are imposed on any solution, such as “Do not exceed the allowable budget” or “Ensure that all demand is met”

1.3.1 A Product Mix Model

Let ABC Micro Products, assembles two models A and B. Both models use many of the same electronic components. Two of these components, which have very high quality, and both models A and B require both components, which are obtained from a single overseas manufacturer. For the next month, the supply of these components is limited to 6000 components of I and 3500 components of II. To assemble one unit of A 12 components of I and 6 components of II are required while to assemble 1 unit of B 12 components of I and 10 components of II are required. By selling one unit of A a profit of 25 is earned while from B a profit of 40. How many of each product should be assembled during the next month to maximize the manufacturer’s profit? Assume that the firm can sell all its produces.

Here, from above description one can tabulate this information as

Product	**Component I**	**Component II**	**Profit**
A	12	6	25
B	12	10	40
Available	**6000**	**3500**	

Let assume that we produced X_1 units of A and X_2 units of B. Here, we refer to the unit profits as *objective function coefficient*, the per-unit requirements for the limited components of each product as *constraint coefficient,* and the available quantities of components I and II as the *right-hand side values.* The left hand sides of the constraints are called *constraint functions.* Thus for the component A limitation, $12X_1 + 12X_2$ is the constraint function with constraint coefficients of 12 & 12 and 6,000 is the right-hand side value. Hence, the mathematical model is

Maximize $Z = 25X_1 + 40X_2$

Subject to

$12X_1 + 12X_2 \leq 6000$ Component I Constraint

$6X_1 + 10X_2 \leq 3500$ Component II Constraint

$X_1 \geq 0$ and $X_2 \geq 0$. Non-negativity Constraint

The above model is called a **linear programming (LP) model.** To be a linear program, the following three conditions must be met:

I. The objective and constraints must be represented using *linear functions* of the decision variables. This means that all decision variables can be raised *only* to the first power and can be multiplied *only* by a constant term.
II. Constraints must be of a ≤, ≥ or = type. A constraint using a *strict inequality* (< or >) is not permitted.
III. Variables can assume any fractional numerical value; that is, they are continuous.

Traditionally to find solution for this type of linear programming model, depending on number of variables one can use either Graphical or Simplex Method. But, now, we will develop model in Excel and solve it by using Add-Ins Premium Solver.

Product Mix Model (Linear Programming Model):

To solve above model we have to prepare model in Excel as below.

	A	B	C	D	E
1	ABC Micro Products				
2					
3	**Parameters and Uncontrollable Variables**				
4					
5	**Product**	**A**	**B**		
6	Profit	25	40	Availability	
7	Component I	12	12	6000	
8	Component II	6	10	3500	
9					
10					
11	*Linear Programming Model*				
12					
13	**Product**	**A**	**B**	**Total**	**Unused**
14	Quantity Produced	0	0	0	
15	Component I Used	=B7*B14	=C7*C14	=B15+C15	=D7-D15
16	Component II Used	=B8*B14	=C8*C14	=B16+C16	=D8-D16
17	Profit	=B6*B14	=C6*C14	=B17+C17	

Here, one can select Solver from Excel-Tool Menu and by setting the following one can get the solution as

	A	B	C	D	E
1	**ABC Micro Products**				
2					
3	**Parameters and Uncontrollable Variables**				
4					
5	**Product**	**A**	**B**		
6	Profit	25	40	Availability	
7	Component A	12	12	6000	
8	Component B	6	10	3500	
9					

10					
11	**Linear Programming Model**				
12					
13	**Product**	**A**	**B**	**Total**	**Unused**
14	Quantity Produced	375	125	500	
15	Component A Used	4500	1500	6000	0
16	Component B Used	2250	1250	3500	0
17	Profit	9375	5000	14375	

1.3.2 Logistics (Transportation) Model

In many situations a company produces products at locations called supply points and ships these products to customer locations called demand points. Typically, each supply point has a limited capacity that it can ship, and each must receive a required quantity of the product. Spreadsheet models can be used to determine the minimum-cost shipping method for satisfying customer demands.

Viraj Electric Shipment Viraj Electric has three electric power plants that supply the power needs of four cities. Each power plant can supply the amounts shown following table.

	City 1	City 2	City 3	City 4	Supply
Plant 1	8	6	10	9	**35**
Plant 2	9	12	13	7	**50**
Plant 3	14	9	16	5	**40**
Demand	**45**	**20**	**30**	**30**	

Traditionally to get initial basic solution, one can use methods like North-West-Corner Rule, Least Cost Method, Vogel's Approximation method etc. In addition to this, he/she has to use MODI's algorithm to test whether the initial basic solution is optimal or not. But, at present formulate this problem as a mathematical linear programming model. For this assume that C_{ij} be the transportation cost associated with transporting 1 unit from i^{th} origin/plant to j^{th} destination/city and X_{ij} be the number of units transported from i^{th} origin to j^{th} destination then the linear programming model for the above problem becomes

Minimize: $8X_{11} + 6X_{12} + 10X_{13} + 9X_{14} +$
$9X_{21} + 12X_{22} + 13X_{23} + 7X_{24} +$
$14X_{31} + 9X_{32} + 16X_{33} + 5X_{34}$

Subject to

$X_{11} + X_{12} + X_{13} + X_{14} = 35$
$X_{21} + X_{22} + X_{23} + X_{24} = 50$
$X_{31} + X_{32} + X_{33} + X_{34} = 40$
$X_{11} + X_{21} + X_{31} = 45$
$X_{12} + X_{22} + X_{32} = 20$
$X_{13} + X_{23} + X_{33} = 30$
$X_{14} + X_{24} + X_{34} = 30$
All $X_{ij} \geq 0$

Viraj Electric Shipment (Transportation Model)

To solve above model we have to prepare model in Excel as below.

	A	B	C	D	E	F	G
1	**Viraj Electric Company Transportation Problem**						
2	**Unit Shipping Cost**						
3					**To**		
4			**City 1**	**City 2**	**City 3**	**City 4**	**Supply**
5		**Plant 1**	8	6	10	9	**35**
6	*From*	**Plant 2**	9	12	13	7	**50**
7		**Plant 3**	14	9	16	5	**40**
8	Demand		**45**	**20**	**30**	**30**	
9							
10	**Shipments**				To		
11							
12			**City 1**	**City 2**	**City 3**	**City 4**	**Total Shipped**
13		**Plant 1**	0	0	0	0	=SUM(C13:F13)
14	**From**	**Plant 2**	0	0	0	0	=SUM(C14:F14)
15		**Plant 3**	0	0	0	0	=SUM(C14:F14)
16	**Total Received**		=SUM(C13:C15)	=SUM(D13:D15)	=SUM(E13:E15)	=SUM(E13:E15)	
17	**Total Cost**		**=SUMPRODUCT(C5:F7,C13:F15)**				

Here, set the following in Premium Solver

Set Target Cell as $C$18 to be Minimize

By Changing Cell as $C$13:$F$15

Subject to Constraints $G$13 <= $G$5, $G$14 <= $G$6
$G$15 <= $G$7 , $C$16 >= $C$8
$D$16 >= $D$8 , $E$16 >= $E$8
$F$16 >= $F$8

In options set Check Box True 1. Assume Linear Model
2. Assume Non-Negative

Then one will get the following solution

	A	B	C	D	E	F	G
1	*Viraj Electric Company Transportation Problem*						
2	**Unit Shipping Cost**						
3					**To**		
4			**City 1**	**City 2**	**City 3**	**City 4**	**Supply**
5		**Plant 1**	8	6	10	9	35
6	**From**	**Plant 2**	9	12	13	7	50
7		**Plant 3**	14	9	16	5	40
8		**Demand**	45	20	30	30	
9							
10	**Shipments**			**To**			
11							
12			**City 1**	**City 2**	**City 3**	**City 4**	**Total Shipped**
13		**Plant 1**	0	10	25	0	35
14	**From**	**Plant 2**	45	0	5	0	50
15		**Plant 3**	0	10	0	30	40
16	**Total Received**		45	20	30	30	
17	**Total Cost**		1020				

1.3.3 Assignment Model

An Assignment Problem is a particular case of transportation problem where the objective is to assign a number of resources to an equal number of activities so as to minimize total cost or maximize total profit. The problem of assignment arises because available resources such as men, machines etc. having varying degrees of efficiency for performing different activities such as job. Therefore, cost, profit or time of performing different activities is different. Thus, the problem is: *how should the assignments be made so as to optimize the given objective.*

1.4 CONCLUSION

The objective of the present paper was to illustrate the use of Information Technology tool and explain concept of optimization techniques in management. The main advantage of studying Premium Solver E-tool is that it trains a student to get conversant with the present and future business environment and to analyze it for managerial actions at general and functional levels. Also, instead of using traditional method for getting solution, one can get quick accurate solution. In addition, he/she can use the same model with changed values of parameters and able to find out new solution within short margin of time.

REFERENCE:

1. *Anand Sharma(2006),* Statistics for Management, Himalaya Publishing House.
2. *Basavraj S Benni(2006),* Enhancing the Management Teacher's Productivity through E-Tools: Demand Forecasting as a Case, JIMS 8m.
3. *Jaffrey D. Camm, James R. Evans (2000)*, Management Science & Decision Technology, South-Western College Publishing.
4. *John A Lawrence, Barry A Pasternack,* Applied Management Science – A Computer Integrated Approach for Decision Making, John Wiley & Sons.
5. *Mik Wisniewski(1996),* Quantitative Methods for Decision Makers*,* Macmilan.
6. *S. Christian Albright, Wayne Winston, Christopher J. Zappe(2000),* Data Analysis & Decision Making with Microsoft Excel, Duxbury.

Amar Dinkar Ekal
Assistant Professor, CSIBER, Kolhapur .

International Journal of Research in Social Sciences
Year : 2016, Volume : 6, Issue : 6
First page : (597) Last page : (604)
Online ISSN : 2249-2496.

Leveraging Human Resource through Employee Self Service In HRIS

Mrs. Mane Madhura K.
(MCA, MBA, M.PHIL, M.COM. Sub(Commu.), Assistant Professor, Chh. Shahu Institue of Business Education and Esearch, University Roadkolhapur, Maharashtra, India

Online published on 8 August, 2016.

Abstract

Researchers realized the strategic importance of HRM only recently. Companies started to documentways of creating business value through proper management of workforce. HRM was initially called Personnel management that consisted of routine administrative and transactional work related to HR, but due to globalization, company consolidation, technological advances, and further research, HRM today focuses on strategic initiatives like mergers and acquisitions, talent management, succession planning industrial and labor relations, and diversity and inclusion. In the current global work environment, most companies focus on lowering employee turnover and on retaining the talent and knowledge held by their workforce. New hiring not only entails a high cost but also increases the risk of a newcomer not being able to replace the person who worked in a position before. HR departments strive to offer benefits that will appeal to workers, thus reducing the risk of losing corporate knowledge. A HRIS, which is also known as a human resource information system or human resource management system (HRMS), is basically an intersection of human resources and information technology through HR software. It allows HR activities and processes to occur electronically. HRIS has different features to handle different functions in HRM. One of the main feature of HRIS is Employee Self Service (ESS). This feature helps the HR department to enable employee get information from the HRIS on their own, thus saving a lot of time of the HR department to take care of more important strategic tasks. The company gets many benefits from ESS. Two issues are important one; Determining Whether to Adopt ESSand two; Question is open enrollment would be useful.

Top

Keywords

ESS, HRIS, OPEN ENROLLMENT, STRATEGIC HRM.

Top

Top

An Exploratory Study of Engineering Students' Perception onFactors Influencing the Quality of Employability Enhancing Training and Development Programme.

1 author:

Pravin P Chavan
CSIBER Kolhapur

ISSN : 0976-3740

Journal of Development Management Studies

Ashwatha

Vol.10 No.3 July-September 2016 Rs. 20/-

Yashwantrao Chavan Academy of Development Administration

Raj Bhavan Complex, Baner Road, Pune 411 007.

Tel.: (020) 25608234 Fax: (020) 25608100 Email : yashadabooks@gmail.com Website : www.yashada.org

ISSN : 0976-3740

Journal of Development Management Studies

Ashwattha

Vol.10 No.3 July-September 2016 Rs. 20/-

Contents

An Exploratory Study of Engineering Students' Perception on Factors Influencing the Quality of Employability Enhancing Training and Development Programme

Ajay Maske[1] and Pravin Chavan[2]

Abstract:

Engineering education is one of the most prosperous educations that provide ample number of career opportunities. However research conducted on quality of engineering students in India reveals that hardly 15 to 25 per cent engineering students are employable (see also AICTE, 2014). To overcome this problem educational institute imparts special Training to the students so that overall development of these students shall take place. For successful achievement of training objectives students training need assessment is important. Present research paper is based on an exploratory study of engineering student perception on factors of successful Training and Development Program. Factor analysis result reveals that training material and delivery, location and facilities, training goals, training scheduled and experiential opportunity, placement orientations and planning and duration of training are the important factors that determine success of training.

Introduction:

Training and development plays very significant role in increasing the productivity of the manpower in any organizations. There are enormous direct and indirect benefits of training for individuals, teams and society. The direct benefits like enhancement in innovation, adaptive expertise, technical skills, self-management skills, and cross-cultural adjustment. Other indirect benefits from training and developments are improvement in the communication, planning, coordination and individual empowerment. As training improves the skill set of employees working in the organization countries shall also skill up their youth through a quality education and training. National Skill Development Corporation in India is providing various training modules and courses that are helping for building human capital.

Indian education sector is witnessing a mushrooming growth. Studies have revealed that Indian institutions produced lakhs of engineers but

[1]Ph. D. Research Scholar, Department of Commerce and Management, Shivaji University Kolhapur, 416 004, (MH) India

[2]Assistant Professor, Chh. Shahu Institute of Business Education and Research, Kolhapur, 416 004 (MS), India.

industry experts strongly feel that only 15 to 25 per cent of them are employable .It was found that there is ample gap between the academic output and industrial requirement. It is also found that employers are not satisfied with skill set and quality of the engineering students. Companies are less satisfied with fresh engineering graduates produced in the engineering education institutes . Students with skills like positive attitude, effective communication, problem solving, time-management, team spirit, self-confidence, criticism handling, flexibility etc. means soft skills as a whole, have much better chances of survival in corporate in comparison with students those are lacking in the soft skills (Saravanan, 2009). Technical and conceptual skills students learn through the basic curriculum offered by the educational institute. Apart from it there is need of offering soft skills to the students which they may use in day to day interpersonal transaction in the organization. These skills can be imparted to the students through specially planned training program.

Employers think that conceptual skills can be partly remedied through in-house training even after graduation, while soft skills would require longer timeframe to be acquired.. Companies give more importance for soft skill while hiring students from campus interviews. To increase the number of students to be selected from campus interviews it's important for the educational institutes to organize special training for the students.

The students good at conceptual knowledge and equipped with soft skills have better prospected to get employment. A quality placement of the students is not only important in terms of candidates but imperative in terms of educational institutes for brand building and gaining competitive edge. Good placement directly affects on the students admission and attracting quality students' admissions in the institute.

Training is defined as the act of increasing the knowledge and skills of an employee for doing a particular job. It is imparted to develop specific skill among the students. When any organization provides training to their employees it is most important to predefine the objectives of the training. The success of training depends upon how well the training need analysis is been done, advance planning done for the training, content of the training, how well the training is been delivered, and feedback received from trainees on overall quality aspect of the training. Feedback received from the students on training and development program assists educational institutes to improve quality of the program and address the students' needs more effectively. Present paper is a based on a study of students' opinion on quality of Training and development program implemented by the educational institutes.

The Context:

India's is one of the fastest growing economies. This economic growth offers employment opportunities. Engineering students have ample numbers of employment prospect both in Indian companies and in Multinational Corporations. Research study conducted on quality of engineering students reveals that 15 percent to 25 percent are employable. To overcome this problem educational institute imparts special Training to the students so that overall development of these students shall take place. For successful achievement of training objectives students training need assessment is important. Present research work is an Exploratory Study of engineering Student Perception on factors of Successful Training and Development Program. Factor analysis result reveals that Training Material and Delivery, Location and Facilities, Training Goals, Training Material and Delivery, Training Scheduled & Experiential Opportunity, Placement orientations and Planning and duration of training are the important factors that influence on success of training. Key Introduction:

Training and development plays very significant role in increasing the productivity of the manpower in any organizations. There are enormous direct and indirect benefits of training for individuals, teams and society. The direct benefits like enhancement in innovation, adaptive expertise, technical skills, self-management skills, and cross-cultural adjustment. Other indirect benefits from training and developments are improvement in the communication, planning, coordination and individual empowerment .

As training improves the skill set of employees working in the organization countries shall also skill up their youth through a quality education and training. Many countries are also focusing on training and development of the youth, students, skilled employees and unskilled workers. National Skill Development Corporation in India is providing various training modules, courses which are helping for building human capital and these is directly correlated to economic prosperity. So proper designing, conducting and evaluating training programs to employees,students and society will helps in developing human asset which can leads for development of the economy.

In India there were few technical institutes which were providing technical education however recently the situations has changed, many new private player has entered in the education sector because of which intense competition has taken place in education industry. Many studies have reveal that Indian institutions produced lakhs of engineers but industry experts strongly feel that only 15 per cent to 25 per cent of them only are employable .It was found that there is ample gap between the academic output and industrial requirement. It is also found that employers are not satisfied with skill set and quality of the engineering students. Companies are less satisfied with fresh engineering graduates produced in the engineering education institutes . Students with skills like positive attitude, effective communication, problem solving, time-management, team spirit, self-confidence, criticism handling, flexibility which means also soft skills as a whole, have much better chances of survival in corporate in comparison with students those are lacking in the soft skills (Saravanan 2009). Technical skills and conceptual skills students learn through the basic curriculum offered by the educational institute. Apart from it there is need of offering soft skills to the students which they may use in day to day interpersonal transaction in the organization. These skills can be imparted to the students through specially planned training program. “Training is the defined as the act of increasing the knowledge and skills of an employee for doing a particular job".

Comparatively employers give lowest importance while selecting students because employers think that conceptual skills can be partly remedied through in-house training even after graduation while soft skills would require longer timeframe to be acquired.. Companies give more importance for soft skill while hiring students from campus interviews. To increase the number of students to be selected from campus interview it's important for the educational institutes to organize special training for the students.

The students good at conceptual knowledge and equipped with soft skills have better prospected to get employment. A quality placement of the students is not only important in terms of candidates but imperative in terms of educational institutes for brand building and gaining competitive edge. Good placement directly affects on the students admission and attracting quality students' admissions in the institute.

Training is the systematic modification of behavior through learning which occurs as a result of education, instruction, development and planned experience. Training is imparted to development specific skill among the students. When any organization provides training to their employees it is most important to predefine the objectives of the training. The success of training dependents upon how well the training need analysis is been done, advance planning done for the training, content of the training, how well the training is been delivered, and feedback received from the trainees on the overall quality aspect of the training. Feedback received from the students on Training and development program assists educational institutes improve quality of the program and address the students need more effectively. Present research work is a study of student's opinion on quality of Training and development program implemented by the educational institutes.

Professional graduates need to improve their generic skills (Basic Skills, People related skills, Conceptual skills) other than technical skills. The students need to be well versed with selection attributes given by recruiters. For getting success in interviews training on communication skill, writing resume, positive attitude, and motivation, strategic planning, and preparing for the interview are significant (B. Sripala and G.V. Praveen, 2011). Trainings programs are advantageous to student of all kinds. Training plays an instrumental role in improving communication skills, managerial skill, and to build confidence amongst student. It also helps students for getting jobs. Curriculum and courses need to be reoriented toward practical knowledge and art of doing things. About 80 per cent of students support that the training should close to their location where they stay (Salma Shaheenand Sultana Khatoon, 2013). During the period of the post 1990s, attributes such as rapid technological growth, globalization, dynamic world economy, increasing influence of IT, rising competition and others, generic skills or soft skills of high order is expected as a must in fresh engineers. In spite of lakhs of engineers being produced by our Indian institutions, the industry experts strongly feel that only 15 to 25 per cent of them only are employable (BelagoduVenkatesh, 2013).

Research Gap:

There is an ample research conducted on expectations of industry from engineering students and skill possessed by them. These studies helps to understand what shall be the content of the training. Educational institutes can use these studies as a guiding tool and prepare their training model. However there is lack of research conducted on students' opinion of assessing the quality of the training. Present study is an effort to understand the students' opinion on the quality of the training imparted by the educational institutes. The objective of the study is to understand the factor influencing the success of T and D program in the students' perspective.

Data and Methodology:

The study is conducted on Engineering Institutes affiliated to Shivaji University Kolhapur. The engineering institutes completed five years of operation are considered for the study. There are total 29 such institutes. The students pursuing engineering courses from these institutes are the unit under the study. There are total 10348 students admitted for the batch 2014-15 in all these selected sample institutes. From this population sample size is calculated using proportion to population sample size estimation method. At 99 per cent confidence level and at 5 per cent confidence interval calculation calculated sample size is 625 students which form the base of data collection for the present study. The calculated sample size is proportionally allocated among 29 colleges and samples from each college were selected through using simple random sampling method.A structured questionnaire was prepared for data collection. To understand Student's feedback on training and development program conducted by the institute scale was prepared. The scale contains 30 statements. These statements were graded on 5 point scale. Here 1 represents strongly disagree and 5 represent strongly agree. Reliability of the scale was measured through Cronbach Alpha. As alpha score is 0.9326, the scale is reliable.

Results and Discussions

To study the factors under student's opinion on quality of training and development evaluation principal components Analysis is used. KMO test result 0.918 and Bartlett's test of sphericity is significant at 5 per cent level of significant ($p < 0.05$). Both tests are valid to run factor analysis.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.918
Bartlett's Test of Sphericity	Approx. Chi-Square	9277.709
	df	435
	Sig.	.000

To choose the factors criteria of given values over 1 is used. From the table below it is identified that there are six factors with given values greater than1. The variables of each factor are given in table below.

Total Variance Explained

	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	Per Cent of Variance	Cumulative PerCent	Total	Per Cent of Variance	Cumulative Per Cent	Total	Per Cent of Variance	Cumulative Per Cent
1	10.680	35.599	35.599	10.680	35.599	35.599	5.100	16.999	16.999
2	1.934	6.448	42.047	1.934	6.448	42.047	3.426	11.421	28.420
3	1.586	5.288	47.335	1.586	5.288	47.335	2.462	8.207	36.627
4	1.310	4.366	51.702	1.310	4.366	51.702	2.361	7.871	44.498
5	1.204	4.013	55.714	1.204	4.013	55.714	2.286	7.620	52.118
6	1.148	3.826	59.540	1.148	3.826	59.540	2.227	7.423	59.540
7	.978	3.261	62.802	-	-	-	-	-	-
8	.924	3.079	65.881	-	-	-	-	-	-
9	.879	2.930	68.811	-	-	-	-	-	-
10	.794	2.648	71.458	-	-	-	-	-	-
11	.751	2.504	73.962	-	-	-	-	-	-
12	.724	2.414	76.376	-	-	-	-	-	-
13	.674	2.247	78.623	-	-	-	-	-	-
14	.627	2.088	80.711	-	-	-	-	-	-
15	.618	2.061	82.772	-	-	-	-	-	-
16	.555	1.851	84.623	-	-	-	-	-	-
17	.481	1.602	86.225	-	-	-	-	-	-
18	.459	1.529	87.754	-	-	-	-	-	-
19	.416	1.386	89.141	-	-	-	-	-	-
20	.407	1.357	90.497	-	-	-	-	-	-
21	.392	1.307	91.805	-	-	-	-	-	-
22	.373	1.244	93.049	-	-	-	-	-	-
23	.351	1.172	94.221	-	-	-	-	-	-

	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	Per Cent of Variance	Cumulative PerCent	Total	Per Cent of Variance	Cumulative Per Cent	Total	Per Cent of Variance	Cumulative Per Cent
24	.321	1.069	95.289	-	-	-	-	-	-
25	.312	1.041	96.330	-	-	-	-	-	-
26	.280	.932	97.262	-	-	-	-	-	-
27	.251	.837	98.100	-	-	-	-	-	-
28	.214	.715	98.815	-	-	-	-	-	-
29	.193	.643	99.458	-	-	-	-	-	-
30	.163	.542	100.000	-	-	-	-	-	-

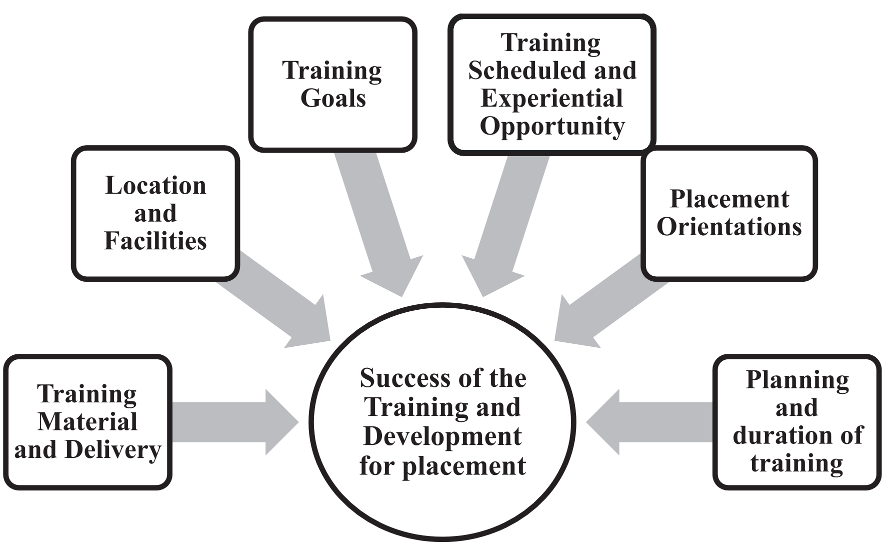
Extraction Method: Principal Component Analysis.

Following table shows the grouping of the variables according to the criteria and respective naming given to the each factor.

Rotated Component Matrix	Factor Loading	Factor
The supporting material for training was good	0.548	Training Material and Delivery
The each training session was good	0.581	
Training sessions were beneficial in terms of placements	0.668	
The training program was Well Designed	0.702	
The training program was Well Delivered	0.765	
Training programs arranged was helpful in personal growth	0.748	
Training programs are helpful in long run	0.638	
Training program was conducted systematically	0.662	
Proper training will help for improvement in final placements	0.545	
The training and development program were challenging	0.492	Location and Facilities
The Training location and facilities were good	0.712	
The Training location and facilities were conductive	0.746	
The timing of training was appropriate	0.761	
The lecturer/trainer were interactive	0.552	
Quality of Training was good	0.467	

Rotated Component Matrix	Factor Loading	Factor
The training and development program were Well Organized	0.535	Training Goals
The training and development program Beneficial	0.780	
The training and development program have Achieved its objective	0.549	
The training and development program prepare me for final placements	0.433	Training Scheduled and Experiential Opportunity
Throughout the engineering course sequence of training was well planed	0.502	
There is sufficient interaction with industry executives (HR. Manager, Production Manager, and GM Etc) and institute during your engineering education.	0.547	
With theoretical learning focus was also given on experiential learning	0.788	
The lecturer/trainer were Knows the importance of training And Placements	0.692	Placement orientation
The total amount of training provided was appropriate	0.597	
The training prepared me well for placement activity	0.581	
Training feedback and evaluation has done properly	0.532	Planning and Timing
Importance given by institute to training and development activates were sufficient	0.631	
Duration of training conducted in engineering is sufficient	0.556	
Thought-out engineering curriculum training and development activates were planned systematically.	0.685	
Training Activities conducted were placement oriented	0.469	

Factors Successful for the Training and Development for Placement:



Training Material and Delivery:

Training material and delivery is very important factor for the success of the training and development. Training material used by the trainer or teacher while training has high impact on the quality of the training.

Location and Facilities:

This factor is about extent to which training program was challenging, extent to which training provides new knowledge. It highlights that location and facility given for the training shall be conducive. It further emphases that the training should be interactive.

Training Goals:

This particular factor was about extent to which the training and development program was objective oriented and extent to which it has fulfilled its objectives.

Training Scheduled and Experiential Opportunity:

This factor underlines the importance of proper scheduling of the training and extent to which the training and development programs have provided experiential learning opportunity.

Placement orientations:

This factor underlines the importance of placement orientation of the training. The training shall make students capable and ready for final placement.

Planning and duration of training:

This factor states that to make training quality better the training activity needs to be well planned for entire year. Institute should give sufficient importance for the training. Time duration assigned for the training should be sufficient. Feedback of the training needs to be collected regularly.

Concluding Remarks:

Training programs are conducted with the focus for the adults and the employees within the organization. But in the current competitive epoch it needs a varied way of forthcoming academic educations. It is useful to initiate training programs as an alternative form of education in academia, as well as in the high school environment (MarinescuSorin, and George Toma 2013). Professional graduates need to improve their generic skills (Basic Skills, People related skills, Conceptual skills) other than technical skills and they should also become aware of history, growth potential, and availability of percentage of job in market. There is importance of firsthand knowledge and experience of situations which are faced by current Industry and hence the Professional graduates need to understand emerging trends of industry. This underlines the essential philosophy of training of young engineering graduates. The students need to be well versed with selection attributes given by recruiters. For securing the place in labour market of monopolistic competitive of nature the training on communication skill, writing resume, positive attitude, and motivation, strategic planning, and preparing for the interview are significant (B. Sripala and G.V. Praveen 2011). Trainings programmes are advantageous to student of all kinds including the female students. Training plays an instrumental role in improving communication skills, managerial skill, and to build confidence amongst student. It also helps students for locating the place in the labour market. Hence the curriculum and courses need to be reoriented toward practical knowledge and art of doing things. There is a serious necessity of training centers in universities. About 80 percent of students need training facilities in the closer vicinity (Salma Shaheen and Sultana Khatoon2013). Earlier the employers used to recruit fresh engineering graduates generally based on their academic merit as depicted by marks cards and technical skill tests. Emphasis on other skills was relatively less. However, in the post 1990s, attributes such as rapid technological growth, globalization, dynamic world economy, increasing influence of IT, competition and many others aspects, generic skills or soft skills of high order are expected as a preponderant prerequisite in fresh engineers. In spite of lakhs of engineers being produced the Indian institutions, the industry experts strongly feel that only 15 to 20 per cent of them only are employable (BelagoduVenkatesh2013).

Engineering students have ample number of employment prospects. However, lack of employability skills restricts the employment prospects of these students. To overcome this problem engineering colleges offer special kind of training for their overall development. The students training need analysis is a key for achieving the objectives of the training. Exploratory study conducted on student perception on training and development program reveals that training material and delivery, location and facilities, training goals, training scheduled and experiential opportunity, placement orientations and planning and duration of training are the important factors that influenceon success of training.

References:

1. Abad Ahmed (2013), "Training for problem solving" Indian Journal of training and development. Vol 43, No 04, October-December, 2013, pp.01-03.
2. Balyan, R. k., and Balyan, S. (2015). Modern Human Resources Management, Text and Cases (Frist ed.). Mumbai: Himalaya Publishing House.
3. Belagodu, V. (2013). A Study On The Perception Of Faculty On Employability Skills OF. Research Journal of Social Science and Management , 215-228.
4. Blom, A., and Saeki, H. (2010). Employability and Skill Set of Newly Graduated Engineers in India. World Bank Group ELibary .
5. Dubey, N. K., Goyal, S., Pathak, R., and Rajput, U. S. (2009). An Empirical Study on Expectations of Industry from Academia. http://www.indianmba.com/Faculty_Column/FC1099/fc1099.html .
6. Herman, A., and Kurt, K. (2009). Benefits of Training and Development for Individuals and Teams, Organizations, and Society. The Annual Review of Psycholog, psych.annualreviews.org, 451-474.
7. Paul Marinescu, Sorin George Toma (2013) Training programs-Training and development alternatives for students, International economic conference of Sibiu 2013 post crisis economy: Challenges and opportunities, IECS2013.
8. B. Sripala and G.V. Praveen (2011), Soft

Skills In Engineering Education: Industry perspective, Language in India, Vol No 11, pp-277-283.

9. Salma Shaheen and Sultana Khatoon (2013), Importance of industrial training for engineering girl's students, International Journal of Scientific Research, Vol 02, Issue 02, pp, 97-99.

10. Karim Babayi Nadinloyi, Nader Hajloo, Nasser sobhi Garamaleki, Hasan sadeghi: The study efficacy of time management training on increase academic time management of students, 3rd WCPCG-2012.

11. Mingkhuan Phaksunchai, Wannee Kaemkate, Suwimon Wongwanich (2014) : Research and development of a training package for developing creative problem solving of undergraduate students, 5th WCES2013

12. Zahid Ali,(2008), " Interaction Between Industry and higher institutions , engineering universities in particular", Second Conference on Planning and development of education and scientific research in Arab States, Feb2008.

❑❑❑

Corporate Social Responsibility of Selected Business Units in Satara

Article · December 2016

2 authors:

Pushpa Kashi
CHHATRAPATI SHAHU INSTITUTE OF BUSINESS EDUCATION AND RESEARCH

Sarang Bhola
Karmaveer Bhaurao Patil Institute of Management Studies and Research, Satara

A RESEARCH JOURNAL OF
DR. VIKHE PATIL FOUNDATION'S,
PRAVARA CENTRE FOR
MANAGEMENT RESEARCH &
DEVELOPMENT, PUNE

Online ISSN 2278-0165 Print ISSN 0975-7201

PMR

PRAVARA MANAGEMENT REVIEW

Vol 15 No. 2 JUL-DEC 2016

Listed in Cabells International Directory
Indexed in Indian Citation Index (ICI)

Research Papers:

Corporate Social Responsibility of Selected Business Units in Satara

Pushpa Kashi*
Dr. Sarang S. Bhola**

ABSTRACT:

Discharging duties towards society is a moral responsibility of organization since every organization initially strives for survival then growth, stability and then extends to social obligation. This descriptive inferential study emphasizes on the association of CSR activities undertaken by SME's and the expectations of society. Present study has been undertaken to test null hypothesis, the CSR activities undertaken by industry and expected by society are independent. Study conducted on samples randomly selected from 39 industrial units and 140 individuals from distinct social strata. Data collected using structured schedule. The data regarding opinions of citizens of data towards existing CSR initiatives by industry of Satara. has also been considered. Different strata of society taken group wise and been queried for awareness of existing CSR activities and for the expectations they are having from industry.

There are neglected areas wherein industries should implement CSR activities. The areas of concern are mainly more of environment, education, health. Concerned sensitive areas are rural development, road safety, sports and youth development.

The null hypothesis i.e. the CSR activities undertaken by industry and expected by society are independent is rejected.

Keywords: CSR, SMEs, Social Strata, Social obligations, Industry Proposals.

Introduction: Business exists within the society. Business and society depend completely on each other. Then it becomes essential for a business to survive in market that is to increase its connectivity to the society in a positive manner. That is why CSR are the business' responsibilities towards different groups of society in which it exists and grows. It becomes important to draw a distinction between CSR, which can be a strategic business policy and charity, sponsorships or philanthropy. Interviews of owners and managers of selected SMEs, representing a cross-section of the cluster, shown the scope of the enterprises' internal and community based external socially responsible activities. CSR as a way of responding to social demands in order to achieve social prestige Maintaining a strong corporate culture which emphasizes Corporate Social Responsibility (CSR) values is required to achieve benefits.

Review of Literature:

The concept of CSR originated in 1950s when American Corporations rapidly increased in size and power. In the early writings on CSR, it was referred to more often as social responsibility (SR) than as CSR, as then dominance of businesses been not noted. The publication by Howard R. Bowen (1953) of his landmark book Social Responsibilities of the Businessman is argued to mark the beginnings of the modern period of literature on this subject.

Bowen (1953) set forth an initial definition of the social responsibilities of businessmen: "It refers to the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society"

As per the classical view,business should provide economic wellbeing to the members of society, on the other hand non economic goals are best left to government and the other non-economic institutions of society.However,it is true in general but again business has to provide a helping hand to government.

John G. Simon, Charles W Powers and Jon P. Gunnemann propose four Criteria:

Corporations cannot solve each and every problem. There needed some distinguishing criteria in which corporation can assist other institutions.

1. The urgency of the need
2. The proximity of a corporation to the need
3. The capability of the corporation to respond effectively

*Assistant Professor, Chh. Shahu Institute of Business Education and Research, Kohapur 416 004

**Associate Professor, Karmaveer Bhaurao Patil Institute of Management Studies and Research, Satara 415 015

4. The likelihood that the need will not be met unless corporation acts.

Thus, a corporation can address such threats to well being of larger number of people that are close at hand and related in some way to the corporation activity, as corporations have the resources and expertise to solve them and if neglected can persist.

In globalised scenario, having entry of more transnational corporations ,India in its unorganized sector which is responsible for almost less than half of the GDP and employs around 93% of the country's workforce. Where government have no provisional rights or efforts taken for the workforce contributing towards the Nation's development. Whereas the workforce suffered with problems like Poverty, poor educational efforts,ill-health,continuous deteriotion of environment, poor participation of Employees in business development. As well Indian companies serving global markets need more responsible labour and environmental standards to survive in long- term. To incorporate CSR into core strategy, businesses must identify oncoming social issues which comprise company's strategic vision rather than only being philanthropic.

The Companies Act, 2013 is likely to bring in many SMEs into the CSR stream. This will accompany in a fresh set of challenges to a sector that is increasingly being asked by its B2B customers to comply with environmental and social standards, while remaining competitive in terms of price and quality. Thus, SMEs will have to quickly learn to be compliant with these diverse set of requirements. (Handbook on Corporate Social Responsibility in India, 2013)

CSR in India is restricted to narrowly defined set of people (read as stakeholders), to fixed set of roles implementing community development projects) and tothe approaches with tunnel vision (community development in sectors of health, education etc,) there is a need to scale up these efforts in a professional and systematic way, where the corporate bodies have effective roles to play.

To accomplish an organic growth of economic and social spheres of development in country, the roles of Corporations, State and Civil society need to be finely integrated.(Sahoo, 2011)

Basically SME's are struggling for their individual establishments but complementing the work of the government and the NGO's in the towns/villages/cities they operate in. Corporate Philanthropy is widely prevalent in the SME sector in the form of contributions to the health, education, religious institutions and temples cannot be undermined. There is a need to popularize the concept of CSR among SMEs and the benefits it can bring for them. The role of industry associations, in influencing the practice of CSR in SME's is significant as well Government is actively promoting cluster development as a strategy to grow SME's to promote local production, innovation and collective learning approach to SME's. (Vasanthi Srinivasan, Diana Joseph, June 2013).

Business is an integral part of social system it has to care for varied needs of the society Business which is resourceful has a special responsibility to the society.

Social involvement of business would enhance a harmonious and healthy relationship between the society and business seeking mutual benefit for the both. Social involvement may create a better public image and goodwill for the company which further becomes instrumental in attracting customers, efficient personnel and investors. As far as the Tata group is concerned, it has gone a long way in fulfilling its duty and responsibility towards the society and the nation through programs. (A Srivastava, Sep,-Oct. 2012)

Research Methodology:

Present study is undertaken to test hypotheses that, the CSR activities undertaken by industry and expected by society are independent.

Descriptive research methodology is used. Researchers wished to facilitate discussion on the magnitude of local needs and expectations of local people towards local industry to suffice with the said needs.

Schedule for social strata had elicited information on awareness of CSR by SME's. and satisfaction and expectations towards the same. Schedule has carried some close ended questions and few open ended questions seeking demographic/social profile of samples.

140 numbers of people of society equally divided in each stratum of the same which comprises

twelve different professions like Social Activists, Manufacturers ,Teachers, Employees working in private sector, Doctors, politicians, Senior citizens, Students, Traders, Women, employees working in Government sector ,Advocates has been offered schedules to opine on CSR. It has taken almost10 samples per category.

Regarding 39 sample industrial units' administrative officer/HR Manager/ Owner/ Entrepreneur had been interviewed. The scrutinized interview schedule was codified for data feeding. Data was entered in MS-Excel with data validation check and further validated with SPSS. The filtered and validated data was tested for chi-square Calculations.

Data and Interpretation:

The data from existing CSR activities conducted by industry has been collected and the data from sampled in society has also been conducted on the expectations of CSR activities. These data from twelve different strata of society are compared to check the fit in between.

H0:1: The CSR activities undertaken by industry and expected by society are not associated.

H1:1: The CSR activities undertaken by industry and expected by society are associated.

Table: 1 - Frequency of CSR proposed by industry and expected by society.

Following is the frequency table of samples of society and industry marked for CSR activities.

(N=140)

Sr	CSR Initiatives	Society Expectations	Industry proposal	Total
1	Nature & environment	99	31	130
2	Education	74	34	108
3	Health	82	30	112
4	Rural development	68	10	78
5	Employment	46	24	70
6	Overcoming natural calamities	0	15	15
7	Rehabilitation	68	5	73
8	Infrastructural development	86	7	93
9	old age homes	54	1	55
10	Youth Development	8	1	9
11	Sports Promotion	44	2	46
12	Community welfare	56	0	56
13	Charity	63	0	64
14	Women empowerment	84	0	84
15	Road safety	69	0	69

Above table 1 shows the comparison between CSR proposed by industry and expected by society across 15 selected CSR initiatives. Nature and environment, education, health and employment are the issues at the top. The least concerned issues from the view point of industry are community welfare, charity, women empowerment and road safety.

Table: 2 Frequency of CSR undertaken by industry and expected by society.

Sr.	Variable	Society expectations (n= 140)	Percentage to total of society expectations	Ranks society expectations	Industry proposal (n = 39)	Percentage to total of industry proposal	Ranks industry proposal	Total
1	Nature & Environment	99	70	1	31	79	2	134
2	Education	74	52	5	34	87	1	110
3	Health	82	58	4	30	76	3	114
4	Rural Development	68	48	7	10	25	6	80
5	Employment	46	32	11	24	61	4	72
6	Overcoming Natural Calamities	0	0	14	15	38	5	15
7	Rehabilitation	68	48	7	5	12	8	75
8	Infrastructural Development	86	61	2	7	17	7	95
9	Old Age Homes	54	38	10	1	2	10	57
10	Youth Development	8	6	13	1	2	10	9
11	Sports Promotion	44	31	12	2	5	9	48
12	Community Welfare	56	40	9	0	0	12	58
13	Charity	63	45	8	0	0	12	65
14	Women Empowerment	84	60	3	0	0	12	86
15	Road Safety	69	49	6	0	0	12	71

Above table 2 indicates that There are neglected areas wherein industries should implement CSR activities. The areas of concern are mainly more of environment, education, health.The sensitive areas are rural development, road safety, sports and youth development as well as infrastructural development.

Table:3 - CSR undertaken by industry and expected by society chi-square Calculations.

Following table shows the detailed calculation for chi-square.

O	E	(O-E)	(O-E)2	-E)2/E
99	110.39	-11.39	129.73	1.18
74	91.71	-17.71	313.64	3.42
82	95.11	-13.11	171.87	1.81
68	66.24	1.76	3.11	0.05
46	59.44	-13.44	180.74	3.04
0	12.74	-12.74	162.26	12.74
68	61.99	6.01	36.10	0.58
86	78.98	7.02	49.34	0.62
54	46.71	7.29	53.20	1.14
8	7.64	0.36	0.13	0.02
44	39.06	4.94	24.37	0.62
56	47.56	8.44	71.32	1.50
63	53.50	9.50	90.26	1.69
84	71.33	12.67	160.46	2.25
69	58.59	10.41	108.27	1.85
31	19.60	11.40	129.96	6.63
34	16.29	17.71	313.64	19.25
30	16.89	13.11	171.87	10.18
10	11.76	-1.76	3.10	0.26
24	10.56	13.44	180.74	17.12
15	2.26	12.74	162.26	71.73
5	11.01	-6.01	36.10	3.28
7	14.02	-7.02	49.34	3.52
1	8.29	-7.29	53.20	6.41
1	1.36	-0.36	0.13	0.09
2	6.94	-4.94	24.37	3.51
0	8.44	-8.44	71.32	8.44
0	9.50	-9.50	90.26	9.50
0	12.67	-12.67	160.46	12.67
0	10.41	-10.41	108.27	10.41
				215.51

The calculated figure of chi-square is 215.51 is much higher than table value of chi-square at 95% of confidence level i.e. 5% of significance level at 14 degrees of freedom is 23.6848 hence, there is sufficient statistical evidence to reject null hypothesis. The alternative hypothesis i.e. CSR activities proposed by industry and expected by society are associated is accepted.

Findings:

The society opined on preferences to CSR activities in the study region. The priority marked to environment followed by infrastructural development as well as women empowerment are the focus areas to CSR, seems that the samples from the study area are nature and environment friendly and prefer green civilization. Health is the area where CSR activities for Medical checkup camps for society and for blood donation camps gained preference. The least preferred CSR initiative includes overcoming natural calamities, youth development, sports promotion etc.

Suggestions:

1. More of the environment friendly activities are to be followed by companies such as providing facilities using natural resources as well as their protection.

2. Health related activities are to be followed more; like taking more of health and sanitation awareness camps, providing medical facilities through camps.

3. Education should receive maximum support whereas issues such as pedagogy, community awareness should also be explored.

4. SME owner's should increase their investments in CSR activities time-wise, finance-wise. If it is done time-wise, they can review on the CSR engagements in which already they are and can scrutinize on social issues where the investment should go in.

Finance-wise It can be done that units can identify and work together for local-level projects that complement each other. A common organization with all the present CSR following participants will carry out these activities collectively and thus reduce the operational cost of management will help in developing long-term projects by increasing the reliability of CSR budget of the concerned units which they find difficult to allocate as it depends on the financial performance of them. It will help them to overcome the barrier of finance allocation for the present CSR activities.

Conclusion:

As far the study concerned on CSR activities at Satara, there are areas of concern wherein the investment should go in. As far the present scenario, the work is done in health, education and environment. The investment should more go in local issues such as rural development, Water and sanitation awareness as well companies can contribute to the youth development programmes such as anti-addiction, Skill development.

References:

- John Boatright, B. P. (2011). *Ethics and the Conduct of Business, 6th edition.* Noida, India: Dorling Kindersley(India)Pvt.Ltd.,441- 442
- Emmerling, T. C. (2007). *Corporate Social and Environmental Responsibility in India-Assessing the UN Global Compacts role.* bonn: German Development Institute.,25-29
- A Srivastava, G. N. (Sep,-Oct. 2012). Corporate Social Responsibility: A Case Study of TATA Group. IOSR Journal of Business and Management (IOSRJBM), 17-27
- Handbook on Corporate Social Responsibility in India. (2013). India: PricewaterhouseCoopers Private Limited.
- Sahoo, C. (2011). Corporate Social Responsibility: Issues and Controversies. European Journal of Business and Management, 1-6.
- Vasanthisrinivasan, D. J. (June 2013). Responsible Business practices SMEs in India-An overview. APJMMR.

■

Vol 7 Issue 3 April 2017

ISSN No : 2230-7850

International Multidisciplinary Research Journal

Indian Streams Research Journal

Executive Editor
Ashok Yakkaldevi

Editor-in-Chief
H.N.Jagtap

Welcome to ISRJ

RNI MAHMUL/2011/38595 ISSN No.2230-7850

Indian Streams Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial board.Readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India
Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.isrj.org

ISSN: 2230-7850 IMPACT FACTOR : 5.1651(UIF) VOLUME - 7 | ISSUE - 3 | APRIL - 2017

INDIAN STREAMS RESEARCH JOURNAL

CHALLENGES SERVICE SECTOR WOMEN FACING AT THE WORKFORCE

Mrs. Revati R. Patil
Asst .Prof CSIBER , Kolhapur.

ABSTRACT

Increasing rate in the proportion of women in service industry enabling women to exploit their potential in the labour market and experiencing economic independence. But whether this participation creates new tracks for women to take a lead in improved job design, quality of work life and their socio-economic status.

The paper conclude that, the service economy will advantage women, if she intensively acquired competency that are in growing demand and it will be great opportunity for women to compete effectively with men.

KEYWORDS- *Work place and personal hurdles, women's expectations, women competency, job outcomes.*

• Why women in service industry ?

The service sector in India today accounts for more than half of India's GDP. Services or the "territory sector" of the economy covers a wide gamut of activities like trading, banking & finance, infotainment, real estate, transportation, security, management and technical consultancy among several others.

The combination of more educational opportunities for women and increasing number of jobs in raising service sector in Indian economy propelled the steady increase in the female workforce participation in the post Liberalisation. As women are more interchangeable from the standpoint of employees, demand for women rose in service industry.

Today's service industry think that women employees having qualities of high sense of responsibility, most trustworthy, can handle pressure, tidy and methodical, meeting deadlines, can analyse effectively, can multi-task, maintain harmony. Good communicators and fast learners. Hence maximum women workforce observed in Telecom, HR, Advertising, IT, Insurance, Consultancy, Health Care, Banking and Educational Services.

Another source of hope for women and the service sector comes from the work in organizational behaviour and firm sociology that sees female "Social Intelligence" having productive use in team production and group management. It may evolutionary selection or cultural training or both females 'attention to the feelings of others and to group dynamics. May also be an important advantage in the growing markets for client interactive jobs, whether in Consulting, Insurance, Banking, Telecom, Legal Services or Healthcare Services.

Now the scenario revealed that, there is high need to think on the trickiers issues concerned with women employees in service industry.

• Barriers faced by women in service industry :

Generally, there are two types of women employees. Some accept the life as they find it. The attitude of such women towards job is providing living in enough. For some taking home a pay is not all, such women are searching chances for self-fulfillment in workplace. While pursuing for the above job aims there may be some barriers they are :

I) Workplace perspectives :

• Feeling trapped in current position.
• Not wishing to work in inappropriate conditions.
• Do not like the work doing.
• Heavy workload.
• No opportunity for growth/ poor career advice.
• Poor training.
• Male-oriented work culture/ prejudice mind of bosses, colleagues & subordinates.
• Lack of flexible working.
• No-out of turn promotions. only giving better assignments.
• Emotional pressures.
• Poor interpersonal relations.
• Risk of job.
• Dealing with guilt after breaking the glass ceiling.

II) Personal Perspectives :

• Care for family / children.
• Lack of emotional quotient.
• Lack of desire to engage.
• Social & cultural constraints.
• Husband's view on work.
• Distance from workplace.
• Parent's / In-laws view on work.
• Social pressures, not to earn money.
• Poor education.
• Feeling shame/ guilty.
• Lack of time and energy.
• Unable to lead a fulfilling family life.
• Work stress.
• Detachment at home.

In short, women in service industry are getting it bad from both sides, and they don't know how to react. If women give all to their career it will seemed as 'too hardcore'. If women asks for flexitime, bosses abuse them of demanding too much down-time. If they give up totally and focus on family, husband and family members feel resentful about woman' hanging around at home & enjoying all the perks'.

Thus women are facing trickier issues and performing daily tight-rope walk. The are postphoning having babies because not sure about jobs will waiting for them. Husband also pressurized to fulfill expectations of his parents. In case if women go away on long leave seniority is gone then how to start reporting to a junior? Even men (husband/ bosses) are not all thinking seriously about the circumstances. Their cool attitude generates more problems. They are expecting the perfect society hostess, a superwoman who work hard, and parties even harder. A woman be could flaunt, but also perfect homemaker, make dazzling conversation and be great in bed.

What women are really expecting ?

• Need for mentoring.
• Change in societal mindset.
• Change in herself.

• Special training and development for women.
• Day care centers.
• Elderly care.
• Flexi-timings.
• Work-sharing.
• Part-time employment.
• Leave plans both paid & unpaid to suit employee needs.
• Rest rooms.
• Job with autonomy & flexibility.
• Realistic work loads.
• Participative work culture.
• Insurance plan.
• Food services.

If organization are taking painstaking efforts to fulfill expectations of women will have diversity at workplace. Organization can ensures women's career and retain them even they can returned to their careers after maternity breaks and continued to flourish in the company at all levels. This would be the greatest way to tap into a vast talent pool at a reasonable cost. Considering that competent women employees are largely titled toward service oriented companies.

• Need for women competency :

Making a point during the seminar on 'safety guidance for women in service industry' in New Delhi, retired IPS officer Kiran Bedi focused on various laws and regulations listed in the constitution for issues concerning the safety of woman at the workplaces. Further she noted need to end gender discrimination among women workers and treat them as equal to men.

Speaking on occasion Bollywood actress Kiran Kher said :

"Since in the hospitality industry women workers have to interact, travel and deal with their male counterparts and customers, it is advisable to be politely assertive in incomfortable situations. If that does not work then they should bring it to the notice of immediate authorities." Addition to this she also advised woman do not only focus on their appearance and looks but also project the right body language and always take efforts to develop your inner strengths and standup against incorrect things.

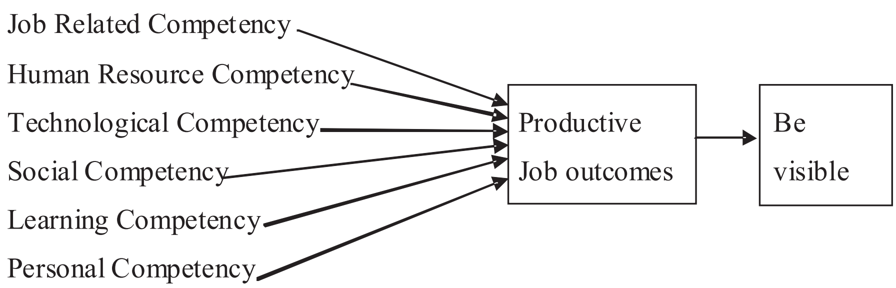
Air Hostess Academy Founder Director Sapana Gupta said :

"Women in the service industry with a wide variety of people, hence making them more vulnerable to harassment at work. From colleagues to guests they need to interact all kinds of individuals. Hence the first thing they need to learn is to be calm and composed."

The above observations of the three eminent personalities in their respective fields underlines the issues- First the woman should be acquainted with the legal terms of their jobs. According to research survey conducted by Linda Babcock, H.U.D. Dept. of Economics, Karning Mellon University, women who are initially conscious about their career and work of selected jobs are not at all possessive about the offers given by the employers in terms of pay and facilities and other incentives, safety and security measures such kind of negligence occurred due to women's negative attitude towards economic sources. And they are motivated in taking up those roles that display familial & societal benefits. The survey further throws lights on, since the last few decade women's are leading prominently in every walk, but still are performing low challenging job and suffering gender discriminations in selection and promotions procedures.

Second, they should identify their inner strength and be competent in specialized skills. Lastly service industry is mainly people originated and here women has do continuously interact with variety of people. Thus if she will follow competency, it may helps her to retain in service industry.

Conceptual Framework



Job Related Competency

Women should be knowledgeable and have authorative position in all functional areas. For that she has to interact and work with proven seniors and mentors or well known consultants.

Human Resource Competency

She has to take continuous efforts to be acquainted with HR policies, selection procedures, assessment techniques, reward systems, organizational structure. It will helps her to be familiar with employees, right to have quality workplace.

Technological Competency

Getting education and training as they can, being technosavvy and constantly involving herself in change management to cope up with dynamic external environment which worked as projecting, confidence, self promoting, nurturing their talents and developing their entrepreneurial skills.

Social Competency

Women should keep focus on customer services through continuous guidance, support, and facilities to customer. Interact people at all levels. It enables them to build their own image in the workforce. Such developed networks helps to reduce overstress at both professional and personal life.

Learning Competency

Women should have to encourage learning attitude among themselves, depending on reliable data and exchange of information between colleagues and other employees helps in creating a more knowledgeable women workforce. Such people development ensures the image of 'Learning Organizations'.

Personal Competency

Women in service sector have to apply the learning's and knowledge required initiatively.

Thus conceptual framework highlights if women in service sector develop her own competency in the given area, she will able to contribute towards productive job outcomes and become more perceptible.

CONCLUSION :

A rapid increase in the number of women employees in service industry creates need to attract, retain and grow this slot in workfoce. In short inspite of number of hurdles women employees are willing to work hard, wanting to develop knowledge in order to achieve their career objectives. However women are focused on just superior performance of the job at hand, instead of lead a team. To change this attitude women has to develop their own competency because service industry ready to offering them high job security.

REFERENCES :

1.Biswajeet Pattanayak 'Human Resource Management', 3rd edition, Prentice-Hill India, New Delhi-Pg. No. 274-283 (2005)
2.V.V.Ramani 'Women In Business', ICFAI University Press, (2004)

3.Times of India, 'Companies offer flexi options to Retain Women employees', Indian Labour Journal, Vol- 51, No-5 (May 2010).
4.Shingou Ikeda, 'Company Size and Childcare leave : The Problem of support for women's Job Continuity', Japan Labour Review, Vol-7 No.-1 Pg No.119-139 (Winter 2010).
5.'Conceptual Model of Competence of the Service Provider', Vikalpa The Journal for Decision Makers, Vol-35, No-3 (July-Sept. 2010)
6.The Hindu-Online edition, 'Snaping a safer tomorrow for working women', Tuesday, (May 06, 2008).
7.Shobha De 'Search for Superwoman', THE WEEK, Pg.No.50, (April 24, 2011)
8.K.K.Singh, T.Mohan Raja, 'Working Women In Society- A case study of Apollo Hospitals', Contemporary Social Work. Year-2, Issue-I, Pg.No101-109, (January 2010).
9.Debapratim Purkayastha, Amrit Chaudhari, 'In sight into women professionals : How Accentor smashed the Glass Ceiling'.
10.www.hrmguide.net
11.www.womensnews.org
12.www.SitaGita.com
13.www.allbusiness.com

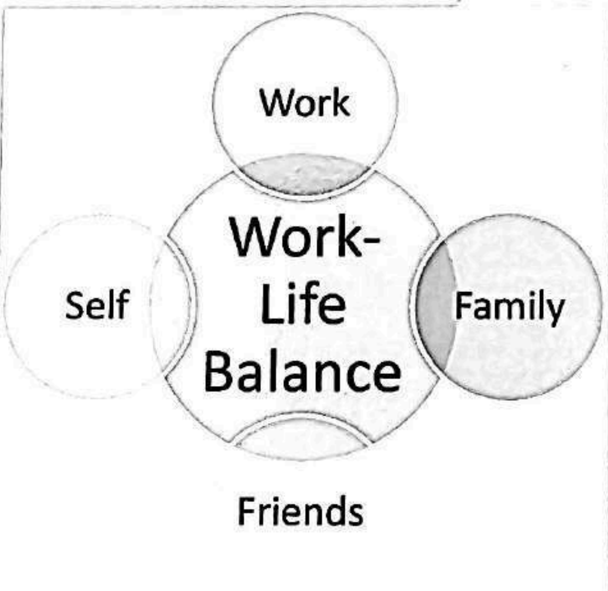
INDIAN STREAMS RESEARCH JOURNAL

International Recognition Multidisciplinary Research Journal

Volume - 6 | Issue - 11 | December - 2016

4.1625(UIF) 2230-7850

WORK LIFE BALANCE AMONG WORKING COUPLES IN CORPORATE SECTOR : A FANATICAL & THEORETICAL FRAMEWORK



Prof. Vinayak K. Thorat

Vinayak K. Thorat

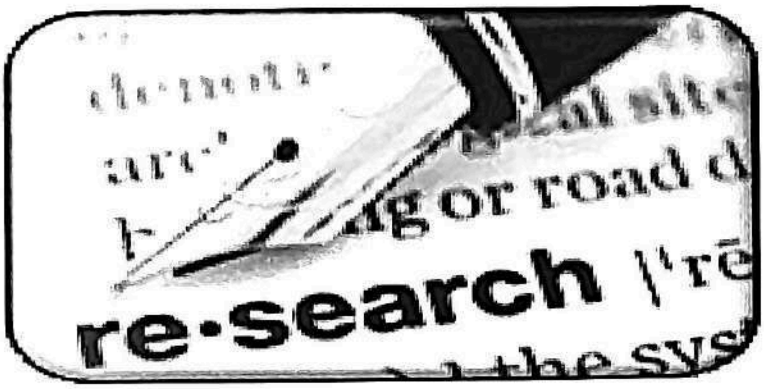
Shivaji University, Kolhapur, Swaraj Institute of Management, Karad.

ABSTRACT:- Work-life balance signifies the extent to which an employee experiences feeling fulfilled and having his or her needs met in both work and non-work facets of life. The main objective of this study is to explore the wo...Page No-54

Editor - In - Chief - H. N. Jagtap

Indian Streams Research Journal
International Recognized Multidisciplinary Research Journal

ISSN NO:-2230-7850   Impact Factor : 4.1625(UIF)   Vol.- 6, Issue - 11, December-2016



ISRJ Indian Streams Research Journal

ISSN: 2230-7850 Impact Factor : 4.1625(UIF) Volume - 6 | Issue - 11 | December - 2016

VALUE STREAM MAPPING OF HUB-750 PRODUCT LINE TOWARDS IMPROVEMENT IN CYCLE TIME AND OVERALL PRODUCT FLOW

Mr. Prashant R. Mahadik[1] and Dr. U. M. Deshmukh[2]

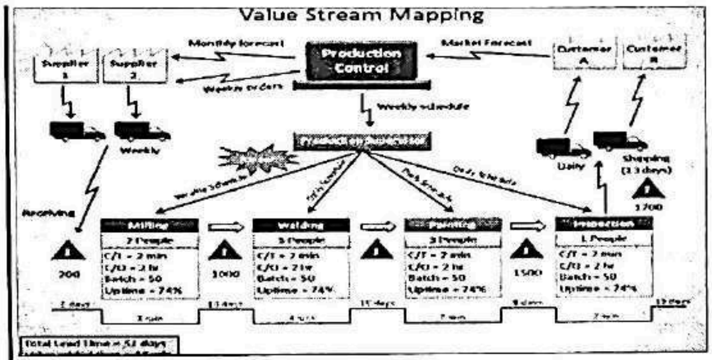
[1]Quality Engineer, Neeta Instrument (Pillai Group) Shiroli MIDC, Kolhapur .

[2] Chairman, M. Phil Programme ,Chhatrapati Shahu Institute of Business Education & Research (SIBER), Kolhapur.

ABSTRACT

Nowadays in manufacturing industry require more profit with the help of the small lead time and low cost many manufacturing companies spent more money and time on the reduced the lead time. This paper addresses the implementation of value stream mapping in the manufacturing industry. Current state plant layout is give details about the existing position and identifies the various problems. Future state plant layout show the implementation action plans.

KEYWORDS:*Logistics, customer value, customer, customer satisfaction, customer benefits*.



INTRODUCTION :

Value stream mapping is a lean manufacturing technique used to analyze and design the flow of materials and information required to bring a product or service to a consumer. At TOYOTO, where the technique originated, it is known as "Material and information flow mapping." It can be applied to nearly any value chain.

The goal of VSM is to identify, demonstrate and decrease waste in the process waste being any activity that does not add value to the final product values stream mapping also has the benefit of categorizing process activity into three main areas – value add, non value add and waste.

Value stream mapping method visually maps the flow of material and information from the time products come in the back door as raw materials, through all manufacturing process steps and off the loading dock as finished products.

MEANING:

Definition of value stream mapping value stream mapping is a lean manufacturing or lean enterprise techniques used to document, analyze and improve the flow of information or materials required to produce a product or services for a customer.

VSM METHODOLOGY:

VSM has four major steps as given.

1.Select a product family
2.Draw current state map
3.Draw future current state map
4.Develop work plan for implementation future state.

1)Product selection:

A company is producing around 400 – 500 types of jobs for different customers.

ISRJ Indian Streams Research Journal

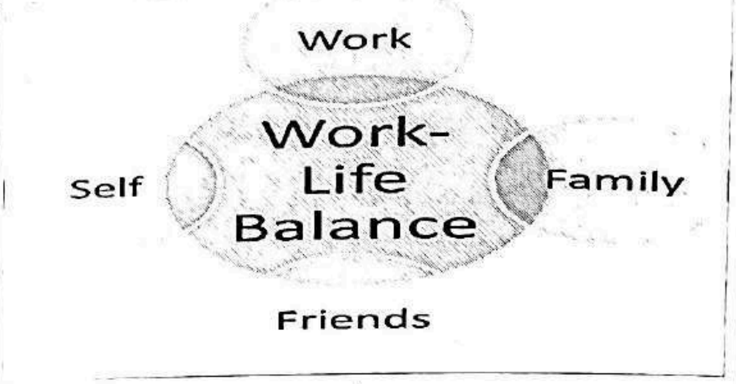
ISSN: 2230-7850 Impact Factor : 4.1625(UIF) Volume - 6 | Issue - 11 | December - 20

WORK LIFE BALANCE AMONG WORKING COUPLES IN CORPORATE SECTOR: A FANATICAL & THEORETICAL FRAMEWORK

Prof. Vinayak K. Thorat[1] and Dr. U. M. Deshmukh[2]

[1]Shivaji University, Kolhapur, Swaraj Institute of Management, Karad.

[2]Chairman, M. Phil Programme , Chhatrapati Shahu Institute of Business Education & Research (SIBER), Kolhapur.



ABSTRACT

Work-life balance signifies the extent to which an employee experiences feeling fulfilled and having his or her needs met in both work and non-work facets of life. The main objective of this study is to explore the work life balance and conflicts among working couples in the corporate sector. The study is based on deep analysis through 5 issues; Work related issues, Family related issues, Self related issues, other issues and coping strategies. The results say that many employees sacrifice their personal time in order to get the balance between work and life. Employees especially women have a lot of role conflicts as mothers and other family roles. Many men these days want to get take up household responsibilities. A lot of coping strategies that the employees utilized have been discussed in the current study.The another purpose of this study is to investigate the work and family roles accumulation experiences of working couple relationships, and to explore the strategies and processes to be adopted by working couples and their organizations to manage work life balance.

In the modern era of technology and convenience, organizations have begun to provide their employees with helpful ways to balance their work and non-work roles through benefits like flexible work hours, telecommuting, and so on. How-ever, offering these benefits is not enough; the organization and management must stand behind its promotion of healthy work-life balance for employees by creating a culture as such and designing policies that support this initiative.

KEYWORDS: *Work-Life-Balance, Corporate Sector, Working couples, Work-life conflicts, Coping strategies*

INTRODUCTION :

Families and employing organizations throughout the industrialized world are changing fundamentally and rapidly, both in terms of structure and in terms of expectations. However, work and family policies and practices within organizations and wider societies, and the values and assumptions which support them, are changing more slowly. Further, organizations are becoming more diverse. The future human resource will includes an increased number of women employees, more minorities, variety of ethnic backgrounds, more ageing workers, disabled, and people with different lifestyles. The extent to which these shifts are effectively and efficiently managed will have an impact on the competitive and economic performance of the business organizations. Therefore, workforce-employing pattern is changing because both women and men are entering into the organizations. This gives the concept of working couples i.e. the couples

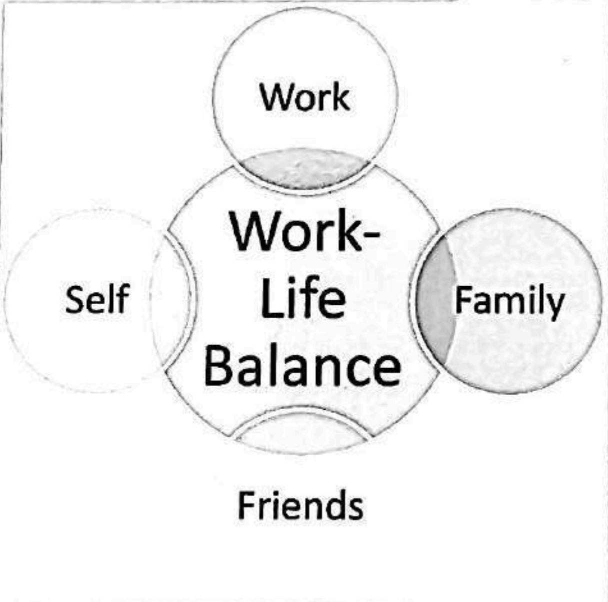
INDIAN STREAMS RESEARCH JOURNAL

International Recognition Multidisciplinary Research Journal

Volume - 6 | Issue - 11 | December - 2016

4.1625(UIF) 2230-7850

WORK LIFE BALANCE AMONG WORKING COUPLES IN CORPORATE SECTOR : A FANATICAL & THEORETICAL FRAMEWORK



Prof. Vinayak K. Thorat

Vinayak K. Thorat

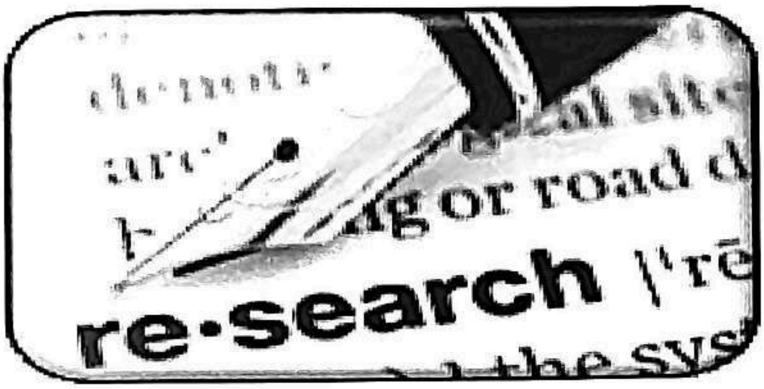
Shivaji University, Kolhapur, Swaraj Institute of Management, Karad.

ABSTRACT:- Work-life balance signifies the extent to which an employee experiences feeling fulfilled and having his or her needs met in both work and non-work facets of life. The main objective of this study is to explore the wo...Page No-54

Editor - In - Chief - H. N. Jagtap

Indian Streams Research Journal
International Recognized Multidisciplinary Research Journal

ISSN NO:-2230-7850 Impact Factor : 4.1625(UIF) Vol.- 6, Issue - 11, December-2016



Indian Streams Research Journal

ISSN: 2230-7850 Impact Factor : 4.1625(UIF) Volume - 6 | Issue - 11 | December - 2016

VALUE STREAM MAPPING OF HUB-750 PRODUCT LINE TOWARDS IMPROVEMENT IN CYCLE TIME AND OVERALL PRODUCT FLOW

Mr. Prashant R. Mahadik[1] and Dr. U. M. Deshmukh[2]
[1]Quality Engineer, Neeta Instrument (Pillai Group) Shiroli MIDC, Kolhapur .
[2] Chairman, M. Phil Programme ,Chhatrapati Shahu Institute of Business Education & Research (SIBER), Kolhapur.

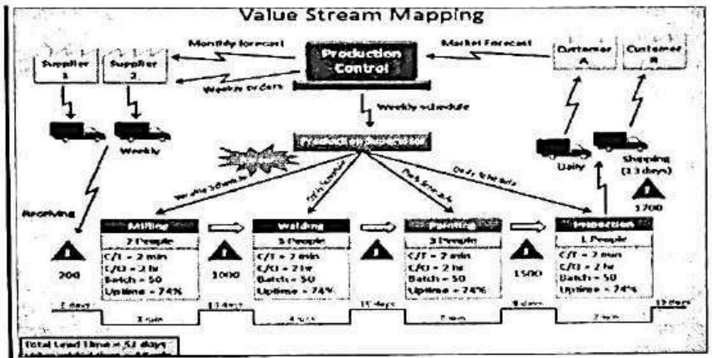
ABSTRACT

Nowadays in manufacturing industry require more profit with the help of the small lead time and low cost many manufacturing companies spent more money and time on the reduced the lead time. This paper addresses the implementation of value stream mapping in the manufacturing industry. Current state plant layout is give details about the existing position and identifies the various problems. Future state plant layout show the implementation action plans.

KEYWORDS:*Logistics, customer value, customer, customer satisfaction, customer benefits*.

INTRODUCTION :

Value stream mapping is a lean manufacturing technique used to analyze and design the



flow of materials and information required to bring a product or service to a consumer. At TOYOTO, where the technique originated, it is known as "Material and information flow mapping." It can be applied to nearly any value chain.

The goal of VSM is to identify, demonstrate and decrease waste in the process waste being any activity that does not add value to the final product values stream mapping also has the benefit of categorizing process activity into three main areas – value add, non value add and waste.

Value stream mapping method visually maps the flow of material and information from the time products come in the back door as raw materials, through all manufacturing process steps and off the loading dock as finished products.

MEANING:

Definition of value stream mapping value stream mapping is a lean manufacturing or lean enterprise techniques used to document, analyze and improve the flow of information or materials required to produce a product or services for a customer.

VSM METHODOLOGY:

VSM has four major steps as given.

1.Select a product family
2.Draw current state map
3.Draw future current state map
4.Develop work plan for implementation future state.

1)Product selection:
A company is producing around 400 – 500 types of jobs for different customers.

ISRJ Indian Streams Research Journal
ISSN: 2230-7850 Impact Factor : 4.1625(UIF) Volume - 6 | Issue - 11 | December - 20..

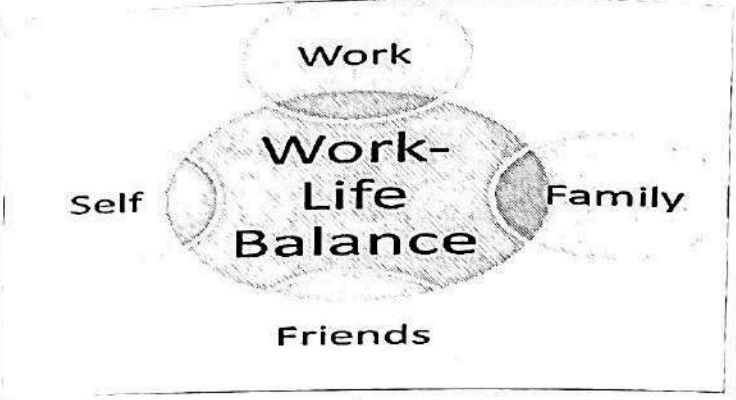
WORK LIFE BALANCE AMONG WORKING COUPLES IN CORPORATE SECTOR: A FANATICAL & THEORETICAL FRAMEWORK

Prof. Vinayak K. Thorat[1] and Dr. U. M. Deshmukh[2]
[1]Shivaji University, Kolhapur, Swaraj Institute of Management, Karad.
[2]Chairman, M. Phil Programme , Chhatrapati Shahu Institute of Business Education & Research (SIBER), Kolhapur.

ABSTRACT

Work-life balance signifies the extent to which an employee experiences feeling fulfilled and having his or her needs met in both work and non-work facets of life. The main objective of this study is to explore the work life balance and conflicts among working couples in the corporate sector. The study is based on deep analysis through 5 issues; Work related issues, Family related issues, Self related issues, other issues and coping strategies. The results say that many employees sacrifice their personal time in order to get the balance between work and life. Employees especially women have a lot of role conflicts as mothers and other family roles. Many men these days want to get take up household responsibilities. A lot of coping strategies that the employees utilized have been discussed in the current study.The another purpose of this study is to investigate the work and family roles accumulation experiences of working couple relationships, and to explore the strategies and processes to be adopted by working couples and their organizations to manage work life balance.

In the modern era of technology and convenience, organizations have begun to provide their employees with helpful ways to balance their work and non-work roles through benefits like flexible work hours, telecommuting, and so on. How-ever, offering these benefits is not enough; the organiza tion and management must stand behind its promotion of healthy work-life balance for employees by creating a culture as such and designing policies that support this initiative.



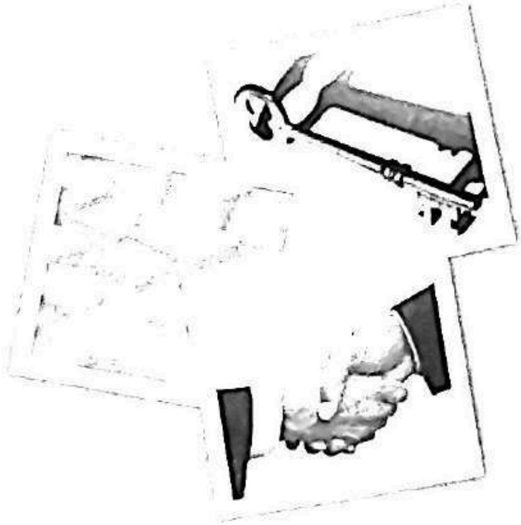
KEYWORDS: *Work-Life-Balance, Corporate Sector, Working couples, Work-life conflicts, Coping strategies*

INTRODUCTION :

Families and employing organizations throug hout the industrialized world are changing fundamentally and rapidly, both in terms of structure and in terms of expectations. However, work and family policies and practices within organizations and wider societies, and the values and assumptions which support them, are changing more slowly. Further, organizations are becoming more diverse. The future human resource will includes an increased number of women employees, more minorities, variety of ethnic backgrounds, more ageing workers, disabled, and people with different lifestyles. The extent to which these shifts are effec-tively and efficiently managed will have an impact on the compe-titive and economic performance of the business organizations. Therefore, workforce-employing pattern is changing because both women and men are entering into the organizations. This gives the concept of working couples i.e. the couples

Proceedings of

International Conference On "Recent Trends in Business, Management & IT"

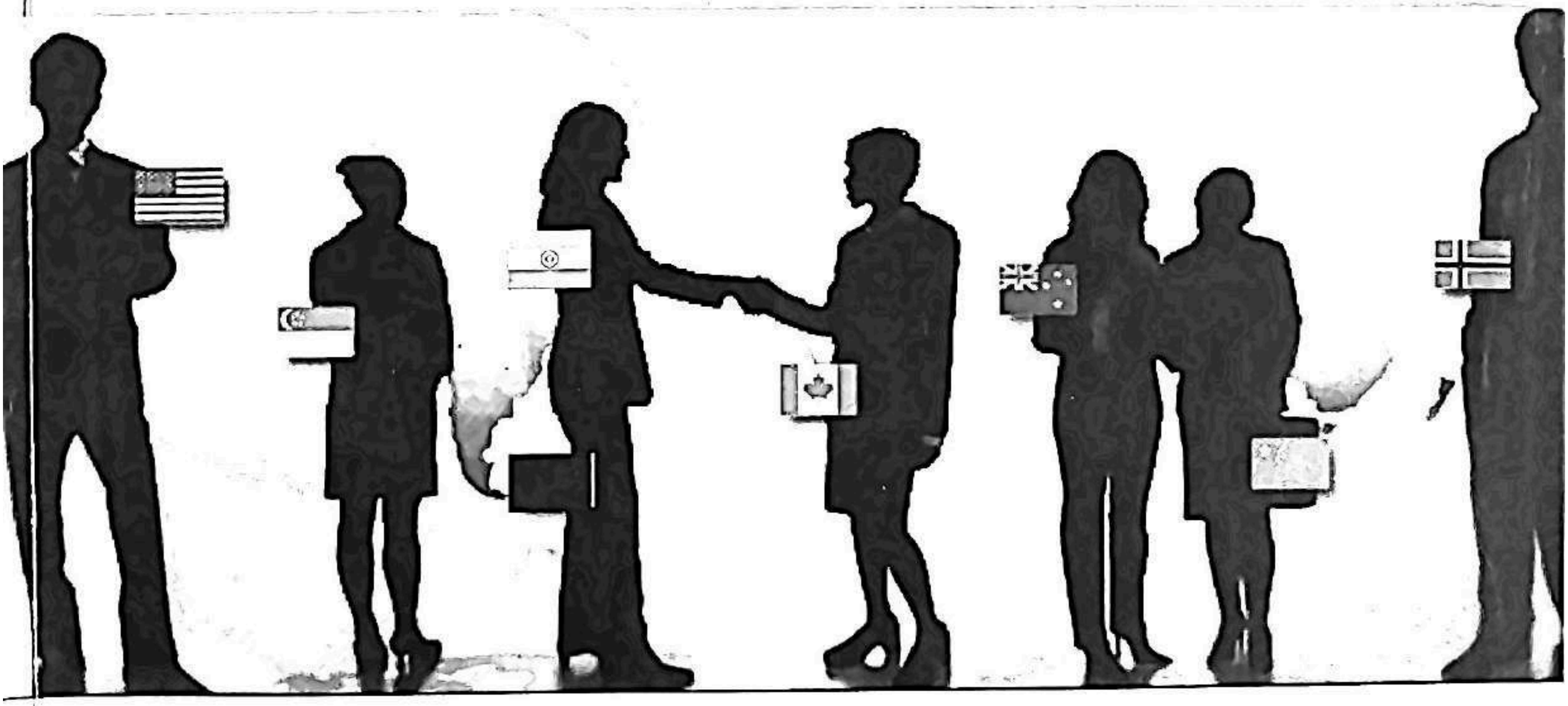


ISBN: 978-81-920045-4-9

[Business Papers]

Volume - I

Editors : Dr. Sanjay Kaptan || Dr. Anwar Shaikh || Prof. Rakesh Mittal



Organised by

Anjuman Khairul Islam's
Poona College of Arts, Science & Commerce

In Association With

Department of Commerce & Research Centre
University of Pune

INDEX

PROSPECTS AND CHALLENGES OF ENTREPRENEURIAL MARKETING IN THE GLOBAL COMPETITIVE SCENARIO

Dr. U. M. Deshmukh
H.O.D. Operations Management,
SIBER School of Management, Kolhapur
Mobile No.-9890691927

Prof. Veerdhaval S. Ghorpade
Assistant Professor,
Bharati Vidyapeeth University, Pune
Institute of Management, Kolhapur
email-veerdhavalg@gmail.com,
Mobile No-9881514555

Abstract: *Entrepreneurial Marketing Management is a term, which is receiving increasing use. It essentially encompasses two very distinct areas of Marketing Management and Entrepreneurship. This article is dedicated to exploring the emergence of this as a discipline, its history, challenges and its prospects. Scholars from both the world from Marketing and Entrepreneurial Management, Networking and the Resources and the Skill implications of adopting an Entrepreneurial approach to marketing activities. This research has now built up into a sizable body of literature and this note introduces the reader to the essence of this research and identifies its usefulness in viewing many areas of Management, its Prospects and Challenges, this note further argues that entrepreneurs must utilize the social and human capital contained within networks for successful opportunity recognition and resource mobilization. It examines networks along their components of relational and structural embeddedness and examines how they play out in identifying opportunities and securing resources for their ventures.*

Introduction And Historical Perspective

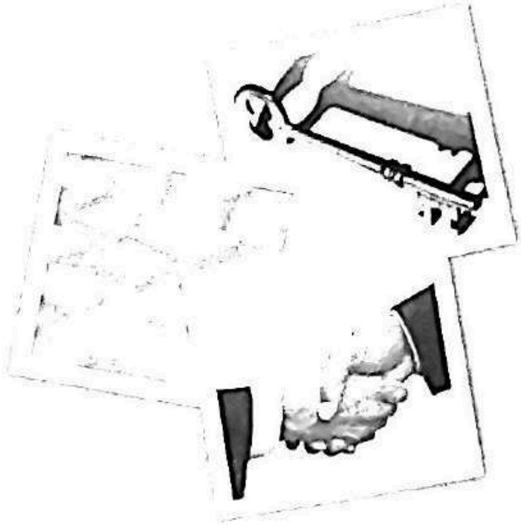
The Marketing Management or Entrepreneurship interface has developed a substantial body of literature over last decade. Marketing has much to offer the study of Entrepreneurship (Murry: 1981, Hills: 1987) and likewise Entrepreneurship can look to Marketing as the key function within the firm, which can encompass innovation and creativity. The interface between the two disciplines as having distinct areas of both difference and overlap the difference are between traditional Marketing which operates in consistent environment, firstly, where market conditions are continuous and the firm is satisfying clearly perceived customer needs and pure Entrepreneur which operates in an uncertain environment, secondly, where market conditions are discontinuous and the needs of the market are as yet unclear. The overlap exist in two areas: one where Market conditions are continuous and Entrepreneurship aids the process of identifying as yet unperceived needs and secondly in a discontinuous market where Entrepreneurship guides Marketing Management strategy to develop existing needs in new environment.

In essence these researchers perceive the interface as focusing on identifying opportunities in the changing environment. In our opinion Marketing, Entrepreneurship, and Management have three key areas of interface: they both change focused opportunistic in nature and innovative in there approach to Management. Ideas add value through time, effort, money and skills, assume the risk of the competitive marketplace to implement these ideas and realize the rewards from these efforts, Highlights the importance of change as one of the key drivers in Entrepreneurial activity. Many of the actions undertaken by the Entrepreneur are key concepts in marketing theory, which suggest that successful Marketing is undertaken by firm who identify new opportunities, apply innovative techniques to bring the product/ service to the market place and successfully meets the needs of their chosen target market. Again the central element of managing many activities in a fluid, changing environment is stressed.

If we accept three key areas of the Marketing Management /Entrepreneurship interface as being change focused, opportunistic in nature and innovative in management approach, this has implications for education. Specifically this suggests that curricula are adequately developed to encourage students to learn how to deal

Proceedings of

International Conference On "Recent Trends in Business, Management & IT"

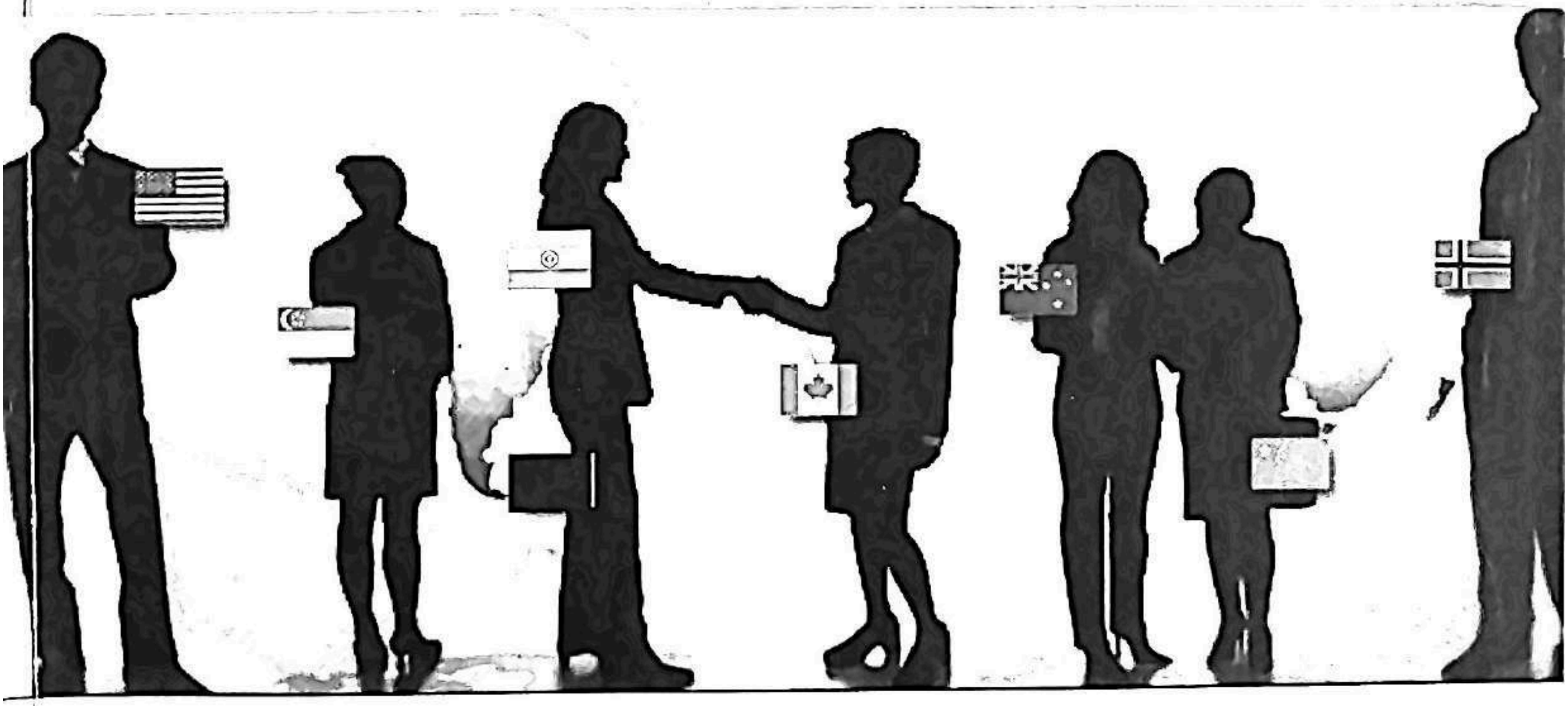


ISBN: 978-81-920045-4-9

[Business Papers]

Volume - I

Editors : Dr. Sanjay Kaptan || Dr. Anwar Shaikh || Prof. Rakesh Mittal



Organised by

Anjuman Khairul Islam's
Poona College of Arts, Science & Commerce

In Association With

Department of Commerce & Research Centre
University of Pune

INDEX

PROSPECTS AND CHALLENGES OF ENTREPRENEURIAL MARKETING IN THE GLOBAL COMPETITIVE SCENARIO

Dr. U. M. Deshmukh
H.O.D. Operations Management,
SIBER School of Management, Kolhapur
Mobile No.-9890691927

Prof. Veerdhaval S. Ghorpade
Assistant Professor,
Bharati Vidyapeeth University, Pune
Institute of Management, Kolhapur
email-veerdhavalg@gmail.com,
Mobile No-9881514555

Abstract: *Entrepreneurial Marketing Management is a term, which is receiving increasing use. It essentially encompasses two very distinct areas of Marketing Management and Entrepreneurship. This article is dedicated to exploring the emergence of this as a discipline, its history, challenges and its prospects. Scholars from both the world from Marketing and Entrepreneurial Management, Networking and the Resources and the Skill implications of adopting an Entrepreneurial approach to marketing activities. This research has now built up into a sizable body of literature and this note introduces the reader to the essence of this research and identifies its usefulness in viewing many areas of Management, its Prospects and Challenges, this note further argues that entrepreneurs must utilize the social and human capital contained within networks for successful opportunity recognition and resource mobilization. It examines networks along their components of relational and structural embeddedness and examines how they play out in identifying opportunities and securing resources for their ventures.*

Introduction And Historical Perspective

The Marketing Management or Entrepreneurship interface has developed a substantial body of literature over last decade. Marketing has much to offer the study of Entrepreneurship (Murry: 1981, Hills: 1987) and likewise Entrepreneurship can look to Marketing as the key function within the firm, which can encompass innovation and creativity. The interface between the two disciplines as having distinct areas of both difference and overlap the difference are between traditional Marketing which operates in consistent environment, firstly, where market conditions are continuous and the firm is satisfying clearly perceived customer needs and pure Entrepreneur which operates in an uncertain environment, secondly, where market conditions are discontinuous and the needs of the market are as yet unclear. The overlap exist in two areas: one where Market conditions are continuous and Entrepreneurship aids the process of identifying as yet unperceived needs and secondly in a discontinuous market where Entrepreneurship guides Marketing Management strategy to develop existing needs in new environment.

In essence these researchers perceive the interface as focusing on identifying opportunities in the changing environment. In our opinion Marketing, Entrepreneurship, and Management have three key areas of interface they both change focused opportunistic in nature and innovative in there approach to Management. Ideas are value through time, effort, money and skills, assume the risk of the competitive marketplace to implement these ideas and realize the rewards from these efforts, Highlights the importance of change as one of the key drivers in Entrepreneurial activity. Many of the actions undertaken by the Entrepreneur are key concepts in marketing theory, which suggest that successful Marketing is undertaken by firm who identify new opportunities, apply innovative techniques to bring the product/ service to the market place and successfully meets the needs of their chosen target market. Again the central element of managing many activities in a fluid, changing environment is stressed.

If we accept three key areas of the Marketing Management /Entrepreneurship interface as being change focused, opportunistic in nature and innovative in management approach, this has implications for education. Specifically this suggests that curricula are adequately developed to encourage students to learn how to deal

Volume - 4 | Issue - 9 | March - 2017

RESEARCH DIRECTION

UGC APPROVED

International Recognition Interdisciplinary Research Journal

Impact Factor 2.9005(UIF)

ISSN 2321-5488

TECHNIQUES USED FOR INVENTORY CONTROL IN SPINNING MILLS

S.S. Kadam

Mrs. S. S. Kadam

D. R. K. College of Commerce, Kolhapur.

ABSTRACT:- Inventory control is the technique of maintaining the size of the inventory at some desired level keeping in view the best economic interest of an organization. The objective of inventory control is to maintain inventories of the optimum level. So the use of various techniques and to ...

Editor - In - Chief - S.P. Rajguru

Research Directions
International Multidisciplinary Research Journal
ISSN NO:- 2321-5488 Impact Factor : 2.9005(UIF) Volume - 4 | Issue - 9 | March - 2017

RESEARCH DIRECTIONS

ISSN: 2321-5488
IMPACT FACTOR : 2.9005(UIF)
VOLUME - 4 | ISSUE - 9 | MARCH - 2017

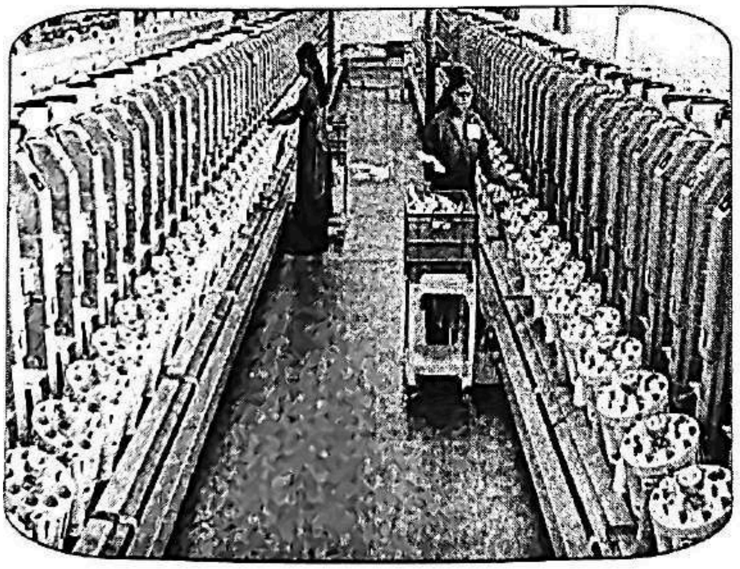
TECHNIQUES USED FOR INVENTORY CONTROL IN SPINNING MILLS

Mrs. S. S. Kadam[1] and Dr. U. M. Deshmukh[2]
[1]D. R. K. College of Commerce, Kolhapur.
[2]CSIBER, Kolhapur.

ABSTRACT

Inventory control is the technique of maintaining the size of the inventory at some desired level keeping in view the best economic interest of an organization. The objective of inventory control is to maintain inventories of the optimum level. So the use of various techniques and to control the investment in inventories it is an very essential. Techniques of ABC analysis, FSN analysis, XYZ analysis, HML analysis etc. used in various organization and it is useful to reduce the cost of production. The basic objectives of inventory control is to optimize the size of inventory in the spinning mill. This paper is aimed to study how inventories are managed and focused on techniques used in spinning mills. Effective inventory control techniques are essential to avoid unnecessary locking up investment in inventories. So it is very necessary to control the investment in inventory and to achieve the maximization of profit in spinning mills.

KEYWORDS- *Inventory control, techniques, investment, effective optimize, economic, production.*



INTRODUCTION :

Every business organization, however big or small, has to maintain inventory and it constitutes an integral part of the working capital. It has been estimated that inventory in Indian industries constitutes more than 60% of current asset. Inventories are significant elements in cost process. Inventories require a significant investment, not only in acquiring them but also in holding them. Investment in inventories is said to be idle but it is unavoidable in any organization. For this reason, one requires a careful planning, formulation of policies and procedures appropriate to maintain the stock at some desired level. In other words, these techniques of maintaining inventories at appropriate level may be known as inventory control.

For that purpose it is very necessary to give control on inventories hence, to use the various types of tools and techniques and to control optimum level inventory, it is an very essential in every spinning mills. For inventory control purpose in various organisations ABC analysis, VED analysis, HML analysis, SOS analysis, GOLF analysis, FSN analysis, these types of techniques are used and to control the various inventory items.

In spinning mills, basically ABC analysis and FSN analysis is used for the purpose of inventory control. So, these techniques are very important to control the various items of inventory and to achieve the objectives of the spinning mills.

DEFINITION OF INVENTORY

The term inventory includes stock of finished goods, work-in-progress, raw material and components.

In the words of G. Sudarsana Reddy, "Inventory can be used to refer to the stock on hand at a particular time of raw materials, goods-in-process of manufacture, finished products, merchandise purchased for resale, and the like, tangible assets which can be seen, measured and

ISSN 2277-7644

Research Journal for
Renaissance in Intellectual Disciplines

RENAISSANCE

Chief Editor
Dr. Khanderavaji S. Kale

International Registered and Recognized
Research Journal in Higher Education for all Subjects

CONTENTS

Page No-19 to 23
Research Paper
Research Journal for
Renaissance in Intellectual Discipline
ISSN 2277-7644,Vol-17, Issue-1, April., to June.,-2016 (Quarterly)

"Safety, Health and Welfare Programmes in Warana Sugar Factory"

Mrs. Nilima Magdum

Dr. U. M. Deshmukh
Chairman,
Mphil, Programme, CSIBER, Kolhapur

ABSTRACT-:

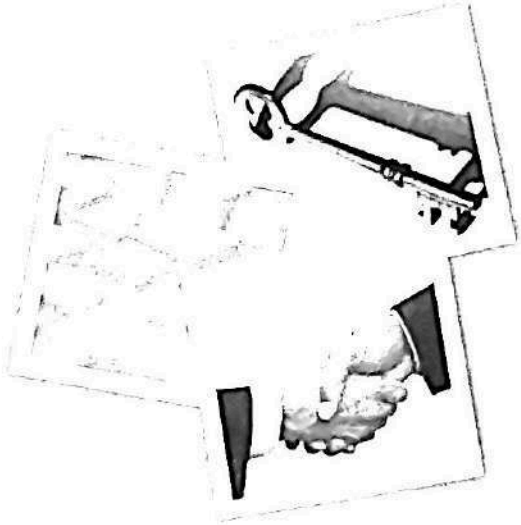
Employee health, safety and welfare measures helps to promote efficiency and results in higher productivity. In manufacturing sectors the study results have shown that the workers who actively followed health and safety rules could result in health and safety performance improvements. Although employee participation and involvement are crucial, the accountability and responsibility in the safety and health must come from senior management as required by the occupational health and safety legislation. A happy work force is an asset for the industrial prosperity of any nation. The objective of this study is to know the overall safety, health and welfare measures at STKWSSKL, Warananagar. Sugar industry comes under Large scale industry sector where employees are subjected to hazardous environment and also this is a co-operative firm so here the study of Safety, Health and Welfare becomes very important topic for the present study. Surveys are conducted to know how the Safety, Health and welfare measures are applied in the industry. The result of this study shows that majority of the employees recognize the present efforts taken by sugar industry, on safety, health and welfare measures are satisfactory. Though, few suggestions are given related to safety as it should be continuous improvement process to reduce accidents and to maintain zero accident.

INTRODUCTION -:

Today's changing Industrial scenario demands the quick response to the market conditions. For this any Industrial unit should be highly productive. This is not possible without the satisfied employees. The employee satisfaction depends not only on the wages or salary paid to them but also highly depends on the welfare and safety facilities provided to them. A

Proceedings of

International Conference On "Recent Trends in Business, Management & IT"

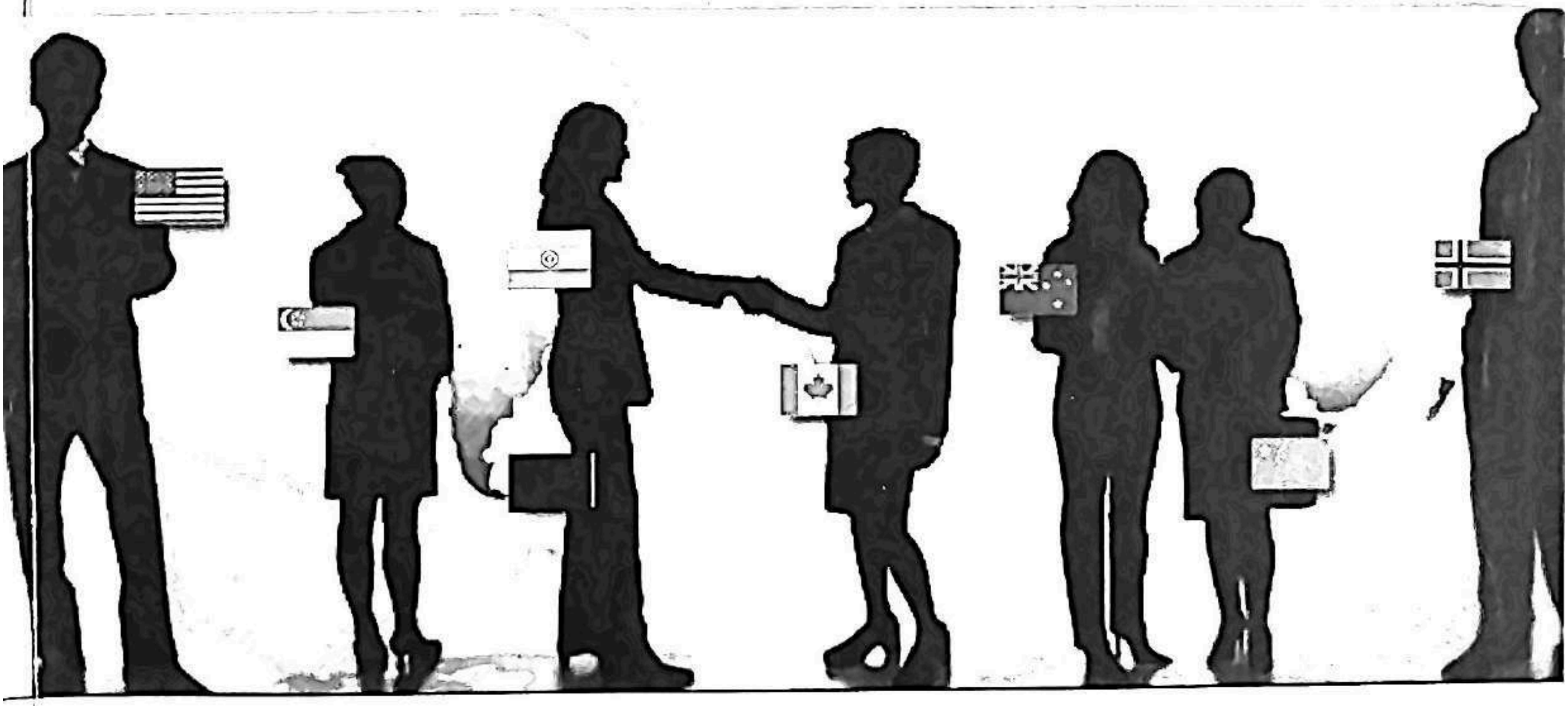


ISBN: 978-81-920045-4 9

[Business Papers]

Volume - I

Editors : Dr. Sanjay Kaptan || Dr. Anwar Shaikh || Prof. Rakesh Mittal



Organised by

Anjuman Khairul Islam's
Poona College of Arts, Science & Commerce

In Association With

Department of Commerce & Research Centre
University of Pune

INDEX

PROSPECTS AND CHALLENGES OF ENTREPRENEURIAL MARKETING IN THE GLOBAL COMPETITIVE SCENARIO

Dr. U. M. Deshmukh
H.O.D. Operations Management,
SIBER School of Management, Kolhapur
Mobile No.-9890691927

Prof. Veerdhaval S. Ghorpade
Assistant Professor,
Bharati Vidyapeeth University, Pune
Institute of Management, Kolhapur
email-veerdhavalg@gmail.com,
Mobile No-9881514555

Abstract: *Entrepreneurial Marketing Management is a term, which is receiving increasing use. It essentially encompasses two very distinct areas of Marketing Management and Entrepreneurship. This article is dedicated to exploring the emergence of this as a discipline, its history, challenges and its prospects. Scholars from both the world from Marketing and Entrepreneurial Management, Networking and the Resources and the Skill implications of adopting an Entrepreneurial approach to marketing activities. This research has now built up into a sizable body of literature and this note introduces the reader to the essence of this research and identifies its usefulness in viewing many areas of Management, its Prospects and Challenges, this note further argues that entrepreneurs must utilize the social and human capital contained within networks for successful opportunity recognition and resource mobilization. It examines networks along their components of relational and structural embeddedness and examines how they play out in identifying opportunities and securing resources for their ventures.*

Introduction And Historical Perspective

The Marketing Management or Entrepreneurship interface has developed a substantial body of literature over last decade. Marketing has much to offer the study of Entrepreneurship (Murry: 1981, Hills: 1987) and likewise Entrepreneurship can look to Marketing as the key function within the firm, which can encompass innovation and creativity. The interface between the two disciplines as having distinct areas of both difference and overlap the difference are between traditional Marketing which operates in consistent environment, firstly, where market conditions are continuous and the firm is satisfying clearly perceived customer needs and pure Entrepreneur which operates in an uncertain environment, secondly, where market conditions are discontinuous and the needs of the market are as yet unclear. The overlap exist in two areas: one where Market conditions are continuous and Entrepreneurship aids the process of identifying as yet unperceived needs and secondly in a discontinuous market where Entrepreneurship guides Marketing Management strategy to develop existing needs in new environment.

In essence these researchers perceive the interface as focusing on identifying opportunities in the changing environment. In our opinion Marketing, Entrepreneurship, and Management have three key areas of interface they both change focused opportunistic in nature and innovative in there approach to Management. Ideas are value through time, effort, money and skills, assume the risk of the competitive marketplace to implement these ideas and realize the rewards from these efforts, Highlights the importance of change as one of the key drivers in Entrepreneurial activity. Many of the actions undertaken by the Entrepreneur are key concepts of marketing theory, which suggest that successful Marketing is undertaken by firm who identify new opportunities, apply innovative techniques to bring the product/ service to the market place and successfully meets the needs of their chosen target market. Again the central element of managing many activities in a fluid, changing environment is stressed.

If we accept three key areas of the Marketing Management /Entrepreneurship interface as being change focused, opportunistic in nature and innovative in management approach, this has implications for education. Specifically this suggests that curricula are adequately developed to encourage students to learn how to deal

Volume - 4 | Issue - 9 | March - 2017

RESEARCH DIRECTION

UGC APPROVED

International Recognition Interdisciplinary Research Journal

Impact Factor 2.9005(UIF)

ISSN 2321-5488

TECHNIQUES USED FOR INVENTORY CONTROL IN SPINNING MILLS

S.S. Kadam

Mrs. S. S. Kadam

D. R. K. College of Commerce, Kolhapur.

ABSTRACT:- Inventory control is the technique of maintaining the size of the inventory at some desired level keeping in view the best economic interest of an organization. The objective of inventory control is to maintain inventories of the optimum level. So the use of various techniques and to ...

Editor - In - Chief - S.P. Rajguru

Research Directions
International Multidisciplinary Research Journal
ISSN NO:- 2321-5488 Impact Factor : 2.9005(UIF) Volume - 4 | Issue - 9 | March - 2017

RESEARCH DIRECTIONS

ISSN: 2321-5488
IMPACT FACTOR : 2.9005(UIF)
VOLUME - 4 | ISSUE - 9 | MARCH - 2017

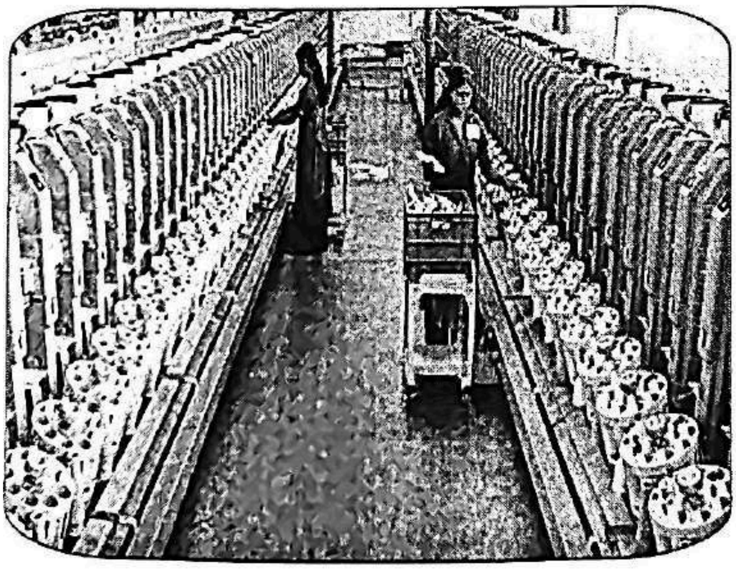
TECHNIQUES USED FOR INVENTORY CONTROL IN SPINNING MILLS

Mrs. S. S. Kadam[1] and Dr. U. M. Deshmukh[2]
[1]D. R. K. College of Commerce, Kolhapur.
[2]CSIBER, Kolhapur.

ABSTRACT

Inventory control is the technique of maintaining the size of the inventory at some desired level keeping in view the best economic interest of an organization. The objective of inventory control is to maintain inventories of the optimum level. So the use of various techniques and to control the investment in inventories it is an very essential. Techniques of ABC analysis, FSN analysis, XYZ analysis, HML analysis etc. used in various organization and it is useful to reduce the cost of production. The basic objectives of inventory control is to optimize the size of inventory in the spinning mill. This paper is aimed to study how inventories are managed and focused on techniques used in spinning mills. Effective inventory control techniques are essential to avoid unnecessary locking up investment in inventories. So it is very necessary to control the investment in inventory and to achieve the maximization of profit in spinning mills.

KEYWORDS- *Inventory control, techniques, investment, effective optimize, economic, production.*



INTRODUCTION :

Every business organization, however big or small, has to maintain inventory and it constitutes an integral part of the working capital. It has been estimated that inventory in Indian industries constitutes more than 60% of current asset. Inventories are significant elements in cost process. Inventories require a significant investment, not only in acquiring them but also in holding them. Investment in inventories is said to be idle but it is unavoidable in any organization. For this reason, one requires a careful planning, formulation of policies and procedures appropriate to maintain the stock at some desired level. In other words, these techniques of maintaining inventories at appropriate level may be known as inventory control.

For that purpose it is very necessary to give control on inventories hence, to use the various types of tools and techniques and to control optimum level inventory, it is an very essential in every spinning mills. For inventory control purpose in various organisations ABC analysis, VED analysis, HML analysis, SOS analysis, GOLF analysis, FSN analysis, these types of techniques are used and to control the various inventory items.

In spinning mills, basically ABC analysis and FSN analysis is used for the purpose of inventory control. So, these techniques are very important to control the various items of inventory and to achieve the objectives of the spinning mills.

DEFINITION OF INVENTORY

The term inventory includes stock of finished goods, work-in-progress, raw material and components.

In the words of G. Sudarsana Reddy, "Inventory can be used to refer to the stock on hand at a particular time of raw materials, goods-in-process of manufacture, finished products, merchandise purchased for resale, and the like, tangible assets which can be seen, measured and

ISSN 2277-7644

Research Journal for
Renaissance in Intellectual Disciplines

RENAISSANCE

Chief Editor
Dr. Khanderavaji S. Kale

International Registered and Recognized
Research Journal in Higher Education for all Subjects

CONTENTS

Page No-19 to 23
Research Paper
Research Journal for
Renaissance in Intellectual Discipline
ISSN 2277-7644,Vol-17, Issue-1, April., to June.,-2016 (Quarterly)

"Safety, Health and Welfare Programmes in Warana Sugar Factory"

Mrs. Nilima Magdum

Dr. U. M. Deshmukh
Chairman,
Mphil, Programme, CSIBER, Kolhapur

ABSTRACT-:

Employee health, safety and welfare measures helps to promote efficiency and results in higher productivity. In manufacturing sectors the study results have shown that the workers who actively followed health and safety rules could result in health and safety performance improvements. Although employee participation and involvement are crucial, the accountability and responsibility in the safety and health must come from senior management as required by the occupational health and safety legislation. A happy work force is an asset for the industrial prosperity of any nation. The objective of this study is to know the overall safety, health and welfare measures at STKWSSKL, Warananagar. Sugar industry comes under Large scale industry sector where employees are subjected to hazardous environment and also this is a co-operative firm so here the study of Safety, Health and Welfare becomes very important topic for the present study. Surveys are conducted to know how the Safety, Health and welfare measures are applied in the industry. The result of this study shows that majority of the employees recognize the present efforts taken by sugar industry, on safety, health and welfare measures are satisfactory. Though, few suggestions are given related to safety as it should be continuous improvement process to reduce accidents and to maintain zero accident.

INTRODUCTION -:

Today's changing Industrial scenario demands the quick response to the market conditions. For this any Industrial unit should be highly productive. This is not possible without the satisfied employees. The employee satisfaction depends not only on the wages or salary paid to them but also highly depends on the welfare and safety facilities provided to them. A

Page No-11 to 13
Research Paper
Research Journal for
Rejuvenile in intellectual Discipline
ISSN 2278-0300,Vol-20, Issue-1, March., to May.,-2016 (Quarterly)

A Review Of Literature On Problems Anmd Prospects Of Women Entrepreneurs In India

Renuka Turambekar
M. Phil. Student
CSIBER, Kolhapur

Dr. C. S. Kale
Asst. Professor
CSIBER, Kolhapur

INTRODUCTION :

The emergence of women entrepreneurs and their contribution to the national economy is quite visible in India. The number of women entrepreneurs has grown over a period of time. Government of India has defined women entrepreneurs based on their holding of equity and participation in employment of business undertaking. Accordingly a women running an enterprise and has a minimum financial interest of 51 per cent of the capital and giving at least 51 per cent employment generated in the enterprise to women. For the economic development of the country, women should be motivated to take up entrepreneurship.

Women entrepreneurs may be defined as a women or group of women who initiate, organize and run a business enterprise. Last five decades have seen phenomenal changes in the status and work place diversity of women in India. In sixties women took small steps to start small women enterprises at home and from home for self employment. The women in seventies opened up new frontiers and developed not only aspirations but ambitious for self-employment and employment generation. In eighties the number of women pursuing highly sophisticated technological and professional education increased. The women of the nineties were capable, competent and confident. They were clear of their goals, processes and dynamics of goal accomplishment. In most cases they move out and outperformed their male counter parts. Twenty first century is the century of Telecom, IT and financial institutions. Women enterprises has made them emerge as a force to reckon with. Most of these industries are headed and guided by women entrepreneurs. In this paper an attempt has been made by the researchers to examine and review the previous and present studies on problems and prospects of women entrepreneurs in India, which are as follows.

Page No-20 to 22
Research Paper
Research Journal for
Rejuvenile In Intellectual Discipline
ISSN 2278-0300,Vol-20, Issue-1, March., to May.,-2016 (Quarterly)

A Review Of Literature On Quality Of Work Life Of Teachers In India

Vasim M. Kadri
M. Phil., Student,
CSIBER, Kolhapur.

Dr. C. S. Kale
Asst. Professor,
CSIBER, Kolhapur.

INTRODUCTION :

The role and responsibility of the teacher is very important and noble. If the plans of a nation are to be fulfilled, it is the teacher who can make the maximum contribution towards the achievement of the desired goals. The teacher has a powerful influence in the formation of the character of every future citizen. Teacher acts as a pivot for the transmission of intellectual and technical skills and cultural tradition from one generation to the other. Therefore, teachers have to work in more dignity and with ample operational freedom. In other words the teachers have to enjoy a good quality of work life. It has been proved that a good quality of work life results into the wellness of the faculty and also improved student behaviour.

Quality of Work Life (QWL) refers to how an individual perceives his or her work life. It encompasses various aspects of work life, that is work itself, working conditions, working skill, rewards - financial and otherwise. Thus, it is a multifaceted concept implying concern for the members of the organization irrespective of the level they belong to. It is a continuous process of changing and improving the work climate so that the interface of people, technology and organization makes for a more satisfying work experience for employees and give desired outcomes for the organization.

Although a good quality work life helps all organizations to increase their performance irrespective of the sector they belong to, yet for the organizations in the service sector, it is more important because performance of the service organization is highly person-centric. The review of literature on this topic by previous authors makes the researchers to get are insight into the methods and procedures to be followed. In this paper an attempt has been

'RESEARCH JOURNEY' *International Multidisciplinary E- Research Journal* | ISSN : 2348-7143
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013) | April 2018
Special Issue 56 :
UGC Approved No. 40705 & 44117

17-18 (6)

A Review of Literature on Job Related Stress and its Impact on Employee Performance

Mahejbin Mubarak Kazi
M. Phil. Student,
CSIBER, Kolhapur.

Dr. C. S. Kale
Asst. Professor,
CSIBER, Kolhapur.

Introduction :

There are many misconceptions about stress. It is therefore important to understand stress well before thinking of managing it. The meaning of stress has changed over the years. In the initial stages stress was considered as environmental pressure, Stress within the person. Basically, stress is a psychological and shysical state that results when the resources of the individual are not adequate to cope with the demands and pressures of the situation. Therefore, stress is more likely in some situations than others and in some individuals than others. Moreover, stress as a response to a demand that is placed upon a person. It can be simply understood as a condition where on experiences as gap between the present state and a desired state. Merriam Webster defined stress as a physical, chemical or emotional factor that causes bodily or mental tension and may be a factor in disease causation. It is also a normal reaction when the brain recognizes a treat. When the treat is perceived, the human body releases hormones that activate its fight or flight response. Stress can be minimized if we know the sources of stress. Occupational stress is a significant and costly problem and that the challenge for the organization is to manage work stress in order to reduce health care costs and improve productivity. In this paper an attempt has been made by the researchers to critically examine various studies that are available. So far, these studies are as follow.

The study by Laiba DAR et.al (2011) Stated that many demographic factors are associated with stress such as, age, gender, qualification, designation and salary. The study showed that male posses more stress bearing capacity than females. The burden of stress is also very on the nature and position of the job. The results show that stress is also increases with the designation.

Balaji R. (2014) in his study stated that, stress can not be avoided altogether, in fact a little bit of stress is necessary to spur productivity and innovation. But it must be kept at a reasonable level or else it will cause harm to employees and the organization. Managers are responsible for not over working or stressing out their employees they should act as role models in coping skills for their employees. Moreover, human resource departments are responsible for making stress management resources available and raising organizational awareness about them.

The study by Ratanwat R. G. and Jha P. C. (2014) mentioned that for male factory workers the financial problems, low wages followed by poor physical environment, dual career, threat to job. Security, social and physical isolation, personal and family problems, on role in decision making boring and repetitive work, frustration over career ambition and harassment and bullying were found to be important stress contributing factors. Female workers do have the similar problems and most significant was threat to job security.

ISSN 2277-7644 120

Research Journal for Renaissance in Intellectual Disciplines

CSD

June 2016

RENAISSANCE

Chief Editor

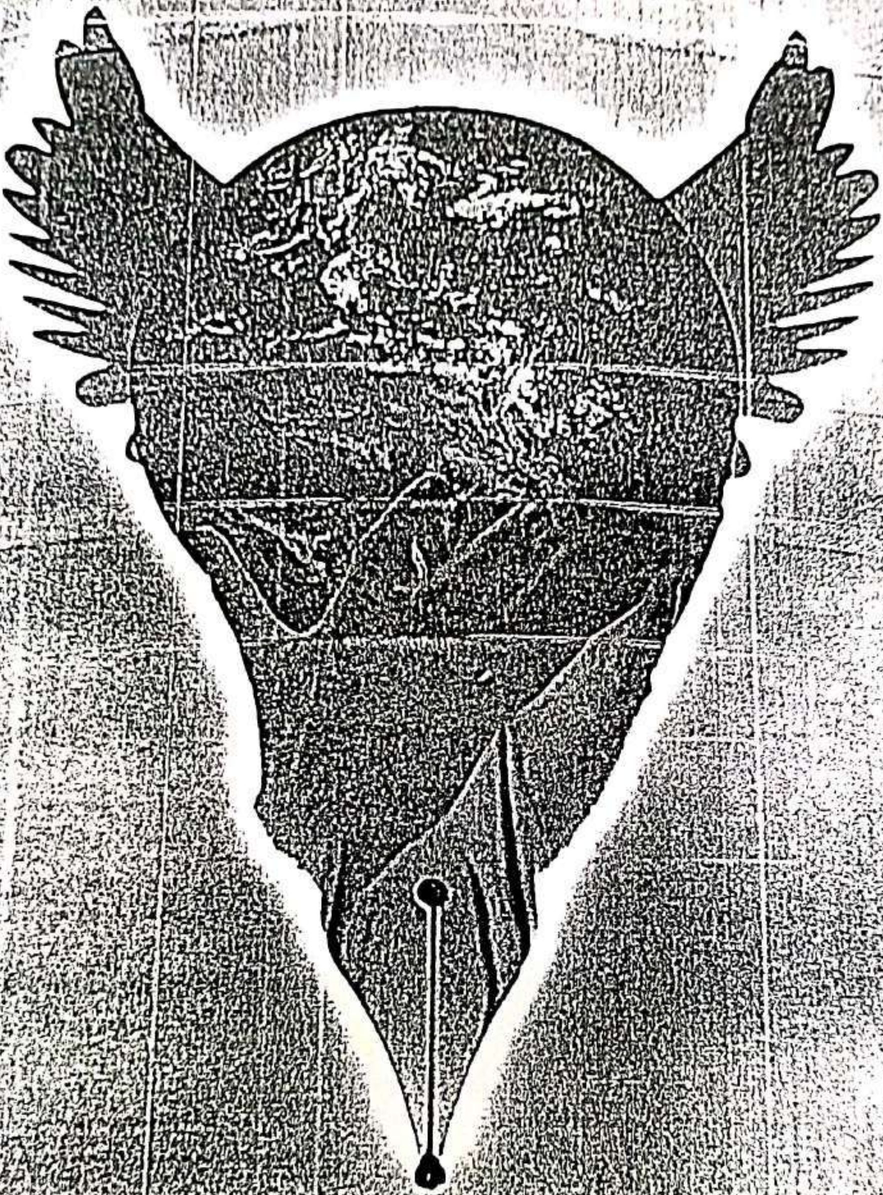
Dr. Khanderavaji S. Kale

International Registered and Recognized

ISSN 2277-7644 120

Research Journal for
Renaissance in Intellectual Disciplines

CSD
June 2016



RENAISSANCE

Chief Editor
Dr. Khanderavaji S. Kale

International Registered and Recognized

CONTENTS

ıge No-27 to 28
esearch Paper
esearch Journal for
enaissance In Intellectual Discipline
SSN 2277-7644,Vol-17, Issue-1, April., to June.,-2016 (Quarterly)

A Review Of Literature On Strawberry Marketing In India

Iorkeri Annapurna A.
M. Phil. Student,
CSIBER, Kolhapur.

Dr. C. S. Dalvi
Faculty Member
CSIBER, Kolhapur

INTRODUCTION :

Strawberry is an important fruit crop of India and its commercial production is ıossible in temperate and sub-tropical areas of the country, but varieties are available which an be cultivated in sub-tropical climate. In India it is generally cultivated in the hills. Its nain centre of cultivation are Nainital (District) and Dehradun in Uttar Pradesh, Mahabaleshwar (Maharashtra), Kashmir Valley, Bangalore and Kalimpong (West Bengal). n recent years Strawberry is being cultivated in plains of Maharashtra around Pune, Nashik nd Sangli towns. The Strawberry is the most widely adopted of the small fruits. Strawberries re grown throughout Europe, in every state of the United States, as well as Canada in the outh America. The wide variation in climate within these regions and the wide adoption of ıe Strawberry plant permit harvesting and marketing, the fruit during greater part of the ear. As far as marketing is concerned majority of the Strawberry growers sell their produce ither through trader agents at village level or commission agents at the market. Strawberry s consumed in large quantities, either fresh or in such prepared foods as preserves, fruit ıice, pies, ice creams, milkshakes and chocolates. Review of literature gives the guidelines om the past researchers and provides foundation to the theoretical framework for the resent investigation. The review of past literature makes the investigator to get an insight ıto the methods and procedures to be followed. In this paper the researchers made an ttempt to study the past and recent studies on this topic which are as follows.

The study by Alim A. Jafar and V. A. Patil (2013) observed that, the fruit is picked

Q Yahoo Search

Compose

Yahoo (196)
gnou1606@gm... (142)
drcsdalvi (32)

Inbox (196)
Drafts (58)
Sent
Archive
Spam (201)
Trash (244)
Smart views
Important
Unread
Starred
People
Social
Shopping
Travel
Finance
Folders
Recent

Archive Move Delete Spam More

Greetings from ISP Team "Volume V Issue VII/July 2016" has b...

Jul 31 at 8:42 AM

Editor IJLTEMAS <editor@ijltemas.in>
To editor ijltemas
BCC drcsdalvi@yahoo.co.in

International Journal of Latest Technology in Engineering, Management & Applied Science

International Peer Reviewed Refereed Journal

Approved by National Institute of Science Communication And Information Resources (NISCAIR)

A Unit of International Standards Publication (ISP)

ISSN 2278-2540 (www.ijltemas.in)

Go Green Save Paper

Dear Authors,

Greetings from International Standards Publication Team, we are pleased to inform you that " Volume V Issue VII/July 2016" of International Journal of Latest Technology in Engineering, Management & Applied Science has been published online.

Authors can view/download full length papers from International Standards Publication Digital Library:-

www.ijltemas.in/Vol-V-Issue-VII

We will ship "Publication Certificates" via speed post, we use two different shipping methods based on geographic locations and desired delivery time. Deliveries outside of major cities or off main routes will take longer (Delivery of Publication Certificates to your address will take 7 –8 working days), please inform us by sending an e-mail at admin@ijltemas.in after receiving the Publication Certificates.

Frequently Asked Questions

A. How can I Download my PDF File ?

- Open Your Google Chrome Browser
- Go to Full Text & Share
- Click on PDF file
- Click Open with
- Find your Adobe Reader and Select it
- Press OK
- Now Save PDF file with New Name

Kindly find the attachment of published paper.

Please mail us if you have other query at Author's Support Portal on info@ijltemas.in

Yours sincerely,

RESEARCH & SCIENTIFIC INNOVATION SOCIETY
RSIS

Executive Managing Editor
International Journal of Latest Technology in Engineering, Management & Applied Science ISSN: 2278-2540
www.ijltemas.in
Go Green Save Paper

International Journal of Latest Technology in Engineering, Management & Applied Science (IJLTEMAS)
Volume V, Issue VII, July 2016 | ISSN 2278-2540

Performance of Woman Self Help Groups

Dr. C. S. Dalvi, Smita Shrivastav

Abstract: - 'Swarnjayanti Gram Swarozgar Yojana' was launched by the Government of India from April, 1999. It was a holistic programme covering all aspects of self-employment such as organization of the poor into Self Help Groups(SHGs), training, credit, technology, infrastructure and marketing.

Keywords: - WSHG, SGSY, Woman Empowerment, Economic Upliftment, Poverty.

I. INTRODUCTION

Improvement in any form, of any aspect calls for a reality check of the existing ground reality. This is imperative to lend the right direction for the future course of concerted action. Microfinance|| refers to provision of financial services—loans, savings, insurance, or transfer services—to low-income households. Its benefits are improving livelihoods, reducing vulnerability, and fostering social as well as economic empowerment. microfinance programs have generally targeted women as their clients. Women have are been found to be more financially responsible with higher repayment rates than men. Also it has been shown that women are more likely than men to invest increased income from microenterprises in the household and family well-being. Most importantly, access to financial services can empower women to become more confident, more assertive, more likely to participate in family and community decisions, and better able to confront systemic gender inequities. However, empowerment is by no means automatic—gender-related issues are complex. Microfinance programs from different regions of the world report increasing decision-making roles of women clients. SGSY was launched in the state of Goa on1.4.1999. There is a felt need to assess the status of its implementation and functioning. A proper detailed evaluation of whether the scheme guidelines were followed in constituting the SHGs, whether their day to day working adheres to stipulated dos and don'ts, to what extent have the women members benefitted economically, are they socially and politically empowered, have the panchayats ,DRDA and banks dispensed their roles judiciously and importantly, what are the problems ,if any, these SHGs and their members are facing ? Answering these questions is of paramount importance. This is precisely what this study intends to accomplish. The groups taken up for study were exclusively all- women groups.

II. OBJECTIVES OF THE STUDY

The following were the objectives with respect to implementation of SGSY in the state of Goa:

A. To study the nature of economic activities undertaken by WSHGs/SHGs under SGSY.
B. To evaluate the impact of economic activities undertaken on the social status of WSHG members.
C. To assess the role of capacity building in the success of SGSY.
D. To suggest measures for the effective implementation of SGSY.

III. RESEARCH METHODOLOGY

A. Primary Data Collection:

Primary data has been collected from WSHG members by using the survey method. Personal interviewing technique was used wherein field researchers administered structured questionnaire to the respondents.

B. Hypothesis :

Monthly Earnings and the social uplift aspects are associated.

C. Sampling Technique and Sample Size:

The researcher has adopted stratified random sampling. . At the time the research proposal was made , the state of Goa had 11 talukas (now there are 12). So it was decided that from each taluka ,self help groups would be selected so as to get an all Goa representation. Thus at the first stage the researcher has used _stratified sampling'. As on 31.3.2008, the total number of Women Self Help Groups(WSHGs) under Swarnajayanti Gram Swarozgar Yojana(SGSY) in the state of Goa were 645(six hundred and forty five) with a total membership of 5,409. Talukawise sample selected proportionately. During the course of the survey 500 members were selected.

D. Secondary Data Collection:

Secondary data used comprises taluka wise SGSY records maintained by the Rural Development Agency(RDA), Government of Goa, annual reports of Ministry of Rural Development, various publications of state, central,

IOSR Journal of Business and Management (IOSR-JBM)
e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 18, Issue 8 Ver. I (Aug. 2016), PP 52-55
www.iosrjournals.org

Social Upliftment of Woman through WSHG In Goa

Dr.C.S.Dalvi, Ms. Smita Shrivastav,

I. Introduction

Improvement in any form, of any aspect calls for a reality check of the existing ground reality. This is imperative to lend the right direction for the future course of concerted action. SGSY was launched in the state of Goa on1.4.1999. There is a felt need to assess the status of its implementation and functioning. A proper detailed evaluation of whether the scheme guidelines were followed in constituting the SHGs, whether their day to day working adheres to stipulated dos and don'ts, to what extent have the women members benefitted economically, are they socially and politically empowered, have the panchayats ,DRDA and banks dispensed their roles judiciously and importantly, what are the problems ,if any, these SHGs and their members are facing ? Answering these questions is of paramount importance. This is precisely what this study intends to accomplish.SGSY was launched in the state of Goa on 1.4.1999. As of March, 2014; the state had a total of 1,475 SHGs .This figure is inclusive of SHGs which are exclusively Women Self Help Groups(WSHGs), SHGs which are exclusively Men Self Help Groups and SHGs which include both men and women as their members. The only study conducted to evaluate the performance of the SGSY scheme in Goa was -'Empowering Rural Women in Goa: An Appraisal of Self Help Groups under SGSY' by Arlette Mascarenhas; GIRDA(now GIPARD), Goa in 2005 as a Minor Research Project sponsored by NIRD, Hyderabad wherein she attempted to find out how SHGs under SGSY scheme can empower rural women in Goa. She has also tried to study the socio-economic background of the women members prior to and subsequent to their joining the SHGs, and if SHGs have helped them to attain leadership qualities.The study was limited to two talukas of Goa, namely, Ponda and Quepem. This study includes all talukas of Goa state. The groups taken up for study were exclusively all- women groups.

II. Objectives Of The Study

The following were the objectives with respect to implementation of SGSY in the state of Goa:

1. To study the nature of economic activities undertaken by WSHGs/SHGs under SGSY.
2. To evaluate the impact of economic activities undertaken on the social status of WSHG members.
3. To assess the role of capacity building in the success of SGSY.
4. To suggest measures for the effective implementation of SGSY.

III. Research Methodology

3.1 Primary data collection:

Primary data has been collected from WSHG leaders by using the survey method. Personal interviewing technique was used wherein field researchers administered structured questionnaire to the respondents.

3.2 Hypothesis :

Monthly Earnings and the social uplift aspects are associated.

3.3 Sampling technique and sample size:

The researcher has adopted stratified random sampling. . At the time the research proposal was made , he state of Goa had 11 talukas (now there are 12). So it was decided that from each taluka ,self help groups ould be selected so as to get an all Goa representation. Thus at the first stage the researcher has used 'stratified ampling'. As on 31.3.2008, the total number of Women Self Help Groups(WSHGs) under Swarnajayanti Gram warozgar Yojana(SGSY) in the state of Goa were 645(six hundred and forty five) with a total membership of 409. Talukawise sample selected proportionately. During the course of the survey, a total of 109 leaders

4 Secondary data collection:

Secondary data used comprises taluka wise SGSY records maintained by the Rural Development gency(RDA), Government of Goa, annual reports of Ministry of Rural Development, various publications of ate, central, international agencies, microfinance sector reports, reputed academic journals, books and websites public and private agencies.

127

ISSN 0974-763X

SOUTH ASIAN JOURNAL OF MANAGEMENT RESEARCH (SAJMR)

CSD

Volume 8 Number 2 July 2016

CONTENTS

Chhatrapati Shahu Institute of Business

al Woman Empowerment Through Women Self Help Groups: A Study of SGSY in Goa

Ms. Smita Shrivastav
Faculty, St. Xavier's College, Goa

Dr. C. S. Dalvi
Faculty, CSIBER, Kolhapur

act: The paper assesses the status of implementation and functioning WSHG under SGSY. A proper d evaluation of whether the scheme guidelines were followed in constituting the SHGs, whether their day working adheres to stipulated dos and don'ts, to what extent have the women members benefitted nically, are they socially and politically empowered, have the Panchayat, DRDA and banks dispensed oles judiciously and importantly, what are the problems ,if any, these SHGs and their members are ? Answering these questions is of paramount importance. In the past studies pertaining to Goa attempt ade to find out how SHGs under SGSY scheme can empower rural women in Goa. The study was d to two talukas of Goa, namely, Ponda and Quepem. The present paper attempts to study the socio-mic background of the women members prior to and subsequent to their joining the SHGs, and if SHGs elped them to attain leadership qualities. The groups taken up for study were exclusively all- women s from all talukas of Goa state. Statistical tests are adopted to examine the various hypothesis in the

vords: WSHG, SGSY, Woman Empowerment, Economic Upliftment

ntroduction

Improvement in any form, of any aspect for a check of the existing ground reality. is imperative to lend the right direction for uture course of concerted action. SGSY launched in the state of Goa on1.4.1999. e is a felt need to assess the status of its ementation and functioning. A proper led evaluation of whether the scheme elines were followed in constituting the is, whether their day to day working res to stipulated dos and don'ts, to what nt have the women members benefitted omically, are they socially and politically owered, have the Panchayats , DRDA and s dispensed their roles judiciously and ortantly, what are the problems ,if any, these Gs and their members are facing? wering these questions is of paramount ortance. This is precisely what this study nds to accomplish. SGSY was launched in state of Goa on 1.4.1999. As of March, 4; the state had a total of 1,475 SHGs. This re is inclusive of SHGs which are lusively Women Self Help Groups SHGs), SHGs which are exclusively Men Help Groups and SHGs which include both and women as their members.

The only study conducted to evaluate the Appraisal of Self Help Groups under SGSY' by Arlette Mascarenhas; GIRDA(now GIPARD), Goa in 2005 as a Research Project sponsored by NIRD, Hyderabad wherein attempt was made to find out how SHGs under SGSY scheme can empower rural women in Goa. The researcher tried to study the socio-economic background of the women members prior to and subsequent to their joining the SHGs, and if SHGs have helped them to attain leadership qualities. The study was limited to two talukas of Goa, namely, Ponda and Quepem. The groups taken up for study were exclusively all-women groups. However the current study covers all talukas of Goa state.

2.0 Objectives of the study:

The following are the objectives with respect to implementation of SGSY in the state of Goa:

i. To study the nature of economic activities undertaken by WSHGs/SHGs under SGSY.
ii. To evaluate the impact of economic activities undertaken on the social status of WSHG members.
iii. To assess the role of capacity building in the success of SGSY.
iv. To suggest measures for the effective implementation of SGSY.

Indian Streams Research Journal

ISSN: 2230-7850 Impact Factor : 4.1625(UIF) Volume - 6 | Issue - 11 | December - 2016

CREATING CUSTOMER VALUE THROUGH THE LOGISTICS MANAGEMENT

Prof. D. P. Mohite[1] and Dr. C. S. Dalvi[2]

[1]Assistant Professor , Swaraj Institute of Management , Vanvasmachi, Karad .

[2]B. Tech., MMS, Ph.D. , Chhatrapati Shahu Institute of Business Education & Research (SIBER), Kolhapur.

ABSTRACT

Ultimately the success or failure of any business will be determined by the level of customer value that it delivers in its chosen markets. Customer value can be defined quite simply as the difference between the perceived benefits that flow from a purchase and the total costs incurred.

Logistics is the interface between the market place and the organiza tion wishing to satisfy its customers and is thus a key area for creating value for the customer. Logistics is a process that crosses functional boundaries meaning that functional integration is the key in the smooth flow of goods and related information.

The objective of this study is to improve the understanding of how logistic management contributes to customer value creation.

Obviously, logistics has strong impact on both components of value. High-quality logistics services directly attract customers and increase the perception of the purchase benefits. On the other hand, effective logistics strategies and technologies provide reduction of logistics costs, that is, the overall costs. For these reasons, logistics is considered to be very effective tool in creating and increasing the customer value.

As a result of the study, a proposition is made:

"If customer value is to be achieved, then customer success has to be attained."

KEYWORDS:*Logistics, customer value, customer, customer satisfaction, customer benefits*.

INTRODUCTION :

Schmidt (1986) describes logistics management as:

"The management (i.e. the planning , execution and control) of all factors that affect the materials flow and the information about it , seen from the perspective of customer requirements, for the purpose of achieving a high delivery , a high reliability , a high degree of completeness and a short delivery time"

Logistics system and examples of relevant activities:

VOLUME-6 | ISSUE-4 | APRIL - 2017 • ISSN No 2277 - 8179 | IF : 4.176 | IC Value : 78.46

"Super Market Consumer Perception Analysis Through Data Mining Techniques"

Computer Science

KEYWORDS: Data Mining, Market Basket Analysis, Supermarket, Consumer, Satisfaction.

Rani Patil Asso.Professor, Dept. M.Phil.CSIBER, Kolhapur

Dr. S. D. Bhoite Asso.Professor, Dept. M.Phil.CSIBER, Kolhapur

ABSTRACT

Market basket analysis is an important component of analytical system in retail organizations to determine the placement of goods, designing sales promotions for different segments of customers to improve customer satisfaction and hence the profit of the supermarket. These issues for a leading supermarket are addressed here using frequent item set mining. The frequent item sets are mined from the market basket database using the efficient Apriori algorithm and then the association rules are generated. The retail sector in India is witnessing a huge revamping exercise as traditional markets make way for new formats such as departmental store supermarkets and specialty stores. Retail is India's largest industry, accounting for over 10 per cent of the country's GDP and around eight per cent of the employment. Retail industry in India is at the crossroads. It has emerged as one of the most dynamic and fast paced industries with several players entering the market. Western-style malls have begun appearing in metros and second-rung cities alike introducing the Indian consumer to a shopping experience like never before. India's vast middle class and its almost untapped retail industry are key attractions for global retail giants wanting to enter newer markets. The organized retail sector is expected to grow stronger than GDP growth in the next five years driven by changing lifestyles, strong income growth, better products and shopping options, and favourable demographic patterns. A Study on Consumer Satisfaction towards Supermarkets with special reference to Sangli city is a modest attempt to understand the consumer perception towards retailing in the Sangli city region. The study intends to find out the relationship between demographic variables of the consumer and satisfaction of the consumers in different attributes of Supermarkets in Sangli city.

Introduction: Supermarket shopping is often categorised as a self-service retail environment. For supermarket retailers wanting to build relationships with their customers, being able to track their levels of 'satisfaction' with the key elements of the supermarket environment is extremely important.

From the retailer's perspective the aim is to minimise the reasons for complaints and dissatisfaction and the cost of a service recovery plan whilst establishing a track of direct feedback from customers about their reactions to those key elements. Satisfaction is a consumer's post-purchase evaluation of the overall service experience. It is an affective reaction in which the consumer's needs, desires and expectations during the course of the service experience have been met or exceeded. satisfaction in this sense could mean that a supermarket has just barely met the customer's expectations, not exceeded nor disappointed those expectations. The benefits of taking the customer's response beyond satisfaction at this level by exceeding expectations, is a competitive strategy many retailers aspire to achieve. Against this background this study was designed to investigate customers' satisfaction levels with a range of key elements, which contribute to the retail offer presented by Supermarkets in Sangli city. Factors of particular interest in a retail supermarket environment are friendliness of staff, cleanness of supermarket, and layout of supermarket.

Objectives of Study:
1) To study how internal layout and arrangement of items are made.
2) To study facilities provided by Super Markets.

Hypotheses:
Ho: There is no significant relationship between Buyer's income and making the purchasing decisions.

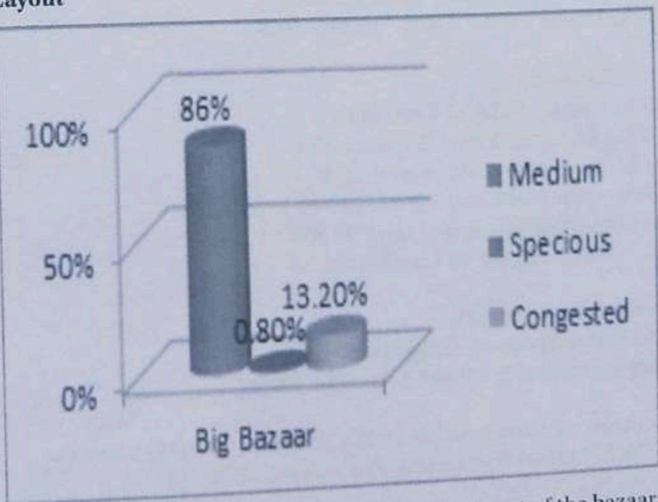
Methodology: This study is based on survey method. Non Probability Random sampling has been used in this study and survey consists of a sample of 250 respondents from the supermarkets, in Sangli city. The primary data collected by conducting the survey by framing of the questionnaires and filled by the consumers of the Supermarkets in Sangli. The secondary data were collected from various journals, magazines, newspapers, websites...etc. For analyzing the primary data the various tools and techniques were used in this study. They are as follows: MS- Excel analysis.

Chi-square Test is applied for Hypothesis testin

No. Of Respondents / Bazaar	Bazaars Layout			TOTAL
	Medium	Specious	Congested	
Big Bazaar	215 (86%)	2 (0.8%)	33 (13.2%)	250 (100%)

Data Analysis and Interpretation:
Table No 1 – Respondents Opinion about Bazaars Layout

Graph No 1- Showing Respondents Opinions about Bazaars Layout

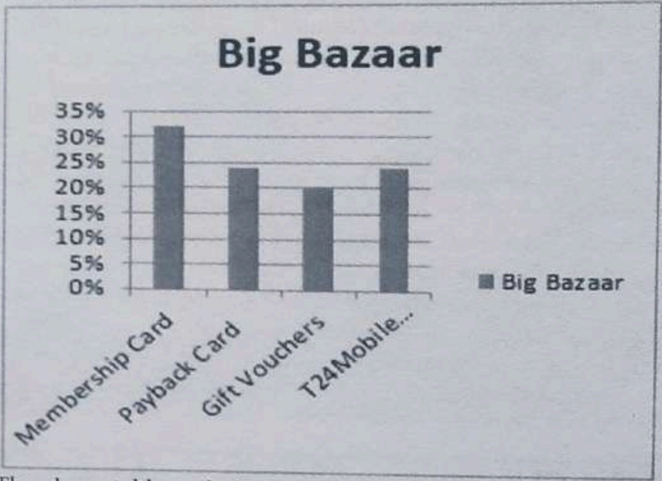


We studied respondents choices regarding the layout of the bazaar, which layout they prefer from the given options (Medium, Specious, Congested), and come up with following results. At Big Bazaar, 86% respondents found it as Medium size while 0.8% found it as specious. About 13.2% fells that Big Bazaar is congested layout.

Table No 2 – Facilities availed by the Respondents

No. Of Respondents / Facility Provided By Bazaars	Bazaar Big Bazaar
Membership Card	80(32%)
Payback Card	60(24%)
Gift Vouchers	50(20%)
T24Mobile currency offer	60(24%)
TOTAL	250(100%)

Graph No 2 – Showing Facilities availed by the Respondents



The above table and chart visualize the customers' interest or preference to the facility provided by the bazaar. The facilities considered were Membership Card, Payback Card, Gift Vouchers, T24 Mobile currency offer. From the above table and chart we can see that 32%, respondents interested in membership card. From the above table and chart we can see that 24%, respondents are using payback card. About 20% respondents are interested in gift vouchers and 24% respondents are using T24 Mobile recharge card. We can say that most of the respondents prefer to have Membership Card & payback card.

Data analyzed with the data mining tool R:

1. Inserting layout of bazaar data into R from .csv file and operation:

> Layout2<-read.csv("D:\\Layout2.csv");
> Layout2;

X Medium Specious Congested TOTAL
1 Big Bazaar 86% 0.80% 13.20% 100%

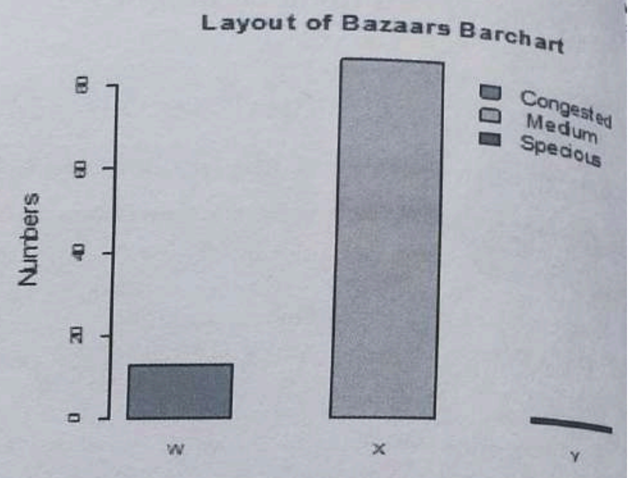
> str(Layout2);
'data.frame': 1 obs. of 5 variables:
$ X : Factor w/ 1 level "Big Bazaar": 1
$ Medium : Factor w/ 1 level "86%": 1
$ Specious : Factor w/ 1 level "0.80%": 1
$ Congested: Factor w/ 1 level "13.20%": 1
$ TOTAL : Factor w/ 1 level "100%": 1

> summary(Layout2);
X Medium Specious Congested TOTAL
Big Bazaar:1 86%:1 0.80%:1 13.20%:1 100%:1

> data<- structure(list(W= c(13L), X= c(86L), Y= c(1L)),.Names= c(W, X,"Y),class="data.frame, row.names= c(NA, 1L));

> attach(data);
> print(data);
W X Y
1 13 86 1

Representation of data into R using graphs:
> colours <- c (red, orange, blue);
> barplot(as.matrix(data), main="Layout of Bazaars Barchart", ylab = "Numbers", cex.lab = 1.5, cex.main = 1.4, beside=TRUE, col=colours);



From above chart we conclude that here maximum respondent having found the Medium type of Layout of Bazaars.

2. Inserting facility provided by the bazaar data into R from .csv and operation:
> F<-read.csv("D:\\F.csv");
> F;

X Big.Bazaar
1 Membership Card 80(32%)
2 Payback Card 60(24%)
3 Gift Vouchers 50(20%)
4 T24Mobile currency offer 60(24%)
> str(F);
'
data.frame': 4 obs. of 2 variables:
$ X : Factor w/ 4 levels "Gift Vouchers",..: 2 3 1 4
$ Big.Bazaar: Factor w/ 3 levels "50(20%)","60(24%)",..: 3 2 1 2

> summary(F);
X Big.Bazaar
Gift Vouchers :1 50(20%):1
Membership Card :1 60(24%):2
Payback Card :1 80(32%):1

T24Mobile currency offer:1
> data<- structure(list(W= c(32L),X=c(24L),Y=c(20L),Z=c(24L)),.Names= c("W", "X", Y","Z"),class="data.frame",row.names= c(NA,1L));
> attach(data);

The following objects are masked from data (pos = 3):

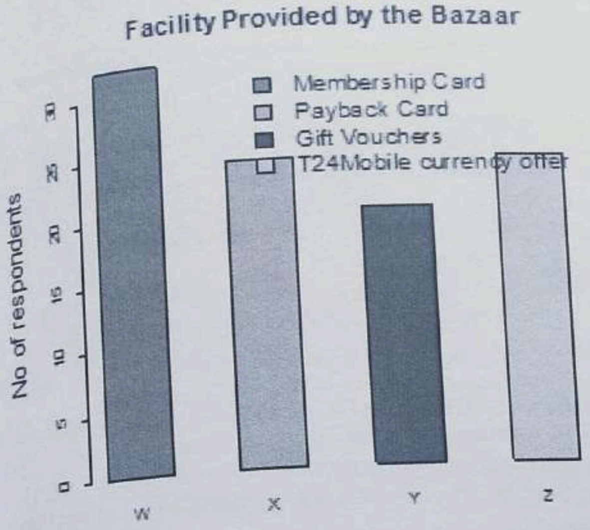
W, X, Y, Z
The following objects are masked from data (pos = 4):

W, X, Y
> print(data);
W X Y Z
1 32 24 20 24
> print(data);
W X Y Z
1 32 24 20 24

Representation of data into R using graphs:
> barplot(as.matrix(data), main="Facility Provided by the Bazaar",ylab = "No of respondents", cex.lab = 1.5, cex.main = 1.4, beside=TRUE, col=colours);

VOLUME-6 | ISSUE-4 | APRIL - 2017 • ISSN No 2277 - 8179 | IF : 4.176 | IC Value : 78.46

egend("topright",c("Membership Card","Payback Card","Gift
uchers","T24Mobile currency offer"),cex=1.3, bty="n",
l=colours);



From above chart we conclude that here maximum respondents are interested in Membership Card, Payback Card and Gift Vouchers Facility

Hypotheses Analysis and Results

OBSERVED FREQUENCY [Oij]:

Bazaar	Less than & Equall 25000	25001-50000	50001-75000	75001-100000	100001 & Above	TOTAL
Big Bazaar	132	56	37	16	09	250

EXPECTED FREQUENCY [Eij]:

Bazaar	Less than 25000	25000-50000	50000-75000	75000-100000	100000 & Above
Big Bazaar	114	65.3	37.5	22.5	10.8

CHISQUARE TEST:-

$X^2 = \Sigma[(Oij - Eij)^2 / Eij]$

(Oij-Eij)=

18	-3.9	-0.5	-6.5	-1.8

$(Oij-Eij)^2$=

324	15.2	0.3	42.3	3.2

(Oij-Eij)2/Eij=

2.8	0.2	0	1.9	0.3

We have to find Degrees Of Freedom using following formula:

DF=5

The P-value is the probability that a chi-square(x2=5.7) statistic having 12 degrees of freedom is more extreme than 5(for 0.99).

Check probability value for degrees of freedom=5 at probability=0.99

Here X2=5<5.7(for alpha=0.99)
So accept H0 i. e. There is no significant relationship between income of respondents and their purchase decisions

Conclusion: Data Mining System is useful to study buying behave or of the customers in retail departmental stores. With this study researcher has concluded that there are certain buying habits of the customers. And according to these buying habits of customer, management may update their system of providing various types of services to their customers to delight the customers and to retain the customer with same business house.

References:

[1] Atkin, Charles K., "Observation of Parent Child Interaction in Supermarket Decision-Making," Journal of Marketing, October, 1978, February
[2] M. Hahsler, K. Hornik, "Building on the arules infrastructure for analyzing transaction data with R", in R. Decker, H.-J. Lenz (eds.), Advances in Data Analysis, pp. 449-456, Berlin: Springer, 2007.
[3] J. Han, M. Kamber, Data Mining: Concepts and Techniques, p. cm. London: Academic Press, 2001.

Link

https://www.worldwidejournals.com/international-journal-of-scientific-research-(IJSR)/article/a-review-of-pharmaceutical-market-segmentation-and-growth-of-the-pharmaceutical-market-in-sangli-city/ODkxNg==/?is=1&b1=189&k=48

Volume : V, Issue : IX, September - 2016

A Review of Pharmaceutical Market Segmentation And Growth Of The Pharmaceutical Market In Sangli city

Mr. Shivappa G Teli, Dr. S. D. Bohite

Abstract :

Key discoveries of the 1980s and 1985s, such as insulin and penicillin, became mass-manufactured and distributed. Sangli City�s pharmaceutical Market was established in the late 19th and early 20th centuries. Sangli city�s pharmaceutical market is highly dynamic and is characterized by greater levels extensive regulation of its products. All of these changes are ultimately good for the Sangli city�s pharmaceutical Market, which suffered in the past decades regulation and large quantities of drugs. They force the industry to reach a level necessary for global competitiveness. At the time of independence in 1947, Sangli city�s market was established by MNCs that controlled between 80 - 90 percent of the market primarily through importation. Approximately 99 percent of all pharmaceutical products under patent in India at the time were held by foreign companies and domestic Indian drug prices were among the highest in the world. The strong growth prospects of the pharmaceutical Market segment and growing demand from the domestic market, will further fuel growth in the pharmaceutical sector. Manufacturing segment. Due to the highly fragmented nature, there is a dearth of pricing power and critical scale. This in turn restricts the ability to produce the technology-driven products required for operating in global markets.

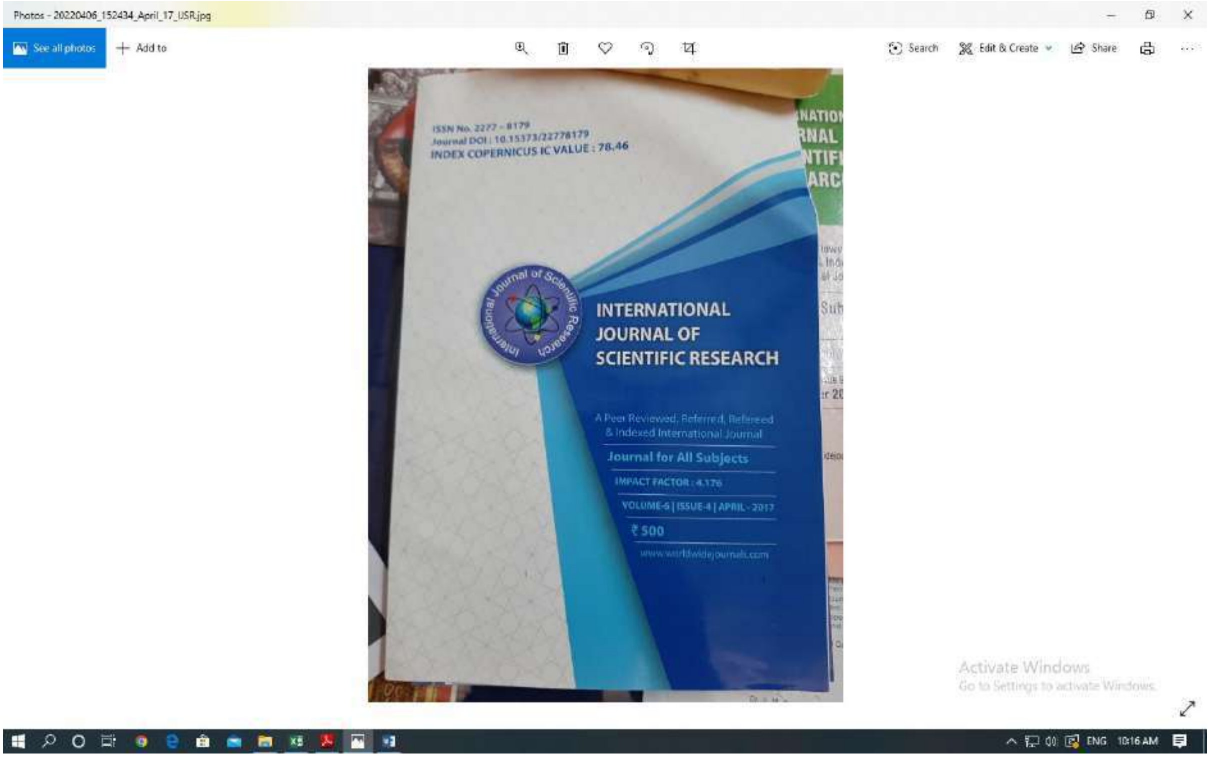
Keywords :

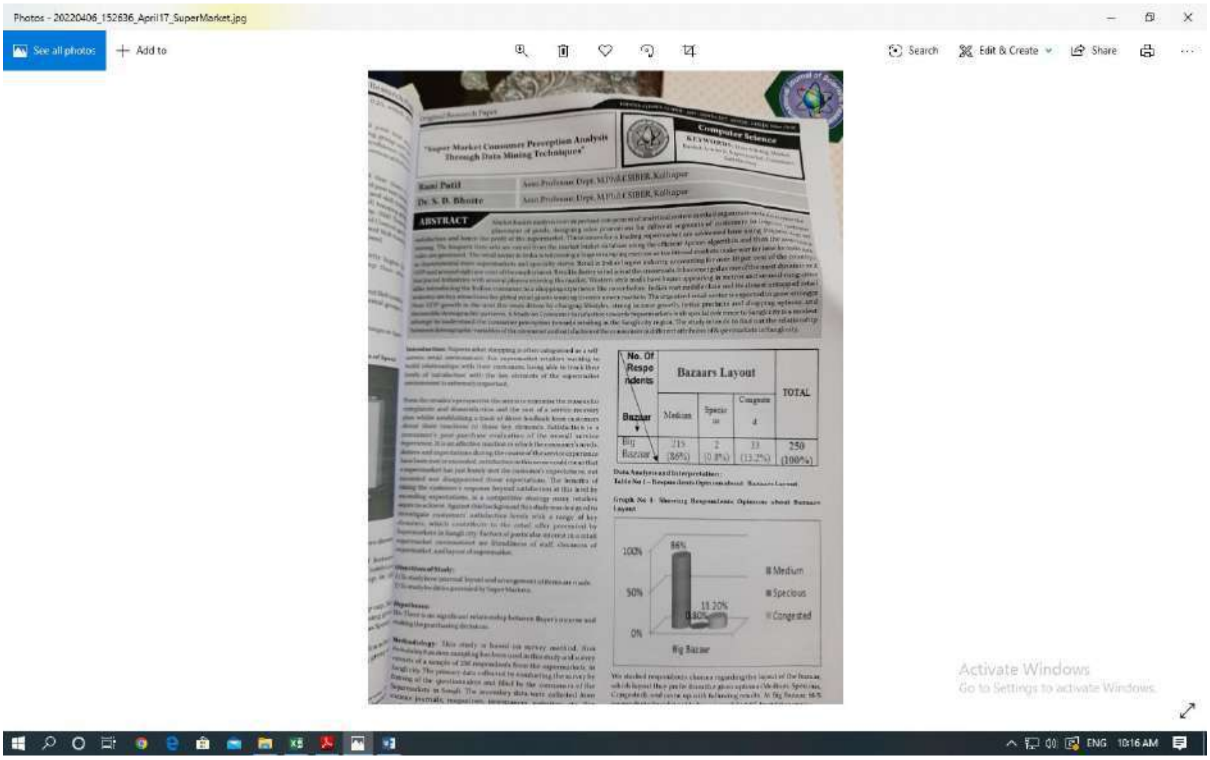
Pharmaceutical Market Market Segmentation Market Trends

Article: Download PDF DOI : 10.36106/ijsr

Cite This Article:

Mr.Shivappa G Teli, Dr. S.D. Bohite A Review of Pharmaceutical Market Segmentation And Growth Of The Pharmaceutical Market In Sangli city International Journal of Scientific Research,Volume : 5 | Issue : 9 |September 2016


Photos - 20220406_152434_April_17_IJSR.jpg
See all photos
Add to
Search
Edit & Create
Share
ISSN No. 2277 - 8179
Journal DOI : 10.15373/22778179
INDEX COPERNICUS IC VALUE : 78.46
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH
A Peer Reviewed, Referred, Refereed & Indexed International Journal
Journal for All Subjects
IMPACT FACTOR : 4.176
VOLUME-6 | ISSUE-4 | APRIL - 2017
₹ 500
Activate Windows
Go to Settings to activate Windows.
ENG
10:16 AM


Photos - 20220406_152636_April17_SuperMarket.jpg
See all photos
Add to
Search
Edit & Create
Share
Computer Science
"Super Market Consumer Perception Analysis Through Data Mining Techniques"
Rani Patil
Dr. S. D. Bhoite
ABSTRACT
Bazaars Layout
TOTAL
Big Bazaar
215 (86%)
2 (0.8%)
33 (13.2%)
250 (100%)
100%
50%
0%
86%
Medium
Specious
Congested
Big Bazar
Activate Windows
Go to Settings to activate Windows.
ENG
10:16 AM

CONTENTS

Page No-35 to 41
Research Paper
Research Journal for
Resurrection in [illegible]
ISSN 2278-0319,Vol-17, Issue 1, May - to July, 2016 (Quarterly)

"Improving Employability Of Graduate Students Using Through Computerized Model"

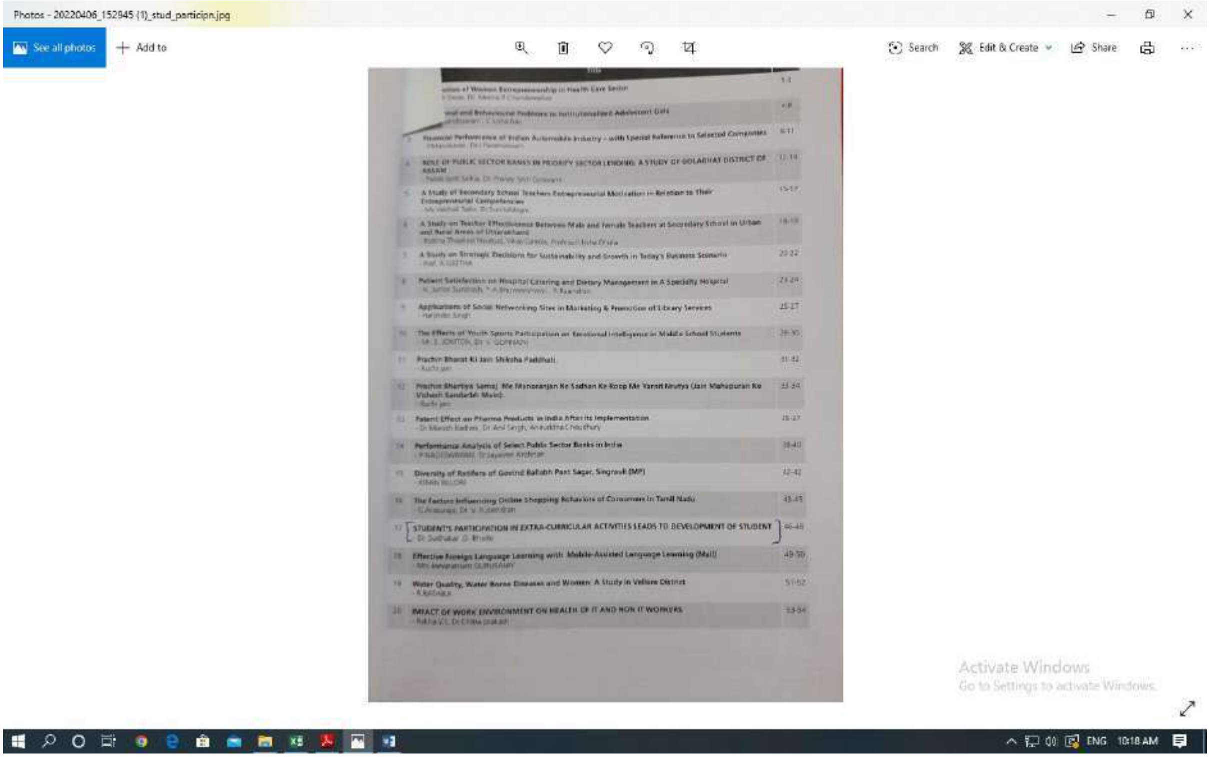
Mrs. Ghatage Suhasini Suhas,
M.Phil Student,
CSIBER, Kolhapur

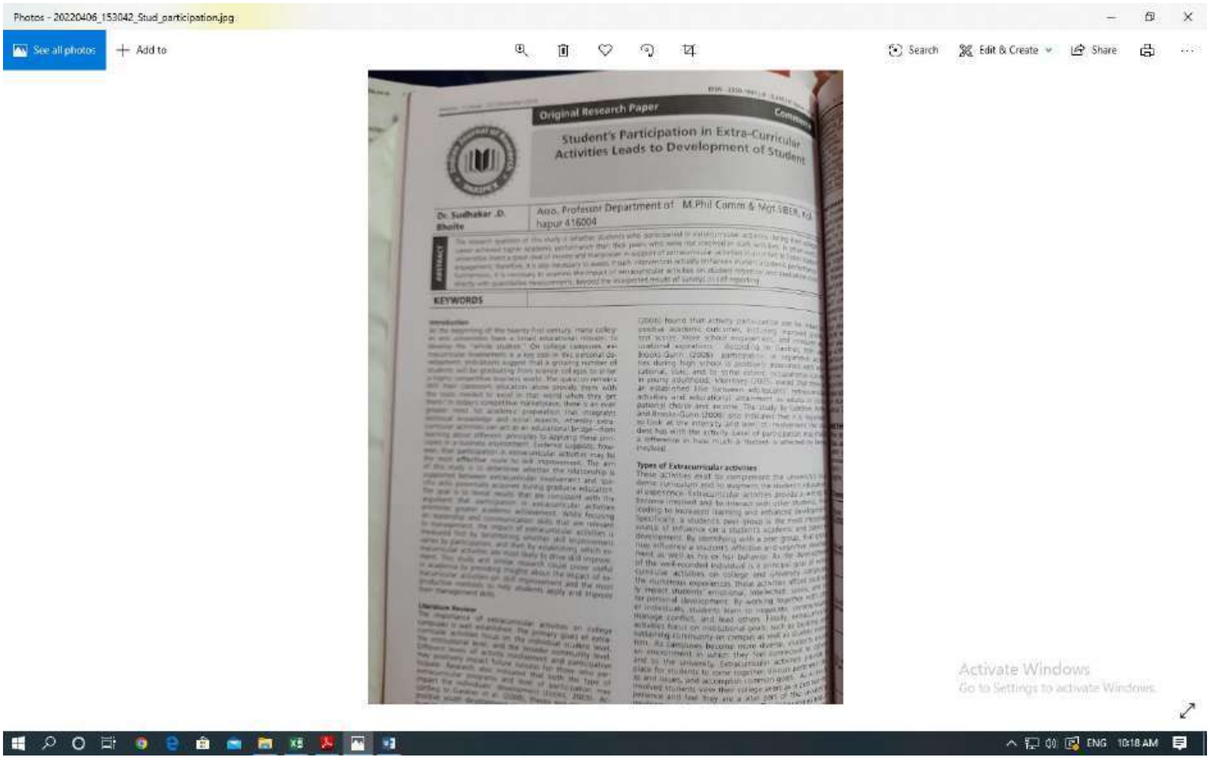
Dr. S. D. Bhoite
Faculty Member,
CSIBER Kolhapur

Abstract

This paper on the identification of important soft skills needed for successful ability to listen, work ethic, and transition from completion of baccalaureate agrees to competitive dealing with ambiguity. Employment in agriculture, natural resources and related careers. The training evaluation of this paper is to find out how computerized model given aptitude test program can be evaluated from the perspective of the students of graduate colleges to test its effectiveness. Here also checks which soft skills are those critical to an employee's ability to work smarter and deal with people at the emotional level and works confidently. India graduates more than five million graduates every year out of which Engineers comprise a small part of it at around 600 thousands, where as rest take up a variety of three year bachelor degree programs like Arts, Commerce and Science. It is important to understand, what proportion of graduates that come out every year are actually employable in India's knowledge economy with learning Fresh graduates everywhere are facing an uphill challenge in terms of securing a job. In their corporate sector so many job but most of the college student are not even aware of employability percentage. Since most employers select fresh graduates based on a combination of numerical, logical and verbal reasoning abilities. So our computerized model give opportunity to increasing numerical, logical, verbal reasoning abilities, general knowledge when the graduate students are practice on solving a aptitude tests regularly and increases all these ability. When student performance week in maths or any type of aptitude test system will give suggestion for their week points means he/she need to improving maths, English grammer, G.K etc.

Keywords: Employment of Graduates, Soft skill, Increasing employability, Importance of





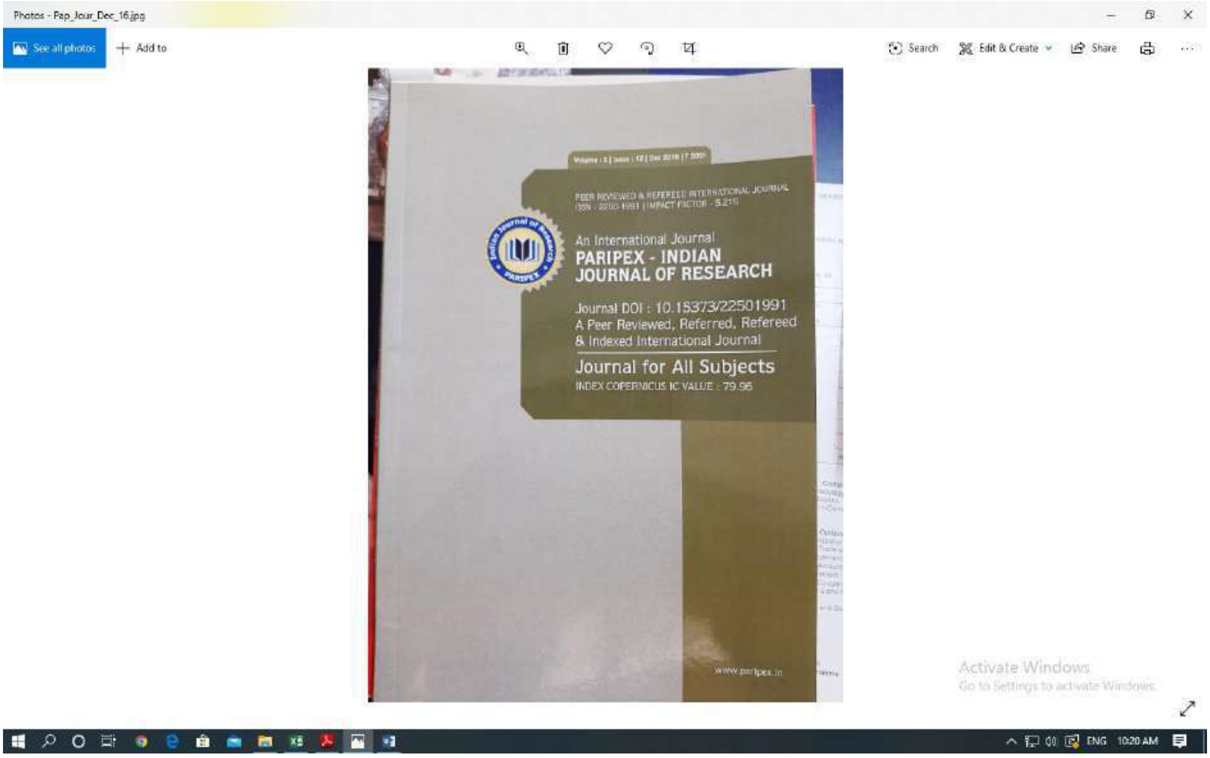
Original Research Paper

Student's Participation in Extra-Curricular Activities Leads to Development of Student

Dr. Sudhakar .D. Bhoite

Asso. Professor Department of M.Phil Comm & Mgt SBER, Kolhapur 416004

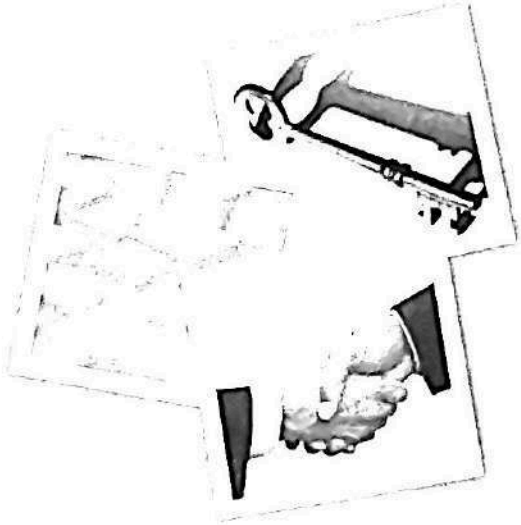
KEYWORDS


Photos - Pap_Jour_Dec_16.jpg
See all photos
Add to
Search
Edit & Create
Share
PEER REVIEWED & REFEREED INTERNATIONAL JOURNAL
An International Journal
PARIPEX - INDIAN JOURNAL OF RESEARCH
Journal DOI : 10.15373/22501991
A Peer Reviewed, Referred, Refereed & Indexed International Journal
Journal for All Subjects
INDEX COPERNICUS IC VALUE : 79.96
www.paripex.in
Activate Windows
Go to Settings to activate Windows.
ENG 10:20 AM


Photos - Pap_stud_prt_Extr_act_DrSDB_Dec_16-17.jpg
See all photos
Add to
Search
Edit & Create
Share
Indian Journal of Research
PARIPEX
ISSN No: 2250-1991
Index Copernicus (IC) Value : 79.96
Impact Factor: 5.215
Certificate of Publication
This is to certify that
Prof./Dr. Sudhakar .D. Bhoite.
has contributed a paper as author/ Co-author to
PARIPEX- INDIAN JOURNAL OF RESEARCH
Title "STUDENT'S PARTICIPATION IN EXTRA-CURRICULAR ACTIVITIES LEADS TO DEVELOPMENT OF STUDENT
and has got published in volume 05 , Issue 12 , December 2016
The Editor in Chief & The Editorial Board appreciate the Intellectual Contribution of the author/co-author
Executive Editor
Editor in Chief
Member, Editorial Board
238
ENG 10:20 AM

Proceedings of

International Conference On "Recent Trends in Business, Management & IT"

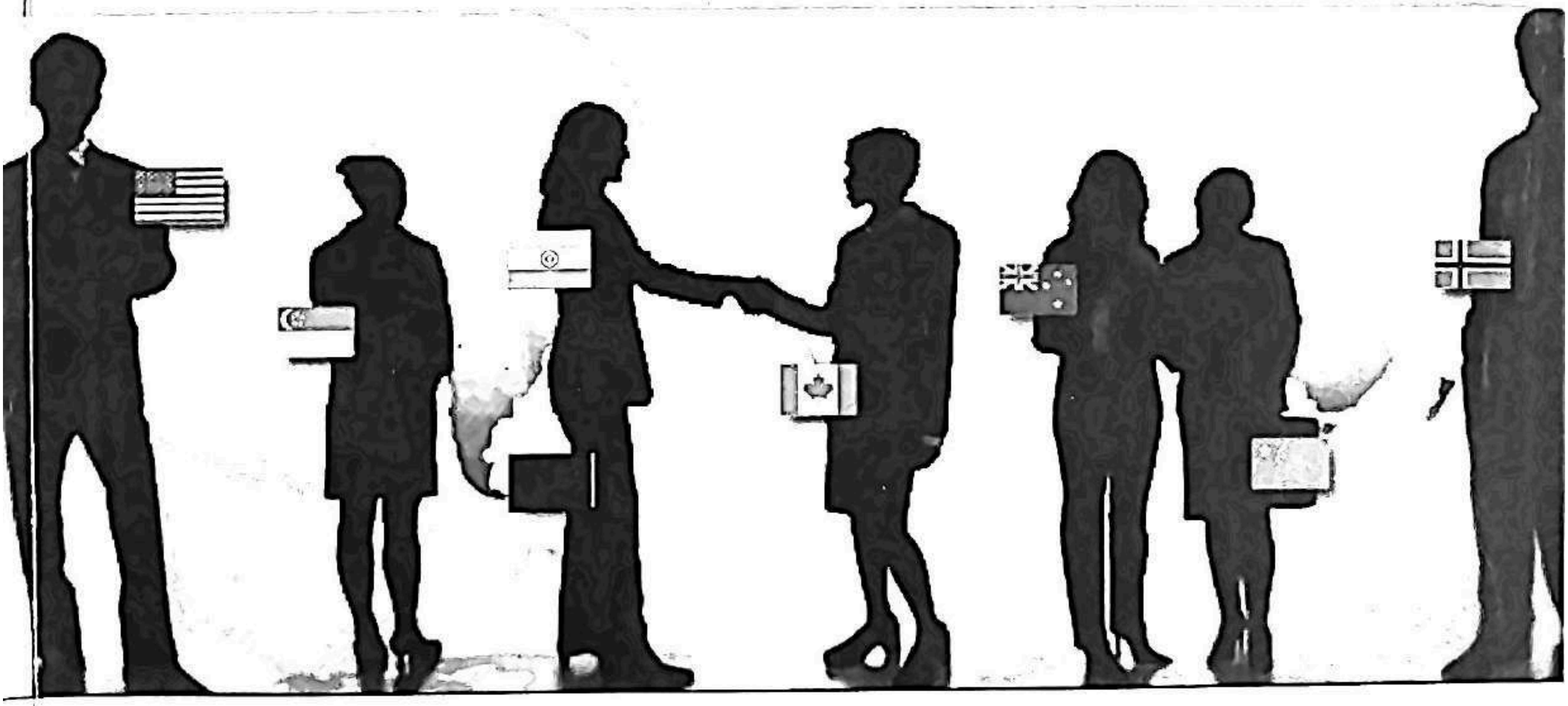


ISBN: 978-81-920045-4-9

[Business Papers]

Volume - I

Editors : Dr. Sanjay Kaptan || Dr. Anwar Shaikh || Prof. Rakesh Mittal



Organised by

Anjuman Khairul Islam's
Poona College of Arts, Science & Commerce

In Association With

Department of Commerce & Research Centre
University of Pune

INDEX

Paper Title **Page No.**

PROSPECTS AND CHALLENGES OF ENTREPRENEURIAL MARKETING IN THE GLOBAL COMPETITIVE SCENARIO

Dr. U. M. Deshmukh
H.O.D. Operations Management,
SIBER School of Management, Kolhapur
Mobile No.-9890691927

Prof. Veerdhaval S. Ghorpade
Assistant Professor,
Bharati Vidyapeeth University, Pune
Institute of Management, Kolhapur
email-veerdhavalg@gmail.com,
Mobile No-9881514555

Abstract: *Entrepreneurial Marketing Management is a term, which is receiving increasing use. It essentially encompasses two very distinct areas of Marketing Management and Entrepreneurship. This article is dedicated to exploring the emergence of this as a discipline, its history, challenges and its prospects. Scholars from both the world from Marketing and Entrepreneurial Management, Networking and the Resources and the Skill implications of adopting an Entrepreneurial approach to marketing activities. This research has now built up into a sizable body of literature and this note introduces the reader to the essence of this research and identifies its usefulness in viewing many areas of Management, its Prospects and Challenges, this note further argues that entrepreneurs must utilize the social and human capital contained within networks for successful opportunity recognition and resource mobilization. It examines networks along their components of relational and structural embeddedness and examines how they play out in identifying opportunities and securing resources for their ventures.*

Introduction And Historical Perspective

The Marketing Management or Entrepreneurship interface has developed a substantial body of literature over last decade. Marketing has much to offer the study of Entrepreneurship (Murry: 1981, Hills: 1987) and likewise Entrepreneurship can look to Marketing as the key function within the firm, which can encompass innovation and creativity. The interface between the two disciplines as having distinct areas of both difference and overlap the difference are between traditional Marketing which operates in consistent environment, firstly, where market conditions are continuous and the firm is satisfying clearly perceived customer needs and pure Entrepreneur which operates in an uncertain environment, secondly, where market conditions are discontinuous and the needs of the market are as yet unclear. The overlap exist in two areas: one where Market conditions are continuous and Entrepreneurship aids the process of identifying as yet unperceived needs and secondly in a discontinuous market where Entrepreneurship guides Marketing Management strategy to develop existing needs in new environment.

In essence these researchers perceive the interface as focusing on identifying opportunities in the changing environment. In our opinion Marketing, Entrepreneurship, and Management have three key areas of interface they both change focused opportunistic in nature and innovative in there approach to Management. Ideas add value through time, effort, money and skills, assume the risk of the competitive marketplace to implement these ideas and realize the rewards from these efforts, Highlights the importance of change as one of the key drivers in Entrepreneurial activity. Many of the actions undertaken by the Entrepreneur are key concepts of marketing theory, which suggest that successful Marketing is undertaken by firm who identify new opportunities, apply innovative techniques to bring the product/ service to the market place and successfully meets the needs of their chosen target market. Again the central element of managing many activities in a fluid, changing environment is stressed.

If we accept three key areas of the Marketing Management /Entrepreneurship interface as being change focused, opportunistic in nature and innovative in management approach, this has implications for education. Specifically this suggests that curricula are adequately developed to encourage students to learn how to deal

Volume - 4 | Issue - 9 | March - 2017

RESEARCH DIRECTION

International Recognition Interdisciplinary Research Journal

Impact Factor 2.9005(UIF)

ISSN 2321-5488

TECHNIQUES USED FOR INVENTORY CONTROL IN SPINNING MILLS

S.S. Kadam

Mrs. S. S. Kadam

D. R. K. College of Commerce, Kolhapur.

ABSTRACT:- Inventory control is the technique of maintaining the size of the inventory at some desired level keeping in view the best economic interest of an organization. The objective of inventory control is to maintain inventories of the optimum level. So the use of various techniques and to ...

Editor - In - Chief - S.P. Rajguru

Research Directions
International Multidisciplinary Research Journal
ISSN NO:- 2321-5488 Impact Factor : 2.9005(UIF) Volume - 4 | Issue - 9 | March - 2017

RESEARCH DIRECTIONS

ISSN: 2321-5488
IMPACT FACTOR : 2.9005(UIF)
VOLUME - 4 | ISSUE - 9 | MARCH - 2017

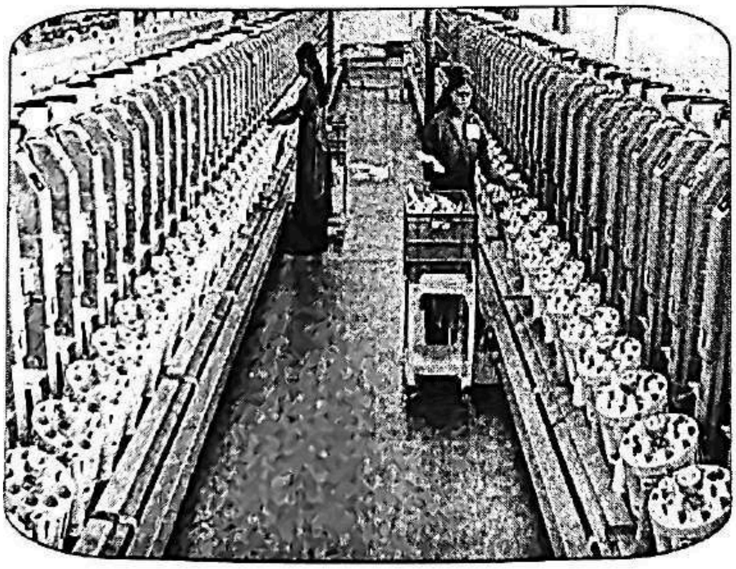
TECHNIQUES USED FOR INVENTORY CONTROL IN SPINNING MILLS

Mrs. S. S. Kadam[1] and Dr. U. M. Deshmukh[2]
[1]D. R. K. College of Commerce, Kolhapur.
[2]CSIBER, Kolhapur.

ABSTRACT

Inventory control is the technique of maintaining the size of the inventory at some desired level keeping in view the best economic interest of an organization. The objective of inventory control is to maintain inventories of the optimum level. So the use of various techniques and to control the investment in inventories it is an very essential. Techniques of ABC analysis, FSN analysis, XYZ analysis, HML analysis etc. used in various organization and it is useful to reduce the cost of production. The basic objectives of inventory control is to optimize the size of inventory in the spinning mill. This paper is aimed to study how inventories are managed and focused on techniques used in spinning mills. Effective inventory control techniques are essential to avoid unnecessary locking up investment in inventories. So it is very necessary to control the investment in inventory and to achieve the maximization of profit in spinning mills.

KEYWORDS- *Inventory control, techniques, investment, effective optimize, economic, production.*



INTRODUCTION :

Every business organization, however big or small, has to maintain inventory and it constitutes an integral part of the working capital. It has been estimated that inventory in Indian industries constitutes more than 60% of current asset. Inventories are significant elements in cost process. Inventories require a significant investment, not only in acquiring them but also in holding them. Investment in inventories is said to be idle but it is unavoidable in any organization. For this reason, one requires a careful planning, formulation of policies and procedures appropriate to maintain the stock at some desired level. In other words, these techniques of maintaining inventories at appropriate level may be known as inventory control.

For that purpose it is very necessary to give control on inventories hence, to use the various types of tools and techniques and to control optimum level inventory, it is an very essential in every spinning mills. For inventory control purpose in various organisations ABC analysis, VED analysis, HML analysis, SOS analysis, GOLF analysis, FSN analysis, these types of techniques are used and to control the various inventory items.

In spinning mills, basically ABC analysis and FSN analysis is used for the purpose of inventory control. So, these techniques are very important to control the various items of inventory and to achieve the objectives of the spinning mills.

DEFINITION OF INVENTORY

The term inventory includes stock of finished goods, work-in-progress, raw material and components.

In the words of G. Sudarsana Reddy, "Inventory can be used to refer to the stock on hand at a particular time of raw materials, goods-in-process of manufacture, finished products, merchandise purchased for resale, and the like, tangible assets which can be seen, measured and

ISSN 2277-7644

Research Journal for
Renaissance in Intellectual Disciplines

RENAISSANCE

Chief Editor
Dr. Khanderavaji S. Kale

International Registered and Recognized
Research Journal in Higher Education for all Subjects

CONTENTS

Page No-19 to 23
Research Paper
Research Journal for
Renaissance in Intellectual Discipline
ISSN 2277-7644,Vol-17, Issue-1, April., to June.,-2016 (Quarterly)

"Safety, Health and Welfare Programmes in Warana Sugar Factory"

Mrs. Nilima Magdum

Dr. U. M. Deshmukh
Chairman,
Mphil, Programme, CSIBER, Kolhapur

ABSTRACT-:

Employee health, safety and welfare measures helps to promote efficiency and results in higher productivity. In manufacturing sectors the study results have shown that the workers who actively followed health and safety rules could result in health and safety performance improvements. Although employee participation and involvement are crucial, the accountability and responsibility in the safety and health must come from senior management as required by the occupational health and safety legislation. A happy work force is an asset for the industrial prosperity of any nation. The objective of this study is to know the overall safety, health and welfare measures at STKWSSKL, Warananagar. Sugar industry comes under Large scale industry sector where employees are subjected to hazardous environment and also this is a co-operative firm so here the study of Safety, Health and Welfare becomes very important topic for the present study. Surveys are conducted to know how the Safety, Health and welfare measures are applied in the industry. The result of this study shows that majority of the employees recognize the present efforts taken by sugar industry, on safety, health and welfare measures are satisfactory. Though, few suggestions are given related to safety as it should be continuous improvement process to reduce accidents and to maintain zero accident.

INTRODUCTION -:

Today's changing Industrial scenario demands the quick response to the market conditions. For this any Industrial unit should be highly productive. This is not possible without the satisfied employees. The employee satisfaction depends not only on the wages or salary paid to them but also highly depends on the welfare and safety facilities provided to them. A

ISSN 2278-0319

Research Journal for Resurrection in Intellectual Disciplines

International Registered and Recognized Research Journal in Higher Education for all Subjects

Chief Editor

Dr. Khanderavaji S. Kale

RESURRECTION

CONTENTS

Page No-19 to 21
Researcħ Paper
Research Journal for
Resurrection in Intellectual Discipline
ISSN 2278-0319,Vol-21, Issue-1, May., to July,-2017 (Quarterly)

A Review of Literature on Organizational Buying Behavior

Rutuja R. Mithari
M. Phil Student
CSIBER, Kolhapur.

Dr. U. M. Deshmukh
Chairman
M. Phil Programme, CSIBER, Kolhapur.

Introduction:

Organizational buying is the decisions making process by which formal organizations establish the need for purchased products and services and identify, evaluate, and choose among alternative brands and suppliers. It is a set of complex events which depends upon the level of experience the firm has in purchasing that goods or services. It is a multi person activity. Organizational behavior refers to the buying behavior of organizations that buy products for business use, resell or to make other products. Organisations basically consist of business, industries, retailers, government, and Non-government organizations. In fact, Business and Industries buy products for business use or to produce other products and resellers buys products to resells at a profit. Governments buy products for use in offices and development projects or to provide service to people. Non governmental organizations buy products to provide service to their clients. They can be hospitals, educational institutions, religious or social organizations. Organizational buyers behaviors is also known as industrial buying behavior, business buying behaviors and business to business buying behavior. Organizational buyers make buying decisions for their organizations and purchase products and services professionally. This type of buyer tends to be more knowledgeable than normal consumers. The review of literature on this particular topic by previous authors makes the investigator to get some understanding into the methods and procedures to be followed. An attempt has been made by the researchers in this paper to review the previous and present studies.

The study by Dimple TURKA and Sujata S. (2015) stated that, organizational buying is that the buyer or purchasing officer is often not the only person who influences the

Volume - 6 | Issue - 1 | July - 2016

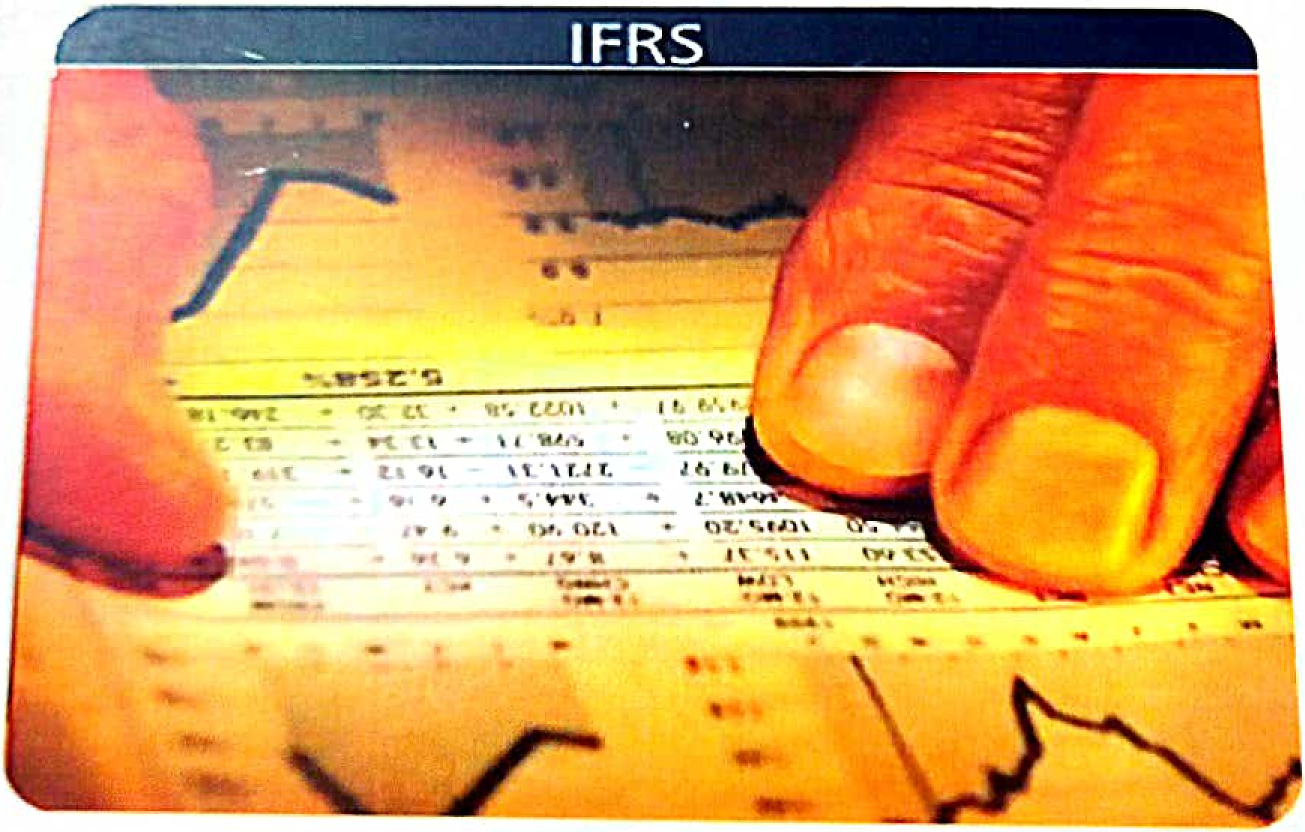
GOLDEN RESEARCH THOUGHTS

International Recognition Multidisciplinary Research Journal

Impact Factor 4.6052(UIF)

ISSN 2231-5063

IFRS: THE IMPACT ON INDIAN CORPORATE



Research by

Dr. Amardeep D. Jadhav

Amardeep D. Jadhav

Asst. Professor , Chhatrapati Shahu Institute of Business Education and Research, Kolhapur.

ABSTRACT:-Improvement in comparability of financial information and financial performance with global peers and industry standards. This will

ISSN: 2231-5063 Impact Factor : 4.6052(UIF) Volume - 6 | Issue - 1 | July - 2016

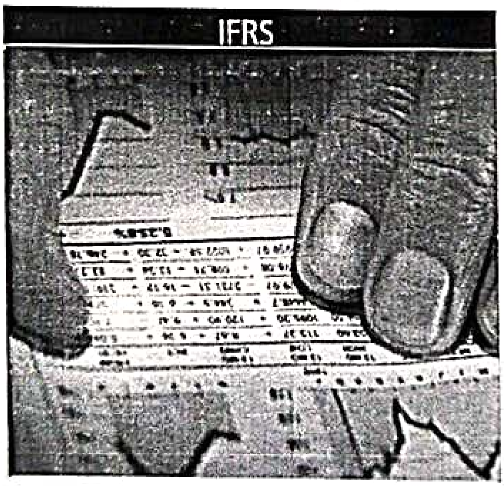
Golden Research Thoughts
International Recognition Multidisciplinary Research Journal
RNI : MAHMUL/2011/38887
ISSN No: 2231-5063
Impact Factor 2.2052 (UIF) [Yr. 2014]
3.4052 (UIF) [Yr. 2015]
4.6052 (UIF) [Yr. 2016]

GRT Golden Research Thoughts

IFRS: THE IMPACT ON INDIAN CORPORATE

Dr. Amardeep D. Jadhav
Asst. Professor ,
Chhatrapati Shahu Institute of Business Education and Research, Kolhapur.

ABSTRACT



Improvement in comparability of financial information and financial performance with global peers and industry standards. This will result in more transparent financial reporting of a companys activities which will benefit investors, customers and other key stakeholders in India and overseas; The adoption of IFRS is expected to result in better quality of financial reporting due to consistent application of accounting principles and improvement in reliability of financial statements. This, in turn, will lead to increased trust and reliance placed by investors, analysts and other stakeholders in a company's financial statements; and Better access to and reduction in the cost of capital raised from global capital markets since IFRS are now accepted as a financial reporting framework for companies seeking to raise funds from most capital markets across the globe. A recent decision by the US Securities and Exchange Commission (SEC) permits foreign companies listed in the US to present financial statements in accordance with IFRS. This means that such companies will not be required to prepare separate financial statements under.

KEYWORDS :*global peers and industry standards, Securities and Exchange Commission (SEC)*

INTRODUCTION

However, the perceived benefits from IFRS adoption are based on the experience of IFRS compliant countries in a period of mild economic conditions. The current decline in market confidence in India and overseas coupled with tougher economic conditions may present significant challenges to Indian companies.

Volume - 6 | Issue - 6 | July - 2016

INDIAN STREAMS RESEARCH JOURNAL

International Recognition Multidisciplinary Research Journal

Impact Factor 4.1625(UIF)

ISSN 2230-7850

FINANCIAL REFORMS IN BANKING SECTOR AND THEIR CRITICALEVALUATION

Research by

Dr. Amardeep D. Jadhav

Dr. Amardeep D. Jadhav

Chh. Shahu Institute of Business Education and Research, Kolhapur, Maharashtra.

ABSTRACT:-Face of Global Banking is undergoing a transition. Banking is now a global issue. Reforms in the financial sector, covering banking, insurance, financial markets, trade, taxation etc. have been...Page No-01

Editor - In - Chief - H. N. Jagtap

Indian Streams Research Journal

International Recognized Multidisciplinary Research Journal

ISSN NO:-2230-7850 Impact Factor : 4.1625(UIF) Vol.- 6, Issue - 6, July -2016

ISSN: 2230-7850 Impact Factor : 4.1625(UIF) Volume - 6 | Issue - 6 | July - 2016

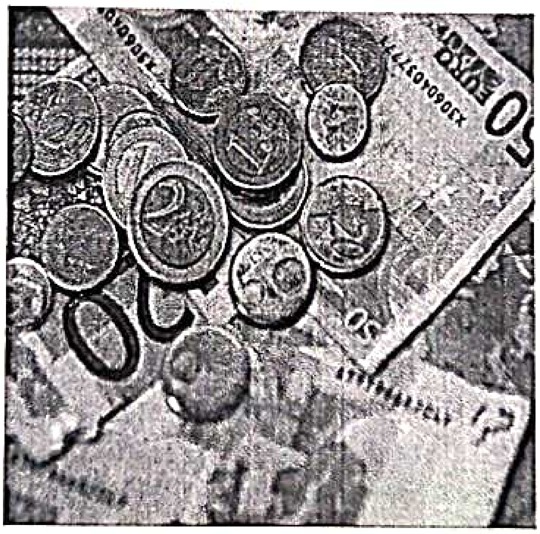
Indian Streams Research Journal
International Recognized Multidisciplinary Research Journal
ISSN No : 2230-7850 Impact Factor : 4.1625 (UIF) [Yr. 2016]

ISRJ Indian Streams Research Journal

FINANCIAL REFORMS IN BANKING SECTOR AND THEIR CRITICALEVALUATION

Dr. Amardeep D. Jadhav
Chh. Shahu Institute of Business Education and Research, Kolhapur, Maharashtra.

ABSTRACT



Face of Global Banking is undergoing a transition. Banking is now a global issue. Reforms in the financial sector, covering banking, insurance, financial markets, trade, taxation etc. have been a major catalyst in strengthening the fundamentals of the Indian economy. The reform measures have brought about sweeping changes in this critical sector of the Indian's economy. Banking in India is generally fairly mature in terms of supply, product range, and reach-even though reach in rural India still remains a challenge for the private sector and foreign banks In the year 2007. The broad objective of the financial sector reform has thus been to create a viable and efficient banking system. Improvements in the growth rate can be effected through three, not necessarily mutually exclusive channels: improving productivity of capital, through investments in human capital and raising total factor productivity (TFP). Performance of the banking sector has impact across the length and breadth of the economy. The major banking sector reforms comprises of modifying the policy framework; improving the financial soundness and credibility of banks; creating a competitive environment, and strengthening of the institutional framework. The banking sector reform measures to enhance efficiency and productivity through competition were initiated and sequenced to create an enabling environment for banks to overcome the external constraints which were related to administered structure of interest rates, high levels of pre-emption in the form of reserve requirements, and credit allocation to certain sectors. An attempt has been made in this paper to provide a brief overview on performance of the Banking Sector in India. It also includes a critical review of the performance as well as impact of Banking Sector Reforms in India. It has also covered the role

ISSN 2278-0319

Research Journal for
Resurrection in Intellectual Disciplines

International Registered and Recognized
Research Journal in Higher Education for all Subjects

Chief Editor
Dr. Khanderavaji S. Kale

RESURRECTION

CONTENTS

Page No-9 to 14
Research Paper
Research Journal for
Resurrection in intellectual Discipline
ISSN 2278-0319,Vol-18, Issue-1, Aug., to Oct,-2016 (Quarterly)

Implementation Of Goods And Services Tax (Gst) In India : Challenges And Opportunities

Dr. Amardeep D. Jadhav
Asst. Professor
Chhatrapati Shahu Institute of Business Education and Research, Kolhapur

ABSTRACT

Goods and Services Tax is a broad based and a single comprehensive tax levied on goods and services consumed in an economy. GST is levied at every stage of the production-distribution chain with applicable set offs in respect of the tax remitted at previous stages. It is basically a tax on final consumption. The Goods and Services Tax (GST) is a value added tax to be implemented in India, the decision on which is pending. GST is the only indirect tax that directly affects all sectors and sections of our economy. Ignorance of law is no excuse but is liable to panel provisions, hence why not start learning GST and avoid the cost of ignorance. Therefore, we all need to learn it whether willingly or as compulsion. The goods and services tax (GST) is aimed at creating a single, unified market that will benefit both corporate and the economy. The changed indirect tax system GST-Goods and service tax is planned to execute in India. Several countries implemented this tax system followed by France, the first country introduced GST. Goods and service tax is a new story of VAT which gives a widespread setoff for input tax credit and subsuming many indirect taxes from state and national level. The GST Implementation is not yet declared by government and the drafting of GST law is still under process and a clear picture will be available only after announcement of Implementation. India is a centralized democratic and therefore the GST will be implemented parallel by the central and state governments as CGST and SGST respectively. The objective will be to maintain a commonality between the basic structure and design of the CGST, SGST and SGST between states .In this article, I have started with the introduction, in general of GST and have tried to highlight the objectives the proposed GST is trying to achieve. Thereafter, I have discussed the possible challenges and threats; and then, opportunities that GST brings before us to strengthen our free market economy.

Keyword: - GST, CGST, SGST, CENVAT, VAT

INTRODUCTION

Goods and Services Tax is a broad based and a single comprehensive tax levied on

ISSN 2277-9310
Vol. VI, Issue 5 (I), September, 2016

International Research Journal Of COMMERCE BUSINESS AND SOCIAL SCIENCES

(IRJCBSS)

INDEX

IMPACT OF FINANCIAL LITERACY ON FINANCIAL PLANNING

Dr. Amardeep D. Jadhav
Asst. Professor
Chhatrapati Shahu Institute Of
Business Education And Research,
Kolhapur

Abstract

The role played by governments and employers in managing investments on behalf of individuals has shrunk significantly in the recent past. This is mostly due to the reforms in the financial markets and changes in the social support structure across the world. The reduced role of the government and employers has heightened individuals' responsibility in managing their own finances and securing their financial future. Market forces continue to increase the range and complexity of financial products presented to the investors. Individuals are given an increased role in managing their finances on the assumption that they are capable of a nuanced understanding of the risk return characteristics of the investment opportunities and are able to optimally choose from among them. These abilities are collectively referred to as 'financial literacy' around the world. In this context of increasing role and complexity, any lack of awareness about the available choices and their characteristics and the consequent inability to choose products optimally, could significantly affect individuals' financial outcomes. Research from different countries has documented a certain degree of association between financial literacy and outcomes which could adversely influence the household wellbeing. For instance, the financially less literate are found to be associated with high interest rate borrowing, less participation in financial markets, and poor retirement planning. Economic and financial sector reforms have placed higher disposable incomes with the public. Availability of a variety of new financial products on both, credit and investment sides, which are provided by a host of financi l intermediaries has necessitated that the investing public understands the degree of each product and product supplier, and takes an informed decision about where s(he) should invest. At the same time, those who are not part of the formal financial system need to be educated about banking and why they should have a relationship with banks. Financial literacy is considered an important element for promoting financial inclusion and ultimately financial stability. Financial literacy would benefit the financially-excluded by enabling them to understand the benefits and the ways to join the formal financial system. It could also benefit the financially included by helping them make informed choices about the products and services available in the market to their best advantage. This paper stresses the importance of financial literacy and the opportunities for research in this area.

Keywords: Financial Inclusion, Financial Literacy, Financial Reforms, Financial Planning,

Introduction

It is aptly said that give a man a fish and you will take care of his one meal but teach him how to fish and that takes care of rest of his life. For economic progress, it is not enough for an individual to earn an income; he also needs to make informed and wise decisions about what to do with the money once it reaches his hands. Failure to utilize the money prudently leads to growing debt, misuse of credit facilities and in the long run slows down economic growth. On the other hand financial literacy fosters improved standard of living and a confidence about the future. It assists in sound financial planning – in accumulation of assets, in funding of education of and also in planning for retirement which in turn help build economy. Financial decisions can be difficult. Comparing savings or borrowing options with different interest rates and term structures can be difficult for those who are not finance savvy and even a knowledgeable individual may need to rely on calculators or spreadsheets to make truly informed decisions. Yet, many households are not knowledgeable, and often receive little assistance when making these decisions. Moreover, unlike the decision to visit a restaurant or purchase a particular car, customers may not receive useful feedback on the value of the financial product they have purchased, making the typical learning process even more difficult. So, Financial literacy the ability to process financial information and make informed decisions about personal finance has received growing attention in the developed markets and, emerging markets as a potentially important determinant of household well being.

Dr. (Sow.) I.B.P.Mahila Kala Mahavidyalaya, Aurangabad

Research World

Half Yearly National Research Journal

Volume - I

March - 2017

Best Practices for Quality Enhancement in Institutes of Higher Education

IDEAL - ISSN - 2319-359X

IMPACT FACTOR - 4.08 www.sjifactor.com

CONTENTS

3 Quality Enhancement in Institutes of Higher Education: is it the Need of the Hour?

Dr. Amardeep D. Jadhav
Member, IQAC Committee Chh. Shahu Institute of Business Education and Research
(An Autonomous Institute) Kolhapur.

Abstract

Some institutions have realized that the ultimate goal of management is to enhance the institutional mission by ensuring high quality in teaching, training and research, and community services. This objective requires governance that matches the institution's social vision, and its understanding of global issues, and efficient managerial skills. The Management needs to be vigilant about changes in the educational environment, locally, nationally and globally. Sensitivity to them by making effective responses depends on visionary and dynamic leadership. Senior leadership in many institutions has set such directions and involved students in the process. They have acquired quality values and set up higher goals that address the needs of all stakeholders. Some private institutions, stand committed to the development of the entire work force by encouraging participation, learning, innovation and creativity throughout the organization by means of their personal commitment to planning, reviewing performance and recognition of employees for their quality achievement. The leaders serve as role models, to reinforce values but the team as a whole is motivated by such leadership to give a quality-lift to the institution. Another institution achieves the same by practising the principle: 'Principal as first-among-the equals', which integrates the organization for participatory effort.

With higher education becoming an international service, there is growing concern the world over about quality, standards and recognition. Consequent upon this trend, the debate on how benchmarks have to be evolved for ascertaining and assuring quality at different levels of higher education is significant. This paper highlights the initiative of the National Assessment and Accreditation Council (NAAC) to promote the concept of best practices benchmarking. It also sets the stage for a discussion of the identification, sustenance, dissemination and adaptation of best practices and of their transference from one system to the other. Quality has become the defining element of education in the 21st Century in the context of new social realities. The information communication revolution, the knowledge economy, and globalization are greatly influencing the "next society", to borrow the expression of Peter Drucker, that has emerged. This networked complex and competitive society places a great premium on education for development. The Millennium Development Goals of the United Nations (MDGs, 2002) consider knowledge as the prime mover of development in the new millennium. How to provide quality education to large numbers at affordable costs is the primary concern

Golden Research Thought

Volume - 6 | Issue - 12 | June - 2017

International Recognition Multidisciplinary Research Journal

4.6052(UIF) 2231-5063

LOYEE MOTIVATION: A STRATEGY TO ACHIEVE ORGANIZATIONAL GOALS

Golden Research Thoughts

International Recognition Multidisciplinary Research Journal

ISSN NO:-2231-5063 Impact Factor : 4.6052(UIF) Vol.- 6, Issue - 12, June -2017

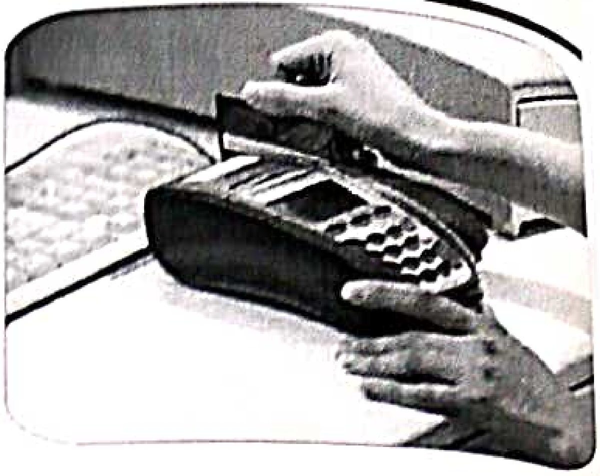
ISSN: 2231-5063

GRT

GOLDEN RESEARCH THOUGHTS

VOLUME - 6 | ISSUE - 12 | JUNE - 2017

CASHLESS ECONOMY IN INDIA: AN OVERVIEW



Patil Prashant Rajgonda[1] and Dr. Amardeep D. Jadhav[2]
[1]Research Scholar , Chhatrapati Shahu Institute of Business Education and Research Kolhapur .
[2]Research Guide , Chhatrapati Shahu Institute of Business ,Education and Research Kolhapur.

ABSTRACT

A cashless economy does not exist anywhere in the world. It has been proposed that India move towards a "cashless economy". I want to differ on this idea of "cashlessness". Until recently, India had been operating a system where the dispensation of cash was deliberately and strategically denied to the rural landless labour class. The poor suffered because they weren't paid for their labour in cash. In other words, their dues were never accurately calculated. This has been the history of the village economy all across the globe. This practice has resulted in feudalism or the accumulation of surplus. In short, it is not the dispensation of cash that has given rise to the injustice and inequality. Rather, it is the cashlessness that has made poor people poorer and the rich people richer.

In the Indian context, the labourers who have been exploited in the rural economy through such cashlessness belong to the lower castes. Moneylenders have seized their lands whenever they failed to pay off the high-interest loans. This age-old practice of money lending put cash in the control of a few people, usually the landlords. Labourers had to beg for limited cash from landlords while the real value of their labour was never calculated. If the anthropological data is studied, we find that all moneylenders belonged to the upper castes. They used to control the poor, who hailed from the lower castes. Such an economy has not just given rise to injustice, inequality and the landlessness but also to increased forced migration. Denied their dues and respect for their labour and stripped of their land, the lower castes migrated to cities in search of "cash", which is now being plundered by the Modi government.

KEY WORDS- *Dispensation, Accumulation, Moneylenders, Injustice, Migration etc.*

INTRODUCTION

The move to a cashless economy — through sudden withdrawal of currency from circulation and expecting the adjustments to automatically materialize — seems a faraway dream. Yes, there may be strong valid reasons to go cashless (bringing about efficiency and transparency in transactions, easier detection of corruption, among others). But there are, equally, robust counter-arguments as well (concerns of privacy and data storage, benefits going to a few mobile wallet or payment solutions companies, etc). What is striking is that there has been no attempt from the government to engage with these diverse opinions. People have, instead, been told to simply go cashless without questions being asked. One cannot also ignore the fact that moving to cashless economy, especially in rural areas, involves enormous investments by the government, both

2017 – 18

INTERNATIONAL JOURNAL OF RESEARCHES IN BIOSCIENCES, AGRICULTURE AND TECHNOLOGY
© VISHWASHANTI MULTIPURPOSE SOCIETY (Global Peace Multipurpose Society) R. No. MH-659/13(N)
www.vmsindia.org

EXTRACTING OBJECT MODEL INFORMATION FROM DATA FLOW DIAGRAM

Ajay D. Shinde
Departmant of Computer Studies Chhatrapati Shahu Institute of Business Education and Research, Kolhapur.

Abstract
The model is diagrammatic representation of artifacts to be implemented in software. Data flow diagram is an important tool in procedure oriented software engineering. It is used to represent working of system in terms of its users, functions, data stores and data flows, But this is an old technique whereas object oriented software engineering is new emerging area. It is possible to establish the relationship between procedures oriented and object oriented software engineering. In this paper an approach is presented to extract information from data flow diagram that helps to find out object oriented artifacts. The approach presented in this papers helps to extract information required for building use case model, Class model and other dynamic models. It will be a great help for developers switching from procedure oriented to object oriented domain.

Keywords: Data Flow Diagram, Software Engineering, Use case model, Class model, Object Oriented Software engineering

The need

Data Flow Diagram (DFD) is graphical diagrams for specifying and visualizing the model of a system to be developed. DFD is useful in defining the requirements of user in a graphical view. Once the requirements from user are collected in analysis phase DFD is drawn to represent working of the system in terms of users and user roles, Data flows, functions and data stores [5]. Since only one diagram is not sufficient for showing working of the system in detail, DFD is broken down in to level, where each level gives more detailed working description for one of the functions from earlier level. In order to have logical linking between levels of DFD the consistency check mechanism becomes essential between a higher level and lower level DFD [1]. As the software development and design field is maturing day by day the systems are becoming more complex, it becomes essential to have new approaches for specification and design. In additions to this there is a need to raise the level of abstraction so that designer focuses more on the concepts and different views of the system and less on the implementation details. The approach should have necessary support for automation, consistency checking and verification; this in turn will reduce costs and time required for development of the new systems [6]. In order to tackle these problems, one should use models to describe systems, starting from the high-level specification to the implementation. In last few decades object orientation has become more popular and gaining more and more support from the software community. The reasons for this may be (i) It is becoming standardized and (ii) provides support for representing system model using various diagrams from different development and implementation perspectives [13]. But still many developers use DFD as requirement analysis tool, in addition to this many old systems are still in use and DFD is part of their documentation. Now it is very necessary to find out concepts represented in DFD and relate it to object oriented models So that object model information can extracted from it. The primary aim of this paper is to study interrelation between structured methodologies like DFD and object oriented methods and design an approach for extracting object model information from DFD which is a structured method. The main contributions of this paper are (i) to establish relationship between DFD and object oriented approach (ii) to identify set of rules for object model information extraction from DFD.

Review of Earlier Works

Till day many researchers and academicians have already studied the relationship between of DFDs and object-oriented concepts. A survey of this relationship is given in [8]. In this paper authors discuss some of the approaches that are relevant for the work presented in this paper. In [4] Object-Process Methodology (OPM) is proposed that uses objects and processes. An Object-Process Diagram (OPD) shows both the behavior and structure of the system that include both processes and objects. Objects may be persistent or transient entities and processes perform some or the other operation on them. In addition, OPD has state diagram to describe the objects. The OPM has timing constrains, conditions, exceptions, control flow structures and events for modeling, specifying, and designing reactive and real-time systems [11]. In another proposal, two types of functional models are suggested: Object Functional Models (OFM) and Service Refinement Functional Models (SRFM). The DFD notation is modified and the roles of the functional models are redefined, in

International Research Journal of Computer Science (IRJCS)
Issue 12, Volume 4 (December 2017)

ISSN: 2393-9842
www.irjcs.com

REQUIREMENT ENGINEERING: HOW TO MAKE IT COMPLETE AND CORRECT

Dr. Ajay D. Shinde
Associate Professor, Department of Computer Studies,
Chhatrapati Shahu Institute of Business Education and Research, Kolhapur,Maharashtra.
ajshinde@siberindia.edu.in

Manuscript History
Number: **IRJCS/RS/Vol.04/Issue12/DCCS10082**
DOI: 10.26562/IRJCS.2017.NVCS10082
Received: 11, November 2017
Final Correction: 25, November 2017
Final Accepted: 05, December 2017
Published: December 2017
Citation: Shinde, D. A. D. (2017). REQUIREMENT ENGINEERING: HOW TO MAKE IT COMPLETE AND CORRECT. **International Research Journal of Computer Science, Volume IV, 12-15. doi:10.26562/IRJCS. 2017 .DCCS10082**
Editor: Dr.A.Arul L.S, Chief Editor, IRJCS, AM Publications, India

Abstract: The software development process heavily relies on requirement engineering as it forms the base for entire process. Although software engineering is full of methods for requirement analysis, the problem we face is which method to select and how to apply it. It is expected that we should be able to get clear and complete idea about what is expected by the user from the proposed system. This puts emphasis on requirement analysis process. The method we need to adopt should enable us to get clear and complete set of requirements. The requirement engineering process dependent on abilities of the persons carrying out the process also the nature of system puts certain constraints on the process. . This paper is an attempt to look at certain problems posed by the requirement engineering process and possible corrective measures against it to help improve overall software quality.

Keywords: Software Engineering; Requirement Analysis; Software process; user requirements; requirements engineering;

I. INTRODUCTION

The software development process starts with requirements engineering process, here we must collect user requirements, understand it, and specify in appropriate manner. Requirements engineering is important task, because it is observed over many decades that many software's failed due to inconsistent, incomplete or simply incorrect requirements identification and specifications [2]. The requirement engineering is systematic way for understanding user requirements this can be achieved using iterative and co-operative process, once requirements are gathered they can be specified using variety of format, by checking the accuracy of the understanding gained [1]. At the time of application of requirement engineering process we face numerous problems, but as this process forms base for entire software development we must be aware about the problems and how to resolve them or at least minimize the effect of problem, so that we get clear and complete idea about user requirements. In this paper we will discuss problems with requirement engineering and possible corrective measures.

II. REQUIREMENT ENGINEERING BASICS

In this section we will take a look at some of the basic concepts in requirement engineering. According to IEEE standards requirement engineering is defined as follows [IEEE- 610.12] [IEEE-830] [IEEE-729]

1. A condition or capability needed by a user to solve a problem or achieve an objective.[4]

International Journal of Scientific Research in Computer Science, Engineering and Information Technology
© 2017 IJSRCSEIT | Volume 2 | Issue 6 | ISSN : 2456-3307

Covering All White Box Tests Using Basis Path Test

Dr. Ajay D. Shinde
Associate Professor, Department of Computer Studies, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra, India

ABSTRACT

Testing is process of executing a program with an intention to find out a yet undiscovered error. During software testing the aim should be to find out maximum number of error before release of software. This is possible only when each and every statement written in a program is executed at least once. The program structure is formed with control structures sequential, selection and iteration, how these statements are written defines the program structure. This paper presents use of basis path testing as a base for program structure testing; also it ensures that each and every statement will be executed at least once.
Keywords : Software Testing, White Box Testing, Basis Path Testing, Program Structure Testing, Testing techniques.

I. INTRODUCTION

Software testing is the procedure of executing a program or system with the intent of finding faults [5]. It is measured to be labor intensive and expensive, which accounts for > 50 % of the total cost of software development [6]. To test the software one should have knowledge about both the structure and functionality of the software. The technique based on functionality is known as black box testing whereas technique based on structure is known as white box testing. The white box testing technique is also known as [8]

- ✓ Glass box testing
- ✓ Clear box testing
- ✓ Open box testing
- ✓ Transparent box testing
- ✓ Structural testing
- ✓ Logic driven testing
- ✓ Design based testing

It includes various techniques such as basis path testing, Loop testing, Condition testing and Data flow testing. Here primary objective is to make sure that each statement is written in correct manner. The purpose of each technique is different, Basis path testing ensures that control flows correctly within the program, loop testing ensures that each loop is executed correctly within its bounds, condition testing ensures that each condition written contains correct expressions, relational and logical operators and brackets are placed correctly, Data flow testing ensures that correct data flows from one statement in a program to another statement in the same program. Now the question is, do the tester need to apply all white box testing techniques to the same program?. The answer for this question is NO, we don't need to apply all the techniques in fact only one technique is sufficient for all and it is basis path testing. In [10] Theresa Hunt has explained What is Basis Path Testing? According to [9] Basis path testing is a hybrid between path testing and branch testing:

Path Testing: Testing designed to execute all or selected paths through a computer program [IEEE610]
Branch Testing: Testing designed to execute each outcome of each decision point in a computer program [IEEE610]

Basis Path Testing: Testing that fulfills the requirements of branch testing & also tests all of the independent paths that could be used to construct any arbitrary path through the computer program [based on NIST]. Not every technique is full proof it will have certain advantages and disadvantages so is the white box.

USE CASE MODELING FOR REQUIREMENT SPECIFICATIONS

Dr. Ajay D. Shinde

Associate Professor
Department of Computer Studies
Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra, India.

Abstract: *Requirement engineering is foremost and essential activity in software development process. Its impotence is evident, model building is time-consuming as it emphasizes the understanding of what is required by the user and what should be given to the user. The model built using use case is a combination of diagram and text, the only diagram is not sufficient to specify user requirement. To support diagram some textual information is must, this makes model self-explanatory. This paper presents the idea about requirement specifications using use case model, where proper combination of diagram and text will be presented to make the idea clear.*

Keywords: *Use case model, requirement specifications, object-oriented analysis, actors, requirement engineering.*

I. INTRODUCTION.

In software industry, various approaches are used for specifying user requirements. Building the use-case diagram is a crucial task as it represents user requirements that need to be mapped on to design model during design phases.However, building use case model may consume lots of time and efforts; in addition to this, it requires the completeunderstanding of the requirements [4].

The use case diagram was first proposed by Ivar Jacobson in 1986 [8].A use case modelinghas become a standard object-oriented methodology used in system analysis to identify, clarify, and organize system requirements. Use case diagrams are part ofUML (Unified Modeling Language)that is accepted as a standard notation for the modeling of real-world objects and systems [7].In the Unified Modeling Language (UML), models used to represent system are classified into two categories structural and behavioral; a use case diagram is a part of the behavioral model [5]. The use case model helps the developer to capture functionalrequirements; also it serves as documentation of user requirements. It is used to define the functional scope of the system [1].

Whileusing UML-based design and development approach, the first step is to identify use cases and is used to form use case diagrams. After this, each use case is describedin detail through textual descriptions. This, results in acomposite model having two parts. Thefirst part is a UML model, which shows the usecases and their relationships, the second part is a set of textual description that define the behavior of use cases shown in the use case model. Although these two parts represent different views still they complement each other very well [9]. In rest of the sections, we will discuss different concepts that are part of use case model and their importance in requirement specifications.

In [2], Hans-Erik Eriksson et al. have given a clear-cut method for use case modeling. It includes following steps.

- Identify actors.
- Find out the relationship between them.
- Identify use cases.
- Find out the relationship between them.
- Draw use case diagram.
- Write use case descriptions.
- Verify and validate your use case model.

II. USE CASE MODEL

As discussed section I of this paper, use case model is having two parts, the first part is diagram called as use case diagram. The use case diagram is a diagrammatic representation of user requirements.

A. Use Case Diagram Concepts

- Actors - external users of the system and user may be human being playing different

Volume 8, No. 5, May-June 2017

International Journal of Advanced Research in Computer Science

RESEARCH PAPER

Available Online at www.ijarcs.info

ISSN No. 0976-5697

Client Virtualization using VMware for Manageable Learning Environment at CSIBER

Dr. P.G. Naik
Professor
Department of Computer Studies
ChatrapatiShahu Institute of Business Education and Research
Kolhapur, India

Dr. R.S.Kamath
Associate Professor
Department of Computer Studies
ChatrapatiShahu Institute of Business Education and Research
Kolhapur, India

Mr. M. B. Patil
Assistant Professor
Department of Computer Studies
ChatrapatiShahu Institute of Business Education and Research
Kolhapur, India

Abstract: Every educational institution has a mandatory requirement of installing multiple operating systems and/or computing environments which is in line with the academic curriculum followed by the institution. Further, the fast growing and a dynamic IT trend demands constant upgradation and installation of new operating systems and supporting applications as the requirements change. To be competitive enough and to stay ahead in market place every educational institution tries its level best to tune itself as per various industry requirements. As such lab preparation is a constant ongoing process which poses a great burden on the shoulders of a system administrator involved in managing the learning environment in an educational institution. In order to support multiple operating systems on a single PC hard drive needs to be partitioned. At the same time this also poses greater inconvenience to students as they need to reboot the system every time they need to switch from one operating system to another. All these issues are addressed by VMware workstation software which enables to run multiple x86-compatible desktop and server operating systems simultaneously on a single machine, in fully networked, portable virtual machines with no rebooting or hard drive partitioning required which proves to be an indispensible tool for every educational institution. In the current paper, the authors have proposed a model for the smooth functioning of a computer lab using VMware workstation software which dynamically gets tuned to the users requirements. The different levels of users are identified and tasks are assigned as per their role in the institution. Three-tier architecture is employed wherein different levels of users will be operating at different layers of the architecture. At the lowest layer VMware solution is proposed and only the admin has the privileges to interact with this layer. The model proves to be extensively user friendly for all levels of users.

Keywords: Access Control List, Authentication, Operating System, Three-tier Architecture, Ubuntu, Virtual Machine, Windows 2003, Windows XP.

I. INTRODUCTION

Cloud computing offers a new form of computing that cuts through IT complexity by leveraging the competent pooling of on-demand, self-managed virtual infrastructure, consumed as a service.

The VMware cloud computing solution in education focuses on allowing academic institutions to realize the effectiveness and flexibility of cloud computing. With virtualization institutes can build cloud architectures that are flexible enough to sustain a unified private and hybrid cloud model [4].

A. IT Transformation in Education

Academic institutions want to spend in state-of-the-art solutions that improve IT effectiveness as they continue to ask workforce to do more with less. To attract students and staff, IT is striving to provide the most sophisticated educational environment in the classroom and online. Educational institutes are adopting cloud computing as the most strategic approach. Cloud with virtualization is an IT transformation that preserves existing investments. Key benefits of implementing VMware solutions in any organization are:

1. Cost reduction
2. Standardization
3. Improved security
4. Application portability and mobility

Types of services can be enabled by VMware solutions are [7]:

1. Course curriculum
2. Distance learning and remote access
3. Enrollment
4. Flexible device access with IT control
5. Lab and classroom provisioning and image management
6. Library and kiosk access
7. Fee payments
8. Transcript administration

B. VMware Solutions

VMware provides variety of solution which enable the educational institutes to cope up with fasting changing learning environments by exploiting the dynamicity and flexibility available in the solutions. The following list summarizes such few prominent solutions [1,5].

1. End user computing deals with moving towards user centric management and cloud ready services
2. VMware cloud application platform helps in build, run and manage applications for cloud deployment

Prediction of Seismic Tremor Magnitude for Andaman-Nicobar Islands using Artificial Neural Network

Kamath R.S.[1]* and Kamat R.K.[2]
1. Department of Computer Studies, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur 416004, INDIA
2. Department of Electronics, Shivaji University, Kolhapur 416 004, INDIA
*rskamath@siberindia.edu.in

Abstract
We report artificial neural network (ANN) model for anticipating the magnitude of seismic tremor for Andaman-Nicobar Islands. We have used the earthquake dataset derived from European-Mediterranean Seismological Center in this work. This work exhibits performance evaluation for various ANN configurations and neural network structures and compares the prediction accuracy. The reported investigations depict optimum ANN architecture achieved by tuning the parameters viz. network type, training function, transfer function and number of neurons in hidden neurons. ANN architecture, thus derived entails nonlinear sigmoid activation function for hidden layer and Levenberg-Marquardt back propagation method for training the model.

Moreover, the performance of the model is evaluated with reference to Mean Squared Error (MSE), Pearson Correlation Coefficient (r) and Gradient (g). Validation of the model has portrayed reasonably good prediction accuracy.

Keywords: Earthquake magnitude prediction, Artificial neural network, Back propagation algorithm, Soft computing, Natural disaster.

Introduction

An early forecast of earthquake is a challenging task since it is a characteristic catastrophe. In spite of the fact that it is realized that most worldwide quakes will assemble at the plate limits, there is no dependable technique for precisely foreseeing the time, spot and size of a tremor. They frequently appear to strike abruptly, now and then exacting enormous harm and losses. Most earthquakes related forecasting focuses on minimizing the danger connected with tremors by evaluating the intermingling of seismic risk and the weakness of a given territory.

Though the prediction of earthquakes is not easy, many research groups are striving hard to monitor the chances of an earthquake so as to come out with the likelihood of the next quake that might hit the region. Amongst the established techniques, few prominently used are the laser beams for detecting the plate movement, seismometer based vibration analysis and monitoring of the levels of the radon gas. Many researchers have carried out the prediction of earthquakes based on different approaches. Molchan and Romashkova[1] have reported prediction of earthquakes using the empirical analysis of seismic rate using the M8 algorithm. The above referred researchers have further upgraded their prediction technique by using a new characteristic to evaluate the forecaster's skill coined as the gambling score (GS) which incorporates the difficulty of guessing each target event by using different weights for different alarms[2].

Preethi and Santhi[3] have reported time series analysis based on fuzzy optimization for earthquake prediction. Different research groups have applied soft computing techniques for evaluating different aspects of earthquake related research, though not much work is done towards using these techniques for prediction purpose.

Karmi et al[4] have reported earthquake risk assessment system using fuzzy-probabilistic technique. Kalita et al[5] have adopted a soft computing approach for recognition of Earthquake Precursor from low latitude total electron content profiles. Mansouri and Hamednia[6] have utilized the remote sensing technique combined with the soft computing approach for damage mapping post-earthquake hazards.

Seyedpoor et al[7] have used simultaneous perturbation stochastic approximation blended with particle swarm algorithms for designing optimal arch dams subjected to earthquake loading. Some related work though not exactly on prediction of earthquakes but related to seismic phenomena has been reported in the literature. Ichimura and Hori[8] have compared and contrasted macro and micro analysis methods for Strong ground motion prediction[8]. Wang and Niu[9] have exemplified object oriented methods for intelligent prediction of landslides.

Alavi et al[10] have effectively utilized multi expression programming paradigm for predicting ground motion. Denolle et al[11] have used virtual earthquake methodology for predicting strong ground motion. Very recently Kaveh et al[12] have derived a whole new set of equations for predicting principal ground motion parameters using M5 algorithm. Thus, the literature review indicates a crystal-clear possibility to exploit soft computing approach in general and techniques like ANN in particular for the problems like earthquake prediction. This has in fact served as motivation for us to develop the conception of prediction of seismic tremor magnitude using ANN in the present investigations.

Research Article

Modeling fetal morphologic patterns through cardiotocography data: Decision tree-based approach

R. S. Kamath[1]*, R. K. Kamat[2]

ABSTRACT

Objective: The present research aims at decision tree (DT) modeling of fetal morphologic patterns by exploring cardiotocography (CTG). CTG consists of fetal heart rate and topographic measurements and is used for the verification of fetal health. **Materials and Methods:** In the present study, we have carried out DT modeling for CTGs data classification based on fetal morphologic patterns. Decision tree model is the most commonly used data mining technique for classification and prediction. The dataset employed in the present study comprises ten classes of morphologic patterns with a sample size of 2126 records. The optimum decision tree model is derived by tuning parameters such as min split, min bucket, max depth, and complexity. This model entails recursive partitioning approach implemented in the "rpart" package of R. The performance of the model is evaluated in terms of mean square error estimate of error rate. **Results:** Thus, derived decision tree model leads to values for tuning parameters such as min split, min bucket, max depth, and complexity are 20, 7, 30, and 0.01, respectively. The 1488 observations from the inputted dataset are considered for the construction of the tree. Root node error is 0.7211. Thus, derived DT model efficiently classifies validation data with very less error. **Conclusion:** The result suggests that the DT modeling has the potential to exhibit as the best tool for modeling of CTG data.

KEY WORDS: Cardiotocography, Classification, Decision tree, Fetal morphologic pattern, Rattle

INTRODUCTION

Cardiotocography (CTG) indicates fetal health in terms of fetal heart rate (FHR), uterine contraction, and fetal movement and is taken from 27 weeks of pregnancy.[11] The CTG analysis done by obstetricians during FHR pattern observation helps in recognizing fetal state such as physiological, suspect, and pathological.[10] Thus, prosperity of embryo can be visualized and taken care in advance.[12]

Literature review divulges that there are a few reported researches of utilizing the machine learning approaches for the study of CTG data.[7-9] Kamath and Kamat have presented random forest (RF) modeling of fetal morphologic patterns for CTG data and derived optimum RF model by tuning different properties.[2] A study by Karabulut and Ibrikci explains machine learning techniques for analyzing CTG data.[3] Their study explains Decision tree system with accuracy 95.01%.[3] Yet another paper by Tomas *et al*. have explained RF model for automatic recognition of three assorted fetal states.[4] This framework supports decision system as a part of pre-birth care. Sundar *et al*. explained CTG data classification by designing artificial neural network model.[5] This classifier was capable of classifying fetal states with less error. The performance of aforesaid model was measured in terms of precision, recall, F-score, and rand index. Yet another paper by Kamath and Kamat reports decision tree modeling of proteins expression levels for down syndrome.[6]

In the background of the research portrayed above, the present study demonstrates decision tree modeling of fetal morphologic pattern using CTG Data. The dataset with 2126 observations of CTGs is selected for the analysis.[1] These data contain FHR, uterine contraction, and fetal movement measurements. The present work is carried out in Rattle. Rattle is a graphical data mining application built on the statistical language R. The study derives DT model that classifies CTG data with very less error.

Access this article online	
Website: jprsolutions.info	**ISSN:** 0974-6943

[1]Department of Computer Studies, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra, India, [2]Department of Electronics, Shivaji University, Kolhapur, Maharashtra, India

***Corresponding author:** R. S. Kamath, Department of Computer Studies, Chhatrapati Shahu Institute of Business Education and Research, University Road, Kolhapur, Maharashtra, India. Phone: +91-9096004515. E-mail: rskamath@siberindia.edu.in

Received on: 19-09-2017; Revised on: 22-10-2017; Accepted on: 25-11-2017

Research Article

Modeling mice Down syndrome through protein expression: An artificial neural network based approach

R. S. Kamath[1]*, T. D. Dongale[2], Pankaj Pawar[3], R. K. Kamat[4]

ABSTRACT

Objective: Present research aims at artificial neural network (ANN) modeling of expression levels of proteins critical to learning in a mouse model of Down syndrome (DS) and delivered detectable signals in the nuclear fraction of the cortex. **Materials and Methods:** In this investigation, we demonstrate the modeling of 77 proteins expression levels measured in the cerebral cortex of 8 classes of control and DS mice exposed to context fear conditioning, a task used to assess associative learning. The dataset with 1080 samples of protein was selected for training the network model. The optimum ANN architecture experimented by varying its various attributes such as network algorithm, training function, learning function, transfer function, number of hidden layers, number of neurons in hidden layer, number of epochs, dataset splitting, and performance combinations. **Results:** The resulted ANN architecture Levenberg-Marquardt Back-propagation method for training the model reveals preeminent performance at lower numbers of hidden neurons and further higher epochs. **Conclusion:** The result suggests that the ANN has the potential to exhibit as the best tool for modeling of protein samples, thus learning by examples can be achieved.

KEY WORDS: Anti-aging, Artificial neural network, Down syndrome, Protein expression

INTRODUCTION

Down syndrome (DS) is one of the most common genetic, congenital causes of learning or memory deficits.[1] DS is a genetic perturbation of considerable complexity due to trisomy of the long (q) arm of human chromosome 21 (Hsa21) and the consequently increased level of expression of some subset of the genes it encodes.[2] There are hardly any pharmacotherapies available for learning deficits in DS. A considerably high interest in identifying pharmacotherapies for DS is because of its high incidences (1 in 1000 live births worldwide).[1] Hsa21 encodes more than 500 genes. Functional information of less than half of Hsa21 genes is available which is scanty. It is clear, however, that Hsa21 genes include protein modifiers such as kinases, phosphatases, methylases and several involved in ubiquitination and sumoylation, transcription factors, RNA splicing factors/modifiers, cell surface receptors and adhesion molecules, and components of many metabolic pathways. Abnormal expression of these genes occurs in DS and results in disturbed biological processes and pathways, of which many affecting brain development and function.[3] Investigation of a pathway gives an advantage to the detailed understanding of the functions of individual Hsa21 genes, when and where each is abnormally expressed. Memantine is currently in use for the treatment of Alzheimer's disease[4] and has been proposed for the treatment of learning deficits in DS.[5,6] Memantine modulates excitatory neurotransmission through the antagonizing activity of N-methyl-D-aspartate receptors.[7] There are a few reports about its effects on protein expression, either alone or in learning paradigms. Higuera *et al*. examined the effects of memantine on protein expression, with and without learning in context fear conditioning (CFC) in mice and further demonstrated an application of self-organizing maps clusters in identifying common critical protein responses, which in turn may aid in identifying potentially superior drug targets.[8] At present, protein expression modeling is also turning

Access this article online	
Website: jprsolutions.info	ISSN: 0974-6943

[1]Department of Computer Studies, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra, India, [2]Department of Nanoscience, School of Nanoscience and Technology, Shivaji University, Kolhapur, Maharashtra, India, [3]Department of Biochemistry, Shivaji University, Kolhapur, Maharashtra, India, [4]Department of Electronics, Shivaji University, Kolhapur, Maharashtra, India

***Corresponding author:** R. S. Kamath, Department of Computer Studies, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra, India. Phone: +91-9096004515. E-mail: rskamath@siberindia.edu.in

Received on: 12-07-2017; Revised on: 27-08-2017; Accepted on: 25-09-2017

ijecs
open access

ISSN : 2319-7242

IJECS

International Journal Of Engineering And Computer Science

www.ijecs.in

ijecs open access www.ijecs.in
International Journal Of Engineering And Computer Science ISSN:2319-7242
Volume 6 Issue 7 July 2017, Page No. 21929-21936
Index Copernicus value (2015): 58.10 DOI: 10.18535/ijecs/v6i7.07

Machine Learning Approach for Marketing Intelligence: Managerial Application

Keerti. S. Mahajan*, S.S.Jamsandekar*, Dr. A M. Gurav**

*Department of Computer Studies, SIBER, Kolhapur. (MS), India.
** Department of Commerce and Management, Shivaji University, Kolhapur. (MS), India.
ksmahajan@siberindia.edu.in, ssjamsandekar@siberindia.edu.in , annasahebg@yahoo.co.in

Abstract

Marketing Intelligent Approach is a cutting edge for marketing management support system to deal with knowledge by machine learning and other soft computing techniques. The range of potential applications of machine learning techniques in marketing management are consumer behavior, optimization of product-market structure, managing the market mix, strategic marketing, finance domain etc describes the synergy between marketing and intelligent systems, specially machine learning techniques. Interactive promotion is a matching field for marketing; where intelligent systems can be applied. The above description suggests us that marketing is a multifaceted field of decision making. Marketing decision is a combination of judgments and analysis which involves a huge degree of intuition in which knowledge and expertise are required to take decision, therefore here Artificial Intelligence (AI) can play an important role. Machine learning is an AI component that observes historic data of actions and does experiential learning by putting the knowledge to use to perform similar process in new computational settings[1]. This paper describes about the potential benefits associated with the application of machine learning techniques to the field of marketing management. It also describes the fundamental techniques and introduces relevant marketing fields to which machine learning approach such as Data Mining, AI, and Soft Computing techniques could be applied.

Keywords: ***Market Intelligence, Managerial Aspects, Soft Computing, Artificial Intelligence, Machine Learning.***

1. Introduction:

In the Era of digitization, E-Commerce sites are blooming like mushrooms, each with a lucrative and exciting product offers, causing a hard-hitting competition in market. Digitalization is the buzz word in the global scenario. In this situation the marketing team of the organization needs to grill down which will help to face the challenges of dealing with massive volumes of users and come up with new marketing strategies. It's practically infeasible for marketers to assemble and process such huge amounts of data from various sources - ranging from websites to mobile apps to buying behavior and offer redemption. Here, where Machine learning can play a vital role in analyzing the huge data, through application of machine learning algorithms the customer and the log databases could be mined easily to provide insights on the success or failure of marketing campaign. Machine learning has risen up to help marketers analyze historical campaign data to deliver highly targeted marketing offers. Managers of marketing takes decisions about their products, distribution channels, advertising brands, price etc, based on the behavior of customers, competitors, suppliers, some uncertain factors like political issues, government rules and overall economy of the country. And to get the desired output; marketing decision making involves strategic issues and marketing mix

Enhancing Performance of Computer Network in Management Institutes

Mr. M. B. Patil
Department of Computer Studies
ChatrapatiShahu Institute of Business
Education and Research
Kolhapur, India

Dr. R.V.Kulkarni
HOD
Department of Computer Studies
ChatrapatiShahu Institute of Business
Education and Research
Kolhapur, India

Abstract:
The primary objective of this paper is to study current network structure used in various management institutes in Kolhapur district and find out the strength and weaknesses. To collect primary data questionnaire has been designed and the data is collected. The data has been collected from the persons who are actively involved in managing and administrating the network. The information collected by researcher contains total number of Servers, Desktops available in their institutions and also the detail information about computer network, they are using .The researcher has also made an attempt to study the different types of hardware components used, topologies, and security measures implemented. The study conducted reveals certain facts about the networks used in management institutes this paper presents the results obtained from the study.

Keywords :**Desktops, Servers,Topology,Network**

1. INTRODUCTION :

Computer network connects two or more autonomous computers. The computers can be geographically located anywhere. A computer network or data network is a telecommunications network which allows computers to exchange data. In computer networks, networked computing devices exchange data with each other using a data link. The connections between nodes are established using either cable media or wireless media. The best-known computer network is the Internet.

Network computer devices that originate, route and terminate the data are called network nodes.[1] Nodes can include hosts such as personal computers, phones, servers as well as networking hardware. Two such devices can be said to be networked together when one device is able to exchange information with the other device, whether or not they have a direct connection to each other computer networks differ in the transmission medium used to carry their signals, the communications protocols to organize network traffic, the network's size, topology and organizational intent.

A computer network facilitates interpersonal communications allowing users to communicate efficiently and easily via various means: email, instant messaging, chat rooms, telephone, video telephone calls, and video conferencing. Providing access to information on shared storage devices is an important feature of many networks. A network allows sharing of files, data, and other types of information giving authorized users the ability to access information stored on other computers on the network. A network allows sharing of network and computing resources. Users may access and use resources provided by devices on the network, such as printing a document on a shared network printer. A computer network may be used by computer crackers to deploy computer viruses or computer worms on devices connected to the network, or to prevent these devices from accessing the network via a denial of service attack.

Applications of Networks :

- Resource Sharing
- Hardware (computing resources, disks, printers)
- Software (application software)
- Information Sharing
- Easy accessibility from anywhere (files, databases)
- Search Capability (WWW)
- Communication
- Email
- Message broadcast
- Remote computing
- Distributed processing (GRID Computing)

RESEARCH DIRECTIONS
ISSN: 2321-5488
IMPACT FACTOR : 5.1723(UIF)
VOLUME - 5 | ISSUE - 6 | DECEMBER - 2017

A STUDY ON PLANT BIODIVERSITY OF JAYANTI NALLA FROM KOLHAPUR

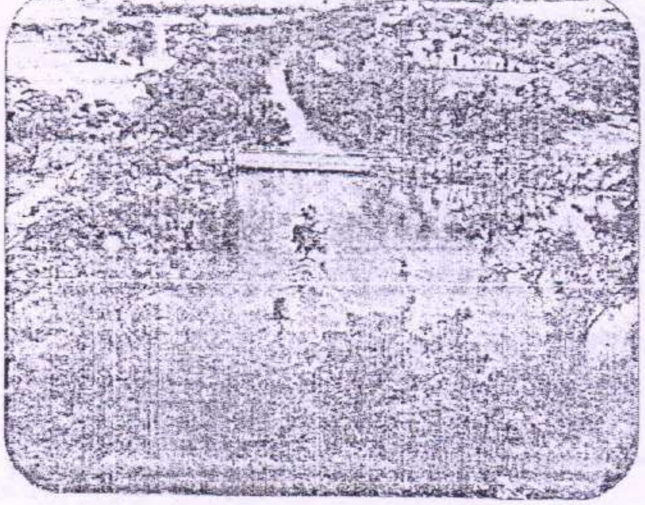
Dr. S. D. Kadam[1] and Mrs. S.S. Kadam[2]
[1]Department of Environmental Science and Management, Chh. Shahu Institute of Business Education and Research, Shivaji University Road, Kolhapur (M.S.).
[2]D.R.K.College of Commece, Kolhapur.

ABSTRACT:-
Plant biodiversity is an important biological tool to understand and monitor the changes in climatic, edaphic and aquatic factors of environment. The fast changes in abiotic factors of environment put stress on biotic communities which results in loss of plant species and animal species from their habitats. These loses of plants and animal species becomes the cause of imbalance in ecosystems which further results in irregular supply of energy pool (food) in between autotrophs to heterotrophs and at the end the whole ecosystem turning towards ageing process. Jayanti Nalla was a fresh water stream before 1980, which originate from Kalamba Lake and meet with Panchganga river after passing 18 km. distance through the central part of Kolhapur city. At present Janyanti Nalla receives huge quantity of sewage from both the sides of crowded human settlements accounts about 150 MLD. This sewage mainly consists night soil and other domestic waste which further alters the characteristics of nalla water. This changed water contents (pollutants) threats the native plants and animal species of nalla water (aquatic flora and fauna) as well as bank biota due to water log condition. Present study on plant biodiversity found that Abrus precatorius L.(Gunj), Cardiospermum helicacabum L. (Kapal Phodi), Cassia tora L. (Tarwad), Cuscuta chinensis Lamk.(Amarvel), Parkensonia aculeata L. (vedi babhul), Passiflora edulis Sims.(Sarbatphal), Terminalia alafa Heyne ex Roth. (Ain), are becoming very rare species among 298 species from Jayanti Nalla.

KEYWORDS: *Environmental factors, sewage, biota, ecosystem, food chain, biodiversity.*

INTRODUCTION:

Biodiversity is a term referred to describes the variety of living community i.e. plants, animals and microorganisms from specific locality or regions for particular time or season. Ecology and ecosystem study point of view it is very important because it represents the wealth of biological resources on which human life and his development depends. The plants, animals and microorganismic communities naturally exists (environmentally introduced i.e. ecotypes) on natural land area to sustain all life process. Unfortunately today these natural communities are dynamically declining very fastly due to human activities, change in climatic factors, edaphic factors and pollution. In this ecological biodiversity and its ecosystem every individual living species is very important to maintain equilibrium in between biotic and abiotic factors and biotic to biotic from autotrophic level to topmost heterotrophic



(carnivore) level. Here each and every individual species (micro or macro) plays important role in stabilizing environmental ecosystems. In this ecosystems plants are depends on climatic factors, edaphic nutrients and water quality where all other animals depending on plants for food, fodder, shelter and for protection. In this all processes saprophytic organisms play very important role for conversion of dead organic matter into usable nutrients and maintaining humus in soil which is important for maintaining plant health and biodiversity.

Present attempt was made on biodiversity of Jayanti Nalla which is originate from Kalamba lake situated on N 1639.574 and E7412.799 at the 581 m. altitude of southe-western side of Kolhapur city (Photo plate 1).

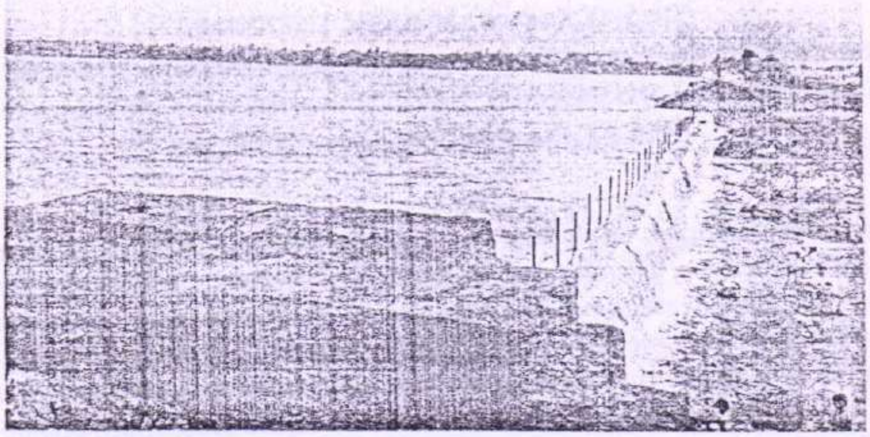


Photo Plate 1. Overview of Kalamba lake and source of Jayati Nalla,Kolhapur.

Kalamba lake is a fresh water lake which cater the need of drinking water for Kolhapur city. Over flows and seepage of Kalamba lake gives birth to this Jayanti nalla and it is passes across the Kalamba Village, Panchgoan, Jarag Nagar, Jawahr Nagar, Mangalwar Peth, Laxmipuri, Shahupuri, Dasara Chowk, Budhwar Peth, Sidharth Nagar and at the end it meets with Panchaganga river. It's total length is about 18 km. and it passes through the heart of city. Earlier it was fresh water stream but today it is receiving huge quantity of sewage generated from the newly human settlement area and now it becomes a major part of sewage carrying nalla of Kolhapur city.

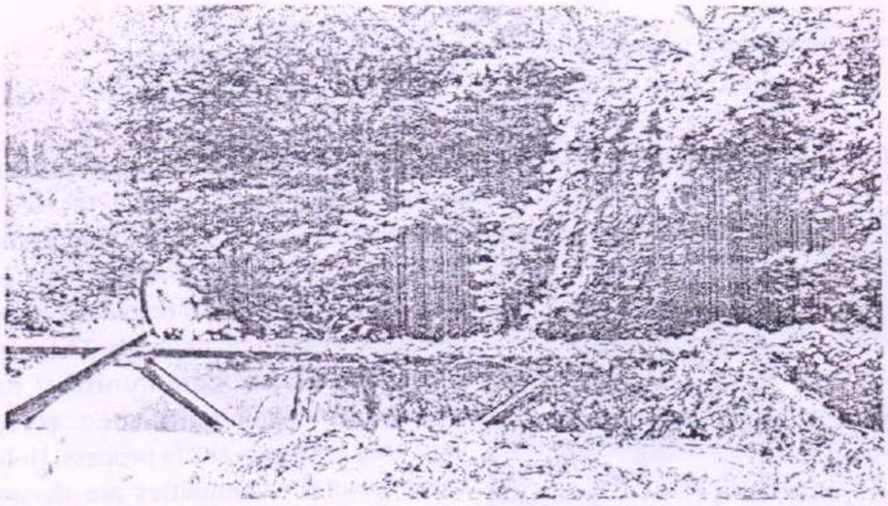


Photo Plate 2. Plant Biodiversity of Jayanti Nalla at Jarag Nager, Kolhapur

Vol 6 Issue 12 Sept 2017

ISSN No : 2249-894X

Monthly Multidisciplinary Research Journal

Review Of Research Journal

Welcome to Review Of Research

RNI MAHMUL/2011/38595 **ISSN No.2249-894X**

Review Of Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial Board readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India
Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.oldror.lbp.world

ISSN: 2249-894X IMPACT FACTOR : 5.2331(UIF) VOLUME - 6 | ISSUE - 12 | SEPTEMBER - 2017

REVIEW OF RESEARCH

A STUDY ON FOUNDRY WASTE SAND MANAGEMENT

Dr. Kadam S. D. , R . Hunashal and S. Gaddi
Department of Environmental Science and Management , Chh. Shahu Institute of Business Education and Research, University Road, Kolhapur.

ABSTRACT :
In the beginning of 21st century global people have started to face the problem of solid waste which is generated through various human activities. The major sources of this solid waste are domestic, agricultural and Industrial activities. These solid waste are mainly organic and inorganic in nature. Out of these waste some are easily degradable and some are non degradable as well as some are highly toxic to human life and environmental ecosystems. In this present attempt foundry industries are objected to study the nature of solid waste generated by them and to know the end use of these solid waste. Foundry industries are mainly using metallic (pig Iron, Scrap) and non metallic (Coke, Limestone, Green sand) as a raw material for casting. After casting or from this cast manufacturing process, foundry industries are generating high amount of waste sand and slag. Due to lack of knowledge about further use of foundry waste sand, it is dumped on ground, roadsides as well as used for land filling which further becomes the cause of pollution of air, water, ground water and land. This foundry waste sand shows high pH (7.8), water holding capacity (WHC) 41.55%, fluoride 2.28 mg/l and Iron 0.92mg/l.

KEYWORDS : *Foundry waste sand, Environment, Leachate, Fluoride, pH, WHC.*

INTRODUCTION

Kolhapur is a district place situated at the southern part of Maharashtra State on the border of northern Karnataka State. Kolhapur receives rich natural beauty and pleasant healthy environment. It is a place of Goddess Shri. Mahalaxmi and known as Dakshin Kashi. The region of Kolhapur receives as much as 1500-1600 mm annual rainfall, having 6-7 perennial rivers with highly fertile land. Because of this richness of natural wealth, Kolhapur region becomes most important last station for fast growth of various types of industrial zones in southern Maharashtra. In this diversified Industrial sectors, Kolhapur Foundry Industrial Sector is very much famous at National and International level for quality casting. As on today there are more than 350 foundries in and around the Kolhapur city.

According to Samraj (2016), President, The Institute of Indian Foundrymen, currently there are more than 4500 casting in India which employing 5 lakh people directly. The foundry industries are the mother of all Engineering and Manufacturing Industries which employing 5 Lakh people directly and 15 Lakh indirectly and earns a revenue of USD 18 billion annually with exports of USD 2 billion and contributes USD 1 billion to the exchequer and stands 2nd rank in world for casting production.

In this foundry industries mainly pig Iron, scrap and other unusable waste metallic material is used as a raw material, (photo plate No.1).

Photo Plate No.1 shows pig iron, scrap, coke and limestone used as a raw material in foundry industry.

For casting the job it requires the molds and for mold formation requires specific green sand which is rich in high quality silica (85-95%). Further this sand is charged with addition of 5-10 % bentonite (clay binder), 5 % Sea coal (Carbonaceous mold additive to improve casting finish) and 5% water and then it is homogenized with the help of mixture to make it ready for molds.

Photo plate 2 shows the 1-Natural green sand, 2-Processed sand, 3-Foundry waste sand, 4-Water washed foundry waste sand and 5-Natural river sand .

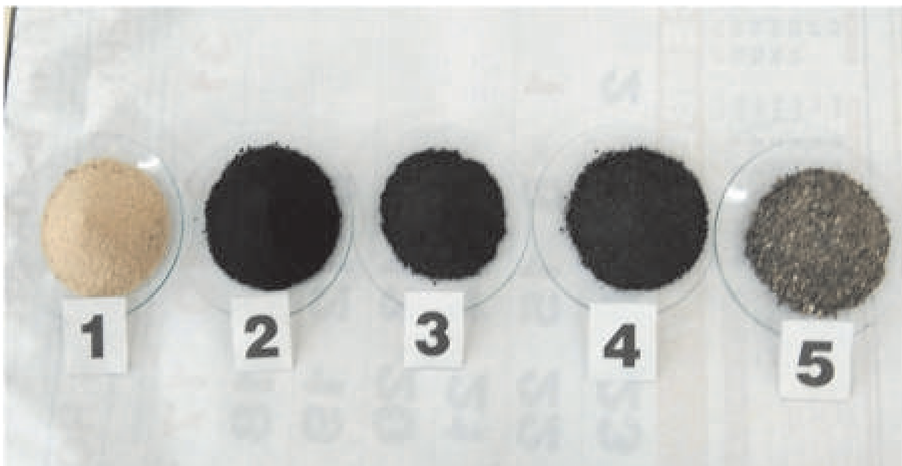


Photo Plate No.2 Shows the 1-Natural green sand, 2-Processed green sand, 3-Foundry waste sand, 4-Water washed FWS and 5-Natural river sand.

MANUFACTURING PROCESS OF CASTING:

The raw material like pig Iron, scrap and other metallic material as pig Iron (40%),metallic scrap (40%), Coke (12%) and limestone (8%) is loaded into furnace where it is heated at 14500C temperature (Photo Plate 3). At this temperature ferrous metallic material is molten and impurities are separated in the form of slag where pure molten metallic liquid is poured into pre formed sand molds. After cooling solidified metal cast is separated from the sand mold. For this process a vast quantity of processed sand is used by the foundry industry for casting. Two-three times this sand repeatedly used and then after it become useless for casting. Then this foundry waste sand and slag is unscientifically used for land filling or dumped on road sides which further becomes cause of air, water and ground water pollution. The leachate of foundry waste sand and slag is not directly harm to human and animal life but sometimes it harm to earth's environment and ecosystem. According to EPA (US), 2007, near about 6-10 million tons of foundry waste sand is generated per year and out of it less than 10-15 % waste sand is recycled and remaining huge amount of waste sand is damped on ground.

Photo Plate No.3 Shows molten ferrous material collection and pouring into sand molds.

Considering the natural stock of green sand and day by day increased demand of green sand, the time has come to think about reuse and recycle waste sand and find some beneficial uses of this foundry waste sand. As on today about the reuse of foundry waste sand (FWS) there is lack of awareness and knowledge among the foundry owners and even limited literature as well as poor technology is available for how to make it reusable and where to use it in proper manner to adopt sustainable best foundry waste sand management practices.

MATERIAL AND METHODS:

To understand the problem of foundry waste sand management number of foundry industries were visited which are situated in Kolhapur region and made the discussion with production managers. Through the interaction lot of information's were collected regarding the use of raw material, furnace, silica sand and process on it to make suitable and ready for mold. To know the physico-chemical characteristics of green sand, processed ready sand and waste sand, samples were collected and brought to laboratory (Photo plate No.2). From these sands leachate was prepared with using distilled water as 1:5 mixture i.e. (20gm. of sand+100 ml. of distilled water) and kept it for overnight after stirring in well manner (Trivedy and Goel,1984). Next day upper supernatant was filtered through whatman filter paper No.1 and filtrate was collected and saved for physico-chemical analysis. From the saved leachate various parameters were analyzed with the help of methods which was prescribed by APHA (1998).

For the reuse and recycle point of view of foundry waste sand in concrete, the commonly used proportion which is used for concrete as 1:2:4 i.e.1 part cement (ppc Grade), 2 parts of foundry sand (Green sand, processed ready sand, foundry waste sand, water washed waste sand and commonly used natural river sand) were used for making concrete block. For this 25 gm. of (ppc grade) cement, 50 gm. of sand and 100 gm. of stone grit ½'' (inch size) was used. All this were mixed together and added 20 ml. of water and homogenized this mixtures. For making proper size of concrete block 1½'' diameter size PVC pipe was used with 3 inch in length. Then the all mixed mixture were introduced in a PVC mold which was already labeled. Then it was kept overnight for curing and next day the concrete blocks were removed from PVC molds and labeled them. Then this separated concrete blocks were kept in water bath for 28 days for curing and then it was air dried (photo plate No.4) and its strength was measured with the help of compression testing machine (Ratnakar Enterprises Make, photo plate No.5).

Photo Plate No.4 Shows concrete blocks processed from various foundry sands.

RESULTS AND DISCUSSION:

Table 1.shows the physico-chemical characteristics of green sand, processed ready sand, foundry waste sand and commonly used natural river sand. The original foundry sand shows greenish yellow in color, processed ready green sand shows dark black color, foundry waste sand shows faint black color where natural river sand shows gray stony color. Processed and foundry waste sand shows black color due to presence of sea coal which is used for converting green sand in usable sand for mold to get superior finishing of casting. For odour point of view all sands were smelled and all sands don't have any odour. The texture of sand shows that the green sand shows 73.84%, processed ready sand contain 4.3%, Foundry waste sand contain 61.43% and natural river sand shows 89.70% of coarse sand respectively. The amount of silt and clay found 50.24% in processed ready sand,11.15% was found in foundry waste sand and raw green sand shows 10.12% silt and clay. Foundry waste sand shows decline in silt and clay and it may be due to burning of silt and clay due to pouring of hot liquid ferrous metal into mold.

Table.1 Physico-chemical characteristics of various foundry sands.

Sr. No	Parameter	Sample-I Green Sand	Sample- 2 Processed Ready sand	Sample-3 Foundry waste sand	River Sand
1	Colour	Gray- Green	Dark Black	Faint Black	Grey
2	Odor	Odorless	Odorless	Odorless	Odorless
3	Soil Texture				
	Corse Sand (%) 0.2 – 2.0 mm	73.84	4.3	61.43	89.70
	Fine Sand (%) 0.02 – 0.2 mm	16.04	37.46	27.42	4.52
	Silt + Clay (%) 0.002 – 0.02mm	10.12	50.24	11.15	5.78
4	Moisture Content (%)	0.06	2.69	0.57	NA
5	Water Holding Capacity(%)	23.02	84.12	41.55	NA
6	pH	7.70	7.93	7.80	NA
7	Total Hardness(mg/l)	120.00	80.00	80.00	NA
8	Calcium (mg/l)	32.06	32.08	24.05	NA
9	Magnesium (mg/l)	9.75	00	4.87	NA
10	Chlorides (mg/l)	4.26	14.20	14.20	NA
11	Alkalinity (mg/l)	40.00	50.00	30.00	NA
12	Iron (mg/l)	0.153	0.307	0.920	NA
13	Chromium (mg/l)	00	00	00	NA
14	Fluoride (mg/l)	2.32	2.40	2.28	NA

NA – Not Analysed

Moisture content also found very poor i.e. 0.06% in green sand, 2.697% in processed ready sand where foundry waste sand shows 0.57% of moisture. Moisture percent found high in processed ready sand may be due to addition of water (5%) at the time of making ready sand for molds. Water holding capacity was found 23.02%, 84.12%, 41.55% in green sand, processed sand and foundry waste sand respectively. High water holding capacity found in processed ready sand may be due to presence of sea coal (organic matter) and it is found declined in foundry waste sand might be due to oxidation of coal ash (OM) which burns at high temperature when molten metal was poured in molds. This burn sand may reduces the water absorbing capacity up to 42.57% than the processed ready green sand.

Sand leachate was used for determination of chemical characteristics and this leachate of green sand shows 7.70 pH, processed sand leachate shows 7.93 pH and foundry waste sand leachate shows 7.80 pH. Total hardness of Green sand found 120.0 mg/l where processed ready sand and foundry waste sand observe 80.0 mg/l of hardness. Hardness is mainly depends on the presence of carbonates and bicarbonates. These carbonates may be oxidized due to high temperature of molten metallic liquid which introduced into molds and molds were processed from silica sand and sea coal.

From the Table 1, it is evident that the level of chloride remains same in processed sand and foundry waste sand (14.20 mg/l) which was very poor in green sand i.e. 4.26 mg/l. The amount of chloride found increased in remaining processed sand and foundry waste sand may be due to presence of sea coal. Alkalinity of green sand was found 40.0 mg/l and it was found high in processed sand (50.0mg/l) and it is found declined in foundry waste sand and it is 30.0 mg/l. It may be due to burning of salts at the time of contact between hot metallic liquid and sand molds.

In case of iron content in used sand shows continuous improvement in iron content i.e. natural green sand shows 0.153 mg/l, processed sand shows 0.307 mg/l and 0.920 mg/l of iron content found in foundry waste sand. It may be due to absorption of ferrous content by sand molds at the time of casting. The amount of fluoride in natural green sand was found 2.32 mg/l and it was found increased up to 2.40 mg/l in processed sand and again it was found declined in foundry waste sand and it was 2.28 mg/l. This is very important from the point of view of water pollution and if proper scientific management practices not considered today for its disposal, then it may be become the cause of water pollution as well as it may produce various adverse side effects among the animal and human body.

Considering the need and sustainable reuse of foundry waste sand which is generated by foundry industries, the green sand, processed sand, waste sand, water washed foundry waste sand and natural river sand was used for making concrete block. After curing of concrete blocks for 28 days in water bath its strength was measured (photo plate 5). Table 2 shows the strengths of various sand used concrete blocks. From the table 2 it is evident that the green sand concrete block shows 16.11 N/mm^2 strength and natural river sand used concrete block shows 19.12N/mm^2 strength where foundry waste sand concrete block shows 10.64 N/ mm^2 strength.

Table 2. Strength of concrete blocks processed from various foundry and River sand.

Sr. No	Name of foundry sand used in concrete blocks	Size of concrete block in mm	Compressive Strength N/mm^2
1	Raw Green sand	Diameter :52 Height :37	16.11
2	Processed Ready Sand	Diameter :52 Height :37	15.35
3	Foundry waste sand	Diameter :52 Height :37	10.64
4	Water washed foundry waste sand	Diameter :52 Height :37	10.78
5	River Sand	Diameter :52 Height :37	19.12

This is very important finding of this study which definitely useful to solve the environment related problems like air, water and land pollution due to unscientific disposal of foundry waste sand. This foundry waste sand is highly useful in manufacturing of concrete bricks, paving blocks, wall plaster and concrete road construction. As well as this foundry waste sand is highly useful in concrete partition wall if it is used in proportion of 50% river sand and 50% foundry waste sand.

From the point of view to reuse and eco-friendly use of foundry waste sand, Government organizations, private builders and other developers have to consider the scope, need and availability of foundry waste sand, they have to use this foundry waste sand in concrete construction which will be helps to solve the environmental problems as well as save the natural stock of river sand which is day by day becoming costly and scare. It also helps to preserve and protect river water and river ecosystem also.

Photo Plate No. 5 Shows the measurement of concrete block strength of various foundry sand used.

REFERENCES:

APHA, (1992) Standard Methods for Examination of Water and Wastewater, American Public Health Association, Washington D.C.

Foundry sands recycling, E.P.A. 530-F-07-018 Internet, c 2007.

Maiti S. K.(2001) Hand book of methods in Environment studies, Vol.2.

Samaraj K. (2016) Inaugural ceremony of 64th Indian Foundry Congress, Coimbatore, President of The Institute of Indian Foundrymen, Jr. of Indian Foundry Vol.62,pp.17-21

Trivedy R. K. and P. K. Goel (1984) Chemical and Biological Methods for Water Pollution Studies. Environmental Publications, Karad, India.

U.S. EPA. 1998. "Sustainable Industry: Metal Casting Industry Profile." U.S. EPA Office of Policy, Industry Sector Policy Division.

ISSN: 0971 - 0965
Journal of Eco-Biology.
2017 34 (1) 203-205

http://www.palaniparamount.com

OCCURRENCE OF COLOUR BLINDNESS AMONG COLLEGE STUDENTS OF MAHARASHTRA

VISWARANJAN SOMANATH

Post Graduate Department of Environment Management

CHHATRAPATI SHAHU INSTITUTE OF BUSINESS EDUCATION AND RESEARCH (CSIBER)

(AUTONOMOUS INSTITUTE)

KOLHAPUR - 416 004, MAHARASHTRA, INDIA.

Email: viswaranjansomanath@gmail.com

BRIEF COMMUNICATION

This work reports the occurrence of colour blindness among college students of Maharashtra. Second year PG students of our Institute were tested for colour blindness. Ishihara Colour Blindness Test Plates was used to study the occurrence of colour blindness. The study revealed that the male students showed higher Red-Green Deficiencies (77.4%) than female students (19.9%).

Colour blindness tests were carried out under various National Health, Nutrition, Child Health, Hereditary Diseases, and Environmental Health Programmes etc. under Thrust Areas. International Organizations like the World Health Organization are giving top priority for similar studies. A perusal of literature reveals that similar research works are scanty and data on the recent trends of colour blindness are not available for India.

K.L.E. SOCIETY'S

G. I. BAGEWADI ARTS, SCIENCE & COMMERCE COLLEGE, NIPANI-591237

DIST:-BELAGAVI, KARNATAKA STATE (INDIA)

[Affiliated to Rani Channamma University, Belagavi.]

[Accredited at 'A' level in 3rd Cycle by NAAC with CGPA 3.35]

"College with Potential for Excellence"

PROCEEDINGS OF THE SELF FUNDING ONE DAY NATIONAL CONFERENCE ON

"RECENT TRENDS IN CHEMISTRY"

3rd FEBRUARY, 2018

ORGANIZED BY DEPARTMENT OF CHEMISTRY

PROCEEDING WITH ISBN : 978-81-930758-5-2

CONTENT

Student s Papers

07. IMPACT OF PERSISTENT & NON-PERSISTENT PESTICIDES ON AGRI-ECOSYSTEM

Dr. Vitthal B. Patil,
Department of Environment Management, CSIBER, Kolhapur,416004

Human interference in the natural processes has created many irreversible changes in both terrestrial & natural ecosystems. Managing numbers & distribution of certain plants & animals in Agri-ecosystem has resulted in upset of many ecological processes & principles. Food chains are very seriously damaged & resulted in outbreak of many diseases. Cultivation of high yielding, short duration as well as improved & genetically modified (GM) varieties of plants & animals posed vulnerability towards pest attack. Change in weather conditions & Climate busted them. To overcome this problem Pesticides, a category of toxic & hazardous chemicals entered agriculture. They efficiently controlled pests but raised many environmental issues. They are like a double edged sword. They should be wisely used. Pesticide is an umbrella term covers large number of hazardous chemicals specially designed to kill/control a target organism called as pest. Pest may be insect, animal, plant or microbes. Use of both persistent & non-persistent Pesticides is responsible for upset of ecological processes. It has adverse effects on both natural ecosystems & managed agri-ecosystems. Pesticide use has adverse impacts on all biotic & a-biotic components of ecosystem. They have detrimental effects on properties of these precious natural resources like soil, air & water. Sustainability of these resources & ultimately health of human beings is at risk. Persistent Pesticides residues remain in ecosystem for many years depending on its half-life. It enters food chain & then get transferred from one organism to other organism in higher tropical levels. This transfer results in accumulation of higher quantities of it in tropical levels, called as bio-accumulation & consequently results in bio-accumulation. Non persistent Pesticides affect beneficial organisms, being more toxic affect human beings also & repeated use results in development of resistance in target organism. Thus both persistent & non-persistent pesticide use has serious environmental consequences on sustenance of agri-ecosystem.

Key words- Persistence Pesticides, Agri-ecosystem

Introduction

Modern agriculture employ's Scientific & Technological tools. The factors & conditions which affect the growth & development of useful plants & animals are controlled by these means. Todays tropical agriculture is traditional, transitional & modern farming systems. Crop production system vary with crop, time, location & the level of technology of that area. Protection of crop is becoming one of the essential features of agriculture. Any organism, which is harmful or potentially harmful to plants, live-stocks or human can be called Pest. Disease is the product of the interaction between the causal organism, host & certain factors within the environment. Pest have arisen in two major ways

1. Natural selection
2. Alteration of ecosystems(Human Activity) which includes selective Breeding, introduction of new plants or animals into environment, monoculture, changes in social habits, & use of toxic chemicals like pesticides.

In the present era pests are managed by use of chemical pesticides. Each pesticide or pesticide class comes with a specific set of environmental concern. Such undesirable effects have led many pesticide to be banned, while regulations have limited or reduced the use of others. Over time pesticides have generally became less persistent & more species specific, reducing their environmental footprint.

Soils cover large part of the land surface of the earth. They are three Dimensional, often contains distinct horizons(Layers) & vary with climate, parent material & topography. They also change over time. Soil is a mixture of minerals, organic material, living organisms, air & water that together support the plant life , which are primary producers in all ecosystem. Soils largely determine the effective functioning of both natural & agricultural ecosystems. Together with the climate, the properties of soils determine the potential biological production of land. Soil properties affect the qualities of surface water & the atmosphere. Farmers are particularly concern with the soil. Urban dwellers should also be concerned about soil because soil health determines the quality & quantity of food they will eat. Food or nutrition is a prime factor which determine health of human beings.

Pesticide use has reduced quality & quantity of biomass & reduced capacity of soil to support biomass production in both natural & agri-ecosystem, resulting in serious environmental consequences.

To overcome impacts of pesticides on environment & to maintain good soil health new strategies of pest management are invited. Present paper give emphasis on study of pesticide impact on soil & other related natural resources and their control for sustainable agriculture.

Material & Methods

The present research work was undertaken to study the environmental consequences of pesticide use. Objectives of the research was to study the reason behind the selection of chemical method of pest management by farmers & the environmental impacts of pesticide use. Emphasis was given on the Influence of pesticide use on ecological systems. As dimensions of ecosystem can not be precisely defined, survey was done in intensively cultivated eastern area of Sangli District. Grape is the major fruit crop of this area. Many farmers cultivate Grapes to sell it as a fresh fruit in market and others cultivate it for processing at farm level. They process grapes to resins. Survey was done for use of agrochemicals. While surveying it was found that these farmers use number of agrochemicals . This kind of cultivation is referred as intensive agriculture. Soil samples were collected by using appropriate sampling technique from cultivated area. These samples were analyzed for fertility/nutrient status. Conventional methods of analysis were used. Organic matter was estimated by Walkely & Black Rapid Titration Method. Available potassium was estimated by ammonium acetate extraction & subsequent flame Photometric. Available Phosphorus was determined by using colorimetric method & available Nitrogen was measured by Alkaline KMnO4 method. DTPA extract of soil was used for micronutrient analysis by Atomic Absorption Spectrophotometer. Soil was also tested for microbial count.

Growth pattern were seen in the field for deficiency symptoms as well as for malformation. Emphasis was given on the outbreak of particular organism in relation to pesticide use.

Results & Discussion

Sustainability is a complex concept. The property of Biological Systems or natural resources to remain diverse & productive indefinitely is called as sustainability. Agriculture is a purposeful work through which elements in the nature eq. natural resources are harnessed for the production of useful plants & animals for human welfare. Mismanagement in the agricultural practices has led to the irreversible changes in the ecological processes which will not support productivity in future.

Soil flora & fauna has a great importance in nutrient recycling in ecosystem. They play crucial role in maintenance of soil health & nutrient availability. Pesticide use has found dramatic changes in number & distribution of both flora & fauna. It was found that microbial flora & fauna in the pesticide used area was dramatically affected. That was also reflected on growth patterns of crop grown in that area.

Persistent pesticides

Pesticide use has direct and indirect effects on ecosystems. Persistent pesticides like Chlorinated Biphenyls eq. DDT kill not only the unwanted target pest but also destroy non target organisms. These non target organisms are helpful for sustainable ecosystems. These organisms play a critical role in food chain. Many of them are pollinating agents. This results in decreased productivity of crop plants & also in the upset of ecological food chains. This phenomenon may result in increased population of certain organisms whose predator has eliminated. This way many organisms number will explode & result in emergence of new diseases. Being persistent they are accumulated in soils, enters plants & then enter the food chain. As human being is at the end of food chain enters human body & gets accumulated in the body. It is reported that many are responsible for nervous disorders, liver & stomach cancer. Many of them are suspected carcinogen & may affect the delicate organs like liver, kidney as well as reproductive system of animals.

Pesticides may enter water bodies & and has adverse effects on aquatic life & biodiversity.

Workers in the pesticide industries & workers in the field are exposed to many hazardous chemicals during process. Accidents during industrial processes pose threat to workers & common people.

Non-persistent or low Persistent pesticides

Many non-persistent or low Persistent pesticides, remain in the atmosphere for short period of time but because of high toxicity are harmful for non target organisms , human & wildlife eq. Organo-phosphate pesticides are responsible for causing muscular weakness, tremors & dizziness in animals.

Being non persistent they are repeatedly used, which develops resistance in target Insect/pest after a certain period of time. Thus effectiveness of these insecticides decreases considerably. This also results in use of higher concentrations of these chemicals for next time which may adversely affect human & wildlife.

Soil health Study

It is reported that fungicide use results in increase in bacterial population. Certain fungicides are toxic to soil arthropods. Captan like chemicals reduces the population of the useful soil invertebrates like springtails, earthworms & millipeds. It also affect useful algae at very low concentrations.

It was found that residues of herbicides decreases bacterial count & increases fungi count. This may result in outbreak of new fungal disease.

Pesticide use has adversely affected number & distribution of earthworms. The effect was reflected in decreased yield & quality of product. Soil flora & fauna plays a key role in soil health management. It was observed that flora & fauna of study area was drastically changed. Food chains were seriously altered. This may also result in outbreak of new insect disease. Increased number of Thrips in study area was the suspected reason behind this. Thrip attack was aresult of misuse of insecticides in the study area.

It was found that the available nutrient content of soil samples collected were High with respect to Nitrogen, K2O & P2O5. Micronutrient content was also categorized as High. Thus all soil samples collected were rich in nutrient content. But still malformation found in the foliage of plants. That was due to complex interaction between plant & attach of thrips with response to pesticide misuse.

Integrated Pest Management (IPM)

It was found that Pesticide use in agri-ecosystem has created several problems in the agricultural sustainability.Requirement of our generation is to manage sustainability of soil & related resources. It is fact that without pesticides agriculture will not have sustainability. So this impact of pesticide on environment can be managed by applying Integrated Pest Management (IPM). It is a strategy of pest management whose goal is not eradication, rather to keep pest population below that which can cause economic loss to crop production. This can be accomplished by an interdisciplinary approach. All strategies & methods of pest management are appropriately used in IPM. Pesticide use is reduced to minimum level. In brief , IPM is a pest management strategy that combines the principles of other pest management systems, but with reduced emphasis on the use of chemicals to reduce pest population below levels that can cause economic loss. Mechanical(Physical), Agronomical, legislative & biological methods are used sequencialy. Use of Bio-pesticides is recommended as ecological principles like predation, parasitism & antagonism are explored.

Safe Pesticides

Safe pesticide use is allowed in IPM. Now goal of pesticide industries & regulatory bodies is to design & recommend safe pesticides. A safe pesticide used in IPM should be able to destroy the target pest within a short period (one or two weeks) & dissipate rapidly. This will reduce chance of entry of these chemicals in food chain.

Absence of synthetic pesticides means encouragement of wildlife.Consequently reduced risk of polluting nearby water system.Low level pesticide application ..more soil Organisms survival ..better soil structure & increased inherent soil fertility. More insects above ground, more food for spiders, birds & predators..Biodiversity maintenance

UPGRADATION OF THE SEPTIC TANK TO SEWAGE TREATMENT PLANT FOR THE EDUCATIONAL INSTITUTE

Mr. D. S. Mali

Associate Professor, Department of Environmental Management,

ChhatrapatiShahu Institute of Business Education and Research (CSIBER), Kolhapur

ABSTRACT

Use of fresh water for watering of garden and lawns of big premises like university, landscape irrigation of multinational companies, municipal corporations and townships at the outskirts of cities, gardens and golf course of military formations is becoming impracticable due to water crisis and is more true in summer. About 80 % of water supplied to consumers gets converted in to sewage. Sewage is rich in plant nutrients and when it reaches to water bodies like river, lake it encourages the growth of algae, water hyacinth and degrades the water quality. Recycle and re-use of wastewater is need of the time for water conservation. Nutrients from the sewage can be recycled back to soil by the use of treated sewage for gardening and agriculture where huge volume of water is required every day. Cluster of population have septic tanks for sewage treatment and disposal. Providing an engineering solution to environmental problems at optimum resources is a challenging task. The present paper makes an effort towards the sustainable development of sewage treatment by suggesting a methodology to upgrade an existing septic tank.

KEY WORDS: *Septic tank, COD, BOD, Water conservation.*

INTRODUCTION

About 20-30 years back for isolated premises like university campus, defence estates construction of septic tanks for collection of sewage at central place and disposal was a concept. Construction of such septic tank incurred lot of expenditure. Now, such septic tanks are absolute, not in use for several reasons like accumulation of silt in sewers and thereby no collection and transport of sewage up to septic tank and poor maintenance of septic tanks. Even after regular de-sludging of septic tank the effluent from septic tank still has BOD in the range of 100 to 150 mg/l or even more. The luxury of use of fresh water for gardening is no more affordable. Such big old and new premises have multiple scattered septic tanks for sewage disposal as per population deposits where septic effluent is disposed through leaching pit or discharged it in to the nearby drain or river.

The use of treated sewage for huge water requirements of gardens, lawns can be met by local treatment of generated sewage. Under such circumstances secondary treatment and hence BOD reduction of sewage effluent retaining nutrients gives the better solution. The aerobically treated sewage through upgraded septic tank effluent can be used for agriculture. The sewage has abundance of required plant nutrients and the same can be drawn from treated sewage. Recycle and re-use of nutrients rich treated sewage for watering of gardens reduces the load on municipal corporations to supply fresh water supply, closes the loop of natural nitrogen cycle and helps to reduce the eutrophication of water bodies like rivers.

The existing septic tank can be converted or upgraded for the treatment of generated sewage. Constructing a preliminary treatment unit, providing a base concrete layer to the bottom of tank, retrofitting of side surfaces, estimating and providing air blower, constructing a room for air blower, diffuse aeration grid will be the technical task that one has to do to convert the existing septic tank.

SEPTIC TANKS: PRESENT SCENARIO

A septic tank is designed to provide what is known as primary biological treatment to crude sewage produced in a normal domestic environment. Septic tanks are designed for detention period of 16 to 24 hrs. It retains solids and allows them to settle out, where they can be partially broken down by biological action so that only the settled sewage is left to flow down to the outlet drain. Any septic tank constructed 20-30 years back is hydraulically overloaded due to additional population deposits in the catchment. The reduction in detention period is leading to poor performance. The septic tank effluent is malodorous; containing sizable portion of dissolved organic content,BOD in the range of 100 to 150 mg/l and pathogenic organisms. Obviously septic tank effluent neither meets disposal standardsnor can be usedfor gardening, watering of lawns and golf course and hence need to be treated further by suitable aerobic process to minimize the health risks and reuse.

MATERIAL AND METHOD

Sewage from sanitary blocks will be screened and collected in Aeration tank which will be equipped with Jet Aerator. Sewage collected will be processed by Activated Sludge Process using Jet Aerator. In this process microbial activity will degrade the organic matter in the effluent into minerals and water. Microbial activity will be enhanced by using organic culture in aeration tank. This will help in reduction of all the effluent parameters like BOD, COD, Suspended Solids, etc. to enable us reuse this water selectively. The treated water parameters will be far better than effluent parameters specified by MPCB.

The stages of treatment are as follows,

1. Aeration Tank will be 2.4 m in height to reduce space and also to optimize diffused aeration process. Sewage will be aerated by Jet Aerator.
2. After aeration, sewage will be settled in a settling tank provided with sludge pumps.
3. Overflow from the settling tank will be collected in the Filter Feed tank.
4. Filtered water will be further filtered through a Dual Media Filter & disinfected by UV to obtain clear water for use as gardening purpose.
5. During operation of the plant, after some time, it is necessary to remove sludge from the system. This is achieved by a sludge drying pot provided for this purpose. Dry cake from the drying pot can be used as manure where as clear filtrate is recycled back to plant.

TREATMENT PLANT UNITS

1.1(One)	Bar Screen chamber of 0.5m x 0.5m x 0.5m swd,
2.1 (One)	Jet Aerator of cap. 10 m^3/hr @ 0.3kg pressure
3.1 (One)	Aeration tank of 2.75m x 1.66m x 2.4m swd,
4.1 (One)	Settling tank of 2.75m x 1.9m x 2.2m swd

5.1 (One)	Sludge pumps 2 m3/hr @ 6m head
6.1 (One)	Filter Feed tank of 2.75m x 1.7m x 2.1m swd
7.2 (Two)	Filter feed pumps of 2 m^3/hr @ 25m head
8.1 (One)	Dual Media Filter of 400mm dia x 1600mm HT,
9.1(One)	Ultraviolet (UV) System,
10. Set	Interconnecting piping for the above system
11. Set	Electrical fitting of the plant

RAWWASTEQUALITYASSUMEDFORDESIGN

SR. No.	PARAMETERS	DOMESTIC SEWAGE
1	pH	6 to 8
2	Suspended solids	150 to 300 mg/l
3	5 day's 20^O C BOD	300 to 400 mg/l
4	COD	600 to 800 mg/l
5	Oil and Grease	40 to 50 mg/l

Note: - All parameters except pH are expressed as mg/l.

TREATEDEFFLUENTQUALITY

SR. No.	PARAMETERS	Treated Water as per MPCB Standards
1	pH	6 to 8
2	Suspended solids	<10
3	5 day's 20^O C BOD	<100
4	COD	<250
5	Oil and Grease	< 10

Note: - All parameters except pH are expressed as mg/l.

DISCUSSION OF TREATMENT PLANT

To have eco-friendly & natural treatment, this plant is designed based on the biological treatment concept. This means naturally occurring microbes (which are present in influent water itself) removes or degrade the organic matter present in the influent & at the end clean water is available for the non potable usage or to dispose safely in the drainage or river bodies as per the norms.

Pre – Treatment

Screening: This is the first unit of the plant in which large or floating materials in the influent gets arrested and blockage or choking of the downstream equipments can be avoided. This arrested material will be removed manually and then it will be disposed of suitably.

Equalization: To absorb variation in quantity and quality of influent and to provide uniform flow at the downstream treatment process, a collection or equalization tank is provided. This will avoid shock loading and process upsets of the treatment plant. To avoid settling of suspended solids in this tank, continues air agitation is provided. If at site, septic tank is provided then collection tank as well as air agitation is not required.

Secondary Treatment Biological Treatment:

This is the main section of the plant where degradation of organic pollutants with the help of aerobic microorganism takes place. To maintain the aerobic condition in the bioreactor, air supply arrangement is provided by means of aeration equipment which has high oxygen transfer efficiency.

Tube Settler: Gravity overflow from the bioreactor is collected in the tube settler tank. In this settling tank, generated sludge from the bioreactor undergoes a gravity settling. Clear supernatant from settling tank will flow by gravity to a chlorine contact tank. To reduce the plan area of settling tank, tube modules are placed in this tank to increase the settling area of the tank. Since this tank is a hopper bottom tank due to which there is no need of sludge scrapping mechanisms.

Disinfection: Supernatant from Tube settler, flow by gravity to the chlorine contact tank. To disinfect the harmful bacteria in the treated water as well as to remove the refractory organics from treated water, in this tank hypo chlorite solution is dosed with the help of dosing system.

Sludge disposal system: Settled sludge from tube settler will be removed by pumping to the sludge holding tank **Tertiary treatment:**

Secondary treated water will be further passed through sand media filter followed by activated carbon filter. Filtered water will be collected in the Irrigation water tank from where it will be taken for desired non potable application. Backwashed water from filters will return back to equalization tank.

ADVANTAGES OF TREATMENT SCHEME

This plant will produce the treated water which can be recycled back.

- This plant is based on biological principle hence no need to use of any excessive hazardous chemicals for the main degradation process.
- Due to efficient aeration system, electrical power requirement is very low.
- Due to user friendly equipments, plant maintenance is very less.
- Due to inbuilt automation, plant machinery life is high & ensures trouble free operation all process rotating electromechanical equipment is provided with standby equipment to ensure the uninterrupted operation.
- If influent treated & operated properly this effluent treatment plant will give enormous benefits such as
- It will avoid the water pollution
- It will help us to give hygienic surrounding
- After required treatment, treated water can reduce our 60-70 % fresh water requirement, which otherwise we use for toilet flushing, gardening, construction, etc. Thus we can save a lot on water expenditure as well as provide us a remedy on present water crises.
- Being a water recycling & conservation system, commercial establishment gets depreciation benefits for promoting green & eco friendly development.
- Filtered water will be collected in the Final Collection water tank from where it will be pumped to the Gardening or Toilet Flushing. Above all, we will be ensuring safe & hygienic environment to our society.

REFERENCES:

1. Carucci A., ChiaolaMajone, M Rolle E., (1999), "Treatment of tannery wastewater in a sequencing batch reactor". Journal of Water Science Tech., 40(1); 253-259.
2. Chang C.H., Hao, O.J, (1996),"Sequencing batch reactor system for nutrient removal:ORPand pH profiles". Journal of Chem tech. Biotech. 67:27-38.,
3. Keller J. Subrmaniam, K. Gosswein J., Greenfield P.F(1997), "Nutrient removal from industrial waste water using single tank sequencing batch reactors", Journal of Wat. Sci. Technology 35(6); 137-144.
4. Mahvi A H, Mesdaghinia A, Karakani F (2008), "Sequencing Batch Reactor: A promising Technology in Wastewater treatment", Iran Journal of Environ. Health Science Engineering, Vol 5, No2, pp. 79-90.
5. Medhat M Saleh, Usama F. Mahmood, "Modified Sequential Batch Reactor (MSBR) A New Process of Wastewater Treatment" Nineth International Water Technology Conference, IWTCC9 2005, Sharm El-Sheikh, Egypt. Pp.105-113.
6. Metcalf & Eddy, Inc. Revised by George Tchobanoglous, "Wastewater Engineering Treatment, Disposal and Reuse" Second Edition, Tata Mc Graw-Hill.
7. Sam Jeyanayagam, "True Confessions of the Biological Nutrients Removal Process". Florida Water Resources Journal, January 2005. pp 37-46.
8. United States Environmental Protection Agency, Office of Water, "Biological Nutrient Removal process and Costs" .Washington, DC20460 (4305T), June 2007.

International Journal of Current Advanced Research
ISSN: O: 2319-6475, ISSN: P: 2319 – 6505, Impact Factor: SJIF: 5.995
Available Online at www.journalijcar.org
Volume 6; Issue 9; September 2017; Page No. 6091-6094
DOI: http://dx.doi.org/10.24327/ijcar.2017.6094.0871

Research Article

THE IMPACT OF PESTICIDES ON THE HEALTH OF FARMERS: A STUDY IN KOLHAPUR AND SOLAPUR DISTRICT OF MAHARASHTRA (INDIA)

Ahire K. D., Magadum P. B., Chinchakar P. N. and Sasane B. S.

Department of Environment Management, Chhatrapati Shahu Institute of Business Education & Research, Kolhapur, Maharashtra, India

ARTICLE INFO

Article History:

Received 20th June, 2017
Received in revised form 13th July, 2017 Accepted 22nd August, 2017
Published online 28th September, 2017

Key words:

Agriculture, farmers, symptoms, pesticide, relative risk etc.

ABSTRACT

The present study was carried out at the Kolhapur and Solapur districts of Maharashtra, India to understand the impact of commonly used pesticides on the health of farmers. The 100 farmers were interviewed from above two districts; using self-structured questionnaire. The main objectives behind this study were to understand the use, sources of information and level of awareness among farmers regarding use of pesticides and occurrence of various health problems due to lack of proper safety measures. The study revealed that the farmers often use pesticides ranging from high to extremely hazardous categories. In present investigation, it was also observed that farmers were suffered with various signs and symptoms of diseases or physiological disorders and the relative risk. Adoption of adequate protective measures in farmers were lacking while using pesticides during daily agricultural activities which may increased the health related problems in the farmers.

INTRODUCTION

Agriculture is the back bone of the Indian economy and contributes 17.32% (2016-17) to the GDP, ensuring food security for more than 1.27 billion Indians. In the process of achieving the targeted food production, pesticides play an important role in Indian agriculture. Pesticides are agrochemicals which are one invaluable input in sustaining the agricultural production. Tulsi Bhardwaj1 and J.P. Sharma, (2013) concluded that due to green revolution the application of pesticides has been increased more than hundred times and causing tremendous loss to environment and human health. In agriculture there are high risk groups which are exposed to hazardous pesticides i.e. production workers, formulators, sprayers, mixers, loaders and agricultural farm workers. Many farmers from developing nations spray pesticides without knowing its actual requirement and its negative impacts on soil, crops and living organisms. Many farmers do not use any type of safety measures or personal protective equipments while spraying pesticides. Thus pesticides cause more harm to the health of the farmers. The harms may be headache, nausea, and skin and eye irritation and also cause major impact on the nervous system etc. The tremendous use of pesticides is carried out in all over world. In India, the is mainly due to lower level education of the population in rural areas, no awareness regarding uses of appropriate personal protective equipments during spraying and handling of pesticides and lack of awareness. According to the report of WHO (1990), there is no any segment of the population is completely protected against exposure to pesticides and the potentially serious health effects, though a disproportionate burden, is shouldered by the people of developing countries and by high risk groups in each country. Pesticide poisoning is alone responsible for death and chronic illness about 1 million people per year. (Environews Forum, 1990).

Pesticides are also responsible for contamination of soil, water and other vegetation. Pesticides are not only kills to pests but also make adverse effect on host or other organisms like birds, fish as well as beneficial insects and non target plants.

METHODOLOGY

Present study is based on primary data which was collected through self-structured questionnaire and interviews of farmers. Total 100 respondents were selected by using simple random sampling method from Kolhapur and Solapur districts.

Questionnaire contained various questions about impact of pesticides on the health of the farmers. It also tries to studies health problems of farmers. It includes questions about availability of pesticides, sources of information, awareness about use of pesticides, various safety measures taken while mixing and spraying of pesticides and various health problems caused due to spraying of pesticides.

Corresponding author:* **Ahire K. D.
Department of Environment Management, Chhatrapati Shahu Institute of Business Education & Research, Kolhapur, Maharashtra, India

RESULT AND DISCUSSION

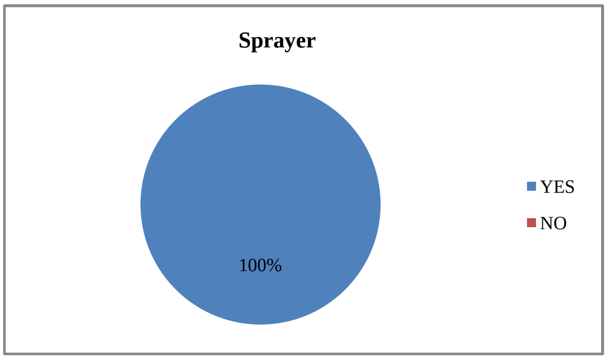


Fig 1 Sprayer

In present study, it was noted from Kolhapur and Solapur districts that, all the surveyed farmers use to spray pesticides.

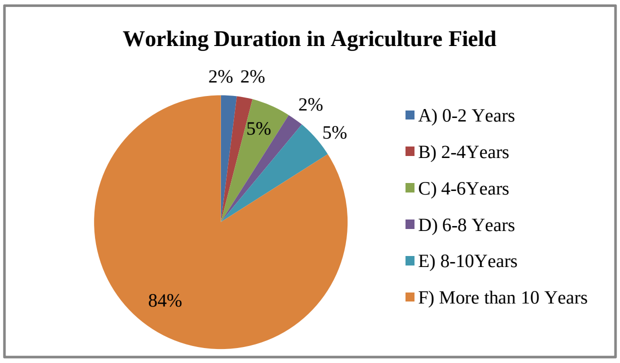


Fig 2 Working Duration in Agriculture Field

In present study, it was noted that 84% farmers are busy in agriculture sector for more than 10 years, 2% for each 0-2, 2-4 and 6-8 years and 5% for each 4-6 and 8-10 years.

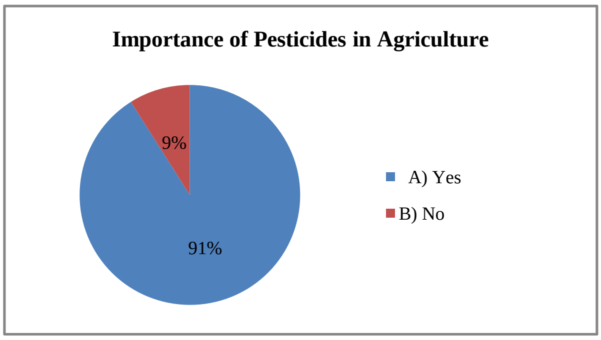


Fig 3 Importance of Pesticides in Agriculture

After analysis, it was concluded that that 91% farmers think that pesticides are important in agriculture while only 9% were thinking about pesticides are not important in agriculture.

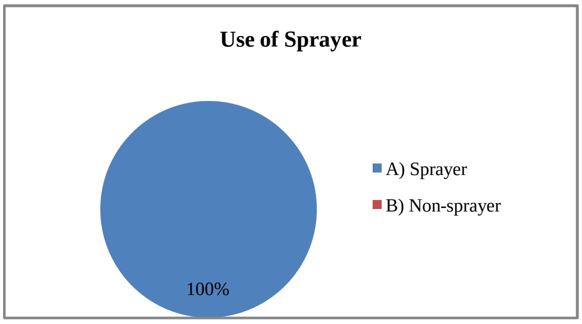


Fig.4 Use of Sprayer

In investigation it was come to know that, the all respondent farmers used sprayer for spraying of pesticides.

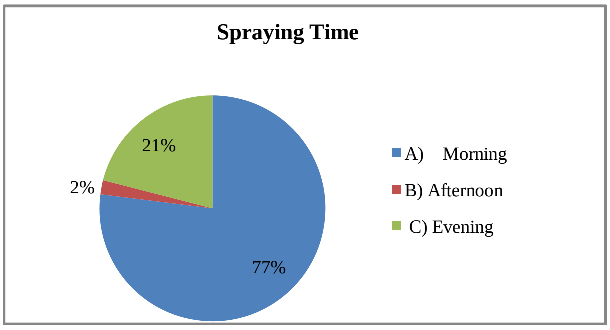


Fig 5 Spraying Time

The observation shows the spraying time of pesticides. It shows that maximum (77%) farmers spray pesticides in the morning time, while 21% and 2% spray in evening and afternoon respectively.

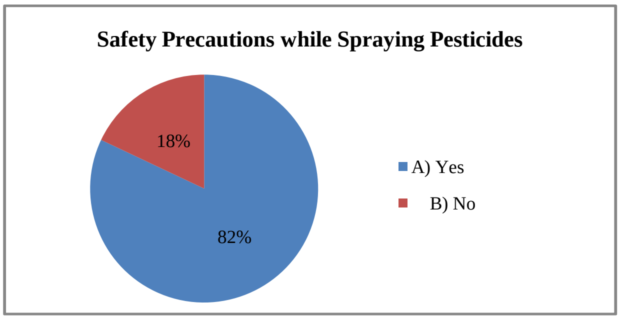


Fig 6 Precautions while Spraying Pesticides

During present investigation it was noted that only 18% respondents were taking safety precautions when they spray pesticides on the other hand maximum (82%) farmers were not taking any safety precautions while spraying of pesticides.

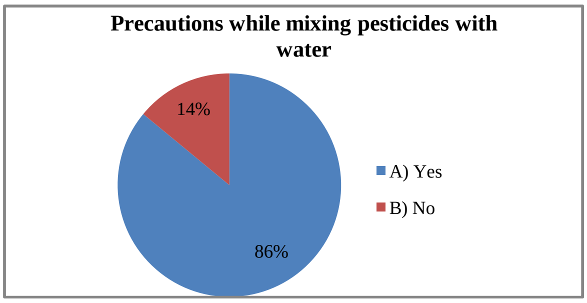


Fig 7 Precautions while mixing pesticides with water

With respect to mixing of pesticides with water it is shows that 86% farmers take precautions while 14% does not take any type of precaution.

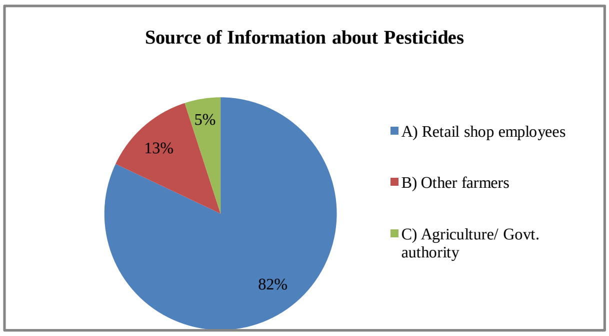


Fig 8 Source of Information about Pesticides

More farmers receive relevant information regarding pesticides from retail shop employee it was 82% followed by other farmers (13%) and reaming 5% received it from agriculture or government authority.

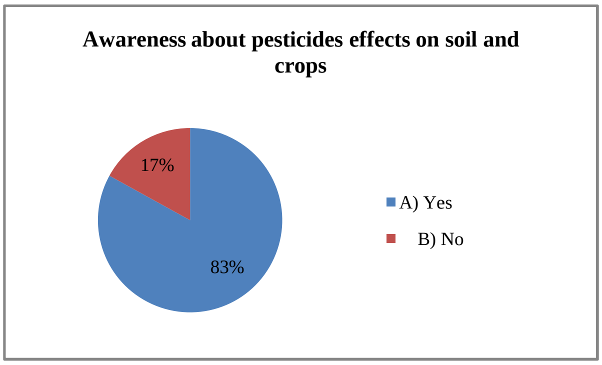


Fig 9 Awareness about pesticides effects on soil and crops

Study was done about awareness regarding harmful impacts of pesticides on soil and crops. It shows that 83% farmers are aware that the pesticides affect the quality of soil and crop and remaining 17% are not much aware about it.

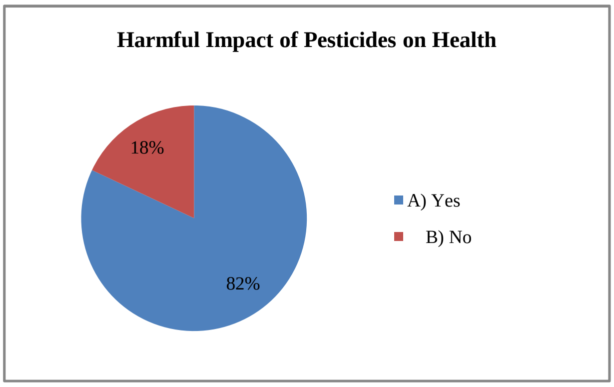


Fig 10 Harmful impact of pesticides on health

Awareness regarding harmful impacts of pesticides was noted. It was seen that 82% farmers are aware regarding to the harmful impacts of pesticide on their health as well as 18 % are not aware about it.

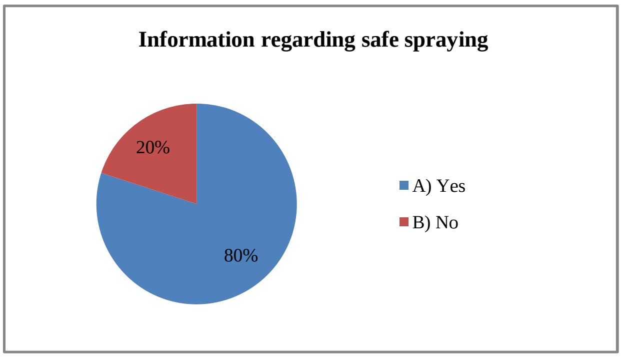


Fig 11 Information regarding safe spraying

Study was carried out to check whether farmers receive necessary information regarding safe spraying of pesticides. It was observed that 80% farmers receive all necessary information regarding safe spraying of pesticides and remaining 20% do not receive necessary information.

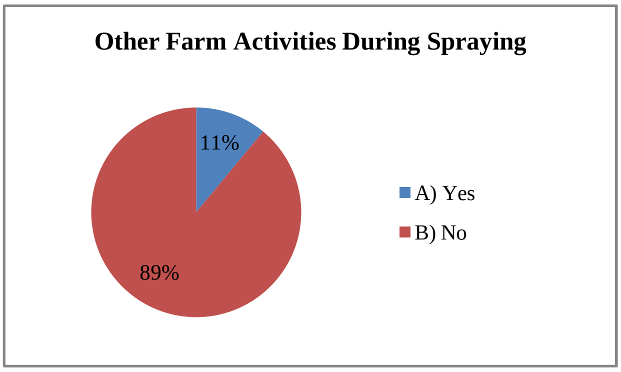


Fig 12 Other farm activities during spraying

During this study, it was also noted whether other farm activities are continued or not during spraying of pesticides. In 89% cases farm activities are not continued while spraying pesticides and in 11% cases farm activities are continued during spraying pesticides.

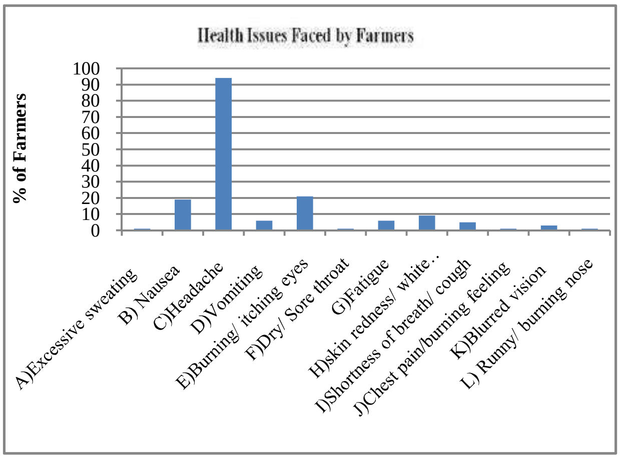


Fig 13 Health issues faced by farmers

The present study is also reflecting the health problems faced by farmers due to use of pesticides in agricultural activities. The occurrence of problems such as excessive sweating, nausea, headache, vomiting, itching eyes, sore throat, fatigue, skin redness, shortness of breath, chest pain, blurred vision and runny nose was observed. The occurrence of headache was more among farmers than any other health issues

CONCLUSIONS

After the present study it can be concluded that many farmers are not aware about harmful impacts of pesticides on their health as well as quality of soil and crops. Majority of farmers think that pesticides are very essential for good yield. It was also concluded that farmers do not receive proper and relevant information about spraying of pesticides. It is also found that many farmers do not use any safety measure and thus suffer from many health problems in day to day life. There is a requirement of creating more awareness among farmers regarding use, effectiveness and positive as well as negative impacts of pesticides on biotic as well as abiotic factors.

References

1. Bhardwaj T. and Sharma, J. P. 2013. Impact of Pesticides Application in Agricultural Industry. *An Indian Scenario*., 4:817-822.

2. Environews Forum. 1990. Killer Environment. *Environ Health Perspect*., 107:A62.
3. Oluwol, O. and Robert A. C. 2009. Health and environmental impacts of pesticide use practices: a case study of farmers in Ekiti state, Nigeria *International Journal of Agricultural Sustainability*., 7(3):153-163.
4. Peshane, P. 2015. Assessment of the health risk among Agricultural Workers exposed to Pesticides in Deoli Block Wardha District. *Innovative Journal of Medical and Health Science*.,5(3):126-128.
5. Wasim Aktar, M. D., Dwaipayan, S., Ashim, C. 2009. Impact of pesticides use in agriculture: their benefits and hazards. *Interdiscip Toxicol*., 2(1):1-12.
6. World Health Organization. 1990. Public Health Impact of Pesticides Used in Agriculture, pp. 88.

How to cite this article:

Ahire K. D *et al* (2017) 'The Impact of Pesticides on The Health of Farmers: A Study in Kolhapur And Solapur District of Maharashtra (India) ', *International Journal of Current Advanced Research*, 06(09), pp. 6091-6094.
DOI: http://dx.doi.org/10.24327/ijcar.2017.6094.0871

****

International Journal of Research
Available at https://edupediapublications.org/journals
e-ISSN: 2348-6848
p-ISSN: 2348-795X
Volume 04 Issue 13
October 2017

Study The Impact Of Traffic Noise On The Health Of Road Side Shop Owners And Traders In Kolhapur City

K. D. Ahire[1], P. G. Kalavikatte[2], B. S. Sasane[3], P. G. Sarwade[4] & S. M. Kore[5]

[1]Assistant Professor, Department of Environment Management, Chhatrapati Shahu Institute of Business Education & Research, Kolhapur, Maharashtra, India.
[2,3,4,5]M.Sc. (Environment & Safety) Students, Department of Environment Management, Chhatrapati Shahu Institute of Business Education & Research, Kolhapur, Maharashtra, India.

***Abstract**:*

Road side noise (Traffic noise) is a most notable source of environmental pollution. Now a day with increasing number of vehicles, the noise pollution also has been increased. The present article focuses on the survey of various impacts of traffic noise on road side shop owners and traders. Different five locations were studied in Kolhapur city. Assessment was done among the 100 respondents residing near traffic signals. The survey was conducted on self-prepared questionnaire. Responses from the people regarding to their health were considered for analysis. The outcome from this study shows the various negative health issues including psychological, physiological, sleep disruption, interference between communication, working efficiency, auditory impacts and the percentage of preventive measures have been taken to minimize the impact of noise. .

Keywords

Traffic noise, survey, physiological effects, psychological effects.

1. Introduction

Noise can be defined as unwanted sound or sound in the wrong place at the wrong time. Noise can also be defined as any sound that is undesirable because it interferes with speech and hearing, is intense enough to damage hearing, or it otherwise annoying. Noise pollution is a very significant component of environmental pollution, not only due to its harmful traits, but also through its presence in all the compartments of modern life. Social survey data has shown that annoyance, sleep disturbance and cardiovascular problems are considered to be the most important environmental noise effects (Ouis, 1982; Langdon, 1976). The road transports are the main source of noise in the modern society, with around 80% of a town's noise pollution being represented by the noises emitted by auto vehicles (Paris gathering, 1990).

Kiernan finds that an even relatively low level of noise affects human health adversely. Sharp and Donovan (1979) confirm that more people are exposed to noise from motor vehicles than any other single source of noise, they are also stated that more people are exposed to noise from motor vehicles than any other single source of noise. Pal and Bhattacharya (2012) done their case study in Agartala and it is pointed out that the most prevalent problems from the traffic noise include irritation, headache, tinnitus, and sleeplessness. The problem of noise pollution is less in small towns and villages. But, those residing in villages or towns along the national or state highways or close to railway tracks do bear the burnt of excessive noise (Salave 2014). Dasarathy and Thandavamoorthy (2013) concluded that the effects of excessive noise could be so severe that either there is a permanent loss of memory or a psychiatric disorder. According to (Savale 2014), The social survey should be one way of finding out what type of sound upset people most and they appear at present to be the only method of determine the effects of noise pollution.

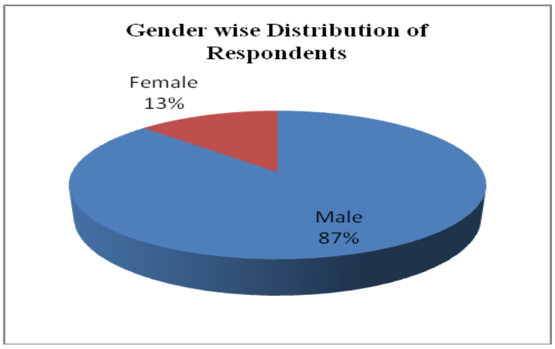
2. Methodology

Present study is based on primary data which was collected through structured questionnaire and interviews of roadside shop owners and traders. Total 100 respondents were selected from the most busy traffic points from the Kolhapur city by using simple random sampling method. Questionnaire contains various questions about overall impact of noise on roadside shop owners and traders. It also includes the study of various health problems regarding to their psychology, physiology, sleep disruption, working efficiency, interference In between speech and other expressions from respondent on roadside noise.

3. Results

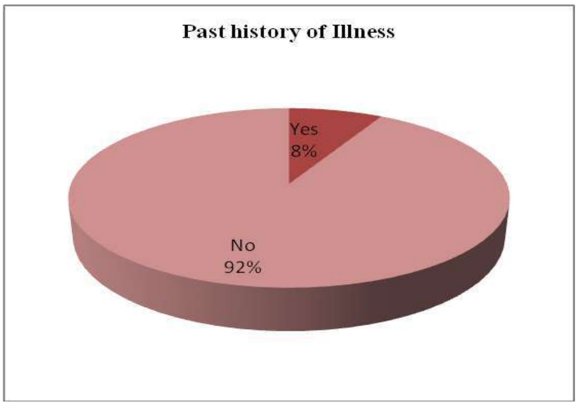
International Journal of Research
Available at https://edupediapublications.org/journals
e-ISSN: 2348-6848
p-ISSN: 2348-795X
Volume 04 Issue 13
October 2017

Total 100 respondents were studied from the different traffic areas. Out of which the male respondent were 87% and the female respondents were 13%.



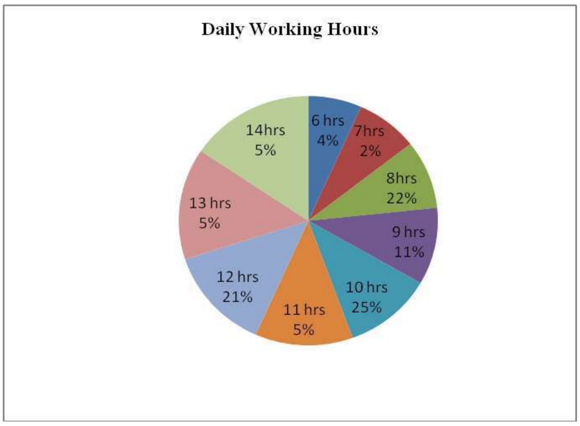
3.1. Gender wise Distribution of Respondents

It was also found that the 8% respondents were having past history of illness, on other hand 92% respondents were not found any kind of past history of illness.



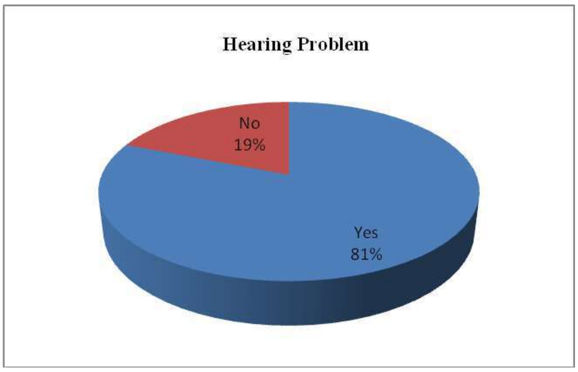
3.2. Past History of Illness

The daily working hours of respondents were taken into consideration. The range of daily working hours was found about 7 – 10 hours, the minimum working hours were noticed i.e. 7 hours where 2% respondents were working daily near traffic area. While 25?qgl]% respondents were daily working for 10 hrs.



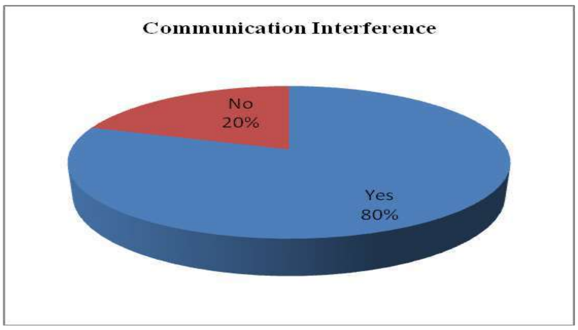
3.3. Daily Working Hours

This study shows the hearing problem occurred due to traffic noise among respondents. 81% respondents were feeling hearing problem and 19% were did not faced any difficulties in hearing.



3.4. Hearing Problems

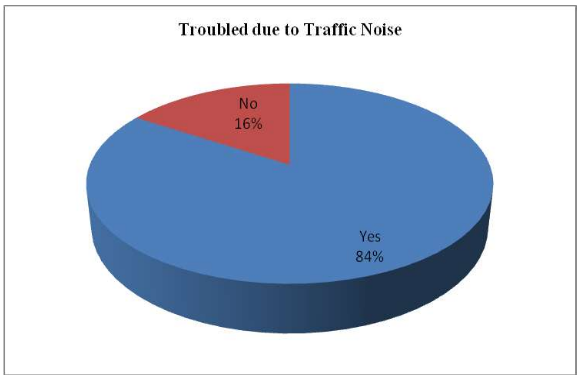
The notable impact of traffic noise was interference in communication among respondents. 80% respondents were experiencing the problem while communicating with others as well as remaining 20% were not did not experience such problem.



3.5. Communication Interference

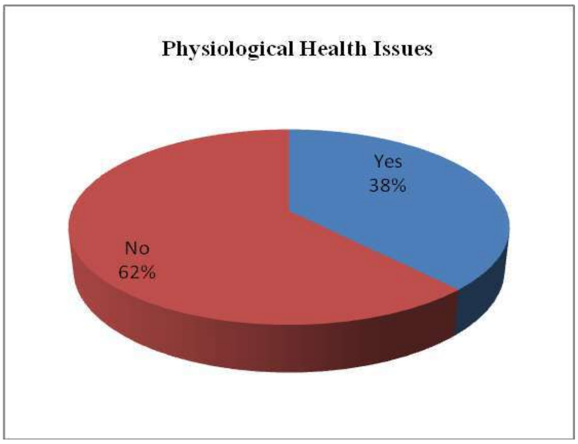
International Journal of Research
Available at https://edupediapublications.org/journals
e-ISSN: 2348-6848
p-ISSN: 2348-795X
Volume 04 Issue 13
October 2017

It was also noticed that among 100 respondents 84 respondents has been troubled by traffic noise, where only 16 were not troubled by traffic noise, so it is indicate that the large number of respondents was adversely affected by heavy traffic noise.



3.6. Troubled due to Traffic Noise

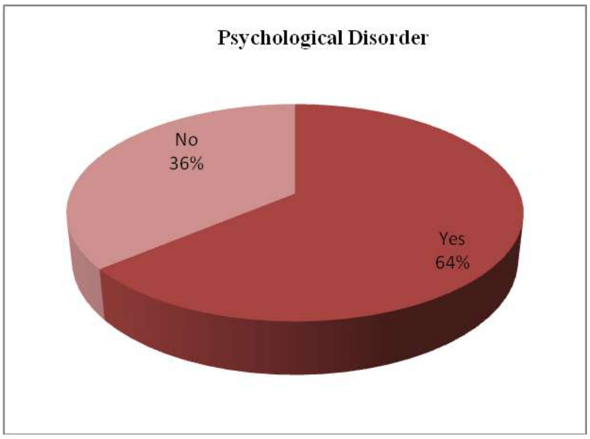
Present investigation was also focused on the physiological effects of traffic noise on the health of respondents. About 38% respondents were suffered by physiological effects due to traffic noise and while 62% were not affected by any physiological health issues due to noise pollution.



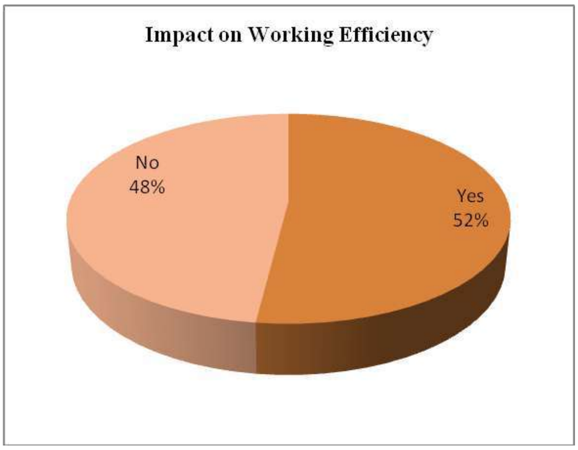
3.7. Physiological Health Issues

With respect to psychological disorder, maximum respondents were facing such problems it was 64%, whereas 36 % respondents were not affected by such disorders.

More (52%) respondents were believed on this traffic noise make adverse impact on their work efficiency.

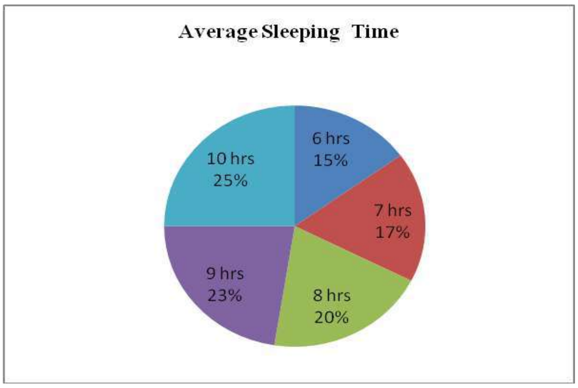


3.8. Psychological Disorder



3.9. Impact on Working Efficiency

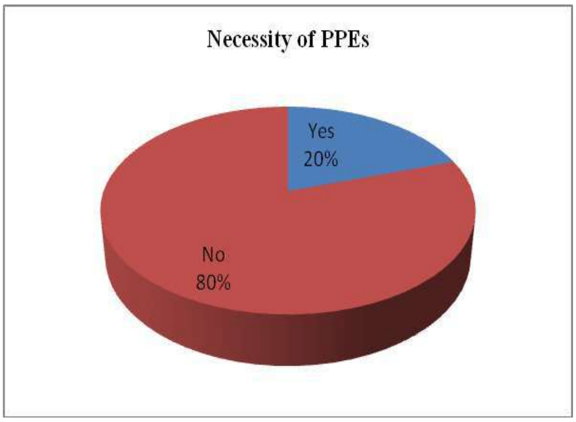
Noise created by heavy traffic has adversely affected on their average sleeping hours. The minimum average sleeping time has found up to 6 hours in 15% respondents. While in 25% respondents, the maximum average sleeping time found up to 10 hours.



3.10. Average Sleeping Time

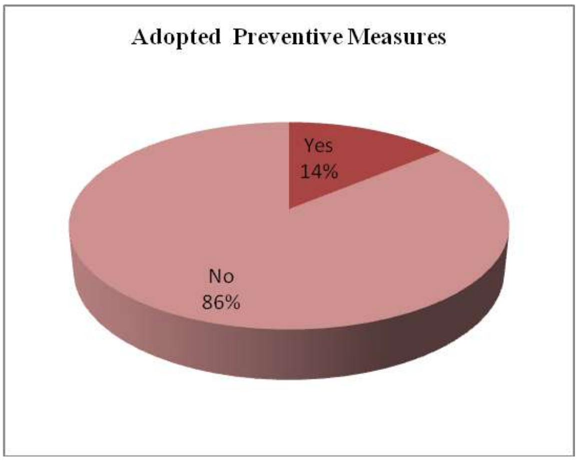
International Journal of Research
Available at https://edupediapublications.org/journals
e-ISSN: 2348-6848
p-ISSN: 2348-795X
Volume 04 Issue 13
October 2017

The traffic noise affected on the health of most of the respondents even according to maximum respondents there is no any kind of necessity to use Personal Protective Equipment (PPE) for the minimization the impact of traffic noise on their health.



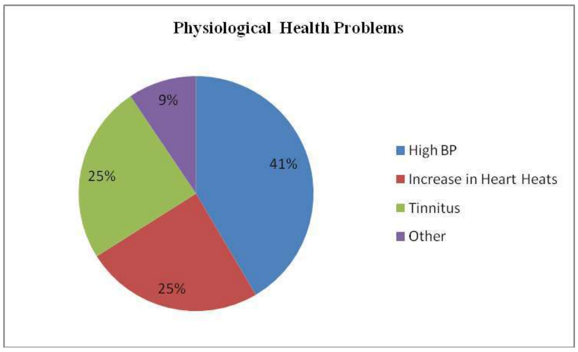
3.11. Necessity of PPEs

Same thinking was also found when the information was collected about adopted preventive measures for the minimization the impact of traffic noise on their health. About 86% respondents were not adopted any kind of preventive measures to minimize the exposure of noise. On other hand only 14% respondents were adopted preventive measures.



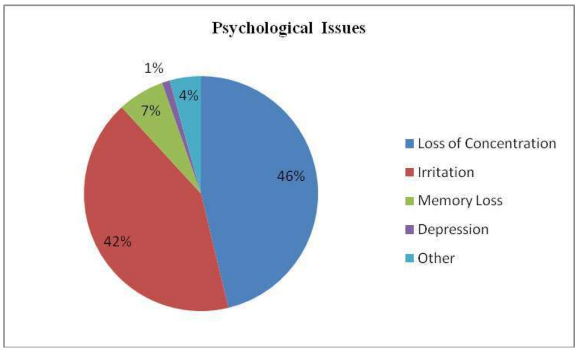
3.12. Adopted Preventive Measures

The impact of traffic noise on the physiological health of respondents was also considered in present study. Maximum respondents (41%) were suffering with high blood pressure, while remaining were also facing another problems i.e. Increase in heart beats (25%), Tinnitus (25%), other (9%).



3.13. Physiological Health Problems

While considering the psychological health issues among respondents, it was noticed that, 46% respondents had lose their concentration during work due to traffic noise, while 42& were having irritation problem as well as 7% respondents faced memory loss and reaming 1% and 4% respondents had depression and other psychological problems respectively.



3.14. Physiological Health Problems

4. Conclusions

The present study was conducted from such areas to know about various health impacts due to traffic Q9`6noise on road side respondent. As any kind of noise is an undesirable sound hence its accountability is more towards adverse impacts regarding to the human health and other issues. The present study shows the various health problems like psychological, physiological, disturbances in communication and on sleep disruption and working efficiency of respondents.

The present study includes the usage of personal protective equipment's as well as the need of PPE's from respondents to minimize the exposure of unwanted noise from traffic. People have also suggested their opinion regarding to road transportation, unwanted honking should be prevented as well as government should have to take strict action against traffic rule breakers, apart from this social awareness must be carried out to know the seriousness about the impact of noise on health.

5. References

[i] Ahire, K. D., and Bhalerao, S. M., " Assessment of Occupational Health Hazards Faced by Sanitary Workers in Kolhapur City ", *International Journal of Scientific Research*, 06, 8, 2017, pp. 246-247-121.

[ii] Dasarathy, A. K. and Thandavamoorthy T.S.., " FIE Pollution due to noise from selected places ", *IOSR J. Mechan. Civil Engineer*, 10, 3, 2013, pp. 12-16.

[iii] Ouis, D. , Annoyance from road traffic noise: a review, *Journal of Environmental Psychology*, 21, 2001, 101-120.

[iv] Savale, P. A., " Effect of Noise Pollution on Human Being : Its Prevention and Control ", *Journal of Environmental Research And Development*, 08, 4, 2014, pp. 1027-1036.

[v] Sharp, B.H., and Donavan P.R, Motor vehicle noise, In. Handbook of Noise Control (2nd ed.). Haris, C.M., New York: McGraw-Hill Book Company, Chapter 32, 1979.

International Journal of Research
Available at https://edupediapublications.org/journals
e-ISSN: 2348-6848
p-ISSN: 2348-795X
Volume 04 Issue 13
October 2017

Occupational Health Scenario In Auto-Looms Industry

K. D. Ahire[1], A. B. Kadam[2], K. S. Sutar[3], S. R. Sawant[4] & R. M. Rajput[5]
[1]Assistant Professor, Department of Environment Management, Chhatrapati Shahu Institute of Business Education & Research, Kolhapur, Maharashtra, India.
[2,3,4,5]M.Sc. (Environment & Safety) Students, Department of Environment Management, Chhatrapati Shahu Institute of Business Education & Research, Kolhapur, Maharashtra, India.

***Abstract**:*

The basic objective of present investigation is to understand the issues of occupational health problems and their causes in auto looms industries. The study revealed that the health of workers is affected by excessive noise caused by auto-looms. In present investigation it was also observed that workers were suffering from various health hazards such as hearing loss, disturbance in communication, annoyance, fatigue, insomnia, breathing problem and the relative risk. Adoption of adequate protective measures in workers was lacking while working at industry, which may increase the health related problems of workers. Based on the results some recommendations were given for the improvement of occupational health of workers in auto looms industry.

Keywords

Auto-looms, fabric, health hazards, noise, relative risk, workers etc.

1. Introduction

India is one of the largest fabric producers in the world. Auto looms is playing an important role in workers life and their economy. Weaving machine equipped with iron devices and the sound of the auto loom is the music of rural home but it has hazardous effects on the health of people. About 35 million people are engaged in this sector, hence Indian Textile Industry has very important place in the economy of India. Due to globalization the textile units are facing financial rivalry, marketing and technological problems (Shaikh Mainuddin Shoukat Ali, Borhade S. N., Dhere Vaibhav, Mrs. Shaikh Sabiha M., 2011), Occupational health is important for the working person. Industry is one of the occupation which affects health of workers. The objective of an occupational health service is not only to keep the workers physically healthy, but also mentally and psychologically stable. A single worker, working 12 hours or may be more with six to nine looms inside confined spaces, it will exposing them to loud noise as well injuries due to shuttle which moves at a high speed across the loom. Kapil Goel, Sartaj Ahmad, Pawan Parashar, Bansal Rahul, Pant Bhavna, Goel Parul, (2013), concluded that power loom workers" suffer from various health issues i.e. respiratory, muscular – disorder of skeletal system, physical injuries, mental stress and skin disorders etc. According to them it is necessary to conduct intervention seminar to prohibit workers from the tobacco chewing habit. Excessive noise is an occupational health hazard with considerable social and physiological impacts, including noise-induced hearing loss and heart related problems. The workers engaged in the processing and spinning of cotton are exposed to significant amount of cotton dust. They are also exposed to particles of soil and chemical which is used in auto-looms. Exposure to cotton dust and other particles leads to respiratory disorders among the textile workers. There is a need to have a look on the occupational health of workers so that they can remain healthy and perform the task carefully.

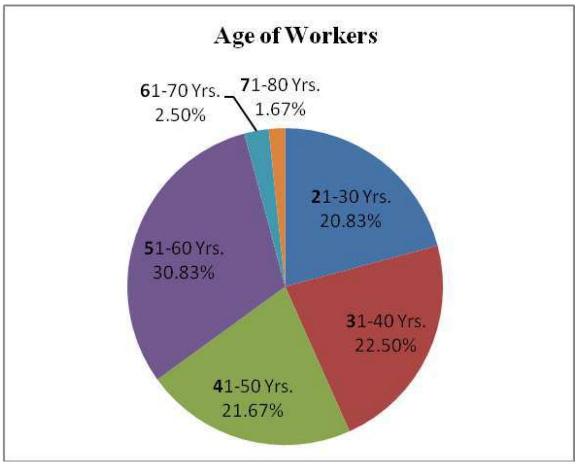
2. Methodology

The investigation of present study is based on primary data which was collected through self-prepared questionnaires. Total 120 respondents (96 male and 24 female) were selected by using simple random sampling method from various auto looms industries from Ichalkaranji city in Maharashtra. The present study tries to focus on various health issues faced by hand looms workers due to their occupation.

3. Results

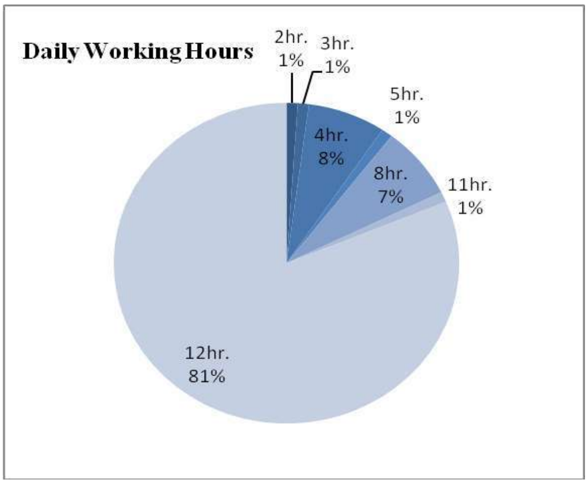
Among the total respondents, it was observed that 20.83% workers were from the age group of 21-30, 22.50% workers from 31-40, 21.67% peoples from 41-50, 30.83% workers from the age group of 51-60, while 2.50% workers from the age group of 61-70 and only 1.67% workers from the age group 71-80.

International Journal of Research
Available at https://edupediapublications.org/journals
e-ISSN: 2348-6848
p-ISSN: 2348-795X
Volume 04 Issue 13
October 2017



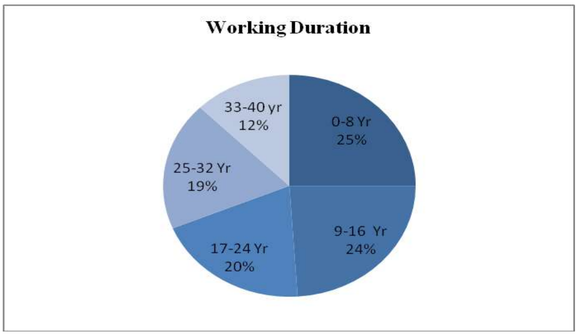
3.1. Age of Workers

By considering daily working hours of workers, maximum respondents (81%) were daily working for 12 hours, only 1% respondents were working for 1 hour which was found minimum working hour.



3.2. Daily Working Hours

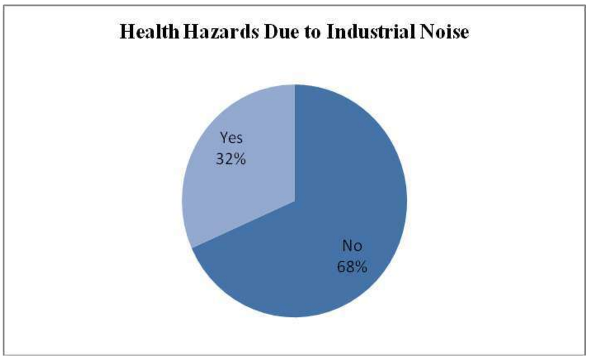
Present study is also focuses on working duration of auto looms workers. 25% workers were working from last 0 to 8 years, some 24% were engaged with this occupation from last 9 to16 years, while 20% were having working duration of 17-24 years, as well as about 19% were working from 25 to 32 years, and about 12% workers are in this profession from 33-40 years.



3.3. Daily Working Hours

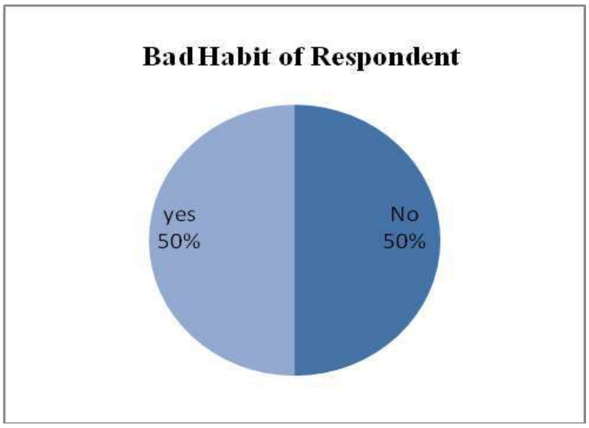
Total 68% workers feels that, noise does not make any impact on their health while reaming 32% bothered about industrial noise.

3.4. Health Hazards due to Industrial



Noise

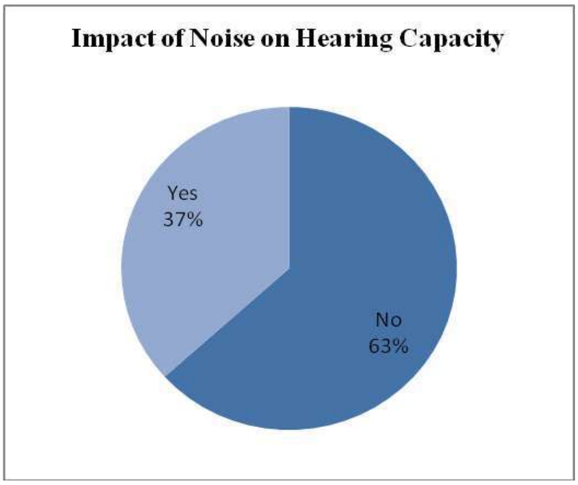
With respect to bad habit, it was found that 50% respondents were addicted to bad habits



3.5. Bad Habit of Respondent

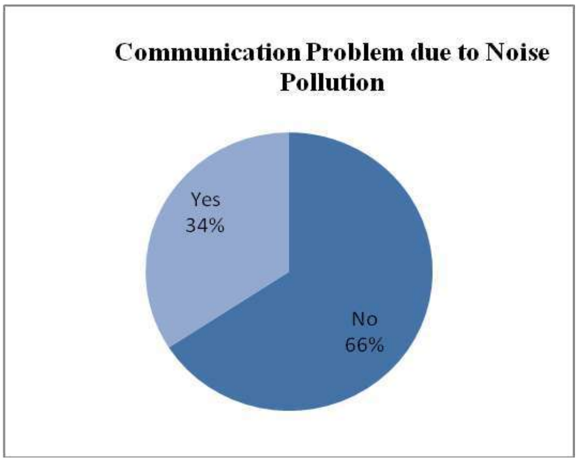
e-ISSN: 2348-6848
p-ISSN: 2348-795X
Volume 04 Issue 13
October 2017

In present study the impact of industrial noise on their health was also tried to considered, the results shows that according to maximum (63%) respondents they does not facing any problem whereas only 37% workers had hearing problem due to industrial noise.



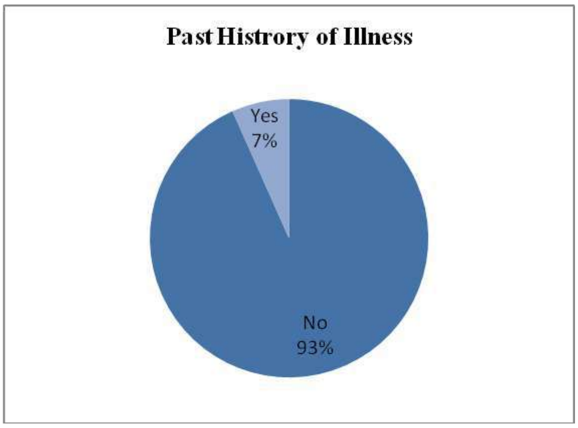
3.6. Impact of Noise on Hearing Capacity

This study also includes the problem related to their communication during work. Due to heavy noise in industry, about 34% workers were facing problem during communication while 66% workers were able to communicate in such conditions also.



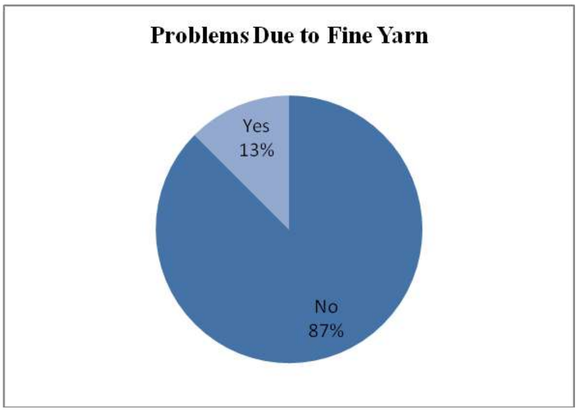
3.7. Communication Problem due to Noise Pollution

The findings from this study shows that only 7% workers suffered by diseases before joing to this occupation on the other hand maximum (93%) were not having any kind of past history of illness.



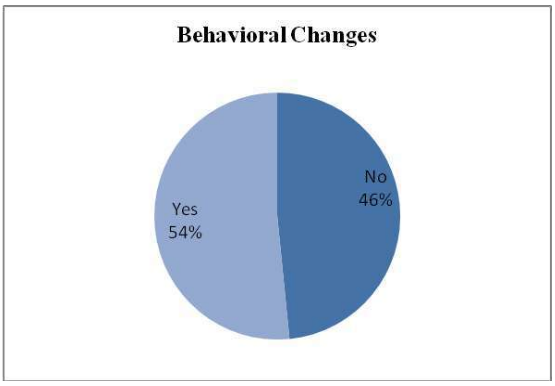
3.8. Past History of Illness

Surprisingly, during investigation it was noted that, problems in breathing due to fine yarn faced by only 13% respondents, whereas 87% workers were not suffering with such problem.



3.9. Problems due to Fine Yarn

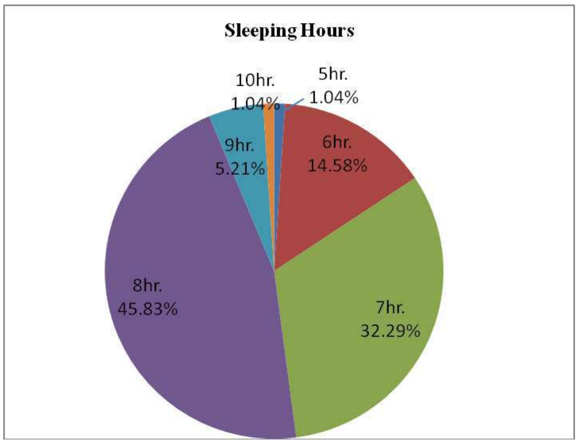
Behavioral changes are considered as major psychological impacts of noise pollution, so it was considered while collecting the information from the workers. About 54% workers have experienced some behavioral changes due to industrial noise and remaining 51% workers does not having any impact on their behavior.



e-ISSN: 2348-6848
p-ISSN: 2348-795X
Volume 04 Issue 13
October 2017

3.10. Behavioral Changes

Study regarding average sleeping hours of workers was done. It was noted that 1.04% workers were having 10 hours of maximum sleeping time whereas minimum sleeping time was noted that 5 hours which was taking 1.04% of workers. Maximum (45.83%) of respondents were having 8 hours of sleeping time.

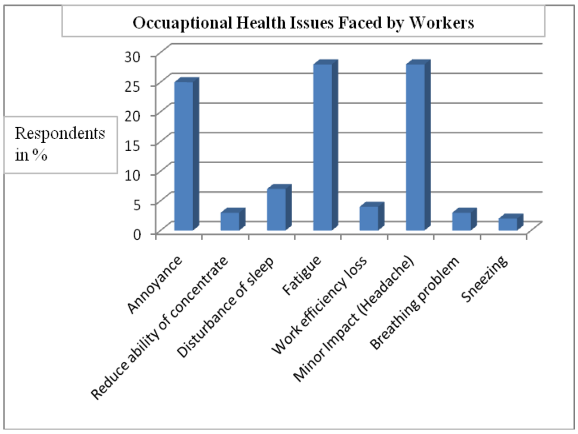


3.11. Sleeping Hours

Table 1. Occupational Health Issues Faced by Workers.

Occupational Health Issue	Respondent (%)
Annoyance	25
Reduce ability of concentrate	3
Disturbance of sleep	7
Fatigue	28
Work efficiency loss	4
Minor Impact (Headache)	28
Breathing problem	3
Sneezing	2

Present study mainly focuses on the occupational health issues faced by auto looms workers. During investigation it was come to know that workers were facing various occupational health hazards during their daily work. Headache, fatigue, annoyance are the major and common occupational issues found in workers working in auto looms industry.



3.12. Occupational Health Issues Faced by Workers

4. Conclusions

The present study was undertaken with the objectives of understanding the life of auto looms workers as well as various occupational health issues faced by them. After interpreting the results, it is concluded that workers in auto looms industry were does not very well aware about their health issues. They were struggling with various occupational health issues in their profession. Occupational health and safety awareness as well as training programmes must be taken for these workers, apart from this motivation among the workers regarding their safety is also needed. It is also found that maximum workers were working for 12 hours, so it may cause adverse affect on their health, therefore working hours should be according to the law.

5. References

[i] Ahire, K. D., and Bhalerao, S. M., " Assessment of Occupational Health Hazards Faced by Sanitary Workers in Kolhapur City ", *International Journal of Scientific Research*, 06, 8, 2017, pp. 246-247.

[ii] Ahire, K. D., Kulkarni A. R., Desai A. A., Chavan K. K., " Effects of Flour Dust on the Health of Flour Mill Workers in Kolhapur City ", *IJLRET*, 03, 5, 2017, pp. 67-71.

[iii] Babel S., and Rajvanshi R.," Occupational health hazards faced by the spice grinding workers", Asian Journal of Home Science, 8,2, 2013, pp.518-521.

[iv] Goel, K., Ahmad, S., Parashar, P., Bansal R., Pant B., Goel P., "Health Status And Treatment Seeking Behavior Among Powerloom Workers In Urban Slum Of Meerut City 36 in U.P.", Journal of Advance Researches in Biological Sciences,5,I ,2013, pp.67–71.

[v] Shaikh, M. S., Borhade S. N., Dhere V., Shaikh S., M., "The Maharashtra Co-operative Quarterly", 195,9,2011, pp.38-54.

ASSESSMENT OF OCCUPATIONAL HEALTH HAZARDS FACED BY SANITARY WORKERS IN KOLHAPUR CITY

Article *in* International Journal of Scientific Research · August 2017

K. D. Ahire
Chh. Shahu Institute of Business Education & Research

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

ASSESSMENT OF OCCUPATIONAL HEALTH HAZARDS FACED BY SANITARY WORKERS IN KOLHAPUR CITY

Management

K. D. Ahire Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research, University Road, Kolhapur – 416004, Maharashtra, India.

S. M. Bhalerao Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research, University Road, Kolhapur – 416004, Maharashtra, India.

ABSTRACT

The working conditions of sanitary workers have remained virtually unchanged for over a century in India. They exposed to certain health problems by virtue of their occupation. The present study was undertaken about occupational health related problems of sanitary workers in Kolhapur City. The present study was carried out at P. G. Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur. The objectives of this cross sectional study to assess the effect of work environment on sanitation workers using structured interview, structured questionnaires. The data collection was done by issuing feedback from sanitary workers on structured data collection form. The collected data has analyzed by using Microsoft Excel.

KEYWORDS:

occupational health, sanitary workers, hazards

INTRODUCTION

The work of sanitation workers ranges from cleaning toilets and unblocking and cleaning sewers and drains, to sweeping streets and collecting garbage. This is time – consuming and tiring physical work and it brings workers in close contact with hazardous wastes. Many of the public toilets are cleaned manually by sanitation workers, rather than through mechanized suction machines. The workers who clean public toilet blocks are usually assigned the cleaning of 40-50 toilets seats. Given that water to clean these blocks is often obtain from nearby taps .it is virtually impossible for cleaners to get enough water to clean so many seats or blocks and without use of personal protective equipment it is a risk for worker for do work. Vaidya (2003) reported that a significant rise in anti-hepatitis E virus positivity ($P < 0.05$) was recorded in sewage workers working for > 5 years. The risks face by workers in waste sectors go beyond the expected risk of infection and communicable diseases. cuts and wounds , animal bites , chemical burns and inhalation of toxic gases , falls and traffic accidents ,muscular –skeletal problems and mental trauma are all part of a c According to WSSCC (1998), Sanitation means interventions in reducing people exposure to disease by providing a clean environment in which to live with measures to break the cycle of diseases. This usually includes disposing and hygiene management of human and animal excreta, refuse and waste water control of disease vectors and provisions of washing facilities for personal and domestic hygiene. An outbreak of cases of airborne irritant contact dermatitis has been reported among incinerator workers employed in a sewage treatment facility (Nethercott 1980).

The frightening aspect about working with waste in countries where the regulation and norms for waste disposal are yet to be strictly enforced is that workers have no ideas just how dangerous the materials they are dealing with. When repeated on regular basis the exposure to even small amount of toxic material combined with poor general health can have disastrous cumulative results. Zuskin et al.(1993), Reported that the baseline ventilatory capacity was significantly decreased compared with the predicted values in sewage workers. With improper segregation of waste materials at the source and all types of garbage being disposed on the streets, these workers are exposed to dirt, infective organisms, and other hazardous materials like chemicals, animal excreta, and sharp objects. These factors subject the workers to skin, gastrointestinal, respiratory, and orthopedic problems, Scarcity of health data in various occupational workers is a cause of great concern. (Tiwari, 2008, Ferreira, 2001 & Medhi 2006). The physical stress of waste picking is heavy waking early and going to sleep late, long distance walked and sweeping and working in all types of weathers without leave etc. this physical stress is accompanied by an almost equal mental stress worries about children left behind by female workers and fear of accident /attacks of dogs and other animal bites etc. According to one survey by Bezwada Wilson of the Safai Karmachari Association, an estimated 12 lakh (1.2 million) scavengers are present in the country.

METHODOLOGY

The present study was descriptive study conducted using a researcher-constructed questionnaire and face to face interviews. The questionnaire consisted of open ended and close ended items relating to the sanitary workers knowledge about the health effects associated with occupation management approaches towards occupation and gender difference in health effects associated with work.

Sample and participants:

The sample size consisted of 50 sanitary workers. The participants of the study involved both female and male sanitary workers. However, from the total of 50 questionnaires distributed to 22 male and 28 female. Sanitary workers were asked if they had experienced health problems prior to becoming a sanitary worker. In the questionnaires form, the personal information and health problems information is collected.

Data analysis:

The following data gathered were analyzed using Microsoft excel and presented as graphs.

- Results from sanitary workers responses
- Health problems of sanitary workers

TABLE – 1
DATA COLLECTION FORM
Part: A Information of the worker:

Name of the worker	
Age	
Gender	M / F
Department	
Contact No.	
Height	
Weight	
Duration of Profession (In years)	
Education	Primary/Secondary/Higher Secondary
Family Type	
Family Size	
Marital Status	
Duration of work (hrs/day)	
Past History of Illness	
Bad Habit (if any)	

Part: B Occupational Health Related Issues:

Health Issues	Yes	No
Musculoskeletal Disorder		
Skin Problems		
Chest Pain		
Body ache		
Tiredness		

ISSN No 2277 - 8179 | IF : 4.176 | IC Value : 78.46

Headache		
Leg Pain		
Cough and Cold		
Infection		
Dermatitis		
Respiratory System Problems		
Gastric Problems		
Miscellaneous		

Part: C Information about Provided Personal Protective Equipments:

Safety Equipment	Yes	No	Used (During Work)
Mask			
Hand Gloves			
Safety Apron			
Safety Shoes			
Cap			
Miscellaneous			

RESULTS AND DISCUSSION

Sanitary workers were asked if they had experienced health problems after becoming a sanitary worker. The clear majority of respondents had experienced health problems after becoming a sanitary worker.

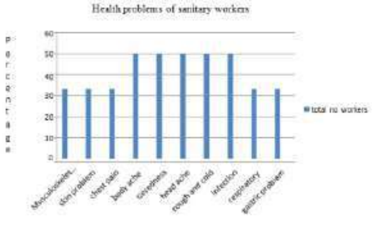


Figure 1: Health problems of sanitary workers

Data were gained to identify both male and female health problems faced due to sanitary occupation. body ache, tiredness, head ache health problems are more is identified. In figure 22 male and 28 female were respondents. 50 % of male and female are suffered from body ache, tiredness, head ache due to their occupation.

Health Problems of Sanitary workers by gender: Male and Female

TABLE – 2
PROBLEMS OF SANITARY WORKERS BY GENDER

Problem	Male (%)	Female (%)
Musculoskeletal Disorder	13	20
Skin Problems	12	19
Chest Pain	14	20
Body ache	24	28
Tiredness	24	30
Headache	25	29
Leg Pain	23	27
Cough and Cold	25	27
Infection	13	20
Respiratory System Problems	14	17
Gastric Problems	12	19

Data were gained to identify Male and Female differences in Health problems suffered through sanitary occupation. Musculoskeletal Disorder, Skin problems, Chest pain, Body ache, Tiredness, Headache, Leg pain, Cough and Cold, Infection, Respiratory disorder, Gastric Problems were identified as health issues associated with being a sanitary worker. Table 2 showed the response from male and female respectively.

Use of Personnel Protective Equipments

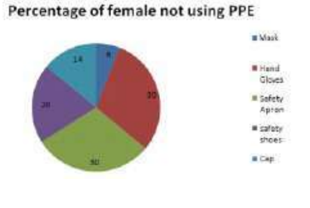


Figure 2: Female not using PPEs

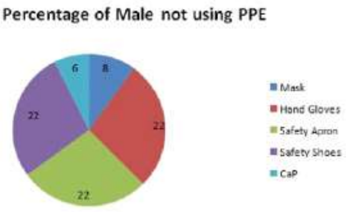


Figure 3: Male not using PPEs

For every sanitary worker provided different types of personal protective equipments for their safety from disease. But it has been observed that workers avoid to use PPEs provided to them. The ignorance of using personal protective equipments is observed in male as well as in female sanitary workers. The ignorance of using PPEs like safety apron, hand gloves is more in female than male. 30 % female avoid using shoes and hand gloves and 20% of safety shoes while 22% male avoids using safety shoes, safety apron, hand gloves etc.

CONCLUSION

The present study has shown that the impact of occupation on workers in terms of their health. Musculoskeletal disorder, skin problems, chest pain, body ache, tiredness were common in male and female sanitary workers. It is also concluded that sanitary workers are closely associated with various occupational health problems. There was lack of awareness observed in sanitary workers regarding the use of personal protective equipment. It should be necessary to make the awareness about personal protective equipments among the workers to avoid or to minimize the health problems.

REFERENCES:

[1] Ambekar AN, Bharadwaj RS, Joshi SA, Kagal AS, Bal AM. (2004). Sero surveillance of leptospirosis among sewer workers in Pune. Indian J Public Health. 48:27–9.
[2] Arvanitidou M, Constantinidis TC, Doutsos J, Mandraveli K, Katsouyannopoulos V. (1998). Occupational hepatitis B virus infection in sewage workers. Med Lav. 89:437–44.
[3] Ferreira JA, dos Anjos LA. (2001) Public and occupational health aspects related to solid waste management. Cad Saude Publica. 17:689–696.
[4] Friis L, Engstrand L, Edling C. (1996) Prevalence of Helicobacter pylori infection among sewage workers. Scand J Work Environ Health. 22:364–68.
[5] Medhi GK, Hazarika NC, Shah B, Mahanta J. (2006) Study of health problems and nutritional status of tea garden population of Assam. Indian J Med Sci. 60:496–505.
[6] Nethercott JR. Airborne irritant contact dermatitis due to sewage sludge. (1981). J Occup Med. 23:771–774
[7] Nethercott JR, Holness DL. (1988). Health status of a group of sewage treatment workers in Toronto, Canada. Am Ind Hyg Assoc J.;49:346–350.
[8] Thorn J, Beijer L, Rylander R. (2002). Work related symptoms among sewage workers: A nationwide survey in Sweden. Occup Environ Med. 59:562–566.
[9] Tiwari RR. (2008) Occupational health hazards in sewage and sanitary workers. Indian J Occup Environ Med. 21:112–115.
[10] Zuskin E, Mustajbegovic J, Schachter EN. (1993). Respiratory function in sewage workers. Am J Ind Med. 23:751–761.

STUDY ON UNNECESSARY HONKING DURING RED TRAFFIC SIGNALS IN URBAN AREA WITH SPECIAL REFERENCE TO KOLHAPUR CITY

[1]K. D. Ahire, [2]K. R. Huddar, [3]J. V. Todkar, [4]A. A. Bhosale, [5]S. G. Ranadive
[1]Assistant Professor, [2,3,4,5]M.Sc. (Environment and Safety) Students
[1]Department of Environment Management,
[1]Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, India

Abstract*— Noise pollution due to honking in the urban area is considered as one of the major problems in any city. Honking noise adversely effects on the health of urban people. The main objective behind this research is to monitor the unwanted horns during red signal. Present investigation based on primary data which was collected at different traffic signals. Twelve different traffic signals in Kolhapur city randomly selected to carry out this work. The counting was done at hour's basis at each and every selected traffic signal. The results of present investigation shows that unwanted honking during red signal at every traffic signal were noticeable, and this may be responsible for increasing traffic noise pollution in urban areas. Lack of awareness among the people regarding noise pollution, inappropriate legislative control about noise pollution, psychology and attitude of people may be major causes of ignorance about honking during red traffic signal.

***Index Terms*— Traffic signal, unnecessary honking, noise pollution.**

I. INTRODUCTION

Noise can be defined as an unwanted sound. Increasing level of noise is conceded as the noise pollution. Vehicular noise is main source of noise pollution. The rapid growth of vehicles in cities is lighting in noise pollution & also air pollution. It affects on living beings. Due to continue honking it affects on human health. It includes psychological problems, irritation, heart problems, physical, headache, blood pressure. It also leads to decrees in work efficiency of human being. According to Deepak Parasher, Professor, Audiology at University College in London, noise pollution causes more deaths than heart diseases around the world. Vehicular traffic, railways and air traffic are considered as major source of noise pollution in urban areas.. According to data from India's Central Pollution Control Board (CPBC) and independent reports, traffic sound averages 100 db from the street, which is approximately like the sound of a leaf blower from about three feet away. The road transports are the main source of noise in the modern society, with around 80% of a town's noise pollution being represented by the noises emitted by auto vehicles (Paris gathering, 1990).

Honking is a common occurrence in India, irrespective of road types and condition, traffic etc. Driving attitude which includes impatience, over accelerating, sudden braking, abiding traffic rules etc. may also aggravate honking. The main objective of present study is to assess the unnecessary honking during red signals in various traffic signals in Kolhapur city in India.

II. METHODOLOGY

Total twelve traffic signals were selected in Kolhapur city for this study purpose. Unwanted honks were counted during red signal for two hours at every signal. Collected data were analyzed by using Microsoft excel.

Table 1 Name of Signals

Signal No.	Name of Signal
1	Mouli Chowk
2	Bus Stand
3	CSIBER Chowk
4	Shivaji Chowk
5	Shree Ganesh Mandir
6	Laxmipuri Chowk
7	Uma Talkies Chowk
8	Hockey Stadium
9	Sambhaji Naagar
10	Janata Bazar
11	Talwar Chowk
12	Tarabai Chowk

.

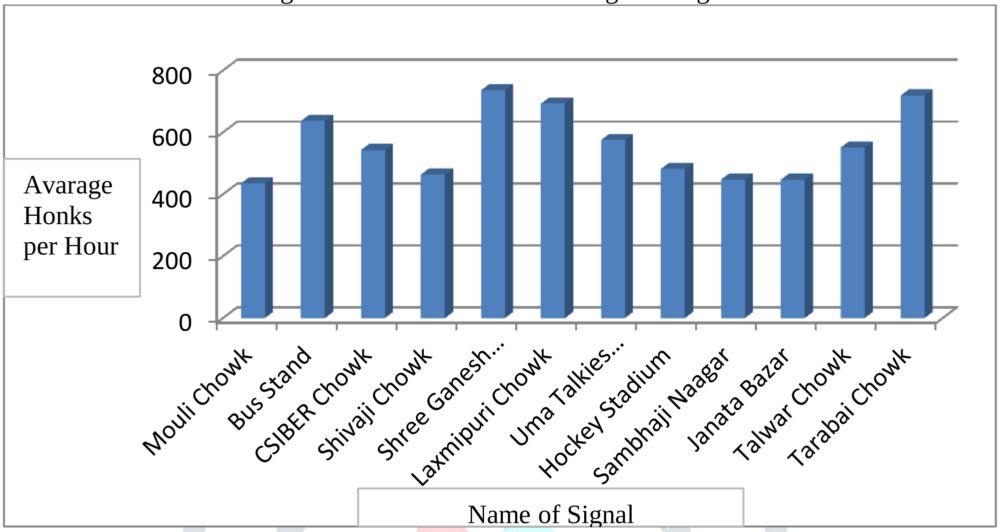
III. RESULTS

Table 2 Unwanted Honks During Red Signal

Number and Name of Signal	Green Signal Time (in Sec.)	Red Signal Time (in Sec.)	Number of Unwanted Honks for 2 hours	Average Honks per Hour
1) Mouli Chowk	15	90	870	435

2) Bus Stand	25	85	1274	637
3) CSIBER Chowk	15	80	1087	543
4) Shivaji Chowk	25	80	929	464
5) Shree Ganesh Mandir	25	100	1473	736
6) Laxmipuri Chowk	30	85	1386	693
7) Uma Talkies Chowk	35	85	1150	575
8) Hockey Stadium	25	75	965	482
9) Sambhaji Naagar	25	85	894	447
10) Janata Bazar	30	75	894	447
11) Talwar Chowk	30	90	1102	551
12) Tarabai Chowk	25	85	1439	719

Figure 1 Unwanted Honks During Red Signal



In India due to the heterogeneity in traffic conditions including mixed vehicle types, congestion, road conditions, frequent honking and lack of traffic sense, the honking is considered as one of the major source of noise pollution in urban area. In this study, the unnecessary honking even during red signal was commonly observed at all twelve traffic signals. Maximum average unwanted honks per hour were counted as 736 at Shree Ganesh Mandir traffic signal while minimum were 435 per hour at Mauli Chowk traffic signal.

IV. CONCLUSIONS

The present study was conducted for to make assessment of unnecessary honking during red signal at traffic signal. Actually during red signal there is no any kind of need for honking. Honking during red signal only creates noise pollution. But unfortunately maximum citizens are ignoring this and creating noise pollution with full confidence and contributing in noise pollution In present study current data represented from a single city of India, by considering this we can imaging the overall situation in whole country.

There is need of social awareness among the people regarding seriousness of noise pollution. The psychology of people should be changed and seriousness about noise pollution should be increased. Apart from this strict legislative control and its proper implementation is needed.

REFERENCES

[1] Doshi, P., Halani, P., Jasoliya, V., Jain, M., Sawant, S. Honking with Reduced Effect on Noise Pollution. International Journal of Advanced Research in Computer and Communication Engineering,4 (10), 2015. pp. 357-359.)

[2] Ouis, D., Annoyance from road traffic noise: a review. Journal of Environmental Psychology, 21. 2001. pp. 101-120.

[3] Savale P. A. Effect of Noise Pollution on Human Being: Its Prevention and Control. Journal of Environmental Research and Development, 8 (4). 2014. pp. 1027-1036.

[4] Vijay, R., Sharma, A., Chakrabarti, T., and Gupta, R. Assessment of honking impact on traffic noise in urban traffic environment of Nagpur, India. Journal of Environmental Health Science & Engineering, 13 (10). 2015. pp. 1-9.

International Journal of Latest Research in Engineering and Technology (IJLRET)
ISSN: 2454-5031
www.ijlret.com || Volume 03 - Issue 05 || May 2017 || PP. 67-71

Effects of Flour Dust on the Health of Flour Mill Workers in Kolhapur City

[1]K. D. Ahire*, [2]A. R. Kulkarni, [3]A. A. Desai, [4]K. K. Chavan
[1,2,3,4] Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur – 416004, Maharashtra, India

Abstract: The present work was undertaken the study on the health problems faced by flour mill workers in Kolhapur city with the aim of workplace environment affect on the health of flour mill workers. During study the unhygienic conditions were observed in the workplace environment of flour mills as fine organic flour dust gets airborne in the indoor environment of the flour mills that may cause serious health problems to the flour mill workers. Data has been collected by a structured interviewer and administered questionnaire. The questionnaire contains questions on respondents demographic attributes, reported respiratory symptoms, smoking status of the subjects and occupational history in relation to exposure. The work histories of the study subjects has been assessed through questions on current job, daily working time, job description, working conditions, and protective measures used etc. Collected data were analyzed with the help of Microsoft Excel.

Keywords: Flour Dust, Flour mill workers, Health, Unhygienic, Workplace Environment.

I. INTRODUCTION

The flour mill workers were facing the problems related to grinding; these were coughing and sneezing, eye irritation, breathlessness due to presence of flour dust in the work environment, Flour as a complex organic dust consisting of wheat, rye, millet, barley, oats or corn cereal, or a combination of these, which have been processed or ground by milling. Flour dust is a hazardous substance; it is a respiratory sensitizer and is known to cause allergic rhinitis and occupational asthma. It is also an irritant and may give rise to short term respiratory, nasal and eye symptoms.Sudha Babel and Rupali Rajvanshi (2013) observed unhygienic conditions in the workplace environment of flour mills as fine organic flour dust [1]. Inhalation of flour dust can produce allergic reaction and chronic respiratory disorders, including sensitization and asthma.Smith and Lumley, 1996, concluded that flour dust is a hazardous substance with respiratory sensitizing with pre-existing disease and also causes chronic bronchitis [2]. Due to all these reasons& the present investigation was planned with the objective to study the general profile of the respondents to find out the problems faced by the flour mill workers and use of personnel protective devices by the flour mill workers. In flour mills, dust generated are released into the air and later inhaled during industrial process, such as cleaning, crumbling, packing, and shipping. The level of dust exposure is highest in the mixing and packing sites of the flour mills. This study is therefore aimed at assessing the effects of flour dust on respiratory symptoms and lung function of flour mill workers in Kolhapur city.

II. METHODOLOGY

The present study is conducted in urban area of Kolhapur city. 45 flour mills are purposively selected for the study. These flour mill owners are working at flour mill from several years. Questionnaires are used to generate information on self-reported problems. Critical examination of work place is also done to know about the work environment. Data were analyzed using frequency and percentage.

Table 1: Data Collection Questionnaire

Part: A

Name of the worker				
Age		Contact No:		
Height(in cm)				
Weight(in kg)				
Duration of employment(In year)				
Education	Up to primary	Up to Middle	Up to Metric	Higher secondary

Family	Nuclear	Joint
Family Size	Small(up to 4members)	Medium(up to 5-8)
Marital status		
Family Occupation	Flour Mill	Other
Duration (hrs\day)	8-10	6-8
Past history of illness	Yes	No
Bad habits		

Part: B

Problems encountered	Activity		
	Cleaning	Grinding	Packing
Skin allergy			
Eye irritation and itching			
Back Ache			
Shoulder Ache			
Breathlessness			
Allergic Bronchitis			
Nausea			
Headache			
Sweating			
Cut in hand			
Coughing and sneezing			

III. RESULTS AND DISCUSSION

Flour dust contain particles from numerous cereal grains (wheat, barley, rye, corn) and may contain a large number of contaminants including silica, fungi, and their metabolites, bacterial endotoxins, mammalian debris and various chemical additives such as pesticides and herbicides. Workers exposed to flour dust during milling transfer operations, mixing process may develop respiratory diseases .The following table gives the information about general profile of the respondents and the problem encountered by the flour mill workers.

Table 2: General Profile of the Respondents:

Aspect	**Categories**	**Frequencies**
Age	20-40	23 (51.12%)
	41-60	12 (26.67%)
	61-80	10 (22.23%)
Duration of employment	10-20 years <20 years	32 (71.12%) 13 (28.89%)
Education	Primary	3 (6.67%)
	Middle	13 (28.89%)

	Up to metric	24 (53.34%)
	Higher secondary	3 (6.67%)
Family	Nuclear	17 (37.77%)
	Joint	28 (62.23%)
Marital status	Married	43 (95.56%)
	Unmarried	2 (4.45%)
Family occupation	Flour mill	41(91.12%)
	Other	4 (8.89%)
Duration of work	8-10 hr	20 (44.45%)
	6-8 hr	25 (55.55%)
Past history	Yes	9 (20%)
	No	36 (80%)
Bad habits	Yes	11 (24.45)%
	No	34 (75.56%)

The data in the table showed that 51.12 per cent of respondents were in the age group of 20-40 while 26.67 per cent were between the age group of 41-60 years and remaining 22.23% of the respondents belong to 61-80 years age group. 62.23 per cent respondents belonged to joint family and remaining were from nuclear family. Further, 60 per cent of respondents had medium family size, 40 per cent of respondents had small family and none of the respondents had large family. The data in the table bring to light that 53.34 per cent of respondents were metric pass and only 6.62 per cent had primary education, remaining up to middle and higher secondary education. Regarding the marital status of the respondents, it can be reviewed from the table that vast majority of the respondents (95.56%) were married, whereas 4.45 per cent is unmarried. The occupational profile of the respondents reveals that good per cent of the respondents (91.12%) had flour mill as their family occupation as well as 8.89 per cent associated with agriculture sector and service along with flour mill. Good number of the workers (71.12%) had work experience of more than ten years. 55 per cent were operating flour mill for 6-8 hour while 44 percent for 8-10 hours. However, only 24.56 per cent were found in category under habits of smoking, drinking and tobacco chewing.

Table 3: Regular activities carried out in flour mills

Sr. No	**Type of activity**	**Frequency**	**Percentage**
1	Cleaning	27	60
2	Grinding	45	100
3	Packing	45	100
4	Loading	45	100

Table above clearly shows that cleaning was the activity carried out by only 60 per cent of the unit, while all the other activities were carried out by the entire unit.

Table 4: Problems encountered by flour mill workers

Problems encountered	**Activities**		
	Cleaning F (%)	**Grinding F (%)**	**Packing F (%)**
Skin allergy	8 (17.78)	5 (11.12)	4 (8.89)
Eye irritation and itching	20 (44.44)	4 (8.89)	8 (17.78)
Back ache	6 (13)	7 (15.56)	12 (26.67)
Shoulder ache	6 (13)	14 (31.12)	11 (24.45)
Breathlessness	19 (42.23)	4 (8.89)	2 (4.45)
Allergic Bronchitis	7 (15.56)	3 (6.67)	1 (2.23)
Nausea	2 (4.45)	7 (15.56)	2 (4.45)
Headache	4 (8.89)	12 (26.67)	2 (4.45)
Sweating	8(17.78)	7 (15.56)	0
Cut in hand	3 (6.67)	8 (17.78)	3 (6.67)
Coughing and Sneezing	7 (15.56)	5 (11.12)	1 (2.23)

In 2013 Sudha Babel and Rupali Rajvanshi were observed unhygienic conditions in the workplace environment of flour mills as fine organic flour dust, the workers working in flour milling are exposed to many hazards, and the major hazards were related to grinding activity which may be due to exposure to flour dust [1]. Grain cleaning activity was carried out by only 60 per cent of the respondents. Problems encountered while grain cleaning were mainly related to eye irritation and itching, breathing and it ranged from 42-44 per cent. The table clearly shows that 83.33 per cent respondents suffered from sneezing and cough which lead to acute effects related to the respiratory problems. Due to excessive noise 26.67% workers faced problem of headache. About 8.89 per cent respondents suffered from eye irritation or eye itching it may be due to flour dust in the environment. 15.56 per cent respondents suffered from allergic Bronchitis. According to Ajeel and Al-Yasin, 2007, Flour dust is a hazardous substance; it is a respiratory sensitizer and is known to cause allergic rhinitis and occupational asthma, it is also an irritant and may give rise to short term respiratory, nasal and eye symptoms [3]. In present study 15.56 per cent respondents suffered from Nausea during work. 15.56 per cent respondents had back ache due to bending at the time of packing of flour. It was due to improper posture adopted during the activity. About 42 per cent of the flour mill workers were having shortness of breath problems, while 34 per cent of workers were having frequent coughing, and 19% workers were having respiratory tract irritation. Problems faced while loading and unloading were related to transferring raw material (grains) to the process area. The hazard of suffocation in the grain area while emptying or shifting the grains was observed. All the bags and sacks were transferred by the hand to the final process area. But at the time of loading, the workers were carrying one bags / container of 15- 20 kg each at a time, on their shoulders or if the load is more than 20 kg than workers used to carry the load on their back which was the main reason for shoulder and backache. It was observed that working environment was quite unsafe and unhealthy for workers and also found occurrence of various health problems were due to work pressure, long working hours, and insufficient cleaning at the work place.

Use of Personnel Protective Equipments:

Personal Protective Equipment (PPE) helps to protect the workers health from the unsafe conditions in the workplace environment. During present study it was observed that PPEs were not available as well as was not used by any flour mill worker while doing their work. The workers in the work area were not wearing any type of PPEs. Even during high noise level not a single worker was using ear muffs. According to various studies even after proper cleaning operations in flour mills, the flour milling may not be able to reduce the flour dust below hazardous level. Therefore for flour mill workers when they are doing their work in the work area, the face masks are highly recommended.

IV. CONCLUSION

The present study was undertaken with the view of understanding the effects of flour dust on the health of flour mill workers in Kolhapur city. From above study it can be concluded that flour mill workers were facing various health related problems in their occupation due to presence of flour dust in the work. None of respondents were using personnel protective devices to protect themselves. It is necessary to make a awareness among flour mill workers regarding their health issues and benefits as well as the use of Personnel Protective Equipments to protect themselves.

REFERENCES

[1] Sudha Babel and Rupali Rajvanshi. Occupational health hazards faced by the spice grinding workers. Asian Journal of Home Science. 8(2), 2013, 518-521.

[2] T. A. Smith and K. P. S. Lumley. Work-related asthma in a population exposed to grain, flour, and other ingredient dusts. Occupational Medicines . 46, 1996, 37-40

[3] N. A. H. Ajeel, and A. K. Al-Yassen. Work related allergic disorders among flour mill Workers. The Medical Journal of Basrah University (MJBU). 25(1). 2007, 29-32.

[4] E. A. Karpinski, Exposure to inhalable flour dust in Canadian flour mills. Appl Occup.Environ.Hyg;. 18, 2003, 1022-33.

[5] H. Kakooei and H. Marioryad.Exposure to Inhalable Flour Dust and Respiratory Symptoms of Workers in a Flour Mill in Iran. Iranian Journal of Environmental Health Science & Engineering. 2 (1), 2005, 50-55.

[6] J. A. Dosman , B. L. Graham, D. J. Cotton.Chronic bronchitis and exposure to cereal grain dust. Am Rev Resp Disease. 120, 1979, 477-80

[7] S. P. Zodpy, R. R. Tiwari. Peak expiratory flow rate in flour mill workers. Indian J Physiol. Pharacolo.42 (4), 1988, 521-56

ASSESSMENT THE CHANGES IN WATER QUALITY OF RIVER GODAVARI DURING NASHIK KUMBH MELA 2015

K. D. Ahire

Assistant Professor, Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research, University Road, Kolhapur – 416004, Maharashtra, India

A. R. Kulkarni

Professor and Head, Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research, University Road, Kolhapur – 416004, Maharashtra, India

A. B. Patil

M.Sc. (Environment and Safety) Student, Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research, University Road, Kolhapur – 416004, Maharashtra, India

S. S. Desai

M.Sc. (Environment and Safety) Student, Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research, University Road, Kolhapur – 416004, Maharashtra, India

A. T. Jadhav

M.Sc. (Environment and Safety) Student, Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research, University Road, Kolhapur – 416004, Maharashtra, India

Abstract: The present study is related with the study of water quality of Godavari River by the various activities held during Kumbh Mela at Nasik, India. This study provides an idea about the water quality of the Godavari River has slightly polluted by the various activities held during Kumbh Mela. The water sample collection done by Grab sampling method at various durations like before starting, during and after Kumbh Mela schedule, the locations of sample collection are Kushawart Kund (Trimbakeshwar, Nashik), Ram Kund (Nashik). The study highlights the various physical and chemical water parameters which were analyzed in laboratory by various methods at Post Graduate Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research (CSIBER), Kolhapur. The result of present study shows the Godavari River water was slightly polluted during Kumbh Mela activities at Nashik.

Keywords: Kumbh Mela, Godavari River, Assessment, Water Quality.

Introduction: The River Godavari is the main source of water supply for Nashik city. Besides this it is used for industrial and domestic waste disposal. Beyond urban area, agricultural activities are carried out at a very large scale on both the banks of river Godavari. The water quality of river is degrading due continuous addition of untreated sewage. This sewage is causing serious damage to the aquatic life present in the water [6]. The pesticides and chemical fertilizers used on these agricultural fields are usually washed away into the river. These activities are responsible for deterioration of water quality of the river. The the quality of the Godavari River is contaminated; the domestic wastewater of the city was a major factor that is responsible for the contamination of the Godavari River [3]. It has got an overall impact on physical and chemical parameters of the water. The survival of aquatic life is in danger due to the chemicals discharged into the river. Toxins within water are harmful to aquatic ecosystem. In most of cases sewage is partly or fully treated or untreated which is directly discharged into the streams and rivers. The use of partially treated wastewater and water supplies, contaminated with sewage for irrigation has been implicated as one of the highest sources of pathogenic micro-organisms, in addition to heavy metals contaminating vegetables and other agricultural settlements may pose serious health hazards [2,5,9,11,12]. The growing problem of degradation and human activities on river ecosystem has made it important to monitor water quality of rivers to evaluate their state of pollution. Being a holy river most of the religious activities are performed on the bank of river Godavari and that too at Ram Kund. People from all the parts of country do come to Ram Kund for various religious purposes and most of them take a holy dip in Ram Kund. Since it is a part of river Godavari and most of the people take bath in Ram Kund the water quality at this location is analyzed.

Study Area: Ram Kund, 35 kms from the origin of river Godavari, is situated in Nashik city of Maharashtra State. It is a place for holy dip. Daily thousands of people take a dip in Ram Kund. During Kumbha Parva Lakhs of people take holy dip in Ram Kund. The belief is that God Rama use to take a bath in Ram Kund and the river takes a turn in ninety degree at this place. The turbulence created due to to abrupt change in direction creates lot of turbulence in water which helps in increasing Dissolved Oxygen level in water. But now days due to various human activities this place got polluted. So to determine the pollution level of this scared place, it is selected as the study area.

Location of Sampling and Sampling: Nashik is a rich historical town of legendary Lord Rama, who spent some time of his exile in Nashik. Nashik has a unique blend of civilization of modernization. This city of temple is one of the holiest places for Hindus inviting thousand of tourist every year. Nashik has scenic beauty of Sahyadri range of mountains merged with vineyards and agricultural yields and a busy hub of industrial activities. Nashik is a paradise for tourist with historical caves, temple, holy rituals, museums, wet lands and lot more.

Kumbh Mela: Thousands of years ago, perhaps in the Vedic period, gods & demons made a temporary agreement to work together in obtaining amrita (the nectar of immortality) from the Milky Ocean, & to share this equally. However, when the Kumbha (pot) containing the amrita appeared, the demons ran away with the pot & where chased by the gods. For twelve human years the gods & demos fought in the sky for the possession of this pot of amrita fell on the four places: Prayag, Haridwar, Ujjain & Nashik. Thus, Kumbhamela is observed at these four locations where the nectar fell. Kumbha Mela is attended by millions of people on a single day. A ritual bath at a predetermined time & place is the major event of this festival. Other activities include religious discussions, devotional singing, maits water irrespective of its water quality suitability. The mass feeding of holy men/women & the poor & religious assemblies where doctrines are debated & standardized. Kumbha Mela (especially the Maha Kumbha Mela) is the most sacred of all the Hindu pilgrimages. Thousands of holy men/women (monks, saints, sadhus) grace the occasion by their presence. The suspiciousness of Kumbha Mela is in part attributed to the gathering of thousands of holy men/women at one place on earth. According to astrologers, the "Kumbha Fair" takes place when the planet Jupiter enters Aquarius & the Sun enters Aries.
Kumbh -Mela scheduled at Nasik, will commence on 14th July 2015 and end by 11th August 2016, almost after a year. Important dates of this grand occasion are mentioned below.

Table 1: Kumbh Mela 2015 Schedule

Date	Event
14th July 2015	Flag hoisting of the main ceremony at Ram Kunda
19th August 2015	Flag hoisting of the Akhara at Sadhugram
26th August 2015	Shravan Shudha – First Snan
29th August 2015	First Shahi Snan
13th September 2015	Second shahi Snan
18th September 2015	Third Shahi Snan
25th September 2015	Bhadrapad Shukla Dwadashi-Vaman Dwadashi Snan

Materials and Methods: The laboratory experiments were conducted at post Graduate Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research (CSIBER), Kolhapur, while water sample were collected on periodic basis at Kushawart Kund (Trimbakeshwar, Nashik) and Ram Kund (Nashik). The Grab Sampling Method was followed for collection of water sample from River Godavari. The various parameters (pH, TDS, Total Hardness, Oil and Grease, Chloride, Free CO2, Sulphate, Inorganic Phosphate, Sodium, and Potassium) were analyzed in laboratory by using different analytical techniques [1].

Result and Discussion:

Table 2: a) Result

Sample No.	Date	Sample Collection Place	pH	Total Dissolve Solid (mg/l)	Oil & Grease (mg/l)	Total Hardness (mg/l)	Sulphate (mg/l)
1	10/08/2015	Trimbakeshwar (Brahmagiri)	6.8	2100	0.4	106	250
2	10/08/2015	Trimbakeshwar (Kushawart Kund)	8.1	2230	0.36	102	125
3	10/08/2015	Ram Kund (Nashik)	8.7	1235	0.37	182	210
4	17/08/2015	Ram Kund	6.7	1315	0.09	208	270
5	24/08/2015	Ram Kund	7.7	1408	0.01	228	200
6	31/08/2015	Ram Kund	8.8	1490	0.04	100	100
7	07/09/2015	Ram Kund	8.2	1100	0.1	130	158
8	13/09/2015	Ram Kund	7.1	995	0.05	170	60
9	21/09/2015	Ram Kund	6.2	1305	0.37	160	181
10	28/09/2015	Ram Kund	7.6	1594	0.09	230	225
11	05/10/2015	Ram Kund	7.8	1710	0.1	250	160

Table 2: b) Result

Sample No.	Date	Sample Collection Place	Inorganic Phosphate (mg/l)	Na (mg/l)	K (mg/l)	Free CO_2 (mg/l)	Chloride (mg/l)
1	10/08/2015	Trimbakeshwar (Brahmagiri)	0.15	6.5	1	8.8	19.88
2	10/08/2015	Trimbakeshwar (Kushawart Kund)	0.28	13	3.25	8.8	28
3	10/08/2015	Ram Kund (Nashik)	0.42	19	2.5	00	36.92
4	17/08/2015	Ram Kund	0.29	21.25	6	8.8	39.76
5	24/08/2015	Ram Kund	0.17	7	3	00	44.02
6	31/08/2015	Ram Kund	0.4	22	6	4.4	49.7
7	07/09/2015	Ram Kund	0.28	14.5	6.75	00	55.38
8	13/09/2015	Ram Kund	0.23	8.25	2.5	4.4	58.22
9	21/09/2015	Ram Kund	0.5	20.5	5.75	17.6	35.5
10	28/09/2015	Ram Kund	0.55	5.75	2	00	42.6
11	05/10/2015	Ram Kund	0.57	6.8	4.2	8.8	43.2

The pH value of river water ranged from 6.20 to 8.84. pH is an important factor in determining the productivity of an ecosystem. The chief sources of Godavari river water pollution identified as sewage constitute 84-92% and industrial waste 8-16% [4]. The Low pH reduces the amount of dissolved inorganic phosphorus and carbon dioxide available for plankton. The free CO_2 available in a water system is the outcome of catabolic activities taking place especially with respiration of the organisms present in aquatic ecosystem. The river Godavari is polluted at Ram Kunda Nashik; it is believed that continuous pollution of the water sources by various human activities may lead to some health problems to human. The analysis of the water quality parameters of River Godavari water from three (03) different stations in Nasik city shows that the pH, Chloride ion, Total Hardness, Calcium values are not well within the permissible limits [7]. The range of free CO_2 was 0 to 17.6 mg/lt. T.D.S. were determined by using Gravimetric method, the Maximum T.D.S. (2230 mg/lit) and minimum T.D.S (995 mg/lit) was recorded on (10/08/2015 and 13/09/2015) respectively. The low DO values were observed in the Godavari River [8]. The Maximum Chloride concentration was recorded on 13/09/2015 that was (58.22 mg/lit) while minimum was recorded on 10/08/2015 that was (19.88 mg/lit). Minimum and maximum concentration of sulfate was calculated on 13/09/2015 (60 mg/lit) and 17/08/2015 (270 mg/lit) respectively. The range of inorganic phosphate was from 0.15 mg/lit to 0.57 mg/lit. The concentration of Na and K were estimated by using flame photometer. There was fluctuation in Na and K values was observed during analysis .The minimum concentration of Na and K were (5 mg/lit and 1mg/lit), while maximum concentration were (22 mg/lit and 6.75 mg/lit) respectively. Total hardness was determined by using Titrimetric method. The maximum concentration of total hardness were 250 mg/lit on 05/10/2015 while minimum total hardness determined on 31/10/2015 (100 mg/lit). Industrial effluents and domestic sewage have caused inimical effect on river water. Thus, the water in Pune is polluted to the greatest extent followed by Nasik and Kolhapur [10].

Conclusion: The water sample of Godavari River during Kumbh Mela activities Nasik 2015 were analyzed at Laboratory. Total 10 parameters of water sample had been tested. By analyzing the samples we found variations in water quality parameters and we come to conclusion that the Godavari River water was slightly polluted during Kumbh Mela activities Nasik 2015. But water did not found high polluted by reason of various measures like discharging extra water in river Godavari, continuous removal of solid wastes from river (Green dustbins were there for collection of waste generated at the bank of river and separate bins were for the collection of food waste materials), mobile toilets, mobile clinics, cover river bank with net etc. were taken during Kumbh Mela by Nashik Municipal Corporation, Government of Maharashtra along with various NGOs. Also regular rainfall during Kumbh Mela at Trimbakeshwar & Nashik might be responsible for dispersion of pollutants.

References:

1. Eugene W. Rice, Rodger B. Baird, Andrew D. Eaton, Lenore S. Clesceri,. “Standard Methods for Examination of Water and Waste water”. American Public Health Association, Washington , D.C. 22th Edn., 2012.
2. Assadian, N. W., DiGiovanni, Enciso G. D. Iglesias, J. Lindemann,W., “The transport of water borne solutes and bacteriophage in soil subirrigated with a wastewater blend Agric”,Ecosys Environ 111, 2015, 279-291.
3. BawaKalpana V. and V. B. Gaikawad, “Water Quality Assessment of Godavari River at Nashik, India: Impact of Sewage and Industrial Wastewater”.Universal Journal of Environmental Research and Technology, Volume 3, Issue 4, 2013, 452- 457.
4. Dhirendra, M. J., Alok Kumar, and NamitaAgrawal, “Studies on Physicochemical parameters to assess the Water Quality of river Ganga for drinking purpose in Haridwar district”. Rasayan J. Chem. 2, 2009, 195-203.
5. Doyle, M. P., “Food borne illness: Pathogenic E.coli, Y.enterocolitica and Y parahaemolyticus”, Lancet 336, 1900, 1111-1115.
6. Jyotiprakash Nayak1, YadavSandeep, MagarAmol, “Investigation of Water Quality Analysis of Godavari River”. IJSART Volume 1 Issue 4, 2015, 2395-1052.
7. ManjushaBhor, PrakashKadave, AbhijitBhor, SheetalBhor, ManishaBhosale and Bholay A.D., “Water Quality Assessment of the River Godavari, At Ram Kund, Nashik, (Maharashtra), India”. International Journal of Engineering and Science, 2278-4721, Vol. 2, Issue 2, 2013, Pp 64-68.
8. MERI Report, “The study water quality ofGodawaririver in Nashik City”.Maharashtra Engineering Research Institute Nashik, 2001.
9. Okafo C. N, Umoh, V. J., Galadima M., “Occurence of pathogens on vegetables harvested from soils irrigated with contaminated streams”.Sci of total Environ 311, 2003, 49-56.

10. Priyanka K. Gadhave and AkankshaHaribhauKawade, “Deteriorated Water Quality as a Comparative Measure to Analyzethe Development Rate of Cities: A Case Study of Maharashtra, India”.International Journal of Environmental Science and Development, Vol. 6, No. 2, 2015.
11. Rai, P. K. and Tripathi, B. D., “Microbial contamination in vegetables due to irrigation”. 2007.
12. Singh, V. K., Singh, K. P. and Mohan, D., “Status of heavy metals in water and bed Sediments of river Gomati –A tributary of the Ganga river, India”, Environmental Monitoring and Assessment, 105, 2005 43-67.

* * *

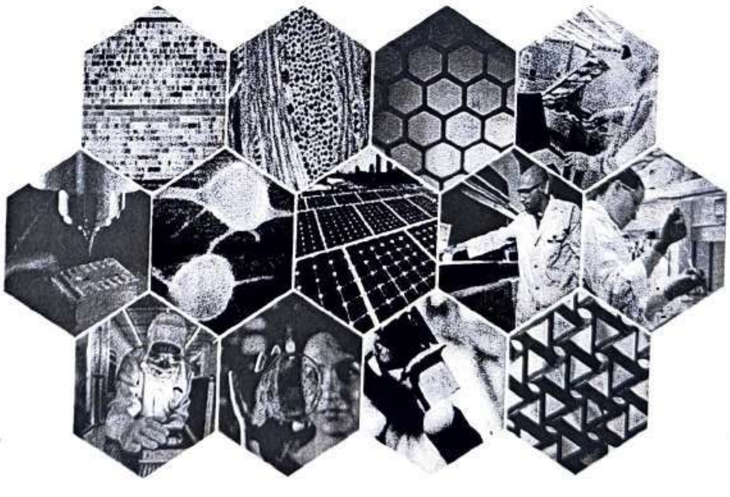
Volume - 8, Issue - 4
April - 2018
ISSN : 2250 - 1630
Quality Impact Factor : 5.93 (CARS)
www.researchjournals.in

Research Expo

International Multidisciplinary Research Journal

Volume - 8, Issue - 4 April - 2018

U.G.C. Approved International Research Journal



PUBLISH WORLD

Publish World App on

Get it on Google play

Contents

Incredible Journey of 7 Years with 3000+ Papers Published.

Published by
Publish World, Anand
http://www.publishworld.org
Email : pwisbn@gmail.com
Not for Commercial Use & Distribution
RNI : N/A (Online Journal)

ISSN 2250-1630

Research Expo International Multidisciplinary Research Journal
ISSN: 2250 - 1630
Volume - 8, Issue - 4, April - 2018
Available Online at http://www.researchjournals.in
Quality Impact Factor: 5.93 (CARS)
U.G.C. Approved International Refereed Research Journal

PSYCHOLOGICAL CONTRACT AND EMPLOYEE ENGAGEMENT: A REVIEW

Dr. Bindu Menon
Associate Professor
CSIBER, Kolhapur
Maharastra (India)

ABSTRACT

Psychological contract refers to mutual unwritten expectations that exist between an employee and employer regarding policies and practices in their organization. Psychological contract influences the job attitudes and performance of employees. This study is aims at developing a deeper understanding about psychological contract and employee engagement

KEYWORDS: Psychological contract, employee engagement, employee commitment, employer obligatioms

INTRODUCTION

The concept of PC introduced in 1960. Argyris and Levinson introduced the term "PC". Argyris focused the different leader ship styles to study the concept of PC. Most research studies highlight the high employee turnover ratio among the employees. Therefore attract, retain and utilize the human resource is a major problem for the organizations. To find out answer for this problem employer needs to understand the expectations and obligations of its employees and vice versa. In this study mainly focus on employees and expectations and the obligations of employers.

OBJECTIVES OF THE STUDY

1. To understand the concept of Psychological Contract
2. To understand the different promises and obligations that affect the Psychological Contract
3. To find out the relationship between Psychological contract and employee engagement

RESEARCH METHODOLOGY

This paper is conceptual in nature. Data was collected from the secondary sources. This is descriptive in nature.

REVIEW OF LITERATURE

To get an idea about psychological contract and findout the concrete relationship with employee engagement, lot of literature has been reviewed based on the following research questions:-

1) What is the concept of psychological contract?
2) How to operate the psychological contracts?
3) What is employee engagement?
4) How employee engagements correlate with psychological contract?

This review spotlights on major advances and connections made within them.

WHAT IS PSYCHOLOGICAL CONTRACT?

The psychological contract refers to the unwritten set of expectations of the employment relationship as distinct from the formal, codified employment contract. This concept was developed in the year 1960s. Argyris (1960) highlighted the term to employee expectations in the workplace. The term psychological contract mainly explained by Denise Rousseau (1995) , according to him the psychological contract includes mutual beliefs and understandings , informal measures, , common goals and perceptions between the two employer and employee . Rousseau (2011) expanded his previous definitions related to Psychological Contract, is a unwritten expectations among the employer and employee in the organization and defined as the set of practical and emotional expectations of benefits that employers and employees can reasonably have of each other, was traditionally seen as an exchange of loyalty for security Hiltrop (1995) explained the psychological contract along with its practical implications also, "the psychological contract that gave security, stability and predictability to the relationship between employees and employers has dramatically altered in the past decades.

Table No. 1 Content of the psychological contract

Obligations of the employee		Obligations of the employer
Robinson et al. (1994))	De Vos et al. (2002	De Vos et al. (2002
Working overtime	Job Performance	Job Content
Loyality	Flexibility	Opportunities for career development
		Social aspects
Extra Role behavior	Extra Role Behaviour	Support
Notice	Loyality	Rewards
Transfer	Employability	Respect for private life
Competitor Support	Ethics	
Proprietary protection		
Minimum Stay		

Source Adapted from PSYCONES (2005, p. 16)

The psychological contract represents an unwritten agreement between the employers and employees based on jointly agreed promises and obligations among the employers and the employees (Sparrow and Marchington, 1998). When the promises and expectations are met the psychological contract can considered as fulfilled. If this Psychological Contract are fulfilled it leads to increase the job satisfaction, organizational citizenship behavior and decreased turnover.

Linde et al. (2008) also supported the views of Sparrow and Marchington (1998) with help of following diagram:-

Table No. 2 Psychological contract obligations and promises guideline

Employee Obligations	Employee promises	Employer obligations	Employer promises
Job performance	Good service	Job Content	Varied work
	Professional Manner		Limited disturbances
	General Honesty		Own work fashion
	Skills Development		Responsibility
	Satisfying Performance		Right to supervise
	Team Player		Right of own opinion
Loyalty	Protect Organisational Image		Departmental influence
	Confidentiality	Rewards	Flexibility
	Not support competitors		Fair Salary

			Job security
			Additional rewards
			Allowances
			Recognition
Ethics	Honesty with leave	Management Policy	Procedural fairness
	Resignation notice		Fair discipline
	Cost effective		Communication structures
Extra Role Behaviour	Respect company time		Information
	Innovation	Social Aspects	Employer- Employee relationships
	Assist others		Supporting social activities
	Social participation		Colleague assistance
Flexibility	Accept transfer		Good working atmosphere
	Do non-required tasks		Social net work
	Work extra hours	Career Development	Reaching true potential
	Geographical mobility		Stimulating work
	Conformity		Room for own initiatives
			Suitable work
			Ability to achieve progress
			Promotion abilities
			Skills development
			Horizontal job mobility
			Training opportunities
			Fair work pressure
		Organizational support	Quality products
			Customer satisfaction
			Feedback
			Righteous management
			Trust in management
			Efficient organization
			Good working conditions
			Good HRM
			Fair work times
			Reimbursement of costs
			Respect for private life

Source Linde et al. (2008)

EMPLOYMENT CONTRACT AND PSYCHOLOGICAL CONTRACT

One of the major arguments in the PC theory is whether it can be regarded as 'contract' in comparison to formal contracts. Sparrow and Marchington (1998) argue that there is an interrelationship between employment contracts and the PC as legal terms and conditions will affect perceptions of obligation. In terms of strict comparison, PC is an implicit reflection of the employment relationship resembling a legal contract only on a more broad scale. There are differences between the two concepts, but the similarities are enough to justify the use of the term as a signal of the power it carries in the employee Relations.

Table No.3 Difference between Employment Contract and Psychological Contract

Employment contracts	**Psychological contracts**
Written	Unwritten
Explicit	Implicit
Legally binding	No legal status
Doesn't tell us much about what people actually do at work	Tells us most things about what people actually do at work
May exert only a small influence on behaviour	Exerts a large influence on behaviour, feelings and attitudes

The Psychological Contract mainly based on the fair believes of the people in fulfilling its perceived obligations above and beyond the formed written contract of employment. It enhances commitment and positive attitude.

HOW TO OPERATE THE PSYCHOLOGICAL CONTRACTS?

Guest and Conway (2002) explained a Psychological Contract with the help of model. They mainly considered two dimensions , one is perception of employees of fairness and trust and another one is how employers keep the promise. Rousseau (1990 and 2011) explained the fulfillment of Psychological Contract for this explained the three concepts of PC, Mutuality, Alignment and Reciprocity. If Contract terms are silent and it is agreed by both the parties is called high level mutuality. If PC is balanced the reciprocity between employer and employee obligations is called alignment. If the employer and employee fulfill the obligations equally is considered as reciprocity. Hess and Jepsen (2009) confirmed that there is a connection between psychological contract fulfillment and three cognitive responses: commitment , satisfaction, and turnover intention. Levels of fulfillment at work have also been shown to impact emotional attachment, affect and the desire to remain with the organization. Ng and Feldman (2009) revealed that if levels of fulfillment decrease employee also reduce their loyalty, trust , efforts and contributions.

WHAT IS EMPLOYEE ENGAGEMENT?

Employee engagement is a property of the relationship between an organization and its employees. An "engaged employee" is one who is fully absorbed by and enthusiastic about their work and so takes positive action to further the organization's reputation and interests. (*Wikipedia*). Engaged employee is nearly three times more loyal toward his jòb in comparison to those employees who are actively disengaged (Kular, Gatenby, Rees, Soane, & Truss, 2008). Therefore the organization should focus on the aspect of employee engagement in order to improve organizational performance (Basbous, 2011; Sundaray, 2011). Gallup, the Consulting Organization divided the types of employee engagement into Engaged Employees, Not Engaged and Actively Disengaged.

Table No.4 Definitions of Employee Engagement

Sources	Definition
Melanie Allen (2014)	Employee engagement is the emotional commitment employees feel towards their organisation and the actions they take to ensure the organisation's success; engaged employees demonstrate care, dedication, enthusiasm accountability and results focus.

Macey and Schneider, 2008a	psychological or affective state (eg commitment, involvement, attachment etc.), a performance construct (eg role performance, effort, observable behaviour, organizational citizenship behaviour etc;
Rotter, 1990 p. 490)	'leads to common understanding , is illustrated with many behavioral examples, stated in such a way that the operations for its measurement are clear and widely accepted as logical and reasonable'
Kahn (1990, p. 694)	"The harnessing of organization members' selves to their work roles; in engagement people employ and express themselves physically, cognitively, and emotionally during role performances."
Schaufeli& Bakker (2004, p. 295)	"A positive, fulfilling, work-related state of mind that is characterized by vigor, dedication and absorption."

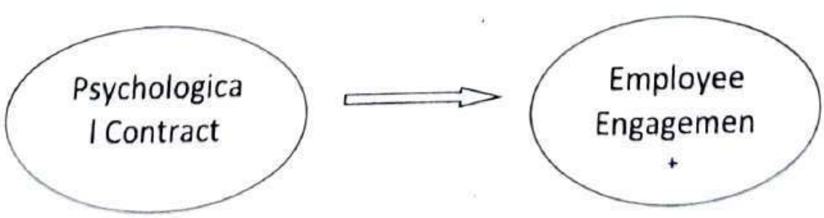
There is no concrete definition on the term employee engagement, employees willingness or commitment to do the job is considered as employee engagement. The way employees feel is related to their desire to act, engaged employees will put effort towards meeting what they understand the organizational goals to be. Melanie Allen (2014) claimed that Engaged employees work with passion and feel an emotional connection to their company. They drive innovation and move the organization forward. They are characterized as being loyal, committed, and productive and deliver results.

HOW EMPLOYEE ENGAGEMENTS CORRELATE WITH PSYCHOLOGICAL CONTRACT?

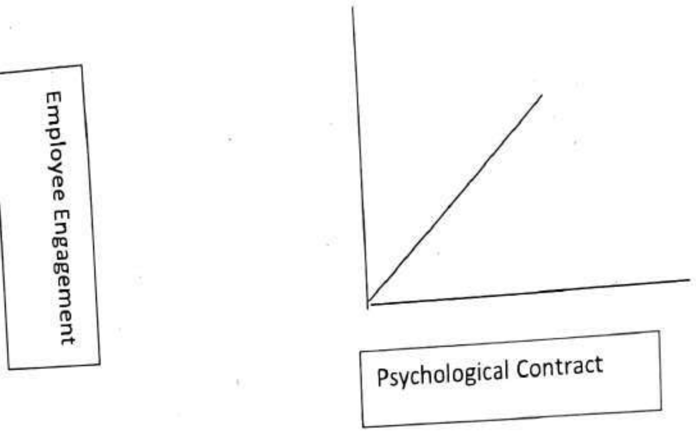
Harold Patrick measured the relationship between psychological contract and employment relationship in IT industries with the help of 202 employees by using Millward and Hopkins psychological contract scale. This study revealed that employees' commitment/ obligations to employers was higher than employers commitment/obligation to employees. More studies have conducted on the issue of psychological contract and employee relationship, but very little studies focused on psychological contract and employee engagement. Between employees' contribution (hard-work, ability, loyalty, etc.) and incentives given by the employer (pay, promotion, job security, etc.) was discussed by Mominson , pointed out that the psychological contract was usually defined as a set of faiths was held by employees about mutual responsibilities. These faiths were based on making sense of promise, while they might not be known by the organization or its agent. So, scholars who held the same view of one-way expectations as Rousseau were called Rousseau School. Li, J., & Dai, L. T. (2015), if employees could be loyal, committed, sincere, they would get the recognition, support and professional development, but managers are fed up with the attitude of the employees, so, psychological contract- the understanding and realizing the exchange relationship between the organization and the employee, gained more popular among the researchers, academicians and business world also.

In order to explore research question as how employee engagement correlate with psychological contract a model is used for study. This model mainly focused on how a change in psychological contract is related to a change in employee engagement. Psychological contracts considered as independent variable and employee engagement as dependent variable.

Conceptual Model of the Study (Fig.1)



From the review of literature and focus group study it is revealed that if there is a proper accomplishment of psychological contracts, an increase in employee engagement. The following figure represents the **graphical representation of this relationship. (Fig 2)**



Traron Moore (2014) mainly highlighted the relationship between psychological contract fulfilment , employee engagement and generational affiliation in retail industries. This study gives substantial learning at the intersection of psychological contracts and employee engagement by considering the factors like pride, satisfaction, commitment and advocacy. Julius E Rohodes (2013) claimed that psychological contract and employee engagement both served the same purpose. He also pointed out that equity, trust, commitment, well being and performance are still important in the organisation. If organisation are able to develop humanistic approaches towards the employees they provides best result to the organisation.

Devendra Lodha (2017) Employee engagement is very important aspect behind the efficiency of the employees and thereby leads productivity of the organization. This study revealed the psychological contract like Trust worthiness amongst the employee of the organization hoe it effect on the employee engagement. In working women from the academic institution, among which majority from the age group of 20-30 years and majority working with the graduate institution are considered as respondents for this study. Analysis of the variables of the Physiological contract with the employee engagement revealed that the Psychological contract carrying the impact on the employee engagement

The success of the psychological contract depends on how well the individual believes in the organization is in accomplishing its perceived obligations more than the formal contract of employment. Peiro, 1992). Highlighted that "If organizations are to achieve and keep quality HRs in line with its goals, they have to pay closer attention to [employee] expectations and quality of\ life demands. They will not only fulfill legal contracts but also the 'psychological contract'..."

LIMITATIONS AND SCOPE FOR FURTHER RESEARCH

There is lot of research work on PC, it was some issues when comparing the research results of foreign researchers. There is no proper tool to measure psychological contract for our local market. Mostly studies focused on the local issues related to psychological contract and its breach. Almost all related studies paying attention on the contract between employer and employees, but psychological contract between organization and managers are totally ignored from the study.

The future study can think about the dynamic steps of psychological contract between organization and managers and to find out the relationship with employees attitudes, perceptions and behaviour.

CONTRIBUTION OF THE STUDY

Based on the above mentioned literature, this study aims to make a contribution in the following ways:

1. Previous studies on psychological contract have discovered relationship with employee relationship and some other studies find out the relationship between psychological contract and satisfaction and organizational commitment. This research mainly contributes by providing the conceptual background about the employee engagement with psychological contract.
2. Furthermore, the study has been carried out with the help of review of literature. The psychological contract influences how employees behave, according to their relationship they have with the organization and other staff. If employee feels they are getting less as compared to their input and same they are not getting proper treatment from employer, the balance is skewed and the psychological contract is breached.
3. Psychological Contract played an crucial role in the daily work activities. Employees who take psychological contract in a positive way, leads to high score on employee engagement and employee commitment.

PRACTICAL IMPLICATIONS

This research gives implications for organisation to know the content of psychological contract. The human resource department should take full care while conveying promises to the job candidates and to the existing employees also. Line managers are also responsible for HR activates as per the strategic HRM therefore Line managers also should consider their promises. The working conditions, conditions of the job, incentives and obligations of the employees towards the organization must be clearly communicated. Management should constantly meet the employees to bring the ideal employer employee relationship. Fair and justifiable treatment is very important to maintain psychological contract i.e Fairness or balance (typically as perceived by the employee) between:

- how the employee is treated by the employer, and
- what the employee puts into the job.

The managers should make reasonable promises to the employees at the time of recruitment, as later on, if the organization fails to meet its obligations this will increase the employee turnover. It also reduces the commitment and loyalty among the employees. Employees identify that they are giving more to the employer and getting less from the employer (in terms of commitments/obligations). Hence they have propensity to leave work at the time of their choice and not making personal sacrifices. Employees engagement should be based on employers strategy like motivation, open communication, flexi working plans, involvement in decision making process, recognition for good work, development opportunity not on the basis of coercion. Employees should develop a proper working relationship with employer's representatives within the organization. It is suggested that psychological contract be a part of organizations business strategy and be line up with the corporate strategy.

Psychological contract is a model and a philosophy which can direct the way we structure and guide the organizations. It also helps the managers how to support their people's needs within the organization. Psychological concept is a powerful tool to expand the thinking and possibilities for people and work.

2017-18

REFERENCES

1. Argyris, C. (1960). Understanding Organizational Behavior. Homewood: Dorsey Press.
2. Arnold B. Bakker, Evangelia Demerouti, (2008) "Towards a model of work engagement", Career Development International, Vol. 13 Issue: 3, pp.209 223,https://doi.org/10.1108/13620430810870476
3. De Vos J, Buyens D, Schalk R (2002) Psychological contract-related information seeking and the role of individual disposition. Poster accepted for the annual conference of the Society of Industrial and Organizational Psychology, Toronto, Canada
4. Guest, D. E., & Conway, N. (2002). Communicating the psychological contract: an employer perspective. Human resource management journal, 12(2), 22 - 38.
5. Harold Andrew Patrick, Psychological Contract and Employment relationship, http://ssrm.com/abstract=1284775
6. Hess, N., & Jepsen, D. (2009). Career state and generational differences in psychological contracts. Career Development International, 261-283.
7. Hiltrop JM (1995) The changing psychological contract: the human resource challenge of the 1990s. Eur Manag J 13:286–294
8. Isaksson K, Bernhard C, Gustafsson K (2003) Importance of employment form and trust into leadership for employee's health in the healthcare sector]. Arbetsmarknad Arbetsliv 9(2):5–16
9. Julicus E Rohodes (2013), Psychological Contract Vs Employee Engagement, The business of parking, Human Resources, P.No.12
10. Kahn, W. (1990). Psychological conditions of personal engagement and disengagement at work. Academy of management Journal, 692 – 724.
11. Kular, S., Gatenby, M., Rees, C., Soane, E., & Truss, K. (2008). Employee engagement: A literature review. Working paper series (19). Kingston University. Retrieved from http://eprints.kingston.ac.uk/4192/1/19wempen.pdf
12. Li, J., & Dai, L. T. (2015). A Review of Psychological Contract. Psychology, 6, 1539-1544. http://dx.doi.org/10.4236/psych.2015.612150
13. Linde B, Schalk R, Linde HM (2008) Clarity and trust: the experience of workplace regulations by employees. South Afr J Labour Relat 32(2):86–103
14. Macey WH, Schneider B (2008a), 'The meaning of employee engagement', Industrial and Organisational Psychology, 1, 3–30
15. Melanie Allen, Managing Director of People Results Ltd, Employee Engagement – A Culture Change, https://www.insights.com/media/1091/employee-engagement-a-culture-change.pdf
16. Morrison, E. W., & Robinson, S. L. (1997). When Employees Feel Betrayed: A Model of How Psychological Contract Violation Develops. Academy of Management Review, 22, 226-256
17. Mr. Devendra Lodha and Ms. Khushali Paṭhak (2017), Effect of psychological contract on employee engagement, Rising, A journal of researchers, Vol 1 , Issue 1
18. Organ, D. W. (1988). Organizational citizenship behavior: The good soldier syndrome. Lexington, MA: Lexington Books.
19. PSYCONES (2005) WP1—state of the art: current evidence concerning employment contracts and employee/organizational well-being among workers in Europe. http://www.psycones.sp. Retrieved 11 Nov 2005
20. Robinson SL, Kraatz MS, Rousseau DM (1994) Changing obligations and the psychological contract: a longitudinal study. Acad Manage J 37(1):137–152
21. Rotter JB (1990), 'Internal vs. external control of reinforcement: a case history of a variable', American Psychologist, 45(4), 489–493
22. Rousseau, D. M. (1995). Psychological contract in organizations: Understanding written an unwritten agreement. Newbury Park, CA: Sage.

ISSN 0974-763X

SOUTH ASIAN JOURNAL OF MANAGEMENT RESEARCH (SAJMR)

Volume 9 Number 2 July 2017

CONTENTS

Chhatrapati Shahu Institute of Business Education and Research (CSIBER)

(An Autonomous Institute)
University Road, Kolhapur- 416 004 Maharashtra State, India.

CASE STUDY

The Best Way To Go International- Caspro Group of Industries, Kolhapur.

Mrs. Revati R. Patil
Assistant Professor,
CSIBER Kolhapur

Dr.Bindu Menon
Associate Professor,
CSIBER Kolhapur

Late Shri Chunilaji Rathod 2nd grandfather of Shri Prakash Rathod shifted with his family from Rajasthan to Pune during Pre-independence period , to start a family business of selling pots, utensils and pans for living. His son Ambalaji was helping him since his school days. Ambalal to be an who later completed his Diploma in Metallurgy from Pune University. As in those days metallurgists had no job opportunities in Pune and on the other hand foundry business in Kolhapur was flourishing, so Ambalalji came to Kolhapur in 1964 and soon got a job at Ghatage Patil Industries. He worked for years and left the company as a development manager in 1974. During these days his dream was to become an entrepreneur.

In 1977, he established his own foundry 'Castwell Metal Industries at MIDC shiroli, Kolhapur with three partners. Due to the loss of the company other partners decided to quit the company. Thereafter he carried the operation with his brother Sakalchandji. Ambalaji carried the production, quality, sales and marketing and his brother was shouldering responsibility of finance and commercial.

Ambalaji had three sons Prakash, Vijay and Mahendra. Mr.Prakash was interested to join the business after his 10th standard but his father had dreamt for Prakash to be an engineer. He completed his engineering in Metrological Engineering from Dayanandsagar College of Engineering Bangalore in 1983 and was willing to join his father's business but his father had dreamt for him again! His father advised him to join Force Motors, Pune, to have job experience. (The reason behind this was to make him experience the pain being an employee.) In Force Motors , he handled production, tool room, design sheet metal departments as lifetime learner.

In 1989 Shri Ambalalji established Rathod industry and asked his son Shri Prakash to take its responsibilities. In 1992 Prakash Rathod launched Caspro Export - the export division of Rathod Industry collaborated with Germany's Deutz which has spread its business in five nations and had seven big companies under its fleet.

In a true sense 1978 to 1992 was cultivating period of Rathod's to create their empire by putting handwork, sincerity and quality. Shri Prakash Rathod due to his work assignments has visited many foreign countries. As a result he got acquainted with latest technical knowledge which invited in him the burning desire to make his company one of the world class from all technical aspect. This began by bringing hismachine shops under one roof and established Ambalal Chunilal Rathod (ACR) Machines in 2008.

Mr.Prakash Rathod started to export his products to foreign countries including USA, Germany, Japan, France and Italy. To do away with the scarcity of skilled workers, a Robot was established in the company. He is also shouldering the duties as the director of Indo-Japanese Association. He is of caring nature especially to his staff of all grades. This includes free distribution of educational aid, picnics, medical aid etc. Moreover by considering agricultural back ground of workers; 'four shift' system was introduced. The staff members can get assistance of Rs.5 lacs through the company fund for medical purposes.

" That's the power of a small dream to do big and achieve more."

Shared Vision, Mission, Values and Goals:

In the scenario wherein, technology is playing dominant role, bureaucratic organization structures have lost their relevance. Resources are available for seamless flow of communication and transactions, with this background, the vision initiated by the company to be world class:

"To become world-class casting manufacturing unit by optimizing resources through operational excellence, technology up- gradation."

"Continuous improvement of human resources environment, technology and product to meet market needs."

Survival with Challenges:

Foundry business was in an uncertain phase and found it difficult to plan for production. Sudden requirement of suspension by customers, lack of skilled workforce to supply castings with acceptable quality, company planned to tackle the issues by providing training (on-the-job and class room) make them competent to produce desired quality. The learning outcomes are multi skilling, latest products and technology.

ACR machines is a big Indian machine shop industry in the field of spare parts exports and leading world class company with all machine shops under one roof. Their core specialty is totally automated systems and hydraulic of all nature. Most of the functions of casting manufactured are upgraded, with technology and quality systems time to time in order to satisfy customers. They aimed at preventing defects and continual improvements in all processes of quality management system. They have installed first robot to overcome scarcity of skilled workers. Now they are working on second Robot and planning for third one. All three Robots will be working together soon.

The core strength of the company is its domain knowledge in spare parts has always been at the forefront to adopt latest technologies. They have updated their system to the latest technologies in melting, pouring, molding and quality control.

The core differentiator for the company are it's totally automated export division which used extensively software and hardware for ensuring instant feedback and correction systems using mobile and internet connectivity. This totally integrated with an online information management and analytics.

Behind all these actions, Shri Prakash Rathod was clear about his top level managers are carrying minimum experience of 20 years in their respective fields. The average age of the management staff is not more than 38 years.

The management is very much focused on having the latest technology available in the world for production and quality control. He believed as we have built up a reputation of being a quality supplier, we have most of the customers as walk in or repetitive. He claimed, we have a friendly relationship with our employees. As a result all our export key areas are America, Germany, Japan, France and Italy. Our domestic customers are Mahindra Group, Force Motors, Breaks India Ltd., and other big Indian group of industries.

Be International and enjoy the world!

1.Situational analysis through urgent attention on main area, e.g. lack of skilled work force

2.New management approachof building young and energetic workforce to fulfill qualitative and competitive requirements of customer.

3.Being a quality supplier in spare parts the company has adopted new marketing strategy to supply castings to various segments with existing and alternative material.

Human Resource initiatives through training multiskilling, adoption of 5s, TQM and Lean Techniques.

5.While journey towards world class quality supplier the company have adopted Green Organization concept to wipe out fume and dust occurring from melting and sand preparation. To minimize the pollution in foundry, Fume and Dust Extraction Systems, STP/ETP and Rain Water harvesting systems have installed.

6.ACR have updated their system to the latest technologies to streamline operational and technological advancement in the following areas:

a)Melting : Installed 1 GBT induction furnace for faster melting rate with reduced power consumption.
Installed Energy Master System for induction furnace to capture and analyse power consumption

b)Pouring:-Use of optical pyrometer for accurate control on pouring temperature.

c)Quality:-Use of 3D Scanner from GOM,Germany for dimensional inspection of castings and pattern equipment.

d)Molding Sand Control:-Use ofdigital testing equipment for Greencompression strength, moisture, wet ten sitestrength.

7.The company currently had cost cutting policy Introduction of automation and robotics to reduce manpower.
Reduction in rejection by implementing quality systems. Training workers to get the best out of the technology and system.
Use power saving equipment and save water and electricity to reduce the overall cost

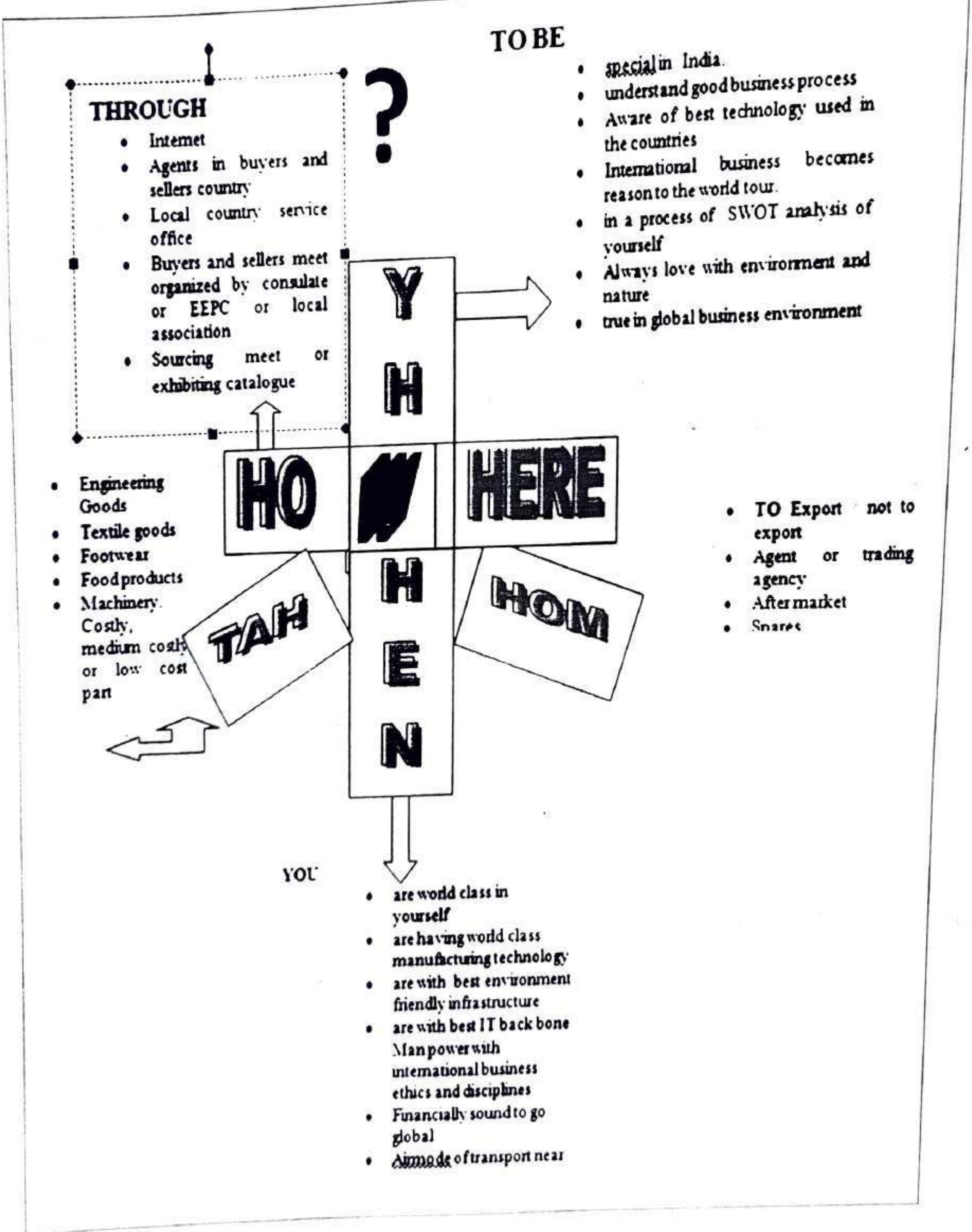
8. Company filtering down its Social values through Corporate Social Responsibility (CSR) practices as:-

a)Indian Red Cross society for mentally disabled children school of Rs. 11 Lacs.

b)Kolhapur Street Beautification Project for Kolhapur Street beautification.

The group strived to build a sound policy, as to deliver the right products, at the right time, at the right cost to the customer.

ACR Model of Being International



ACR preferably initiating the above model and instilling these values which can impact the organization through internationalization. Prakash Rathod further commented on successful internationalization, " I have worked in a company for three years, so I know the pain to be a employee, be ground to earth and do not make myself feel of am someone special or above. Do business and earn profit and not charity and lose money. Have taken ahead vision and try to see the market for next five years and decide your goals and expansion."

Road Ahead:

Developing a new plant in five star MIDC Kagal.

Functioning will start by Dec 2017. 8.5 acres land – supportive, rain water harvesting, paperless office work

One of the best eco friendly plant in the world.While shouldering responsibilities as a owner of business Shri Prakash Rathod never side track to carryout and motivate to carryout continuous improvement project regularly. In today's context we segregate the age groups into various baskets i.e. Baby Boomers (builders), Generation X, Generation Y and Millennial. Each generation has its own baggage of beliefs which has been derived out their exposure to various situations coupled with availability of various means and resources to them to deal with said situations. Thus no beliefs can be termed as right and wrong and therefore, it is the role of business leadership to effectively manage the age mix in way so as to organization and individual can derive maximum gain out of it.

Looking at this case we would like to convey message to self starters of Gen Y and Millennial in the words of Shri Prakash Rathod (Baby Boomers)

" Be a good beginner, good learner, good listener which will convert you to be a experienced professional. Always try to do your own SWOT analysis. Try to be perfect in what you are special in and be an owner of any one foreign language, which will take you to different level and also internationally".

Conclusion:

Caspro Industries continue to grow and expand its network and always took extra ordinary efforts for the achievement of mission. The organization always follows the business mantra of its founder member, "Instead of thinking about cost concentrate on quality, quality products, will bring absolute price" is the mantra. Their products are exported to different countries. The scale of growth has been larger than the most of the organizations in this area.

Questions for discussion :-

1) What motivational lessons can you draw from this case?

2) Suggest a plan of action to help Mr.Prakash Rathod to maintain success in the future?

3) What advantages and disadvantages do you think arise from family oriented business?

Review of Research

(International Online Multidisciplinary Journal)

ISSN No.: 2249-894X **Impact Factor : 5.2331(UIF)**

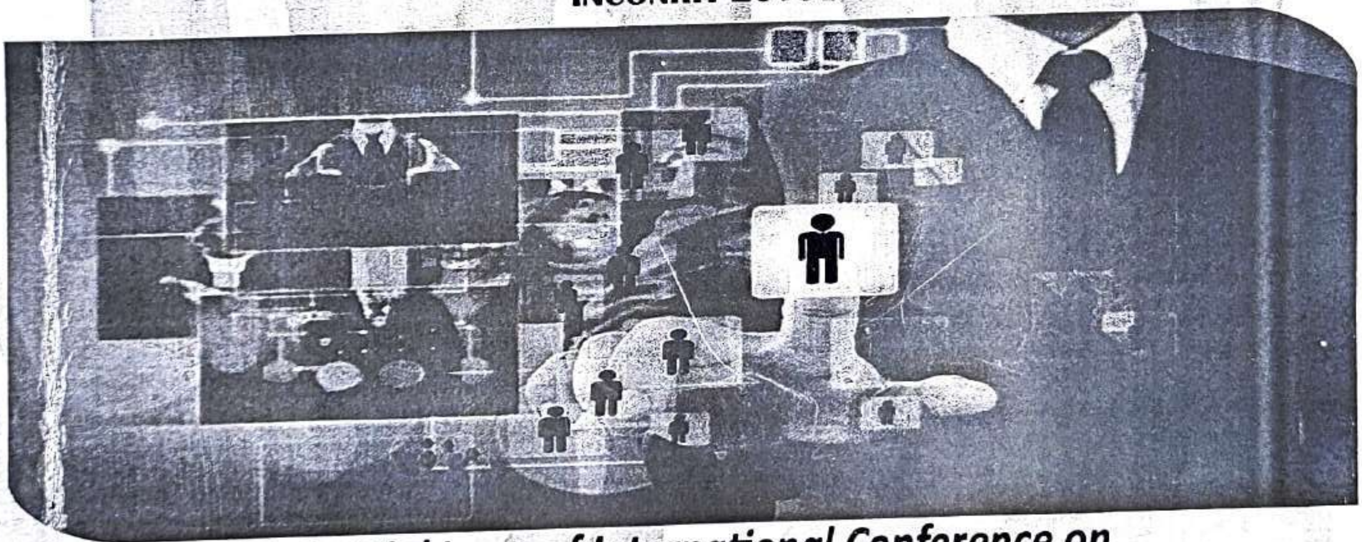
EDITORS

Dr. Mrs. Hemlata Gaikwad

Mr. Shrikant S. Karanjkar

Mr. Rajendra J. Agawane

INCONRIT 2018



Special Issue of International Conference on

"Redefining HR Practices for Sustainable Development"

16th & 17th Feb. 2018

ORGANIZED BY

K. E. Society's

Rajarambapu Institute of Technology

(An Autonomous Institute affiliated to Shivaji University, Kolhapur)

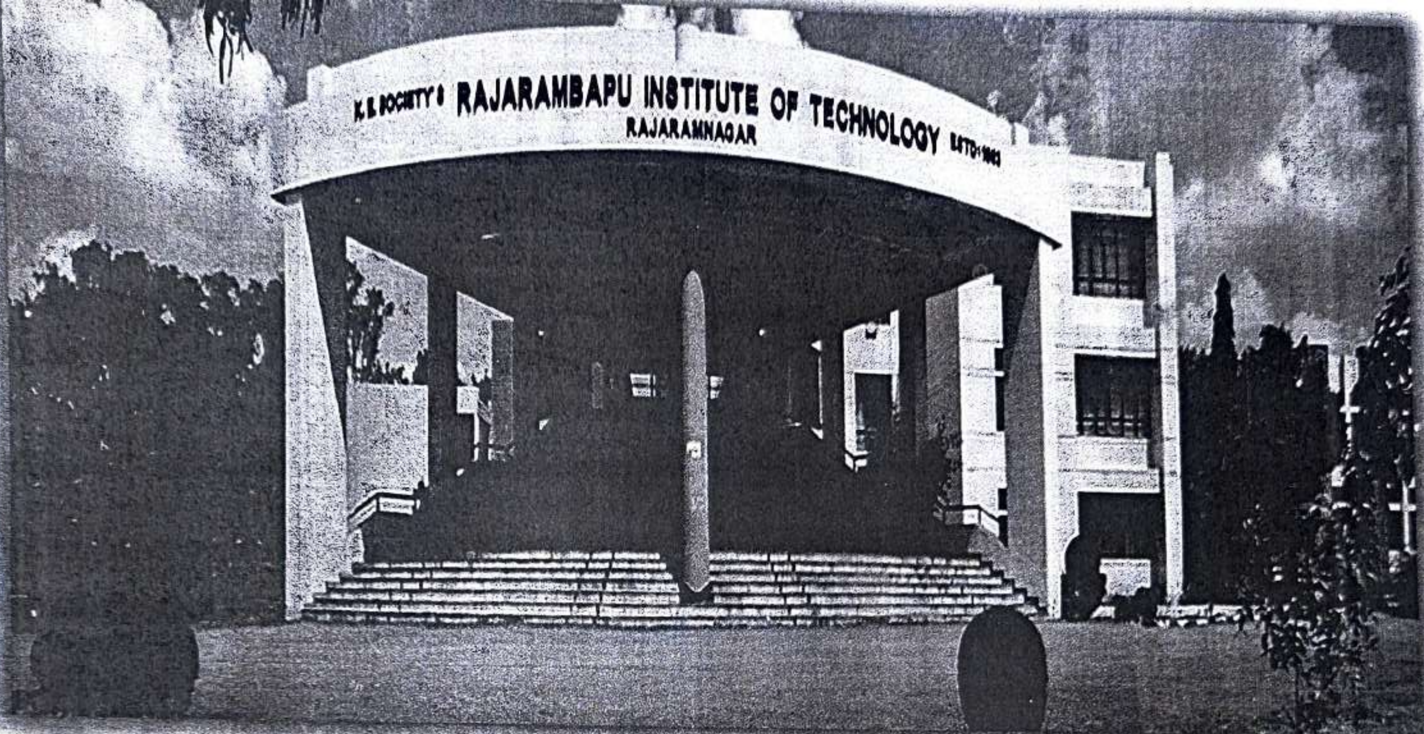
Department of Management Studies (DMS)

Rajaramnagar, Sakharale, Dist. – Sangli, Maharashtra (India)

In Collaboration with

Islampur Chapter of Indian Society for Training and Development, New Delhi

23. Rousseau, D. M. (2011). The individual-organization relationship: The psychological contract. In S. Zedeck (Ed.), APA handbook of industrial and organizational psychology (pp. 191-220). Washington, DC: American Psychological association.
24. Schaufeli, W., & Bakker, A. (2004). Job demands, job resources, and their relationship withburnout and engagement: a multi-sample study. Journal of Organizational Behaviour, 293-315
25. Spatrrow PR and Marchington M (1998), Human Resource Management : the new agenda, London, Financial Times, Pitman Publishing.
26. Traron Moore (2014), The impact of psychological contract fulfillment on employee engagement in the Millennial Generation: The moderating effects of generational affiliation, Georgia State University, Business Administration Dissertations, http://scholarworks.gsu.edu/nus_admin_diss.



K. E. Society's

Rajarambapu Institute of Technology

(An Autonomous Institute affiliated to Shivaji University, Kolhapur)

Department of Management Studies (DMS)

Rajaramnagar, Sakharale, Dist. – Sangli, Maharashtra (India)

Tel : - +91 - 2342 – 220329 , 9970700700, For MBA : 9970700810

Fax : - +91 - 2342 – 220989

LAXMI
BOOK PUBLICATION, Solapur
Ph.: 0217-2372010 / +91-9595-359-435
Email.: apiguide2014@gmail.com
ayisrj2011@gmail.com
Website.: lbp.world

Review Of Research

Content

ISSN: 2249-894X

Impact Factor : 5.2331(UIF)

Review Of Research

Content

ISSN: 2249-894X

Impact Factor : 5.2331(UIF)

REVIEW OF RESEARCH
ISSN: 2249-894X
IMPACT FACTOR : 5.2331(UIF)

THE EFFECT OF EMPLOYEE BRANDING ON EMPLOYEE SATISFACTION:- A STUDY OF KOLHAPUR BASED SELECTED TEXTILE INDUSTRIES

Dr.Bindu Menon
Associate Professor, CSIBER, Kolhapur.

INTRODUCTION:

Employee branding can be defined as "the process by which employees internalize the desired brand image and are motivated to project the image to customers and other organizational constituents" (Miles &Mangold).

The goal of employee branding projects is to get employee confronting inwards and confronting outward to perform better, and develop brand practices. Rightly said by an expert, "Employee branding is about employees living and breathing the brand" – knowing its image story, and epitomizing its image values". Employees need to know significantly more than simply their company's punch line or most recent showcasing effort. It is an aberra branding impact in which correspondence of organization employees serves to portray their compan Employer brand.Numerous organizations take effort to create brand ambassadors out of each and eve employee. Still there is a gap to build up a methodology to develop employee branding.

REVIEW OF LITERATURE

Employee branding is the influencing the behavior of organization members. Employee branding the practice of identifying an employee's behavior and often the employee's point of view with the ima that the organization wants to project to its stakeholders. Employee branding programs include regular training, training in customer service or customer interaction, corporate orientation, and education in corporate brand. Well-developed employee branding programs also include ongoing training, performa evaluation, open communication, recruitment and selection, work environment and rewards systems t support the employees' display of on brand images. Employee branding is the new born baby on the bl when it comes to recruitment practices. It is different from employer branding, employee branding fe back into how your business is perceived by people who might apply to work at your company.

BRANDING

Keller (2001) revealed that the building of strong brands has been increasingly important for m organizations and has been shown to provide financial rewards. Backhaus and Tjcoo (2004) claim that brand is one of the most important assets to firms and that brand management is considered as key acti to many firms. When applying a brand to a product it is called branding. The branding process is an essen aspect of strategic management since it provides identity and competitive differentiation to the organizat (Wood, 2007).

EMPLOYEE BRANDING

Employee branding means what an employee projects about himself and the organisation culture. He or she should be able to serve as a brand ambassador for his or her organisation. Harquail C (2007), revealed the concepts of employee branding and developed a model of how employee branding programs could develop employee brand with the help of some theories based on marketing and organisational studies. Minchingtom (2005) defined Employee branding as the image projected by employees through their behaviors, attitudes and actions. This image will reflect on by employees' attitude and engagement towards the employer brand image promoted through the culture of the organisation." Aurand et al (2005) stressed the role of employees in brand building. According to Rao (2009), the employee brand is an image of the organization presented to an organization's customers and other relevant stakeholders by its employees. And in the employee branding process, the employee starts talking the employer brand and simply put, becomes a brand ambassador for the employer. Even if only a part of the employees might have external contact with customers, and therefore have the most impact on the brand image, the ambition should be to establish the desired brand image among all employees (Miles &Mangold, 2004).

BRAND IMAGE

(Miles &Mangold, 2005) defined the concept of desired brand image as what organizations want the brand to represent to its customers and he also added that organization's brand image is based upon its mission and values therefore it helps it provide a groundwork that defines the desired brand image. A well desired brand image can also define how staff members are expected to deliver customer service (Miles &Mangold, 2005).

How can be achieved?

- By selecting or hiring the competent employees
- By providing proper training.
- Through effective communication
- By providing fair and equitable compensation.

Employee Satisfaction

Becker and Gerhart (1996) studied on job satisfaction; proved jobs can improve firm value. AziriBrikend (2011) defined that job satisfaction is the combination of positive or negative feelings that workers have towards their work. Job satisfaction is the combination of advancement opportunities, nature of work, work conditions and work group. According to Vroom (1964) Job satisfaction is an orientation of emotions that employees possess towards role they are performing at the work place. Job Satisfaction is the essential component for employee motivation and encouragement towards better performance. Many people has defined job satisfaction over the years. Taylor (1911), job satisfaction can improve growth opportunity, provided that job satisfaction can improve through worker motivation.

Organizational Commitment and loyalty

Organizational commitment is defined as the extent to which an employee identifies with and involved in an organization. Price and Mueller (1986) mediate the influence of satisfaction on turnov which places satisfaction causally prior to commitment. Angle and Perry (1978), organizational commitme is the outcome of job satisfaction According to Davis et al (1985), job satisfaction is the immediate effec individual behavior in the workplace; it includes all types of feelings of employees towards their work. S (2004) also concluded the job satisfaction as the extent to which a worker is content with the rewards h she gets out of his or her job, particularly in terms of intersic motivation. Employee loyalty is one of significant factors that human resource managers in particular must have in mind.

Brand Equity

Brand equity is the measurable value derived from marketing and other strategic and efforts attributable to a brand. Devlon (2007) studied leveraging brand equity to attract huma revealed that brand equity helps to attract human capital. The benefits of brand equity markets has been explicated but brand equity influence in human resource market has been ne researcher has given more importance to brand equity in human resource market. Successfu classified as such based on their ability to exhibit high levels of brand equity. Papasolomou (2006) advocate high brand equity as being evident to the extent that organizations exhibit ch such as higher brand loyalty, name awareness, perceived quality, strong brand associations and o

As employees become more important to the brand building process, companies need to to deal with these issues. The role of human resources in brand building is important (Aurand, e Edward (2005) also pointed that the process of managing the internal communication is called branding as focused on assuring that current employees act in accordance with current brand Ahmed (1993) ensuring employee satisfaction was considered in the domain of good HRM However, the concept of internal marketing seems to overlap with the domain of HRM. Employer b a retention management technique influencing engagement, Organizational culture and the p psychological contract all positively linked to retention. Employee branding is somewhat similar with market. This paper mainly focuses on the impact of employee branding on employee satisfaction a works in Textile industries at Kolhapur.

Gromark&Melin find out the positive correlation between a focus on branding and a high margin for Swedish companies. They mainly focused the financial results of the organization highlighted the branding importance for business to business and business to consumer organizatio Gronroos (2003) pointed that perspectives of the management have changed towards a stronger relationship building. When the relationships employees build with customers are ever more impor behavior of the employees has a tremendous impact on the success of a company. The e determine the level of quality in the service provided and have the key to build long-term relations the customers.

OBJECTIVES OF THE STUDY

1) To understanding the concept of employee branding
2) To identify the linking between employee branding and employee satisfaction.

Hypothesis of the study

Ho :- there is no correlation between employee branding and employee satisfaction.
Ha:- There is a correlation between employee branding and employee satisfaction.

Research design of the study:

The research design is exploratory as well as descriptive in nature.

Sources of Information:

The researcher collected the data from primary as well as secondary source by using st questionnaire supported with personal interviews of the employees.

Research Questions

To be able to answer the purpose in a systematic manner, three research questions have been formu
Q 1 - How does the management work with the employee branding process?
Q 2 - How do employees perceive the employee branding process?
Q 3 - What is the relationship between employee branding and employee satisfaction?

A total of 165 employees from different textile industries participated in this study. The sample was etermined by using multivariate research. Questionnaire was the main instrument of this study. The uestionnaire was designed to measure the respondents' level of agreement or disagreement with a specific tatement (Malhotra and Peterson, 2006). Respondents were requested to answer the statements based on -point Likert scale, ranging from 1 "Strongly disagree", "Disagree", "Neutral", "Agree" to 5 "Strongly agree". he Cronbach's alpha reliability test was used to measure how consistent and how well the items in a set are ositively correlated to one another. Cronbach's α values for all the factors were found to be well above the cceptable value of 0.70, namely, employee branding (0.764), Brand image (0.702), employees' motivation 0.797), employee commitment (0.701) and employee satisfaction (0.754). The Kendall correlation was etermined to check the preliminary statistical validity of the constructs' correlations.

Table No.1 Correlation of factors of employee branding with brand image and employee motivation

Variable	M	SD	1	2	3
Factors of employee branding	4.1550	0.367			
Brand Image	4.251	0.318	0.823		
Employee Motivation	4.263	0.289	0.774	0.881	

ote: *p-value <0.05; **p-value<0.01

Here , the correlation is .823 That means there is a uphill (positive) relationship between the two ariables like factors of employee branding and brand image and the correlation is 0.774 between the ariables like factors of employee branding and employee motivation ie if the organization adopts proper ractices like recruitment and selection, performance evaluation, rewards and recognition, communication, ork environment is able to develop brand image and employee motivation.

Table No.2 Correlation of brand image, motivation with employee loyalty and committment

ariable	M	SD	1	2	3
rand Image	4.251	0.318			
mployee Motivation	4.263	0.289	0.881		
mployee oyalty and ommitment	4.168	0.316	0.796	0.816	

ote: *p-value <0.05; **p-value<0.01

Here , the correlation is .0.796 That means there is a uphill (positive) relationship between the two ariables like brand image and employee loyalty and commitment and the correlation is 0.816 between he variables like motivation and employee loyalty and commitment ie if the organization able to maintain ood brand image and adopt proper motivational techniques leads to foster loyalty and commitment mong the employees.

Table No.3 Correlation of employee loyalty and commitment with brand equity

Variable	M	SD	1	2
mployee Loyalty nd Commitment	4.168	0.316		
rand Equity	4.016	0.269	0.784	

ote: *p-value <0.05; **p-value<0.01

Here , the correlation is .0.784 That means there is a uphill (positive) relationship between the variables like employee loyalty and commitment and brand equity ie if the employees [illegible] loyal committed towards their job and organization automatically increase the brand equity.

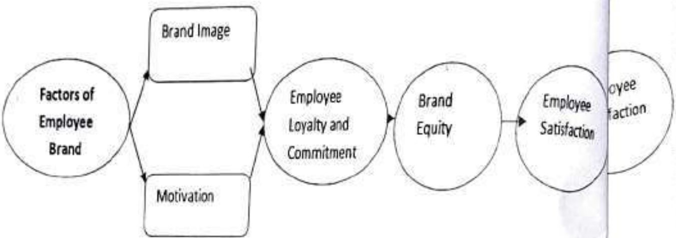
Table No.4 Correlation of brand equity with employee satisfaction

Variable	M	SD	1	2
Brand Equity	4.016	0.269		
Employee Satisfaction	4.315	0.318	0.832	

Note: *p-value <0.05; **p-value<0.01

Here , the correlation is .0.832 That means there is a uphill (positive) relationship between the variables like brand equity and employee satisfaction ie if there is a brand equity among the employ[illegible] leads to increase the employee satisfaction.

Researcher has developed a model based on the study. Hypothesis testing supported this model.



DISCUSSION AND CONCLUSION

The discussion of the key findings results is drawn based on the motives and objectives [illegible] research. The Kendall correlation indicates the strength of the relationship between employee brandi[illegible] employee satisfaction is strong. It means that employee branding results into employee satisfa[illegible] Therefore here null hypotheses is rejected it indicates that there is a correlation direct or indirect corre[illegible] employee branding and employee satisfaction.

When the employees successfully adopt proper factors to build brand image, it provides a [illegible] picture for improving employee loyalty and commitment through the proper motivational technique[illegible] building brand image. Different research studies highlighted the success of corporate brands is [illegible] attributed to employee alignment with the corporate brand (Barrett, 1998; Pringle & Thomson, 20[illegible] Therefore, employee branding is more important than other branding related to customers. Miles [illegible] Mangold (2004) also pointed that if the employee branding process works successfully, it will re[illegible] employee turnover, enhance employee satisfaction.

The study has practical implications to marketing managers in designing customer reten[illegible] strategies. The study shows that different practices like recruitment and selection, communication, rew[illegible] and recognitions, work environment and performance evaluation are the different factors in improving [illegible] brand image.

Tsaur and Lin (2004a; 2004b) in their study find out the relationship among human reso[illegible] management practices, service behavior and service quality in tourist hotels in Taiwan. They found a pos[illegible] relationship between service behavior and service quality. If there is high positive service behavior[illegible] ustomers' perception of service quality will increase. Through such branding process, employees become he representatives and even the brand ambassador of the corporate.

Organizations should establish a strategy for communicating the brand image, what it stands for and ow it should guide them in their interactions with customers and other stakeholders. Organisation can ppoint brand ambassadors from the various departments.

This study focuses on Kolhapur based industries only. Therefore, further research in other areas may e necessary before generalization can be made.

In a nutshell, Employee Branding is all about transforming every employee into a brand envoy of the rganization who will do the branding purposely or unconsciously, thereby will help in making business rogress day and night!!

EFERENCES

1) Arthur Anderson, Best Practices: Building You Business with Customer-Focused Solutions (New York: Simon & schuster,1998)
2) AziriBrikend (2011), Job satisfaction, Management research and practice, Vol.3,(4), 77-86.
3) Backhaus K. Tikoo S. (2004). Conceptualizing and Researching Employer Branding. Career Development International, Vol. 9, Issue. 4/5
4) Barrett, R. (1998). Liberating the Corporate Soul. Butterworth-Heinmann: Oxford.
5) Becker and Gerhart (1996), The impact of human resource management on organizational performance :, progress and prospects, Academy of Management Journal, 39, 779-801
6) Chavan PP and Kulkarni RV (2017)Role of Non-Parametric Test In Management & Social Science Research, Quest International Multidisciplinary Research Journal, Volume VI 38-52
7) Edwards M. R. (2005). Employer and Employee branding: HR or PR. In S Bach (ed.), Managing human resources: Personal management in transition (ch. 10), Wiley-Blackwill.
8) Gotsi M., Wilson A. (2001). Corporate reputation management: "living the brand". Management Decision, Vol. 39, Nr. 2, p. 99-104.
9) Gromark J., Melin F. (no year). Brand Orientation Index Summary. Retrieved 2010-04- 02 from http://www.label.se/start.htm
10) Grönroos C. (2003). *Marknadsföring i tjänsteföretag.* Gothenburg: Liber Ekonomi
11) Grönroos C. (2006) *On defining marketing: finding a new roadmap for marketing.* Marketing Theory, Vol. 6, Nr. 4, p. 395-417
12) Karagoz, S., & Oz, E. (2008). Organizational effectiveness in higher education; measures, measurement and evaluation. Paper presented at the EABR & TLC Conferences Proceedings Rothenburg, Germany.
13) Keller , K. L. & Lehmann , D. R. (2006). Brands and branding: Research findings and future priorities . Marketing Science , 25 (6), 740 – 759 .
14) Kleeman, G. L., & Richardson Jr, R. C. (1985). Student characteristics and perceptions of university effectiveness. Review of Higher Education, 9(1), 5-20.
15) MenonBindu (2015), the impact of job satisfaction on employee commitment: An empirical study of Kolhapur based industries, International multidisciplinary research journal, Vol.3, issue 2.
16) Miles , S. J. & Mangold , G. (2004). A conceptualization of the employee branding process Journal of Relationship Marketing , 3 (2/3), 65 – 87 .
17) Papasolomou , I. & Vrontis , D. (2006). Building corporate branding through internal marketing: The case of the UK retail bank industry . Journal of Product and Brand Management , 15 (1), 37 – 47 .
18) Rao, S. R. (2005). Evolve Your Brand with Time. Available at http://www.citeman.com/5851-evolve-your-brand-with-time.html
19) Simoes C., Dibb S., Fisk R.P., (2005). Managing Corporate Identity: An Internal Perspective, Academy of Marketing Science Journal, Vol. 33, Issue 2

20) Simoes, C. and Dibb, S. (2001). Rethinking the Brand Concept: New Brand Orientat Communications: An International Journal, 6(4), 217–224.
21) Statt D (2004), The Routledge Dictionary of Business Management, Third edition, Routle Detroit, 78.
22) Taylor (1911), The principles of scientific management, New York, Harper and Brothers.
23) Vroom, V. (1964). Work and Motivation. Jhon Wiley and Sons, 91
24) Wood M. B. (2007). Essential guide to Marketing Planning, Pearson Education Limited, p 15

WEBLIOGRAPHY:

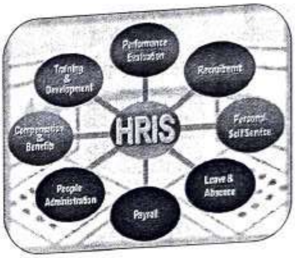
1) http://www.businessdictionary.com/definition/employee.html
2) http://authenticorganizations.com/articles/employee-branding-enterprising-selves-in-servic
3) http://www.mendeley.com/research/conceptualization-employee-branding-process/
4) https://www.auburn.edu/~johnsrd/4160/Readings/Southwes Employee Branding.pdf

REVIEW OF RESEARCH
ISSN: 2249-894X
IMPACT FACTOR : 5.2331(UIF)

APPRAISING ROLE OF HUMAN RESOURCE INFORMATION SYSTEMS AS AN ENABLER OF KNOWLEDGE MANAGEMENT IN ORGANIZATIONS

Mrs. Madhura K. Mane
Asst. Professor, MBA Department, CSIBER, Kolhapur.

ITRODUCTION:



There are different challenges faced by HR managers in 21st entury. HRM in organizations has to manage a diverse workforce, attered across the world, each bringing a new skill set to the table and ntributing towards growth of the organization. The parameters of adership, motivation, communication, team work have changed emendously. To enable the HR managers address these challenges fectively, use if computerized Human Resource Information System has come inevitable. Human Resource Information System (HRIS) is a stem used to acquire, store, manipulate, analyze, retrieve, and stribute information regarding an organization's human resources. An HRIS is not simply computer rdware and associated HR-related software. Although an HRIS includes hardware and software, it also cludes people, forms, policies and procedures, and data. Knowledge management (KM) is the process of eating, sharing, using and managing the knowledge and information of an organisation.[1] It refers to a ultidisciplinary approach to achieving organizational objectives by making the best use of knowledge.[2] anaging the knowledge of employees in an organization efficiently definitely gives a competitive edge to e organization.

The aim of the research article is to identify and evaluate how HRIS acts as an enabler of Knowledge anagement in an organization.

EVIEW OF LITERATURE:

HRIS are mostly created for knowledge management of HRM. The reason for having an HRIS is the eed to control the basic data on personnel, which constructs organizations more profitable and effective. ese concerns are element of the big challenge linked to HRIS development, one of which is also the ilities to design and implement HRIS (Remenyi, 2005). Furthermore, HRIS makes vital contributions to owledge management by advancing organizational learning. For example, HRIS facilitates double loop arning feedback that enables organizational change and discussion, intra organizational communication d decision-making, and shared visions (Argryis and Schon, 1996; Mayfield, et al., 2003).

PES OF KNOWLEDGE:

There are different types of knowledge that exists in organisations. Understanding the different rms that knowledge can exist in, and thereby being able to distinguish between various types of owledge, is an essential step for knowledge management (KM).

Over the centuries many attempts have been made to classify knowledge, and differe focused on different dimensions. This has resulted in numerous classifications and distincti philosophy and even religion.

Within business and KM, two types of knowledge are usually defined, namely expli knowledge. Explicit knowledge is that which can be easily captured, codified and stored. It documents and records of the organization. This type of knowledge is formalized and cod sometimes referred to as know-what (Brown &Duguid 1998). It is therefore fairly easy to identif retrieve (Wellman 2009). This is the type of knowledge most easily handled by KMS, which are ve at facilitating the storage, retrieval, and modification of documents and texts.

From a managerial perspective, the greatest challenge with explicit knowledge is information. It involves ensuring that people have access to what they need; that important kn stored; and that the knowledge is reviewed, updated, or discarded. Although this is changin limited degree, KM initiatives driven by technology have often had the flaw of focusing almost exc this type of knowledge. As discussed previously, in fields such as IT there is often a lack sophisticated definition. This has therefore created many products labeled as KM systems, which fact are/were nothing more than information and explicit knowledge management software.

Explicit knowledge is found in: databases, memos, notes, documents, etc. (Botha et al. 2008

Tacit knowledge is that knowledge that resides in the minds of employees. This type of k base gets developed over a period of years with experience and interactions with different people to non-codified and often personal/experience-based knowledge. This type of knowledge was defined by Polanyi in 1966. It is sometimes referred to as know-how (Brown &Duguid 1998) and intuitive, hard to define knowledge that is largely experience based. Because of this, tacit knowledg context dependent and personal in nature. It is hard to communicate and deeply rooted in commitment, and involvement (Nonaka 1994).

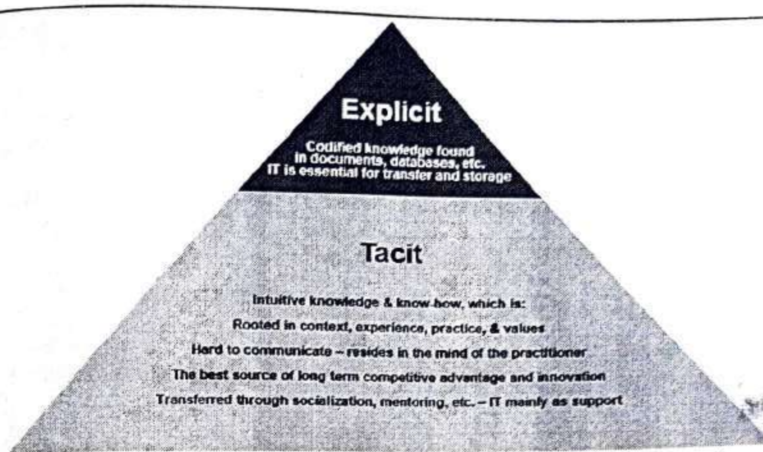
Tacit knowledge is also regarded as being the most valuable source of knowledge, and th likely to lead to breakthroughs in the organization (Wellman 2009).

KM and organisational learning theory almost always take root in the interaction and rela between these two types of knowledge. This concept has been introduced and developed by Nonak 90's (e.g. Nonaka 1994) and remains a theoretical cornerstone of this discipline. Botha et al (200 enunciated that the two types of knowledge cannot be two definite points, in fact they represent a sp of knowledge. It can be said that knowledge is a mixture of tacit and explicit elements rather than bei or the other.

Blackwell (2001) link the lack of focus on tacit knowledge directly to the reduced capabi innovation and sustained competitiveness.

KMS have a very hard time handling this type of knowledge. An IT system relies on codific which is something that is difficult/impossible for the tacit knowledge holder.

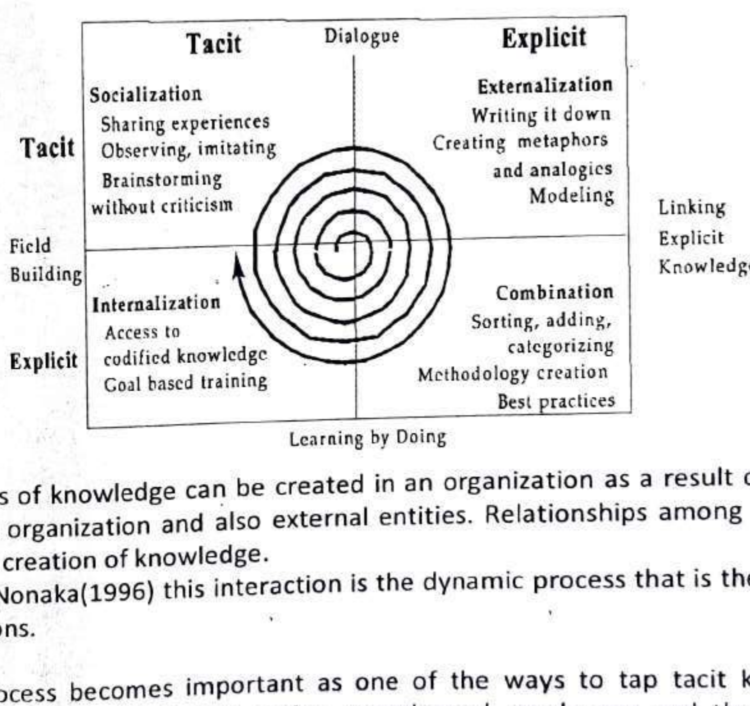
The exact extent to which IT systems can aid in the transfer and enhancement of tacit knowled rather complicated discussion. For now, suffice it to say that successful KM initiatives must place strong emphasis on the tacit dimension, focusing on the people and processes involved, and using I supporting role.



*Source:*http://www.knowledge-management-tools.net/

PIRAL MODEL OF KM:

Implementation of computerized HRIScan contribute immensely to enable organizations manage nowledge efficiently and effectively. Taking reference of Nonaka and Takeuchi's Spiral Model of depicting he interaction between these two types of knowledge, it can be said that different functionalities can be ncorporated in the HRIS to enable capturing, storing, retrieval of knowledge in an organization.



Both the types of knowledge can be created in an organization as a result of interactions between e employees of the organization and also external entities. Relationships among employees, formal and formal, can result in creation of knowledge.

According to Nonaka(1996) this interaction is the dynamic process that is the essence of knowledge eation in organizations.

cialization: this process becomes important as one of the ways to tap tacit knowledge is to enable teraction, preferably informal between senior, experienced employees and the newly inducted ones. cialization is a process of creating common tacit knowledge through shared experiences. In socialization, a ld of interaction is built where individuals share experiences and space at the same t me. Through this ocess common beliefs which are not spoken about or shared otherwise and certain skills that can be rsonified are created and developed. In socialization, the tacit knowledge of one person is shared and ansmitted to another person and it becomes part of the other person's tacit knowledge.

HRIS provides collaborative and connected environment for employees to share their experien
To enable socialization, HRIS can provide social networking platforms like virtual chat rooms, MySp
Facebook etc.

Blogs can be created within the organization where employees can share their experiences a
work as well as life in general.

RSS (Rich Site Summary) or News feeds features can be provided to enable sharing of knowled
the organization. Podcasts can be arranged as part of HRIS to enable audio-video recordings etc.

Implementing mentorship programmes through the use of HRIS is also easily possible to en
interactions between senior and junior employees. This will enable sharing of experiences in
organization.

For example, EMC Corporation uses social business network EMC-ONE to generate innovative
from employees at Annual Innovation Contest.

Externalization: In this is a process of comprehending tacit knowledge and converting it into ex
knowledge. This can be done by converting tacit knowledge into concepts and diagrams. Often one h
make comparisons using metaphors, analogies, and/or sketches in this process. This process gets stimu
with dialogue intended to create concepts from tacit knowledge. A good example of externalization i
process of defining work flow in a department, deciding the line of command in an organization, des
new product concept etc. The tacit knowledge in minds of experts are expressed in concepts or draw
this becomes explicit knowledge. This knowledge can be further studied to be refined.
HRIS can be used to combine HR scorecards with workforce analytics and decision trees
Data flows, work flows can be created using HRIS to provide better clarity about the business process
the organization. Obsolete work flows which are no longer valid in the organization can be easily elimina
Feedback of stakeholders can be taken through HRIS that could be used to refine the diagrams and con
created.

Combination: Combinationis a process of arranging explicit knowledge to form a systematic bod
knowledge. For example, knowledge gathered by senior and experienced HR Manager over a period of
on different topics like employee mobility, recruitment, motivation, job satisfaction, career managemen
can be used by him to formulate a Promotion policy.

HRIS can be used to provide a collaborative work environment. Experienced executives can s
their knowledge in the form of judgment with each other and add tremendous value to strategy and p
formulation. HRIS can help in creating a systematic body of knowledge by providing basic featur
sorting, comparing etc. HRIS can also serve as a repository of the body of knowledge created i
organization which can be used for future reference.

Internalization: this is a process of converting explicit knowledge to tacit knowledge. It also inc
conversion of explicit knowledge into an individual's know-how also called as operational knowledge. E
knowledge is commonly found in the form of records, text, documents, sound, video resources etc. An
this form of explicit knowledge that facilitates internalization. "How to?" questions are a pa
internalization process. The instruction manuals that address such type of questions can be learned and
become a part of person's tacit knowledge.

HRIS can help tremendously in the process of Training and development. Technology ma
possible for human resources professionals to train new staff members in amore efficient manne
facilitate internalization process. This gives employees the ability to access onboarding and tr
programs from anywhere. It is also possible to eliminate the need for trainers to meet with new hires fa
face when completing necessary paperwork to start.

Training in virtual classrooms makes it possible for the HR professionals to train a large number of nployees quickly and to assess their progress through computerized testing programs. Some employers en incorporate an instructor with virtual training so that new hires are receiving the most vital training. nployees can take control of their own learning and development by engaging in training at a time and ace of their choosing, helping them manage their work-life balance. Managers are able to track the training rough the internet as well, which helps to reduce redundancy in training and training costs.

It can be used to gather information about Training need. HRIS can be used to prepare training ograms and calendar that will be followed. Information about various training programs can be made ailable to employees through the HRIS and enrollments can be taken online.

Many web-based HRIS can also provide online training. Feedback about training programs attended employees can be taken and analyzed using HRIS. Using high-level simulation techniques, operational aining can also be given using HRIS.

NCLUSION:

HRIS also provides a way to organization learning by providing a better mechanism of Feedback and ed forward, intra-business communication and decision making. The use of HRIS can enhance the process Knowledge Management by facilitating Socialization, Externalization, Combination and Internalization ocesses. With the use of right kind of technology, it becomes easier and more beneficial for organizations manage 'knowledge' component and thus remain ahead in the competition.

FERENCES:

Girard, John P.; Girard, JoAnn L. (2015). "Defining knowledge management: Toward an applied mpendium" (PDF). Online Journal of Applied Knowledge Management. **3** (1): 14.

"Introduction to Knowledge Management". www.unc.edu. University of North Carolina at Chapel Hill. chived from the original on March 19, 2007. Retrieved 11 September 2014.

Bader YousefObeidat (2012) "The Relationship between Human Resource Information System (HRIS) nctions and Human Resource Management (HRM) Functionalities", Journal of Management Research ISSN 41-899X 2012, Vol. 4, No. 4.

Nonaka, I. (1991). "The knowledge creating company". Harvard Business Review 69 (6 Nov–Dec): 96–104. tp://hbr.harvardbusiness.org/2007/07/the-knowledgecreating-company/es.

Bock, G. W., Zmud, R. W., Kim, Y., Lee, J. (2005). Behavioral intention formation knowledge sharing: amining roles of extrinsic motivators, social-psychological forces, and organizational climate. MIS uarterly (29:1), pp. 87-111.

Argyris, C., Schon, D. A. (1996). Organizational learning ii: Theory, method, and practice. New York: dison Wesley.

Mayfield, M., Mayfield, J., &Lunce, S. (2003). Human resource information systems: a review & model velopment. American Society for Competitiveness, 11(1).

Botha A, Kourie D and RehtaSnyman (2008), "Coping With Continuous Change in the Business vironment: Knowledge Management and Knowledge Management Technology".

Gamble and Blackwell (2001), "Knowledge Management. ISBN 0749436492

Dr. A. Awan, G. H. Sarwar (2015) "INTEGRATED ROLE OF HRIS & SHRM (SHRIS) IN BANKING SECTOR OF KISTAN", Global Journal of Human Resource Management Vol.3,No.1,pp.45-61, January 2015 Published European Centre for Research Training and Development UK (www.eajournals.org) 45 ISSN 2053-26(Print), ISSN 2053-5694(Online)

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION

Impact Factor – 3.452 ISSN – 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

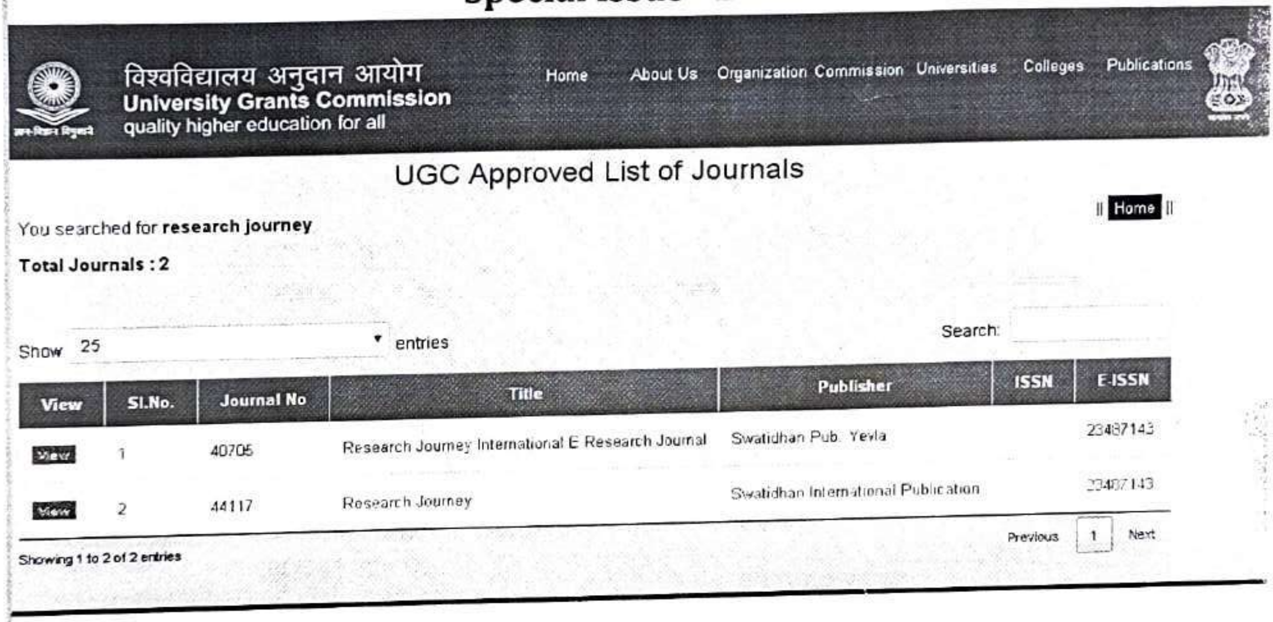
RESEARCH JOURNEY

Multidisciplinary International E-research Journal

PEER REFREED & INDEXED JOURNAL

April 2018

Special Issue - LVIII



विश्वविद्यालय अनुदान आयोग
University Grants Commission
quality higher education for all

Home About Us Organization Commission Universities Colleges Publications

UGC Approved List of Journals

|| Home ||

You searched for **research journey**

Total Journals : 2

Show 25 entries Search:

View	Sl.No.	Journal No	Title	Publisher	ISSN	E-ISSN
View	1	40705	Research Journey International E Research Journal	Swatidhan Pub. Yevla		23487143
View	2	44117	Research Journey	Swatidhan International Publication		23487143

Showing 1 to 2 of 2 entries

Previous 1 Next

Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

This Journal is indexed in :
- University Grants Commission (UGC) List No. 40705 & 44117
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- Universal Impact Factor (UIF)
- International Impact Factor Services (IIFS)
- Indian Citation Index (ICI)
- Dictionary of Research Journal Index (DRJI)

RESEARCH JOURNEY
MULTIDISCIPLINARY ONLINE RESEARCH JOURNAL

SWATIDHAN PUBLICATIONS

For Details Visit To : www.researchjourney.net

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) –0.676 (2013)
Special Issue 58 :
UGC Approved No. 40705 & 44117

ISSN : 2348-7143
April 2018

INDEX

Our Editors have reviewed paper with experts' committee, and they have checked the papers on their level best to stop furtive literature. Except it, the respective authors of the papers are responsible for originality of the papers and intensive thoughts in the papers.

- Executive Editor-

Published by -

© Mrs. Swati Dhanraj Sonawane, Director, Swatidhan International Publication, Nashik
Email : swatidhanrajs@gmail.com **Website :** www.researchjourney.net **Mobile :** 9665398258

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 58 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

Educational Exhibition: The Effect of Sponsorship and Various Promotional Activities on Visitors': Brand Recall, Attitude and Purchase Intention

Mr. Prashant .G. Kale
PhD Scholar,
Shivaji University, Kolhapur.
Dr. M.M.Ali,
Director,
CSIBER, Kolhapur.

Abstract

The number of Educational institutes sponsoring educational exhibitions has increased from last past decade. Yet, for many educational institutes it is unclear how the effectiveness of theeducational exhibition sponsorship is should be evaluated. Evaluation based on the number of visitors will not be appropriate measure.Good media coverage isvery essential but not sufficient. The appropriate measure of evaluating the educational sponsorships are higher brand recall, positive attitude change, higher level of purchase intension toward the sponsors. These factors are an appropriate measure for evaluating educational exhibition sponsorship. The main purpose of this study is to analyze the effectiveness of educational exhibition sponsorship on the visitors brand recall, attitude and purchase intention toward the sponsors.

Key Words - Educational exhibition sponsorship, Brand Recall, Attitude toward sponsors, purchase intention toward the sponsors.

Introduction

Now day's Indian educational market is more customer (student) driven market. In customer driven market, service provider should clearly understand a need, want of customer/ prospect. For understanding customer expectation, need, want and demand, Educational Institutes need to interact with customer/prospect. Sponsoring educational exhibition is the best way to interacting with your potential customer/prospect. A unique specialty of the educational exhibition as compared to other IMCactivities (advertising, public relation) is that educational exhibition offers opportunities for personal interaction with target segment (students & their parents) and understand their needs, wants and demands.

Sponsorship can offered marketers the opportunities for addressing new target audience, for building their brands, and for enhancing their corporate image. (Ferkins and Garland, 2006). Qualitative research finding clearly substantiate the proposition that sponsorship's ability to generate positive consumer brand attitude can be powerful and lasting. (Meenaghan 1999). Educational exhibition sponsorship is still a new IMC activity for many educational institutes and they are unclear about how the effect of sponsorship activities and their relation to other communication mix should be measured.

The purpose of this study is to examine outcomes associated with the educational exhibition sponsorship. It investigates 1) Brand recall of the title sponsor, co-sponsor. 2) How experience with the sponsor's services during the exhibition influences visitors' brand attitude and brand purchase intensiontoward sponsors. 3) Impact of IMC activities on the sponsor's brand recall, brand attitude and brand purchase intension.

Aarhat Publication & Aarhat Journal's

AARHAT MULTIDISCIPLINARY INTERNATIONAL EDUCATION RESEARCH JOURNAL

Peer Reviewed Multidisciplinary Research Journal
ISSN- 2278-5655

Online and Print Journal

Impact Factor: 5.18

UGC Approved Journal No 48178, 48818

Vol VII

Special Issues No X

Chief Editor

Dr.D.N.Valvi

INDEX

CSR : SMES RESPONSIBLE BEHAVIOUR TOWARDS SUSTAINABILITY

Mrs. Pushpa Kashi*
Dr.Sarang Bhola**

ABSTRACT

The purpose of this paper is to investigate understanding of CSR and attitude toward sustainability of small and medium-sized enterprises (SMEs). A case study approach is used to investigate the CSR present scenario, SMEs contribution in economic growth, drivers of CSR activities,barriers in effective implementation and benefits of CSR for SMEs. Furthermore, the paper argues that SMEs and their CSR activities are often limited due to a lack of resources and management skills. That's why overall CSR impact on business performance remains paltry. If again willing to do so,it actually becomes a profit-sacrificing activity.

INTRODUCTION

Social and environmental issues are becoming more important in global and local value chains. The concept of Corporate Social Responsibility over the years changed depending upon nature and size of it The changes in social, political, economical and legal environments has. It has been followed as CSR like charity, development of educational institutions, donations to hospitals and temples. With respect to human rights and all inclusive development it requires to produce qualitative products up to the mark of international standards, adherence of laws relating to the business, etc. Small and Medium Enterprises (SMES) have played a crucial role in India's economic growth.

SME'S CONTRIBUTION TO INDIAN ECONOMY

India has the second largest number of SMES in the world, after China,i.e. near to 48 million, contributing 40% of exports in India. Contribution towards employment remains almost half. SMES play a critical role in generating millions of jobs, especially at the low-skill level. SMES have a much wider spread, hence a wider reach across communities. It can be seen that the geographical reach through SMES is vastly higher than through the larger enterprises.

CSR FOR SMALL AND MEDIUM ENTERPRISES (SMES)

The significance of Corporate Social Responsibility is given as a strategy whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders. Further supports that for an organization to be sustainable, it must be financially secure, minimize (or ideally eliminate) its negative environmental impacts and act in conformity with societal expectations.(UNIDO website)

Schumacher said, "Small is Beautiful"

It becomes important to appreciate interconnection of social and environmental impacts. The two are related and have to be treated as one by everyone, whether an individual, small enterprise or large enterprise. There is need of SMEs to realise that CSR is not just about spending money. The excuse of being small will keep away SMEs from mainstream and will prevent becoming world class .

It is crucial that India works towards making the smaller enterprises CSR compliant as being strong engines of economic growth and generators of millions of jobs, especially at the low-skill level. It will help bring CSR into the mainstream successfully.

UNIDO encourages organisations further that" A properly implemented CSR concept can bring along a variety of competitive advantages, such as enhanced access to capital and markets, increased sales and profits, operational cost savings, improved productivity and quality, efficient human resource base, improved brand image and reputation, enhanced customer loyalty, better decision making and risk management processes".

DRIVERS OF CSR

SMEs can engage with CSR for following reasons:

- Not only being providers of goods and services to large companies but can maintain relations with public as employers as in their own rights.
- By nature these are more closer and impersonal to their stakeholders like customers, employees and neighbours .
- Providing incentives to the handful of employees wherein all activities of organisation are relied can prove responsible labour practices.
- Another strong driver is based on a sense of rootedness within a particular community or geographical location, or other social and cultural norms and expectations of owner-manager, they are often engaged in philanthropic activities, e.g. donations to local charities and religious organisations, or sponsorship of cultural or sporting events rather than the core activities of business.This may prove to be driver for CSR activities getting embodied into basic business activities.

BARRIERS FACED BY SMALL AND MEDIUM ENTERPRISES (SMES)

Issues around for CSR for SMEs are essentially the same as for larger companies. But CSR becomes more challenging for smaller businesses as in lack of required skills resources.

Common barriers involved are:

• Absence of motivation

• Insufficiency of resources/capabilities
• lack of knowledge regarding local needs
• lack of vision that community involvement can bring sustainable business
• Scarcity of time
• Absence of required know- how of engagement in CSR or inability in finding out suitable opportunities

BENEFITS TO SMALL AND MEDIUM ENTERPRISES (SMES)

Business benefits of CSR are the same for firms of all sizes.. But, small businesses in particular may be interested in to win contracts from larger businesses being great CSR policy practitioners and their adherence to certain ethical standards. It provides an enhanced reputation, and lower long-run costs and enhanced reputation. Following are few more benefits like:

- Develops and enhances relationships with suppliers and networks
- Wins new business and increases customer retention
- Attracts, retains and maintains a happy workforce
- Saves money on energy and operating costs and manage risk
- Investment and funding opportunities

DISSCUSSION AND CONCLUSION

Some of SMEs are untouched by and unaware of mainstream CSR at all,contributing towards the society at owner manager's discretion. Many of them are doing at the other end of supply chain imposed by large enterprises to meet the global standard wherein the lack of support from the latter. It needs switching from informal approach towards CSR to more authentic and specific one(McElhaney, 2007)

In the coming days, SMEs may become main source of large companies operating in developing countries ,there they will need to work on the theme of CSR agenda and are to be responsible ones being at other end of business link with their own social and environmental impacts.

References:

Kellie McElhaney, "“Strategic CSR”," Sustainable Enterprise Quarterly, Volume 4, Number 1, pp. Pages 1– 3, 2007.

Donald V. and Martin, Patrick R., Moser, "“A Broader Perspective on Corporate Social Responsibility Research in Accounting”," The Accounting Review, Volume 87, Number 3, pp. Pages 797–806, 2012.

Website:www.unido.org

Vol 6, No 6 (2017)

Abhinav-International Monthly Refereed Journal Of Research In Management & Technology(Online ISSN 2320-0073)UGC approved

UGC approved serial No in the UGC list 11749

Table of Contents

Articles

Volume 6, Issue 6 (June, 2017) UGC APPROVED Online ISSN-2320-0073

Published by: Abhinav Publication

Abhinav International Monthly Refereed Journal of Research in *Management & Technology*

IMPLEMENTATION OF HUMAN RESOURCE INFORMATION SYSTEMS: POSSIBLE PITFALLS AND HOW TO AVOID THEM

Madhura Karan Mane[1]
Asst. Professor, Management
CSIBER, Kolhapur, India
Email: mkmane@gmail.com

Dr. R.D. Kumbhar[2]
Asst. Professor, Management
KBPIMSR, Satara, India
Email: rdk17@rediffmail.com

ABSTRACT

A HRIS, which is also known as a Human Resource Information System or Human Resource Management System (HRMS), is basically an intersection of human resources and information technology through HR software. This allows HR activities and processes to occur electronically. Though the organization may invest in Best-of –Breed software, or even develop one, proper implementation of HRIS is crucial as it decides the success or failure of the system. There are several steps in implementation process and studies show that organizations come across various pitfalls in implementation process. These need to be handled meticulously or can jeopardize the entire project.

Based on the available literature, the author has identified common pitfalls in implementation process ad developed a generic 'ACCEPT' model that largely tackles all the commonly identified pitfalls in implementation of HRIS.

Keywords: HRMS,HRIS

INTRODUCTION

A HRIS, which is also known as a human resource information system or human resource management system (HRMS), is basically an intersection of human resources and information technology through HR software. This allows HR activities and processes to occur electronically. A HRMS (Human Resource Management System) or HRIS (Human Resource Information System) is a form of HR software that combines a number of systems and processes to ensure the easy management of a business's employees and data. These systems could deal with everything from payroll to performance evaluation, covering the whole business.

Human Resource Information Systems provide a means of acquiring, storing, analysing and distributing information to various stakeholders. According to Chugh, R (2014) HRIS enable improvement in traditional processes and enhance strategic decision making. Chugh, R (2014) states that the wave of technological advancement has revolutionized each and every space of life today, and HR in its entirety was not left untouched. Early systems were narrow in scope, typically focused on a single task, such as improving the payroll process or tracking employees' work hours. Today's systems cover the full spectrum of tasks associated with Human Resources departments, including tracking & improving process efficiency, managing organizational hierarchy, and simplifying financial

IJIS February 2018 Issue

International Journal of Information Systems – ISSN: 2229-5429 – Vol. VIII, Issue II, February 2018

APPRAISING ASSIMILATION OF KPI DASHBOARD IN HUMAN RESOURCE INFORMATION SYSTEM WITH REFERENCE TO BALANCED SCORECARD

Mrs. Madhura K. Mane
Asst. Professor,
Ph.D. Scholar,
CSIBER, Kolhapur
Email: mkmane@gmail.com
Mobile: 9923283233

Dr. R.D. Kumbhar
Asst. Professor,
Ph.D. Guide,
KBPIMSR, Varhye Campus, Satara.

ABSTRACT –Human resource management is about the procedures and practices that encompass the human resource aspect within organizations (Dessler and Al Ariss, 2012). With the growing importance attached to HRM being a strategic partner, it is only imperative that more and more research is stimulated in the field of Human Resource Information System or HRIS. HRIS is a computerized system typically comprising a data base or inter related data base that track employees and their employment specific information (Gill and Johnson, 2010). Digital dashboards have become an integral component of HRIS, which provide real-time information, mostly in graphical format to executives to make strategic decisions in HRM. Different authors have identified different KPIs for evaluating performance of HR department that help in strategic HRM. The paper attempts to appreciate Digital Dashboard in HRIS with reference to KPI in strategic HRM using Balanced Scorecard concept.

KEYWORDS: HRIS, Digital Dashboard, KPI, Strategic HRM, Balanced Scorecard.

I. INTRODUCTION:

Human Resource Management is about the procedures and practices that encompass the human resource aspect within organizations (Dessler and Al Ariss, 2012). With the growing importance attached to HRM being a strategic partner, it is only imperative that more and more research is stimulated in the field of Human Resource Information System or HRIS. HRIS is a computerized system typically comprising a data base or inter related data base that track employees and their employment specific information (Gill and Johnson, 2010). HRIS can be briefly defined as integrated systems used to gather, store and analyze information regarding an organizations human resources (Hendrickson 2003).

Many studies came out with many functions that represent an HRIS. For example, HRIS functions include corporate communication, recruitment, selection, training, employee opinion survey, compensation, payroll services and employee verification as well as general staff related information and demographics (Ngai and Wat, 2006; Beulen, 2009; Holincheck et al.,2007).

Human resource information system acting on more sophisticated information expert systems mainly support decision-making in managing human skills (Ostermann, H., Staudinger, B.,& Staudinger, 2009), (Nishad Nawaz, 2014). The use of human resource information system would allow for the human resource function to become more efficient and facilitate better information for decision making (Beadles, Lowery, Johns, Aston, & Ii, 2005), (Nishad Nawaz, 2014).

Usage of Information Technology has increased the effectiveness and efficiency of modern organizations and Human Resource Information System (HRIS) has become an inseparable part of modern organizations (Kapoor, 2012), (Nishad Nawaz, 2013b), (Nishad Nawaz and Anjali, 2012).

It is the requirement of HR executives to have real-time information about key aspects of HR on daily basis. Dashboard in Information Systems is a concept that helps in fulfilling this need to executives. Dashboards can be broken down according to role and can be strategic, analytical or

Operational, (Few S. 2006). Strategic dashboards support managers at any level in an organization, and provide the quick overview that decision makers need to monitor the health and opportunities of HR in the company. Dashboards of this type focus on high level measures of performance, and forecasts. Strategic dashboards benefit from static snapshots of data (daily, weekly, monthly, and quarterly) that are not constantly changing from one moment to the next. Dashboards for analytical purposes often include more context, comparisons, and history, along with subtler performance evaluators. Analytical dashboards typically

ISSN 2277- 8063

June 2017

Vol. VI / Issue - II / 2017

Navjyot

नवज्योत

International Interdisciplinary Research Journal
[Humanities, Social Sciences, Languages, Commerce & Management]

Chief Editor
Dr. Ravindra P. Bhanage
Prof. Dept. of Political Science,
Shivaji University,
Kolhapur.

Editor
Dr. Pyarelal Suryawanshi
Prof. Rajabhau Deshmukh
Mahavidyalaya,Nandgaon (kh)
Dist. Amravati

- Published by -
HOUSA Publication, Kolhapur

 ISSN 2277-8063

CONTENTS

A STUDY OF MICRO FINANCE AND AGRICULTURE

Miss. Punam Ravindra Naik Research Scholar Department of Economics Shivaji University.
Dr. Vishakha Apte ,Prof. General Management MBA Program. CSIBER, Kolhapur

Abstract – The study examined the role of microfinance Institutions in financing agriculture in India. In this paper focused on To study the Micro finance Institutions in India, To find out Challenges facing by Indian microfinance sector, To understand the progress of SHGs in Micro Finance , To study the relationship between Micro finance and Agricultural In conclusion In order to expand the outreach of agricultural microfinance and establish best practices, more careful research and pilot-testing of innovative microfinance products and services that aim at solving specific constraints of farming households are needed. Any way India is always depending up on rural area development. Suppose the rural area will develop automatically nation will grow faster way, many economist to find out the what types of rural planes Indian villages need , with the help of scientific establishment of microfinance is possible to remove the village poverty.

Introduction : A range of institutions in public sector as well as private sector offers the microfinance services in India. They can be broadly categorized into two categories namely, formal institutions and informal institutions. The former category comprises of Apex Development Financial Institutions, Commercial Banks, Regional Rural Banks, and Cooperative Banks that provide microfinance services in addition to their general banking activities and are referred to as microfinance service providers. On the other hand, the informal institutions that undertake micro finance services as their main activity are generally referred to as Micro Finance Institutions (MFIs). While both private and public ownership are found in the case of formal financial institutions offering microfinance services, the MFIs are mainly in the private sector. The microfinance service providers include apex institutions like National Bank for Agriculture and Rural Development (NABARD), Small Industries Development Bank of India (SIDBI), and Rashtriya Mahila Kosh (RMK). At the retail level, Commercial Banks, Regional Rural Banks, and, Cooperative banks provide microfinance services

The Emergence of Private Microfinance Industry : The microfinance initiative in private sector can be traced to the initiative undertaken by Ms. Ela Bhat for providing banking services to the poor women employed in the unorganised sector in Ahmedabad City of Gujarat State. Shri Mahila SEWA (Self Employed Women's Association) Sahakari Bank was set up in 1974 by registering it as a Urban Cooperative Bank. Since then, the bank is providing banking services to the poor self-employed women working as hawkers, vendors, domestic servant etc. As on March 2010, the bank had a membership of 67,000. The deposit and loan portfolio stood at Rs 1050.49 million ($ 22.83 million) and Rs 466.69 million ($ 10.14 million) respectively. Though the bank is making profit, yet the SEWA bank model has not been replicated elsewhere in the country.

Objectives of The Study:

1. To study the Micro finance Institutions in India
2. To find out Challenges facing by Indian microfinance sector
4. To understand the progress of SHGs in Micro Finance
4. To study the relationship between Micro finance and Agricultural

Research Methedology: Data Collection- The present study aims to examine study the Micro finance Institutions in India, the relationship between Micro finance and Agricultural The analysis is mainly based on secondary sources of the data. The secondary data collected from the books, journals, NABARD publication, library and Internet etc.

Scope: The present study relates to Micro finance and Agriculture This study covers SHGs, Legal form of Micro Finance, Challenges before Micro Finance.

Limitations: The researcher has not gone through the primary as the first hand data was not available in time and it was not suitable also. Some relevant factors could not be attended due to paucity of time. The results of the analysis are based entirely on secondary data

Micro Finance Institutions In India: While financial services in India can be traced to the era of Kautilya in the fourth century BC the age of organized sector finance in India is generally acknowledged to have started with the Cooperative Credit Societies Act of 1904. The true expansion of financial services in India started with the nationalization of all banks in the country during the late 1960s. Micro finance is the provision of financial services to low- income poor and very poor self employed people

ISSN 2277-8063
Navjyot / Vol. VI / Issue – II

Microfinance Institutions Generally have the Following Characteristics:

1. Providing small loans for the working capital requirements of the rural poor.
2. Minimal appraisal of borrowers and investments as compared to commercial bank.
3. No collateral demanded; however, these institutions impose compulsory savings and group guarantees.
4. Based on loan repayment history of the members, microfinance institutions extend large loan to the members

The progress of the microfinance programme is given in Table No 1

Table No: 1 The progress of the Microfinance Programme(Rs in crore)

Sr. No.	Particulars	2007		2009		2010	
		No	Amount	No	Amount	No	Amount
1	Loan Disbursed	334	1,151.56	581	3732.33	779	10728.49
2	Loan Outstanding	550	1,584.48	1915	5009.09	1659	13955.74

Source- Source- Annual Report of NABARD, 2006-07, 2010-11, Mumbai.

It is clear from above table No 1, the progress of the microfinance programme there is tremendous increasing trend of micro finance programme in Loan Disbursed as well as Loan Outstanding

Legal form wise MFIs in India: Microfinance is intended to cater to the financial needs of the poor. Its key features include loans in small amounts which are non-collateralized and paid weekly, and provisions for savings and capital build-up. The weekly payment has proven to be feasible specifically in the informal economy of the urban setting more than in the rural areas. In the following table No 2, The MFIs in India can be broadly sub-divided into three categories of organizational forms.

Table No 2 -Legal form wise number of MFIs

Type of MFI	No	Share	Legal acts under which registered
Mutual Benefit MFIs			
Cooperatives	3	0	State Cooperative Societies Act
Mutually Aided Cooperative Societies	445	57	Mutually Aided Cooperative Societies Act enacted by the State Governments.
Sub total	**448**	**57**	
Companies			
Non Banking Financial Companies	24	3	Indian Companies Act, 1956 The Reserve Bank of India Act, 1934
Section 25 Companies	9	1	Section 25 of the Indian Companies Act, 1956
Sub Total	**33**	4	
NGO-MFIs			
Societies	199	25	Societies Registration Act, 1860 or similar Provincial Acts.
Trusts	106	13	Indian Trust Act, 1882
Sub total	**305**	**39**	
Totals	**786**	**100**	

Source- www.nabard.org/microfinance/mf_institution.asp

Microfinance and Agriculture : In many developing countries, the majority of poor people reside in rural areas and are dependent on agriculture, especially crop agriculture, for their livelihood. These agriculturalists confront climatic and price risks, seasonality demands and surpluses of labour and capital and often live in areas that are hard to address with financial services.

Microfinance institutions (MFIs) which are more socially driven could be good providers of agricultural finance and services to small producers. This is due in part to the fact that their financial services are often linked with the training and other support services that they provide, either directly or through linkages with other organizations. However, for a majority of MFIs, the reality is that their models are not very different from traditional microfinance, which tends to be very small, short term loans and frequent repayments, whereas agricultural producers mostly need longer term loans, often with grace periods on the basis of the production cycles. In other words, traditional credit products of MFIs are not well adapted to agriculture. For example, one MFI in Honduras indicated that all its loan obligations

ISSN 2277-8063

had to be paid monthly, so they could not offer anything that did not require a monthly type of repayment as a minimum

In order for microfinance organizations to venture into crop agriculture, it is important to understand the context of crop agriculture and their potential role in it. Agricultural microfinance is not business as usual but requires a different approach from that typically applied in many microfinance organizations. As described later, on the client side, there are generally much lower returns to capital, slower velocity of capital, higher uncontrolled risks and less understanding of finance and business.For the institutions, operating costs are higher as clients are less concentrated, production and market risks are systemic, and the physical infrastructure for services and communication is lacking. There is a higher susceptibility to interest rates given the lower velocity of capital, and there is a higher political risk of intervention. On the positive side, rural communities have a more established social structure and stability upon which to build. Secondly, new information and communication technologies, improved market integration systems and new or adapted financial products and approaches are opening the opportunities for microfinance institutions to better serve smallholder crop producers. Agricultural finance, especially for crops, is critical to boost food production and help address food security in the world and also to address the livelihood needs of the poor, a majority of whom depend upon agriculture for their sustenance. Yet conventional approaches to agricultural finance from development banks have been difficult, commercial banks have shied away due to perceived risks and costs and microfinance institutions with their relatively high cost, short term microcredit did not offer a solution. Today, agriculture has become more market-linked, microfinance institutions have evolved, strategic partnerships have increased opportunities, and new technologies and approaches to reduce cost and risk in agricultural microfinance have been developed. Understanding and applying these in the design and implementation of microfinance, financing crop agriculture for low-income households can be successful, sustainable and help address food and livelihood security.

Specificities of Agricultural Finance : The agricultural sector is different from other economic sectors in a number of ways. Activities are generally located in isolated areas with low population density and poor infrastructure4. They are dependent on weather and production cycles; income is seasonal and monetary income is limited. Agricultural prices are notoriously volatile and few farmers can offer guarantees that are legally or financial acceptable.These specificities demand financing mechanisms adapted to the diverse needs and services of rural households (Wampfler and Lapenu, 2002):

Short-term: input financing at the beginning of the crop year (seeds, fertilizers, pesticides), additional labor, feed, storage facilitates, processing, etc.

Medium and long term: equipment for intensification, commercialization (transportation), storage (buildings), perennial crops (investment, renewal, maintenance), (re)constitution of herds, land purchase.

Family needs: personal, durable goods, housing.

Savings Non-financial services: monitoring demand, technical assistance and extension.

Understanding how to best meet these financial needs and finding ways to mitigate the risks associated with them are added challenges that further hinder the expansion of financial services for agriculture. Moreover, as microfinance is increasingly integrating into conventional financial markets, the sector has no choice but to apply cost-covering interest rates. Such rates often contradict the expansion of rural coverage and agricultural finance due to the low profitability of the activities financed. All these factors explain the relative lack of interest in agriculture on the part of urban and semi-urban zones. Consequently, liberalized markets coupled with contractual innovations—elements promoted under the new paradigm—have not fulfilled their promises vis a vis rural and agricultural finance.

The Role of Shgs in Micro Finance: NABARD is instrumental in facilitating various activities under micro-finance sector at the ground level, involving all partners, viz., NGO, bankers, socially spirited individuals, other formal and informal entities and even government functionaries. This is done through training and capacity building of partners, promotional grant assistance to Self Help Promoting Institutions (SHPI), Revolving Fund Assistance (RFA) to Microfinance Institutions (MFI), equity/Capital Support (CS) to MFI to supplement their financial resources and 100 per cent refinance against bank loans for micro-finance activities. The SHG-Bank Linkage Programme launched by NABARD in 1992 continues to be the predominant Micro-Finance (MF) model in the country. It is a proven method of financial inclusion, providing unbanked rural clientele with access to formal financial services from the existing banking infrastructure

ISSN 2277-8063

Table 2.4: Progress of the Self Help Group (As on 31 March) (`Rs. in crore)

Sr. No	Particulars	2007		2009		2010	
		No	Amount	No	Amount	No	Amount
1	Loan Disbursed	1105749	6570.39	1609586	12253.51	1586822	14453.30
2	Loan Outstanding	2894505	12366.49	4224338	22679.84	4851356	98038.28
3	Saving A/C With Banks	4160584	3512.71	6121147	5545.62	6953250	6198.71

Source- Annual Report of NABARD, 2006-07, 2010-11, Mumbai.

Above table No. Indicates that Progress of the Self Help Group from 2007 to 2010. Loan disbursed by SHGs was Rs. 6570.39 in 2006-07 which increase Rs. 14453.30 in 2010. On the other hand, Loan outstanding also increases by SHGs which was Rs. 612366.49 in 2007 which increase Rs. 98038.28 in 2010.

Challenges Facing The Indian Microfinance Sector

1. **Requirement of deposit services –** There are limited deposit services available for the poor in India. Under the SBLP, group savings accounts are opened in local banks, but these are used primarily for internal group lending, though with access to savings on exit. MFIs find it difficult to offer this service due to regulatory restraints. NBFCs hold a major chunk of the outreach and portfolio but are not permitted to accept member savings as deposits thereby leaving a large proportion of their clients (virtually all low income families around or below the poverty threshold) without access to this service.
2. **Deepening of outreach –** Unless SHPAs and MFIs know the depth of their outreach to clients below the poverty line (and different poverty lines) it will be difficult for them to address any issues related to the poor. In the fast paced growth of the sector it is particularly important to analyse if microfinance services providers are reaching down to those most in need and those not serviced by formal financial institutions. This is the common mandate (by and large) of most microfinance service providers and as tools have become available to measure poverty levels, the challenge is for institutions to define their target outreach more clearly, effectively segment their market and respond with appropriate products.
3. **Social performance management and reporting –** Whilst financial performance management and reporting has developed across the sector, with consensus on key indicators and ratios, the development of social performance management is just beginning. This is seen at the international level to be increasingly important, to ensure that microfinance meets its social goals as a double (or triple) bottom line sector. It will require some reorientation and skill building, to encourage SHPAs and MFIs to go beyond the numbers to ensure quality services with consistent management and reporting.
4. **Sector slow down due to global economic crisis –** The global economic crisis has affected all sectors across countries and continents. Smaller MFIs face problems in obtaining debt funds from banks and find it difficult to maintain liquidity. The liquidity risk has the potential to hamper refinancing of existing clients, leading to the risk of a rise in the current default rate.
5. **Capacity building –** Capacity building and improving understanding of techniques for improving microfinance management is the key to effective microfinance operations and eventually for achieving the objective of financial inclusion with social value. The effective bridging of capacity building gaps requires regular intervention in a number of areas like keeping pace with the fast growth of the sector, geographical spread and diversity and local language constraints. The high attrition rate of MFI staff is also a challenge often inhibiting MFI managements from investing in staff capacity.
6. **Regulation –** Regulatory movement with regard to microfinance has been slow and debates are still underway – as to which institution should be entrusted with regulatory supervision of the sector, and how to regulate the new NBFCs which serve a substantial majority of MFI clients.
7. **The problem of multiple lending –** With an increasing number of MFIs and expansion of operations, the issue of overlapping membership and potential over-indebtedness is beginning to emerge, particularly in certain areas of the country. This is an area that needs more research, and clearer guidelines for the sector on appropriate practice.

Conclusion: The Indian microfinance sector has grown by leaps and bounds during the first decade of the 21st century. A lot of changes have been witnessed during the last ten years on how the microfinance institutions function. Many transformed to for-profit legal forms (NBFCs) and the MFIs continue their efforts to become more efficient and productive. However, in the quest for growth and expansion somewhere the essence of microfinance reaching out to the agriculture has lost its focus. Practitioners and the national government in India are growingly interested in expanding agricultural microfinance. However, due to the unique and uncontrollable risks that farmers face, it is inherently risky for financial institutions to provide financial services to agricultural households.

In order to expand the outreach of agricultural microfinance and establish best practices, more careful research and pilot-testing of innovative microfinance products and services that aim at solving specific constraints of farming households are needed.

Any way India is always depending up on rural area development. Suppose the rural area will develop automatically nation will grow faster way, many economist to find out the what types of rural planes Indian villages need , with the help of scientific establishment of microfinance is possible to remove the village poverty.

References-

1. Nayakara Honnurswamy, Malappa Dandgund,(2012), "Role of Microfinance on Poverty Reduction in Rural India" Indian Streams Reserach Journal, Vol.2,Issue.II/March; 12pp.1-4
2. Calvin Miller, (2011)" Microcredit and Crop Agriculture: New Approaches, Technologies and Other Innovations to Address Food Insecurity among the Poor", 2011 Global Microcredit Summit Commissioned Workshop Paper
3. S.C.Vetrivel1& S. Chandra Kumarmangalam,(Dec 2010) "ROLE OF MICROFINANCE INSTITUTIONS IN RURAL DEVELOPMENT", International Journal of Information Technology and Knowledge Management, Volume 2, No. 2, pp. 435-441
4. Frances Sinha (2009), "State of Microfinance in India" Institute of Microfinance (InM)
5. Solène Morvant-Roux, (2008), "What Can Microfinance Contribute to Agriculturein Developing Countries?
6. Lesaffre D., 2000, A propos de l'offre et de la demande de financement du monde rural en Afrique del'Ouest, Lomé, BOAD, July 2000.
7. Adams, Dale W, Douglas H. Graham, and J. D. Von Pischke, (eds.) (1984) Undermining Rural Development with Cheap Credit, Westview Special Studies in Social, Political and Economic Development series, Boulder, Colo., and London: West view Press.
8. Richard L. Meyer, "Microcredit and Agriculture: Challenges, Successes, and Prospects"retrived from Internet.
9. http://www.nabard.org/roles/microfinance/
10. Annual Report of NABARD, 2006-07, 2010-11, Mumbai.
11. www.nabard.org/microfinance/mf_institution.asp

ISSN 0974-763X

SOUTH ASIAN JOURNAL OF MANAGEMENT RESEARCH

(SAJMR)

Volume 9 Number 2 July 2017

CONTENTS

KOLHAPUR
योजकस्तत्र दुर्लभः
CHHATRAPATI SHAHU INSTITUTE OF BUSINESS EDUCATION & RESEARCH

Chhatrapati Shahu Institute of Business Education and Research (CSIBER)
(An Autonomous Institute)
University Road, Kolhapur- 416 004 Maharashtra State, India.

CASE STUDY

The Best Way To Go International- Caspro Group of Industries, Kolhapur.

Mrs. Revati R. Patil
Assistant Professor,
CSIBER Kolhapur

Dr.Bindu Menon
Associate Professor,
CSIBER Kolhapur

Late Shri Chunilaji Rathod 2nd grandfather of Shri Prakash Rathod shifted with his family from Rajasthan to Pune during Pre-independence period , to start a family business of selling pots, utensils and pans for living. His son Ambalaji was helping him since his school days. Ambalal to be an who later completed his Diploma in Metallurgy from Pune University. As in those days metallurgists had no job opportunities in Pune and on the other hand foundry business in Kolhapur was flourishing, so Ambalalji came to Kolhapur in 1964 and soon got a job at Ghatage Patil Industries. He worked for years and left the company as a development manager in 1974. During these days his dream was to become an entrepreneur.

In 1977, he established his own foundry 'Castwell Metal Industries at MIDC shiroli, Kolhapur with three partners. Due to the loss of the company other partners decided to quit the company. Thereafter he carried the operation with his brother Sakalchandji. Ambalaji carried the production, quality, sales and marketing and his brother was shouldering responsibility of finance and commercial.

Ambalaji had three sons Prakash, Vijay and Mahendra. Mr.Prakash was interested to join the business after his 10th standard but his father had dreamt for Prakash to be an engineer. He completed his engineering in Metrological Engineering from Dayanandsagar College of Engineering Bangalore in 1983 and was willing to join his father's business but his father had dreamt for him again! His father advised him to join Force Motors, Pune, to have job experience. (The reason behind this was to make him experience the pain being an employee.) In Force Motors , he handled production, tool room, design sheet metal departments as lifetime learner.

In 1989 Shri Ambalalji established Rathod industry and asked his son Shri Prakash to take its responsibilities. In 1992 Prakash Rathod launched Caspro Export - the export division of Rathod Industry collaborated with Germany's Deutz which has spread its business in five nations and had seven big companies under its fleet.

In a true sense 1978 to 1992 was cultivating period of Rathod's to create their empire by putting handwork, sincerity and quality. Shri Prakash Rathod due to his work assignments has visited many foreign countries. As a result he got acquainted with latest technical knowledge which invited in him the burning desire to make his company one of the world class from all technical aspect. This began by bringing hismachine shops under one roof and established Ambalal Chunilal Rathod (ACR) Machines in 2008.

Mr.Prakash Rathod started to export his products to foreign countries including USA, Germany, Japan, France and Italy. To do away with the scarcity of skilled workers, a Robot was established in the company. He is also shouldering the duties as the director of Indo-Japanese Association. He is of caring nature especially to his staff of all grades. This includes free distribution of educational aid, picnics, medical aid etc. Moreover by considering agricultural back ground of workers; 'four shift' system was introduced. The staff members can get assistance of Rs.5 lacs through the company fund for medical purposes.

" That's the power of a small dream to do big and achieve more."

Shared Vision, Mission, Values and Goals:

In the scenario wherein, technology is playing dominant role, bureaucratic organization structures have lost their relevance. Resources are available for seamless flow of communication and transactions, with this background, the vision initiated by the company to be world class:

"To become world-class casting manufacturing unit by optimizing resources through operational excellence, technology up- gradation."

"Continuous improvement of human resources environment, technology and product to meet market needs."

Survival with Challenges:

Foundry business was in an uncertain phase and found it difficult to plan for production. Sudden requirement of suspension by customers, lack of skilled workforce to supply castings with acceptable quality, company planned to tackle the issues by providing training (on-the-job and class room) make them competent to produce desired quality. The learning outcomes are multi skilling, latest products and technology.

ACR machines is a big Indian machine shop industry in the field of spare parts exports and leading world class company with all machine shops under one roof. Their core specialty is totally automated systems and hydraulic of all nature. Most of the functions of casting manufactured are upgraded, with technology and quality systems time to time in order to satisfy customers. They aimed at preventing defects and continual improvements in all processes of quality management system. They have installed first robot to overcome scarcity of skilled workers. Now they are working on second Robot and planning for third one. All three Robots will be working together soon.

The core strength of the company is its domain knowledge in spare parts has always been at the forefront to adopt latest technologies. They have updated their system to the latest technologies in melting, pouring, molding and quality control.

The core differentiator for the company are it's totally automated export division which used extensively software and hardware for ensuring instant feedback and correction systems using mobile and internet connectivity. This totally integrated with an online information management and analytics.

Behind all these actions, Shri Prakash Rathod was clear about his top level managers are carrying minimum experience of 20 years in their respective fields. The average age of the management staff is not more than 38 years.

The management is very much focused on having the latest technology available in the world for production and quality control. He believed as we have built up a reputation of being a quality supplier, we have most of the customers as walk in or repetitive. He claimed, we have a friendly relationship with our employees. As a result all our export key areas are America, Germany, Japan, France and Italy. Our domestic customers are Mahindra Group, Force Motors, Breaks India Ltd., and other big Indian group of industries.

Be International and enjoy the world!

1.Situational analysis through urgent attention on main area, e.g. lack of skilled work force

2.New management approachof building young and energetic workforce to fulfill qualitative and competitive requirements of customer.

3.Being a quality supplier in spare parts the company has adopted new marketing strategy to supply castings to various segments with existing and alternative material.

4.Human Resource initiatives through training multiskilling, adoption of 5s, TQM and Lean Techniques.

5.While journey towards world class quality supplier the company have adopted Green Organization concept to wipe out fume and dust occurring from melting and sand preparation. To minimize the pollution in foundry, Fume and Dust Extraction Systems, STP/ETP and Rain Water harvesting systems have installed.

6.ACR have updated their system to the latest technologies to streamline operational and technological advancement in the following areas:

a)Melting : Installed 1 GBT induction furnace for faster melting rate with reduced power consumption.

Installed Energy Master System for induction furnace to capture and analyse power consumption

b)Pouring:-Use of optical pyrometer for accurate control on pouring temperature.

c)Quality:-Use of 3D Scanner from GOM,Germany for dimensional inspection of castings and pattern equipment.

d)Molding Sand Control:-Use ofdigital testing equipment for Greencompression strength, moisture, wet ten sitestrength.

7.The company currently had cost cutting policy Introduction of automation and robotics to reduce manpower.

Reduction in rejection by implementing quality systems. Training workers to get the best out of the technology and system.

Use power saving equipment and save water and electricity to reduce the overall cost

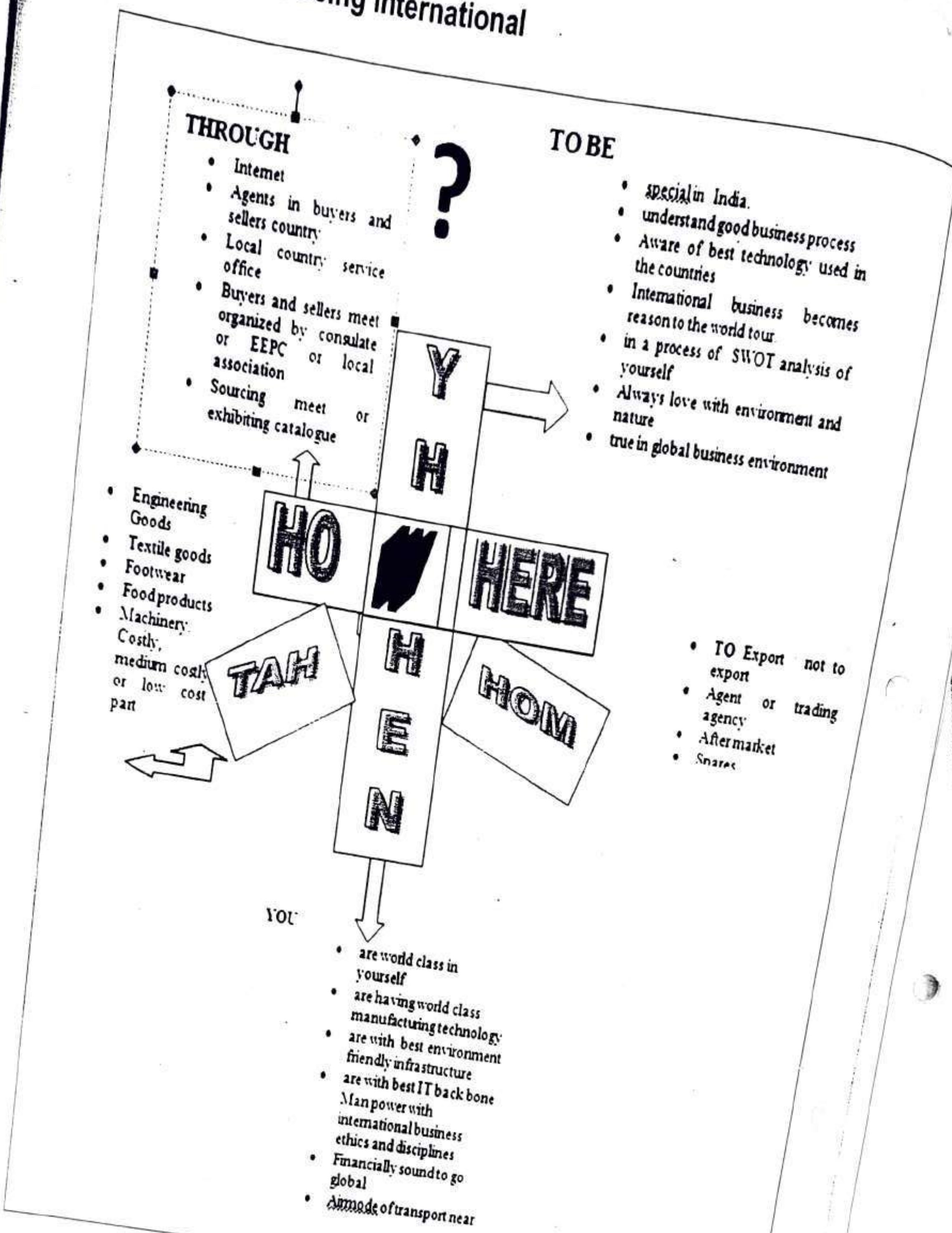
8. Company filtering down its Social values through Corporate Social Responsibility (CSR) practices as:-

a)Indian Red Cross society for mentally disabled children school of Rs. 11 Lacs.

b)Kolhapur Street Beautification Project for Kolhapur Street beautification.

The group strived to build a sound policy, as to deliver the right products, at the right time, at the right cost to the customer.

ACR Model of Being International



ACR preferably initiating the above model and instilling these values which can impact the organization through internationalization. Prakash Rathod further commented on successful internationalization, "I have worked in a company for three years, so I know the pain to be a employee, be ground to earth and do not make myself feel of am someone special or above. Do business and earn profit and not charity and lose money. Have taken ahead vision and try to see the market for next five years and decide your goals and expansion."

Road Ahead:

Developing a new plant in five star MIDC Kagal.

Functioning will start by Dec 2017. 8.5 acres land – supportive, rain water harvesting, paperless office work

One of the best eco friendly plant in the world.While shouldering responsibilities as a owner of business Shri Prakash Rathod never side track to carryout and motivate to carryout continuous improvement project regularly. In today's context we segregate the age groups into various baskets i.e. Baby Boomers (builders), Generation X, Generation Y and Millennial. Each generation has its own baggage of beliefs which has been derived out their exposure to various situations coupled with availability of various means and resources to them to deal with said situations. Thus no beliefs can be termed as right and wrong and therefore, it is the role of business leadership to effectively manage the age mix in way so as to organization and individual can derive maximum gain out of it.

Looking at this case we would like to convey message to self starters of Gen Y and Millennial in the words of Shri Prakash Rathod (Baby Boomers)

" Be a good beginner, good learner, good listener which will convert you to be a experienced professional. Always try to do your own SWOT analysis. Try to be perfect in what you are special in and be an owner of any one foreign language, which will take you to different level and also internationally".

Conclusion:

Caspro Industries continue to grow and expand its network and always took extra ordinary efforts for the achievement of mission. The organization always follows the business mantra of its founder member, "Instead of thinking about cost concentrate on quality, quality products, will bring absolute price" is the mantra. Their products are exported to different countries. The scale of growth has been larger than the most of the organizations in this area.

Questions for discussion :-

1) What motivational lessons can you draw from this case?

2) Suggest a plan of action to help Mr.Prakash Rathod to maintain success in the future?

3) What advantages and disadvantages do you think arise from family oriented business?

Impact Factor - 3.452 ISSN - 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

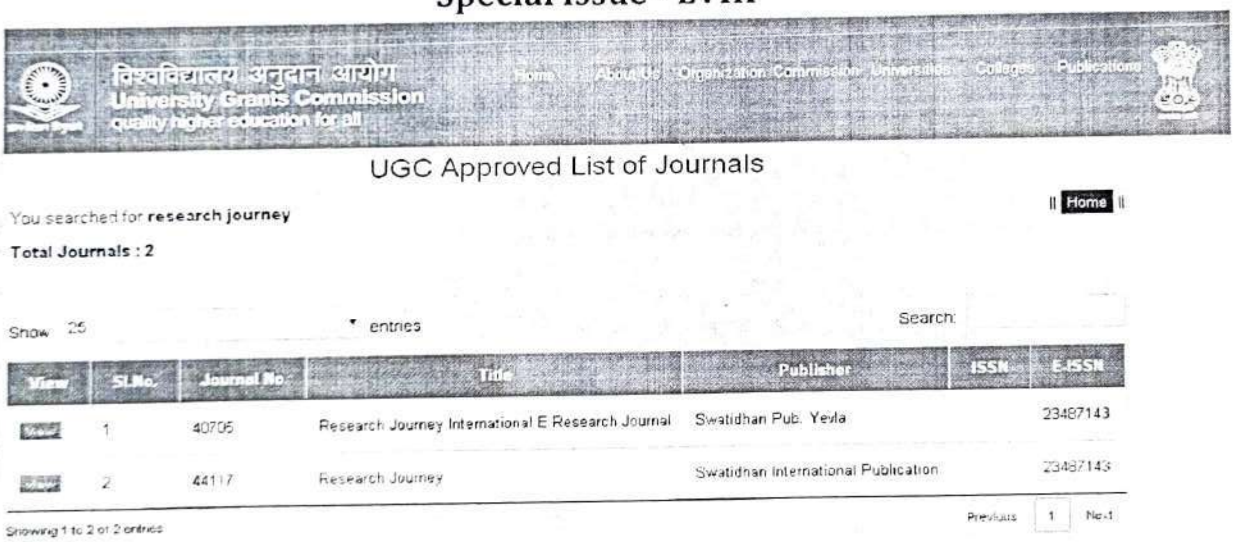
RESEARCH JOURNEY

Multidisciplinary International E-research Journal

PEER REFREED & INDEXED JOURNAL

April 2018

Special Issue - LVIII



UGC Approved List of Journals

|| Home ||

You searched for **research journey**

Total Journals : 2

Show 25 entries Search:

View	Sl.No.	Journal No.	Title	Publisher	ISSN	E-ISSN
	1	40705	Research Journey International E Research Journal	Swatidhan Pub. Yevla		23487143
	2	44117	Research Journey	Swatidhan International Publication		23487143

Showing 1 to 2 of 2 entries Previous 1 Next

Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

This Journal is indexed in :

- University Grants Commission (UGC) List No. 40705 & 44117
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- Universal Impact Factor (UIF)
- International Impact Factor Services (IIFS)
- Indian Citation Index (ICI)
- Dictionary of Research Journal Index (DRJI)

RESEARCH JOURNEY

For Details Visit To : www.researchjourney.net

SWATIDHAN PUBLICATIONS

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION

ISSN : 2348-7143
April 2018

INDEX

Our Editors have reviewed paper with experts' committee, and they have checked the papers on their level best to stop furtive literature. Except it, the respective authors of the papers are responsible for originality of the papers and intensive thoughts in the papers.

- Executive Editor-

Published by -

© Mrs. Swati Dhanraj Sonawane, Director, Swatidhan International Publication, Nashik

Email : swatidhanrajs@gmail.com **Website :** www.researchjourney.net **Mobile :** 9665398258

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) –0.676 (2013)
Special Issue 58 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

Emerging Trends in Digital Marketing in India

Rupali Avinash Ghorpade
Assistant Professor,
Institute of Technical Education Research & Management,
Akurdi

Renuka Sudhir Turambekar
Asst. Professor,
Chhatrapati Shahu Institute of Business Education and Research,
Kolhapur.

Abstract :

The massive Indian market is changing fast. Internet access is mainstreaming among professionals and the use of mobile is intensifying. The pace of change continues to be rapid with digital channels constantly growing in volume and strength. More people spend more time online in India every year, and the digital tools and sites they use play an ever-growing role in their lives. The most recent digital marketing trends and advances not only prepare you for any changes within your specific market but help to establish a comprehensive marketing strategy - designed to increase visibility and maximize revenue. Smart marketers keep on top of the scale of change and ensure their marketing strategies and touch point's mirror where the consumer is spending their time. These notes give a sense of the scale of change we've seen so far and imply the scale of what is coming. The digital marketing of tomorrow offers advancements in emerging technologies as consumers demand a more integrated experience.

Key words: *Digital Marketing, SEO, E-Commerce, Web portals, Google Adsence.*

Introduction

Digital Marketing is a part of a Digital Economy. India is a fast moving nation towards digital economy and this movement has been accelerated with the demonetization of the Indian Currency in the last quarter of year 2016.With it various government digital payment promotion schemes has been launched. Digital market requires digital promotion and marketing strategies. The telecom sector is also playing an important role in the digitalization movement. Recent launch of reliance telecom Jio with the free & unlimited internet facilities has played a revolutionary roll. The other prominent companies like Airtel, Idea, Vodaphone & BSNL are also offering attractive internet plans. Indian banks are also providing more customer friendly & secure money transaction services. Now Indian consumer is spending more time on social media and internet surfing. Thus the visibility of any product is more through digital medium than traditional marketing techniques. n 2018, you will be assisting your customers in taking even more informed decisions. You'll have to know them in and out and make sure you are educating and entertaining in a way they like. Digital marketing techniques include Content Marketing, Marketing Automation, Ad Words, SEO, Social Media, Email Marketing and Website Design.

The key player's role players and infrastructure providers in Digitization of an Economy are government, banking system, Shopping Portal in India, Internet Service Providers and Software Service Providers.

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION

Impact Factor – 3.452

ISSN – 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

Multidisciplinary International E-research Journal

PEER REFREED & INDEXED JOURNAL

April 2018

Special Issue - LVIII

विश्वविद्यालय अनुदान आयोग
University Grants Commission
quality higher education for all

Home About Us Organization Commission Universities Colleges Publications

UGC Approved List of Journals

You searched for **research journey**

Total Journals : 2

|| Home ||

Show 25 entries Search:

View	Sl.No.	Journal No	Title	Publisher	ISSN	E-ISSN
View	1	40705	Research Journey International E Research Journal	Swatidhan Pub. Yevla		23487143
View	2	44117	Research Journey	Swatidhan International Publication		23487143

Showing 1 to 2 of 2 entries

Previous 1 Next

Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

RESEARCH JOURNEY
MULTIDISCIPLINARY ONLINE RESEARCH JOURNAL

This Journal is indexed in :

- University Grants Commission (UGC) List No. 40705 & 44117
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- Universal Impact Factor (UIF)
- International Impact Factor Services (IIFS)
- Indian Citation Index (ICI)
- Dictionary of Research Journal Index (DRJI)

For Details Visit To : www.researchjourney.net

SWATIDHAN PUBLICATIONS

'RESEARCH JOURNEY' *International Multidisciplinary E- Research Journal*
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) –0.676 (2013)
Special Issue 58 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

INDEX

Our Editors have reviewed paper with experts' committee, and they have checked the papers on their level best to stop furtive literature. Except it, the respective authors of the papers are responsible for originality of the papers and intensive thoughts in the papers.

- Executive Editor-

Published by -

© Mrs. Swati Dhanraj Sonawane, Director, Swatidhan International Publication, Nashik

Email : swatidhanrajs@gmail.com **Website :** www.researchjourney.net **Mobile :** 9665398258

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) –0.676 (2013)
Special Issue 58 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

A Study on Consumer Perception and Behaviour Towards online Buying

Renuka Turambekar
Asst. Professor,
Chhatrapati Shahu Institute of Business
Education and Research, Kolhapur.

Rohit Landge,
Asst. Professor,
Chhatrapati Shahu Institute of Business
Education and Research, Kolhapur.

Abstract:

With the increasing usage of digital media by consumers, more companies are using digital marketing to reach their target markets. The purpose of this study is to examine various reasons because of that people will attract for online buying of the product. This paper reports on a study that was undertaken to assess consumer awareness and use, of product review websites. Factors included the impact of e-opinion leadership, consumer susceptibility to informational influence, and gender on awareness and use of these websites. Participants completed a survey that solicited information on awareness of product review websites, extent of usage, as well as demographic information. Results indicated that young and self incoming people are more involved in online shopping the frequency of online purchase is also high & the mist important reason to buy a product on line is product variety & Price effective.

Keywords: consumer awareness, susceptibility, demographic, perceptions.

Introduction:

Indian consumers as a whole spend about 55% of the total consumption expenditure on food items. Consumers decide whether, what, when, from whom, where and how much to buy. They can avail various mediums to buy the products. Attitude toward online shopping and goal to shop online are not only affected by ease of use, usefulness, and enjoyment, but also by other factors like consumer individuality, situational factors, product distinctiveness, previous online shopping understanding and faith in online shopping.(1) Four major categories of determinants: perceived technology, perceived risk, company competency, and trust propensity made the online initial trust.(2) Internet is changing the way consumers shop and buy goods and services and has rapidly evolved into a global phenomenon. Many companies have started using the Internet with the aim of cutting marketing costs, thereby reducing the price of their products and services in order to stay ahead in highly competitive markets. Companies also use the Internet to convey, communicate and disseminate information, to sell the product, to take feedback and also to conduct satisfaction surveys with customers.(3) As in the case of traditional marketing in the past, most of the recent research and debate is focused on the identification and analysis of factors that one way or another can influence or even shape the online consumer's behavior; a good deal of research effort is focused on modeling the online buying and Decision-making process.(4)

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION

Impact Factor – 3.452 ISSN – 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

Multidisciplinary International E-research Journal

PEER REFREED & INDEXED JOURNAL

April 2018

Special Issue - LVIII

विश्वविद्यालय अनुदान आयोग
University Grants Commission
quality higher education for all

Home About Us Organization Commission Universities Colleges Publications

UGC Approved List of Journals

You searched for **research journey**

Total Journals : 2

|| Home ||

Show 25 entries Search:

View	Sl.No.	Journal No	Title	Publisher	ISSN	E-ISSN
View	1	40705	Research Journey International E Research Journal	Swatidhan Pub. Yevla		23487143
View	2	44117	Research Journey	Swatidhan International Publication		23487143

Showing 1 to 2 of 2 entries Previous 1 Next

Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

This Journal is indexed in :
- University Grants Commission (UGC) List No. 40705 & 44117
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- Universal Impact Factor (UIF)
- International Impact Factor Services (IIFS)
- Indian Citation Index (ICI)
- Dictionary of Research Journal Index (DRJI)

RESEARCH JOURNEY

For Details Visit To : www.researchjourney.net

SWATIDHAN PUBLICATIONS

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 58 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

INDEX

Our Editors have reviewed paper with experts' committee, and they have checked the papers on their level best to stop furtive literature. Except it, the respective authors of the papers are responsible for originality of the papers and intensive thoughts in the papers.

- Executive Editor-

Published by -

© Mrs. Swati Dhanraj Sonawane, Director, Swatidhan International Publication, Nashik

Email : swatidhanrajs@gmail.com **Website :** www.researchjourney.net **Mobile :** 9665398258

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 58 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

Governance System of Family Business: A Case study of Godrej Group

Mr. Sanket V. Ravan
Assistant Professor,
Chhatrapati Shahu Institute of Business Education and Research
(CSIBER), Kolhapur.

Abstract :

This paper studies about family business i.e. a corporation that is entirely owned and managed by members of a single family. Also studies how family business is managed by using good family business governance system for effective control. Good governance in terms of separate family governance structure and business governance structure. This paper studies about family business governance system of Godrej Group a very popular family business in India.

Key Words - Family Governance structure, family council.

I. Introduction

A family business means the business actively owned and or managed by more than one member of the same family. A family business is characterized by commitment of family members, reliability, pride, utilization of family human capital etc. To manage family business effectively is called as family business management. To manage family business we require proper governance system for family as well as business since both are separate entities and their management and control required is separate. In India family business is facing various challenges like succession planning, compensation problem, nepotism, lack of talent in family etc. to solve some of these issues good governance system is required.

II. Review Of Literature

K. Ramachandran (2005) in their paper entitled "Indian Family Businesses: Their survival beyond three generations" studied how families grow their business beyond three generations, in highly competitive environments a six Indian case studies were analyzed have all fourth generation family businesses with diversified portfolios, managed by family members and outside professionals. He conclude that the quality of family leadership reflected in the level of Compassion Orientation nurtured in the families is found to be critical for building Competitive Orientation in the group's business.

R.Vani and etal. (2014) in their paper entitled "Family Business Management in Small and Medium Enterprises at Nellore District" conclude that Many family businesses have non-family members as employees, but, particularly in smaller companies, the top positions may be allocated to family members" Family Business contributes 60-70 percent of GDP of most developed & developing countries. Number of challenges face by Indian family business like Finance and Marketing were major challenges.

This study covers family business governance system used by Godrej group.

III. Objectives of the Study

1) To study business governance system used by Godrej family business.
2) To study family governance system used by Godrej family business.

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION

Impact Factor – 3.452 ISSN – 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

Multidisciplinary International E-research Journal

PEER REFREED & INDEXED JOURNAL

April 2018

Special Issue - LIVI

विश्वविद्यालय अनुदान आयोग
University Grants Commission
quality higher education for all

Home About Us Organization Commission Universities Colleges Publications

UGC Approved List of Journals

You searched for **research journey**

Total Journals : 2

|| Home ||

Show 25 entries Search:

View	Sl.No.	Journal No	Title	Publisher	ISSN	E-ISSN
View	1	40705	Research Journey International E Research Journal	Swatidhan Pub. Yevla		23487143
View	2	44117	Research Journey	Swatidhan International Publication		23487143

Showing 1 to 2 of 2 entries Previous 1 Next

Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

This Journal is indexed in :

- University Grants Commission (UGC) List No. 40705 & 44117
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- Universal Impact Factor (UIF)
- International Impact Factor Services (IIFS)
- Indian Citation Index (ICI)
- Dictionary of Research Journal Index (DRJI)

For Details Visit To : www.researchjourney.net

SWATIDHAN PUBLICATIONS

Impact Factor – 3.452 **ISSN – 2348-7143**

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

Multidisciplinary International E-Research Journal

PEER REFREED & INDEXED JOURNAL

April-2018

SPECIAL ISSUE-LIVI

Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

SWATIDHAN INTERNATIONAL PUBLICATIONS

For Details Visit To : www.researchjourney.net

 Price : Rs. 250/-

Editorial Board

Our Editors have reviewed paper with experts' committee, and they have checked the papers on their level best to stop furtive literature. Except it, the respective authors of the papers are responsible for originality of the papers and intensive thoughts in the papers.

- **Executive Editor-**

Published by -

© Mrs. Swati Dhanraj Sonawane, Director, Swatidhan International Publication, Nashik
Email : swatidhanrajs@gmail.com **Website :** www.researchjourney.net **Mobile :** 9665398258

From the Guest Editor's Desk.....

It gives immense pleasure to place before you the research journey-Multi disciplinary International E-research journal.

Indeed we are enjoying the growth and overwhelming response from authors of different areas of management.

The present issue contains Seventeen articles. Among the highlights Dr. M. M. Ali dealt in his articleon the topic Environmental Management in Sugar Factories of Kolhapur and Sangli. Dr. A. D. Jadhav wrote an article on GST impact on Indian economy, Dr. C. S. Dalvi focused on measuring service quality. Remaining authors critically examined various topics of commerce and management. I believe that the articles contributed by esteemed academicians and research scholars for this issue would be immensely readable and beneficial to academicians, research scholars and industrialists.

Dr. G. Haresh
Associate professor of Economics
Chh. Shahu Institute of Business education and research, Kolhapur.
Guest Editors

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) –0.676 (2013)
Special Issue 56 : UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

INDEX

Our Editors have reviewed paper with experts' committee, and they have checked the papers on their level best to stop furtive literature. Except it, the respective authors of the papers are responsible for originality of the papers and intensive thoughts in the papers.

- Executive Editor-

Published by -

© Mrs. Swati Dhanraj Sonawane, Director, Swatidhan International Publication, Nashik

Email : swatidhanrajs@gmail.com **Website :** www.researchjourney.net **Mobile :** 9665398258

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

An Empirical Study on Direct Benefit Transfer Awareness with Special Reference to Kolhapur District

Mr. Krishnat H. Chougale
Ph.D Student, Shivaji University
Kolhapur

Dr. B. S. Sawant
Director KBPIMR
Satara

Abstract :

The Direct Benefit Transfer (DBT) system is an experiment in delivering services to citizens. It provides the guarantee that the funds are reaching the accounts of the beneficiaries. It also ensures that funds are withdrawn by beneficiaries' themselves through the biometric system. This system reduces the time and cost of transferring funds. The Direct Benefit Transfer (DBT) is a social security scheme launched by the government of India, with a prime objective to transfer of cash subsidy directly to the people living below poverty line and entitlements directly to the beneficiary, whose identification would be verified on the base of 'Aadhaar Card' linked with the bank account. Observably, this foresighted step has been taken by the government of India after experiencing so many years of hurdles such as unnecessary delays, leakages and diversion of benefits which take place while providing subsidy to the needy people. In a country like India where more than 25% people are living below poverty line and the benefit of, Central and State Governments sponsored schemes are not reaching them. In spite of spending huge amount and deploying substantial workforce these poor classes are still struggling for their day to day needs like food, shelter, clothing, health, education etc. Various reasons can be mentioned behind this imbalance but it is a proven fact that all is not well. Certain major shortcomings in this regard are non-scientific method for the identification of the beneficiary, lack of proper and effective channels of distribution, lack of interest of implementation of concerning authority, delay in delivery of service, reaching beneficiaries not at its doorsteps and lack of awareness on the benefit of direct benefit transfer. Based on the above backdrop, this paper investigates the public awareness on direct benefit transfer in Kolhapur District, Maharashtra. The findings of this empirical study emphasis the public awareness about the direct benefit transfer scheme and its implication in India.

Keywords: Government Schemes and Aadhaar Card, Public Awareness, Direct Benefit Transfer

Introduction :

The Government of India has now started the Direct Benefits Transfer scheme. With this scheme, the beneficiaries get the amount directly in their Aadhaar linked bank accounts. The government must be responsible regarding the needs and demands of the people. An effective government always has concern over the public related issues. The government of India launched various types of welfare schemes and programmes for its people under whom they are provided subsidies, scholarships to students, benefits to illiterate women and micro credit to poor women section. Until December 2012, the beneficiaries were getting benefits which had to pass through hands of various intermediaries that had become responsible for leakage and delay when later on

ISSN : 2348-7143
April 2018

analyzed by the government. Consequently, the welfare schemes did not achieve their desired targets which were set by the government. Due to such reasons and inevitable hurdles the benefits which were supposed to reach the needy people could not happen. So, to overcome and resolve this problem the Government of India has launched "Direct Benefit Transfer (DBT) Scheme" on January 1st, 2013. The main objective of the programme is to transfer the government subsidies directly to Indian citizens who are living below poverty line. The primary aim of this DBT programme is to remove constrains and open up distribution of Central Government sponsored funds to the beneficiary through bank account using Aadhaar Card. With this background, this research paper analyses the issues relating to the public awareness about DBT in Kolhapur District, Maharashtra.

Concept of Direct Benefit Transfer :

The Direct Benefits Transfer (DBT) scheme simply involves transferring the subsidy amount and other benefits directly to the beneficiaries Aadhaar linked bank accounts instead of providing through government offices.

Benefits from Direct Benefit Transfer :

The scheme aims at minimizing incidence of corruption, eliminating fabrication and duplication with regard to payments of subsidies. Incidentally, other benefits include

1. Bringing transparency into the subsidy system
2. Significant improvement in the governance of government programs as benefits would reach the beneficiary without any intermediation and delay
3. Elimination of fraudulent claimants and saving "considerable" amount.
4. Direct cash through Aadhaar linked bank account would empower poor because they can decide how best to spend the cash to meet with their emergencies for which surveys exhibit they are compelled to borrow from informal money lenders
5. Effective implementation of this scheme leaving cash in the hands of people would lead to higher demand for goods, spurring manufacturing and eventually boosting economic growth (N Sakthivel, 2016).

Review of Literature :

(Sakthivel, Mayilsamy, & Akash, 2016), stated in research paper published in International Journal of Multidisciplinary Research and Development on Inclusive of direct benefits transfer schemes into financial inclusion in India, that there are many schemes and programmes of the Government of India under which many benefits are provided to the people such as subsidies, scholarships to students, benefits for feeding and pregnant mothers, and micro credit to poor women. Till now the beneficiaries were not getting this amount directly in their bank accounts. Financial inclusion is the new model of economic growth which plays a major role in eradicating poverty. The concept of financial inclusion is primary to the process and efforts for achieving inclusive growth and sustainable development of the country. It is a policy of involving a wider section of population deposit mobilization and credit intermediation.

(Thakkar & Vyas, 2015), concluded in research paper published in International Multidisciplinary Research Journal on Direct Cash Benefit Transfer Scheme in India, that the Direct Cash Benefits Transfer policy, introduced in January, sees the poor receiving cash payments directly in their bank accounts for pensions and scholarships. The aim is to stop the vast leakage and siphoning of welfare schemes worth thousands of crores. Eventually, the plan is for all subsidies on fuel, food and fertilizers to be deposited directly in the accounts of beneficiaries, using the Aadhaar scheme, which assigns a unique biometric identity number to every citizen. Only those with a UID and a bank account are able to receive direct cash transfers from the government for their entitlements.

Problem of the Study :

Since independence Indian government implements various schemes to people of country but there is problem that no scheme reaches to the end user of the country. The basic reason behind it is a possibility of corruption, leakages, problem in transparency & lack of co-ordination of government bureaucrats. The ability of UID is to uniquely identify an individual electronically makes it a valuable tool in the administration of Government schemes and a natural financial address on the basis of which funds can be transferred into a linked account. The beneficiary may link their UID number to their account at any bank and change this at any point in time, based on the quality of service they receive. Certain major shortcomings in this regards are non-scientific method for the identification of the beneficiary, lack of proper and effective channels of distribution, lack of interest of implementation of concerning authority, excessive intermediaries and delay in delivery of service, precaution of beneficiaries, reaching beneficiaries not at its doorsteps, more intermediaries between the government and beneficiaries and public are not aware of government benefits including DBT to rural people who are living below poverty line. Based on the above statement of problem, it is necessary to study the public awareness on benefits of direct benefit transfer in Kolhapur District, Maharashtra, India.

Objectives of Research Study :

1. To find out the personal profile of the beneficiary respondents.
2. To identify the public awareness about direct benefit transfer in the study area.

Research Hypothesis :

Ho: There is no significant relationship between age and public awareness about the direct benefit transfer.

H1: There is significant relationship between age and public awareness about the direct benefit transfer.

Methodology :

This study is based on empirical in nature. Primary data were used to collect the questionnaire from the respondents who are residing in Kolhapur District to find out their awareness on direct benefit transfer and secondary data were collected through published source like journals, magazines, newspapers, annual reports and working papers etc.

Convenience sampling method was used for this study. 150 questionnaires were distributed among respondents for collection of data. The collected questionnaire deals with two sections. Section I contains personal details while section II deals with public awareness on direct benefit transfer with five point Likert's scaling questions. The respondents were asked to read the statement carefully and rate the statement ranging from 5 represent Definitely Yes, 4 represent Yes, 3 represent To Some Extent, 2 represent No and 1 represent Definitely No. Respondents were asked to give rating on their perceived impact on the beneficiaries on the stated variables.

2017-18

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 58 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

IV. Research Methodology

For the completion of research paper researcher has used Descriptive research method.It is based on s... data available in various journal articles, websites, books and magazines. This study i... h done in this particular aspect. ...urces.

Data colle...

Second...

types ...

V. I

V

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

Validity & Reliability :

To prepare Schedule and questionnaire extensive literature survey was conducted. Research conducted by various institutes, organization and individual researchers were studied thoroughly. Through literature survey initial set of questions were prepared. A pilot study was conducted and requisite edits and updates were made. Validity and reliability of the survey instruments was assured through taking consultation from various Government officers involved in implementation of DBT scheme.

Limitations of the Study :

Sample size is restricted to 150 only. All the samples were collected only from the respondents who are residing in and around Kolhapur District. The major limitations of the study is time and cost. The results of the study may not be universal to other similar type of the study conducted in some other district of Maharashtra. The period of study is limited to four months i.e., from July 2017 to October 2017.

Data Analysis and Interpretation :

Frequency and Percentage Analysis

Table No.1

Personal Profile of the Respondents

Parameters	Category	Frequency	Percentage
Gender	Female	45	36
	Male	81	64
	Total	**126**	**100**
Nativity	Urban	43	34
	Rural	83	66
	Total	**126**	**100**
Age	21 – 30 Years	48	38
	31 – 40 Years	67	53
	41 – 50 Years	6	5
	51 – 60 Years	5	4
	Total	**126**	**100**
Awareness on DBT	Definitely Yes	20	16
	Yes	42	33
	To Some Extent	23	18
	No	35	28
	Definitely No	6	5
	Total	**126**	**100**

Source: Survey Data

It is inferred that, from the total of 126 respondents only 45 respondents are female and 81 respondents are male. 66% of the respondents are from rural place and 34% of the

ISSN : 2348-7143
April 2018

respondents are from urban place. 53% of the respondents fall under 31 to 40 years of age. 16% of the respondents said definitely yes and 42% of the respondents were said yes about the awareness on DBT.

Variance Analysis (One Way ANNOVA)

Table No.2

Cross Tabulation between Age and Public awareness on DBT

Age	Awareness on DBT					Total
	Definitely Yes	Yes	To Some Extent	No	Definitely No	
21 – 30 Years	45	3	0	0	0	48
31 – 40 Years	0	50	17	0	0	67
41 – 50 Years	0	0	0	6	0	6
51 – 60 Years	0	0	0	0	5	5
Total	**45**	**53**	**17**	**6**	**5**	**126**

Source: Survey Data

Table No.3

Variance Analysis (One Way ANOVA)

	Sum of squares	Degree of freedom	Mean square	F-value	Sig. - value
Between Groups	70.454	5	17.613	182.620	0.001**
Within Groups	11.767	121	0.096		
Total	**82.220**	**126**			

Source: Survey Data

** at 5% level of significant

Findings :

1. It is also revealed from table 2 that 50 respondents who fall under the age category 31 to 40 years said yes that they were aware of DBT and 45 respondents who fall under the age category 21 to 30 years said definitely yes that they were aware of DBT.
2. It is inferred from the above table 3, the calculated value of one way ANOVA is 0.001, which is less than the hypothetical value ($\alpha = 0.05$). Hence, the null hypothesis is not accepted. So, there is significant association between age and public awareness on DBT in Kolhapur District.

Conclusion :

This study concludes that the awareness about DBT is minimum with the respondent who resides in and around Kolhapur District. They are not aware of what is happening around them like the announcements of schemes of central government of India. They are not being provided the required information about the DBT. Village panchayats nearer to them are not able to provide the required information. So the central, state government and village panchayats should jointly take some concrete steps and ensure that people understand the spirit of DBT. Hence, awareness among the rural people who are below poverty line with respect to these schemes is highly required to improve the standard of living.

Suggestions :

People should be given proper awareness about the scheme by the village panchayats. This can be achieved through the effective participation of the panchayats and the educated youth in the villages. Proper awareness programme can be conducted at village level through educational institutions, non-governmental organizations; self-help groups so that the government can eliminate the misconceptions about the scheme to be implemented in the villages. The officials' in charge for enrollment can give a clear picture about the technology involved in this scheme as well. This will remove all unnecessary fear in the minds of the public. Media's involvement and dissemination about the DBT schemes is also highly pivotal. (V.Selvam & Velmurugan, 2015)

References :

a. E, C., & Zeller, R. (1979). "Reliability and Validity Assessment". Sage University Paper, Sage Publications, Beverly Hills, .
b. Farhina Sardar Khan, (2013), "Direct Benefit Transfer: Strong Initiative towards the Empowerment of Citizens", Economic Challenger, Vol.62, No.16, pp.52-59. http://economicchallenger.net
c. Hair, J, Anderson, R, Tatham, R and Black, W, (1998), "Multivariate Data Analysis", Prentice-Hall International Edition, New Jersey,
d. www.prenticehall.com
e. Jairam Ramesh and Varad Pande, (2013), "The Direct Benefits Transfer: No Need for Hype but Certainly a Hope", Yojana, Vol.17, pp.8-10, http://www.yojana.gov.in
f. Joseph Hanlon, Armando Barrientos and David Hulme, (2010), "Just Give Money to the Poor: The Development Revolution from the Global South", USA, Kumarian Press.
g. Kapur A and Chowdhury A, (2011), "Integrated Public Distribution System, GOI Budget Briefs 2011-12", Budget Briefs – TTPDs, Vol.3, No.7. (http://ssrn.com/paper=1790987).
h. N Sakthivel, R. M. (2016). Inclusive of direct benefits transfer schemes into financial inclusion in India. International Journal of Multidisciplinary Research and Development , 56-59.
i. Sakthivel, N., Mayilsamy, R., & Akash, R. (2016). Inclusive of direct benefits transfer schemes into financial inclusion in India. International Journal of Multidisciplinary Research and Development , 56-59.
j. Thakkar, N. D., & Vyas, D. N. (2015). Direct Cash Benefit Transfer Scheme in India. International Multidisciplinary Research Journal , 1-7.
k. V.Selvam, & Velmurugan, G. (2015). An Empirical Study on DBT Awareness. Mediterranean Journal of Social Sciences MCSER Publishing, Rome-Italy , 229-234.
l. Yadav, V. (2013). Unique Identification Project for 1.2 billion People in India:Can it fill Institutional Voids and enable 'Inclusive' Innovation? South Asia Institute (SAI) at Harvard University, 1-20.

Quality Impact Factor : 6.89 (CARS)

U.G.C. Approved International Refereed Monthly Research Journal

Quest
International Multidisciplinary Research Journal

ISSN : 2278 - 4497 http://www.researchjournals.in

Volume – 7, Issue – 2
February – 2018

Published by
Publish World
Anand, Gujarat (India)
http://www.publishworld.org

Advisory Board Members

Contents

Quest International Multidisciplinary Research Journal
ISSN: 2278 - 4497
Volume - 7, Issue - 2, February, 2018
Available Online at http://www.researchjournals.in
Quality Impact Factor: 6.89 (CARS)
U.G.C. Approved International Refereed Research Journal

DIRECT BENEFIT TRANSFER THROUGH AADHAAR: A BOON FOR AAM ADMI

Mr. Krishnat H.Chougale[1], Dr. M.M.Ali[2]
[1]Ph.D. Student, Shivaji University, Kolhapur, Maharashtra (India)
[2]Director, CSIBER, Kolhapur, Maharashtra (India)

ABSTRACT
A landmark phase direct benefit transfer scheme where the subvention amount will go directly into the aadhaar linked bank accounts of the beneficiaries. It is a poverty reduction measure in which government subsidies, pension scheme benefit and other benefits are given directly to the poor in cash rather than in the form of subsidies. The paper contains brief view on the benefits of the schemes which government reach out to identify beneficiaries and can plug leakages. As currently, ration shop owners divert subsidized kerosene to open market and make fast buck. Such Leakages could stop. The scheme will also enhance efficiency of welfare schemes. Implementation of the scheme strategy where money is directly transferred into aadhaar linked bank accounts of beneficiaries. LPG and kerosene subsidies, pension payments, scholarships and employment guarantee scheme payments as well as benefits under other government welfare programs will be made directly to beneficiaries.

KEYWORDS: Aadhaar, Direct Benefit Transfer, UIDAI

INTRODUCTION

The Direct Benefit Transfer (DBT) system was launched in January, 2013 in 20 districts covering scholarship and social security pensions.DBT is an attempt to change the mechanism of transferring subsidies launched by government of India on 1st January 2013. This program aims to transfer subsidies directly to the people through their aadhaar linked bank accounts. It is hoped that crediting subsidies into bank accounts will reduce leakages, delay, etc. The DBT system is an experiment in delivering service to citizens. It provides the guarantee that the funds are received only by the beneficiaries. It also ensures that the funds are withdrawn by the beneficiaries themselves. The amount is dynamic which is proposed and already sanctioned through DBT system.

REVIEW OF LITERATURE

(Thakkar & Vyas, 2015), concluded in research paper published in International Multidisciplinary Research Journal on Direct Cash Benefit Transfer Scheme in India, that the Direct Cash Benefits Transfer policy, introduced in January, sees the poor receiving cash payments directly in their bank accounts for pensions and scholarships. The aim is to stop the vast leakage and siphoning of welfare schemes worth thousands of crores. Eventually, the plan is for all subsidies on fuel, food and fertilizers to be deposited directly in the accounts of beneficiaries, using the Aadhaar scheme, which assigns a unique biometric identity number to every citizen. Only those with a UID and a bank account are able to receive direct cash transfers from the government for their entitlements.

(Shaikh & Bhavsar, 2014),concluded in a research published in Indian Journal of Applied Research, under the title, Direct Cash Transfer- A Boon For Aam Admi that, A milestone phase direct cash transfer scheme where the subvention amount will go directly into the bank accounts of the beneficiaries. It is a poverty reduction measure in which government subsidies and other benefits are given directly to the poor in cash rather than in the form of subsidies. As many Latin American countries have conditional cash transfer schemes in which money is transferred to poor folks through women. The money is given, subject to them confirming that their children attend school regularly, take preventive healthcare measures and provide better nutrition to their children and that's absolute.

(Mohapatra, 2015), stated research paper published in International Journal of Technical Research and Applications, titled Direct Benefits Transfer (DBT) In India: An Initiative For Inclusiveness that, Direct Benefits Transfer (DBT), as a new public policy has been acknowledged by various segments of the society as an initiative for inclusiveness. It is a mechanism through which the target beneficiaries will get the subsidy amount in cash that shall be credited directly to their accounts by linking all the transactions to Aadhaar. DBT envisages a switch from the present subsidy scheme to transfer of benefits directly to Aadhaar seeded bank accounts of the beneficiaries. It is an earnest endeavor to streamline the subsidy mechanism in India. The scheme has potential to control much rooted corruption in public distribution system, by reducing the intermediate cost, by improving the efficiency of the delivery system and by getting rid of the misuse of funds. Its success, in fact depends upon institutional and infrastructural development in the rural and urban as well through which the scheme can be better implemented. DBT will certainly fulfill the living expectation of the government and people specially the deprived and hapless through 'Aap Ka Paisa Aap Ke Haath'.

PROBLEM OF THE STUDY

Since independence Indian government implements various schemes to people of country but there is problem that no scheme reaches to the end user of the country. The basic reason behind it is a possibility of corruption, leakages, problem in transparency & lack of co-ordination of government bureaucrats. The ability of UID is to uniquely identify an individual electronically makes it a valuable tool in the administration of Government schemes and a natural financial address on the basis of which funds can be transferred into a aadhaar linked bank account.

OBJECTIVE OF THE STUDY

1. To identify the benefits to the beneficiary by using Unique Identification (UID) for availing benefits of selected government scheme.

RESEARCH HYPOTHESIS

H0: There is no significance difference in agreement rating regarding; use of UID helps government to identify the actual beneficiaries of welfare schemes.

METHODOLOGY

This study is based on empirical in nature. Primary data were used to collect the questionnaire from the respondents who are residing in Kolhapur District to find out their awareness on direct benefit transfer and secondary data were collected through published source like journals, magazines, newspapers, annual reports and working papers etc.

Stratified Random Sampling method was used for this study. 411 questionnaires were distributed among respondents for collection of data. The collected questionnaire deals with two sections. Section I contains personal details while section II deals with public awareness on direct benefit transfer with five point Likert's scaling questions. The respondents were asked to read the statement carefully and rate the statement ranging from 5 represent Definitely Yes, 4 represent Yes, 3 represent To Some Extent, 2 represent No and 1 represent Definitely No. Respondents were asked to give rating on their perceived impact on the beneficiaries on the stated variables.

VALIDITY & RELIABILITY

To prepare Schedule and questionnaire extensive literature survey was conducted. Research conducted by various institutes, organization and individual researchers were studied thoroughly. Through literature survey initial set of questions were prepared. A pilot study was conducted and requisite edits and updates were made. Validity and reliability of the survey instruments was assured through taking consultation from various Government officers involved in implementation of DBT scheme.

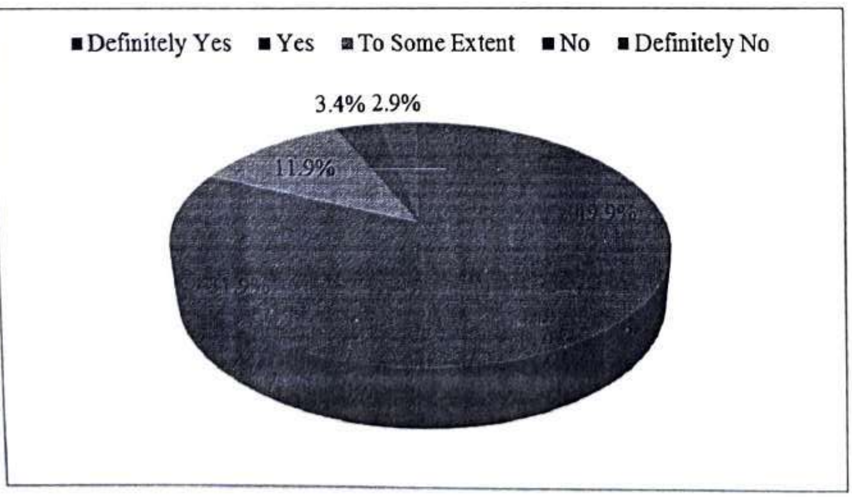
DATA ANALYSIS & INTERPRETATION

UID helps government to identify the actual beneficiaries of Sanjay Gandhi Yojana

Particulars	Frequency	Percent	Weight
Definitely Yes	205	49.9	1025
Yes	131	31.9	524
To Some Extent	49	11.9	147
No	14	3.4	28
Definitely No	12	2.9	12
Total	**411**	**100**	**1736**
Weighted Mean	**4.2238443**		

Source: Survey Data

UID helps government to identify the actual beneficiaries of Sanjay Gandhi Yojana



Regarding the Aadhaar card helps government to identify the actual beneficiaries of Sanjay Gandhi Yojana 80 percent of the respondents opinioned agree as well as fully agree.The weighted score of 4.22 is a clear indication of positive opinion towards the Aadaar card helps government to identitfy the actual beneficiaries in welfare scheme.

Actual beneficiaries of welfare schemes

Response of Satisfaction	Observed Number	Observed Proportion	Observed Cumulative Proportion	Null Proportion	Null Cumulative Proportion	Absolute Difference Observed Cumulative Proportion & Null Cumulative Proportion
Definitely Yes	205	0.50	0.50	0.2	0.2	0.30
Yes	131	0.32	0.82	0.2	0.4	0.42
To Some Extent	49	0.12	0.94	0.2	0.6	0.34
No	14	0.03	0.97	0.2	0.8	0.17
Definitely No	12	0.03	1.00	0.2	1.0	0.00

H0:

There is no significance difference in agreement rating regarding; use of UID helps government to identify the actual beneficiaries of welfare schemes.

Calculated D Value = 0.42 (largest absolute difference value)

Since the D value exceeds the critical value 0.07 the null hypothesis is rejected hence alternate hypothesis is accepted.

H1:

There is significance difference in agreement rating regarding; use of UID helps government to identify the actual beneficiaries of welfare schemes.

FINDINGS

1. It is found that more than 80 percent respondents stated that they are receiving pension in their Aadhaar linked bank account.
2. Aadhaar will help to transfer pension on time to beneficiaries of Sanjay Gandhi Yojana.

CONCLUSION

The Direct Benefit Transfer system is an experiment in delivering service to citizens. It provides the guarantee that the funds are received only by the beneficiaries' aadhaar linked bank account. It also ensures that the funds are withdrawn by the beneficiaries themselves. DBT has been applicable to only very few schemes. The amount is dynamic which is proposed and already sanctioned through DBT system. Therefore, it is still to be seen whether this scheme is successful or not.

REFERENCES

E, C., & Zeller, R. (1979). "Reliability and Validity Assessment". Sage University Paper, Sage Publications, Beverly Hills, .

Farhina Sardar Khan, (2013), "Direct Benefit Transfer: Strong Initiative towards the Empowerment of Citizens", Economic Challenger, Vol.62, No.16, pp.52-59. http://economicchallenger.net

Hair, J, Anderson, R, Tatham, R and Black, W, (1998), "Multivariate Data Analysis", Prentice-Hall International Edition, New Jersey,
www.prenticehall.com

Jairam Ramesh and Varad Pande, (2013), "The Direct Benefits Transfer: No Need for Hype but Certainly a Hope", Yojana, Vol.17, pp.8-10, http://www.yojana.gov.in

Joseph Hanlon, Armando Barrientos and David Hulme, (2010), "Just Give Money to the Poor: The Development Revolution from the Global South", USA, Kumarian Press.

Kapur A and Chowdhury A, (2011), "Integrated Public Distribution System, GOI Budget Briefs 2011-12", Budget Briefs – TTPDs, Vol.3, No.7. (http://ssrn.com/paper=1790987).

Sakthivel, N., Mayilsamy, R., & Akash, R. (2016). Inclusive of direct benefits transfer schemes into financial inclusion in India. International Journal of Multidisciplinary Research and Development , 56-59.

V.Selvam, & Velmurugan, G. (2015). An Empirical Study on DBT Awareness. Mediterranean Journal of Social Sciences MCSER Publishing, Rome-Italy , 229-234.

Yadav, V. (2013). Unique Identification Project for 1.2 billion People in India:Can it fill Institutional Voids and enable 'Inclusive' Innovation? South Asia Institute (SAI) at Harvard University , 1-20.

Aarhat Publication & Aarhat Journal's

AARHAT MULTIDISCIPLINARY INTERNATIONAL EDUCATION RESEARCH JOURNAL

Peer Reviewed Multidisciplinary Research Journal
ISSN- 2278-5655

Online and Print Journal

Impact Factor: 5.18

UGC Approved Journal No 48178, 48818

Vol VII

Special Issues No X

Chief Editor

Dr.D.N.Valvi

Aarhat Multidisciplinary International Education Research Journal (AMIERJ)
A Peer Reviewed Multidisciplinary Journal UGC Approved Journal No 48178, 48818
Impact Factor 5.18 ISSN 2278-5655

A STUDY OF STUDENT'S PERCEPTION TOWARDS CSR WITH SPECIAL REFERENCE TO POST GRADUATE STUDENTS OF KOLHAPUR

Ms.Anuradha Gaikwad,
Faculty at CSIBER
Ms. Bhakti Bhadra,
TPO and Career Development Centre Head at CSIBER

Abstract:
Today it has become very imperative for the consumers and employees to understand the concept of CSR as sustainable products play an important role in growth and development of an organization and a country as a whole. Corporate Social responsibility gives an opportunity to the employees and consumers to contribute towards the society. And to do so, it is essential that the students who are the future employees as well as consumers are well aware of the term CSR.
As the youth is going to play an important role in the society, this paper aims to study the Post Graduate students awareness and their perception about CSR .

Keywords: *Perception, CSR, Post Graduate Students, Consumer Behavior*

1. Introduction:

Corporate social responsibility (**CSR**, also called **corporate conscience**, **corporate citizenship**, **social performance**, or **sustainable responsible business/ Responsible Business**)is a form of corporate self-regulation integrated into a business model. CSR policy functions as a built-in, self-regulating mechanism whereby a business monitors and ensures its active compliance with the spirit of the law, ethical standards, and international norms. CSR is a process with the aim to embrace responsibility for the company's actions and encourage a positive impact through its activities on the environment, consumers, employees, communities, stakeholders and all other members of the public sphere who may also be considered stakeholders.

1.1 CSR as a Concept:

Definition

We define corporate social responsibility strategically. Corporate social responsibility encompasses not only what companies do with their profits, but also how they make them. It goes beyond philanthropy and compliance and addresses how companies manage their economic, social, and environmental impacts, as well as their relationships in all key spheres of influence: the workplace, the marketplace, the supply chain, the community, and the public policy realm. – the President and fellows Harvard University.

Impact Factor – 3.452

ISSN – 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

Multidisciplinary International E-research Journal

PEER REFREED & INDEXED JOURNAL

April 2018

Special Issue - LIVI

विश्वविद्यालय अनुदान आयोग
University Grants Commission
quality higher education for all

Home | About Us | Organization | Commission | Universities | Colleges | Publications

UGC Approved List of Journals

You searched for **research journey**

|| Home ||

Total Journals : 2

Show 25 entries

Search:

View	Sl.No.	Journal No	Title	Publisher	ISSN	E-ISSN
View	1	40705	Research Journey International E Research Journal	Swatidhan Pub. Yevla		23487143
View	2	44117	Research Journey	Swatidhan International Publication		23487143

Showing 1 to 2 of 2 entries

Previous 1 Next

Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

This Journal is indexed in :

- University Grants Commission (UGC) List No. 40705 & 44117
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- Universal Impact Factor (UIF)
- International Impact Factor Services (IIFS)
- Indian Citation Index (ICI)
- Dictionary of Research Journal Index (DRJI)

For Details Visit To : www.researchjourney.net

SWATIDHAN PUBLICATIONS

'RESEARCH JOURNEY' *International Multidisciplinary E- Research Journal*
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) –0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

INDEX

Our Editors have reviewed paper with experts' committee, and they have checked the papers on their level best to stop furtive literature. Except it, the respective authors of the papers are responsible for originality of the papers and intensive thoughts in the papers.

- Executive Editor-

Published by -

© Mrs. Swati Dhanraj Sonawane, Director, Swatidhan International Publication, Nashik
Email : swatidhanrajs@gmail.com **Website :** www.researchjourney.net **Mobile : 9665398258**

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

Implementation of Choice Based Credit System at Chhatrapati Shahu Institute of Business Education & Research, Kolhapur MBA - A Case Study

Amar Dinkar Ekal
Assistant Professor,
CSIBER, Kolhapur- 416004

Abstract :

The University Grant Commission has suggested drastic changes in the curriculum of various graduate and post graduate courses. This is for improving quality of Higher Education in India. They have identified certain areas which need to be improved and will help the students to improve their employability. Choice Based Credit System (CBCS) is the frame work suggested and prescribed by UGC. It includes courses from various categories to cater the need of student and improve the skills. This paper presents CBCS frame work with reference to Master of Business Administration course at Chhatrapati Shahu Institute of Business Education and Research (CSIBER), Kolhapur.

Key Words: CBCS, MBA, Cafeteria-type-learning, Credit System, Ability Enhancement, Employability,

Introduction :

University Grants Commission has come up with the Choice Based Credit System (CBCS) programme in which the students have a choice to choose from the prescribed courses, which are referred as core, elective or minor or soft skill courses and they can learn at their own pace and the entire assessment is graded-based on a credit system. The basic idea is to look into the needs of the students so as to keep up-to-date with development of higher education in India and abroad. CBCS aims to redefine the curriculum keeping pace with the liberalization and globalization in education. CBCS allows students an easy mode of mobility to various educational institutions spread across the world along with the facility of transfer of credits earned by students. (Phukan 2015)

The CBCS is an effective 'Supply side Initiative' measure evolved as a process of 'Academic Reforms' to sustain the Quality Education that focuses on the learner centric education. It is a cafeteria-type learning system in a semester pattern to foster creativity and innovation that bridges the gap between professional and liberal education to empower the students for meeting the challenges of Globalization with an inbuilt International acceptance of recognition of Degrees. The CBCS provides for inbuilt flexibilities in which the students have a choice of pursuing courses of their choice in the form of electives and also enable for seamless mobility among the institutions across the states and countries. This not only broadens their horizons but also intends to make students well rounded in all spheres of development. (MANUU 2017)

1. Semester System and Choice Based Credit System

The Indian Higher Education Institutions have been moving from the conventional annual system to semester system. Currently many of the institutions have already introduced the choice based credit system. The semester system accelerates the teaching-learning process

International Journal of Current Advanced Research
ISSN: O: 2319-6475, ISSN: P: 2319-6505, Impact Factor: SJIF: 5.995
Available Online at www.journalijcar.org
Volume 7; Issue 1(B); January 2018; Page No. 8789-8792
DOI: http://dx.doi.org/10.24327/ijcar.2018.8792.1429

Research Article

INTELLECTUAL PROPERTY REGIME AND INDIA AS A KNOWLEDGE ECONOMY

Vishakha Apte*

MBA Department, Chatrapati Shahu Institute of Business Education and Research, Kolhapur

A R T I C L E I N F O

Article History:
Received 17th October, 2017
Received in revised form 21st November, 2017
Accepted 05th December, 2017
Published online 28th January, 2018

Key words:

Knowledge, knowledge economy, intellectual property, GDP, knowledge capital, physical and natural resources.

A B S T R A C T

It is often said that India is moving towards knowledge economy. There are various definitions of knowledge economy but one thing is sure that the next era will continue to be a knowledge era and the economic prosperity of a country or a firm will be closely linked with its knowledge capital stock. There are various ways of describing a knowledge economy like number of knowledge workers, knowledge sectors, knowledge industries and so on. But one thing is sure that the stock of knowledge cannot be definitely measured and yet it's widely accepted measurement yardstick is Intellectual property and patents filed by a country or a firm.

As noted by WalterW. Powell and Kaisa Snellman, "We define the knowledge economy as production and services based on knowledge-intensive activities that contribute to an accelerated pace of technical and scientific advance, as well as rapid obsolescence. The key component of a knowledge economy is a greater reliance on intellectual capabilities than on physical inputs or natural resources."

This paper examines the Indian capabilities and efforts towards creating the knowledge capital through filing and getting patents, trademarks, or intellectual property rights, industrial designs etc. If India is moving towards the knowledge economy then its place as compared to that of other countries in the world also matters. Not only the advanced and developed economies but also the emerging economies with similar GDP and growth rates are moving towards knowledge economy, then we have to examine the relative speed and position of India in this regard.

INTRODUCTION

Indian economy is one of most promising economy in the world. In 2014 the Asian Development Report predicted that India can become a Knowledge Economy. As the report says, "India, with its youthful population and thriving information and communication technology (ICT) industry, can become a leading knowledge-driven economy as long as regulatory, education, and infrastructure barriers are overcome," ADB said in its report 'Innovative Asia: Advancing the Knowledge-Based Economy' published in September, 2014. The Report also has thrown light on the measures and description of knowledge economy. As per the report, 'A knowledge-based economy describes an economy that uses information resources-technologies, skills, and processes-to achieve and accelerate economic growth potential. This report adopts the following definition which combines World Bank and OECD descriptions: A knowledge-based economy is one that has an economic incentive and institutional regime that stimulates the acquisition, creation, dissemination, and use of knowledge and information to improve its growth and welfare, as well as effective systems of education and skills, information and communication technology (ICT), research and development (R&D), and innovation. Further the World Bank has developed a Knowledge Index and calculated on the basis of the four pillars such as Economic incentive and institutional regime, Education and skills of population, Innovation and technological adoption system, Information and communication technology infrastructure. Each of the four pillars has Rationale and indicators. As mentioned in the report they are given below.

KAM (Knowledge Assessment Methodology)-Basic Scorecard Variables

Performance

Average annual GDP growth (%)
Human Development Index

Economic incentive and institutional regime

Tariff and nontariff barriers
Regulatory quality Rule of law Education and human resources Adult literacy rate (% age 15 and above)
Secondary enrollment Tertiary enrollment

Corresponding author:* **Vishakha Apte
MBA Department, Chatrapati Shahu Institute of Business Education and Research, Kolhapur

Innovation system

Researchers in R & D, per million populations
Patent applications granted by the USPTO, per million populations
Scientific and technical journal articles, per million populations

Information infrastructure

Telephones per 1,000 persons (telephone mainlines + mobile phones)

Computers per 1,000 persons
Internet users per 10,000 persons

Note: The World Bank developed the Knowledge Economy Index (KEI), an indicator of the knowledge economy based on these four pillars and uses that index to benchmark economies. Source: World Bank Knowledge Assessment Methodology and Knowledge Economy Index.

This indicates that while calculating knowledge index of various countries innovation and R&D has been given important place. Hence it will be appropriate to make use of the IPR and Patents to determine Indian economy's journey towards attainment of the status of a Knowledge Economy.

Objectives: The main objective of this paper is to discuss the essentials of Knowledge Economy and India's efforts and results in knowledge economy journey. The important element of knowledge based society is the Intellectual capital or intellectual property that the people in the country create. The objective is to examine the relative position of India in this regard. It is determined via the number of patents files and granted, industrial design applications and design registrations and Trademarks registrations.

Literature Reviewed: The starting point of this paper was the Asian Development Bank's (ADB) report on the 'Innovative Asia: Advancing The Knowledge-Based Economy' *The Next Policy Agenda,* published in 2014.

The literature reviewed is mainly for three purposes. One is for definition of knowledge economy, for studying the determinants of knowledge economy used by various scholars for various objectives. Second literature is reviewed for determining whether, Intellectual Property Rights, patents, trademarks can be used as an indicator knowledge capital and knowledge economy determinant and then determine the condition of Indian economy in this regard. Innovation and its role in economic development is already accepted in economic literature, but here the efforts are to assess the knowledge economy position of our country by making use of IPR and related statistics.

Though Knowledge Economy has been considered as a result of latent variables and its determinants are unobservable a study has been conducted by Frank G. van Oort · Johan H. L. Oud, Otto Raspe**,** entitled, 'The urban knowledge economy and employment growth: a spatial structural equation modeling approach' published online in March, 2009. They have come to the conclusion after their study of three latent variables i.e. R&D-intensity, innovativeness and 'density of knowledge workers, that the latent variables of 'density of knowledge workers' and 'innovativeness' have significant positive and strong impacts on employment growth.

The economic development has been a continuous process of change. All over the world the countries and economic agents try to bring out positive results from this change. Innovations and Research are the foundations of these changes, and the change agents try to get maximum returns from these innovations. As note by David J. Teece in Capturing Value from Knowledge Assets' published by California Management Review Vol 40, No, 3 SPRING 1998. WalterW. Powell and Kaisa Snellman, have also noted that there is a transition from emphasis on use of natural resources to use of knowledge resources. To quote, 'We document this transition with patent data that show marked growth in the stocks of knowledge, and show that this expansion is tied to the development of new industries, such as information and computer technology and biotechnology. The literature on the knowledge economy focuses heavily on knowledge production, however, and attends less to knowledge dissemination and impact.' (Annu. Rev. Sociol. 2004.) Further they have measured the acceleration in knowledge production. The paper quotes that, 'A challenge for social science has been to find metrics to gauge the extent to which society has become more dependent on knowledge production. Although there is wide recognition of the importance of knowledge and intangible capital in fostering economic growth and social change, devising useful measures of these assets has been difficult. One focus has been on stocks of knowledge-human, organizational, and intellectual capital, while another focus has been on activities-R&D efforts, investments in information and communication technology and in education and training, and organizational reforms. Patents have become a widely used indicator of intellectual capital (Grindley & Teece 1997) and economically valuable knowledge (Pakes & Griliches 1980, Griliches 1990).

Taking up the same line forward, in this paper the condition of India in the Knowledge Economy is measured in terms of patents applied, patents granted, industrial designs, trademarks etc.

METHODOLOGY

The World Intellectual Property Organization publishes data of almost all the countries with respect to various aspects such as Patent applications, Patents granted, industrial designs, Trademarks etc. which has been used and it is compared against the GDP of the country. The GDP data published by IMF in their world economic outlook is used here. This paper attempts to examine the ranking of various countries in terms of its GDP and as against its ranking terms of Patents granted. The main purpose here is to examine whether the countries with higher GDP are creating more knowledge capital as compared to low GDP countries? Whether it is essential for a country to create more knowledge wealth in order to become developed and High Income Group country? The data for this purpose is presented below:
Table 1:

TOP 12 Countries In The World In Their Gdp Ranking: 2017 and 2016 ranks

Sr. No	Name of the country	GDP Nominal (billions of $) 2017	Rank	GDP Nominal (billions of $) 2016	Rank
1	United states of America	19,417.144	1	18,561.93	1
2	China	11,795.297	2	11,391.62	2
3	Japan	4,841.221	3	4,730.30	3
4	Germany	3,423.287	4	3,494.90	4

5	UK	2,496.757	5	2,649.89	5
6	India	2,454.458	6	2,250.99	7
7	France	2,420.440	7	2,488.28	6
8	Brazil	2,140.940	8	1,769.60	9
9	Italy	1,807.425	9	1,852.50	8
10	Canada	1,600.265	10	1,532.34	10
11	Russia	1,560.706	11	1,267.75	12
12	Korea	1,498.074	12	1,404.38	11

Source: International Monetary Fund World Economic Outlook April 2017 http://www.imf.org/en/Publications/WEO/Issues/2017/09/19/world-economic-outlook-october-2017.

As compared to 2016 India and Brazil's rank shows an upward projection in 2017. Same is with Russia while USA and China have retained their positions in GDP. Now if we assume that the resulting rise in the GDP is due to the rising patents received by the companies and individuals of the country then we have to take a look at the following data.

Table 2

Patent applications for the top 10 offices

Office	Patent applications 2014	2015	Growth (%) 2014-15
China	928,177	1,101,864	18.7
United States of America	578,802	589,410	1.8
Japan	325,989	318,721	-2.2
Republic of Korea	210,292	213,694	1.6
European Patent Office	152,662	160,028	4.8
Germany	65,965	66,893	1.4
India	42,854	45,658	6.5
Russian Federation	40,308	45,517	12.9
Canada	35,481	36,964	4.2
Brazil	30,342	30,219	-0.4

Note: Application numbers are a sum of direct filings and PCT national phase entries received by offices

Source: WIPO Statistics Database, October 2016.

Table 3 Total applications and growth in applications

Applications worldwide	Year 2014	2015	Growth (%) 2014-15
Patent	2,680,900	2,888,800	7.8
Utility model	948,900	1,205,300	27
Trademark	7,426,867	8,445,300	13.7
Industrial design**	1,137,500	1,144,800	0.6

Table 4 Total patent applications

Office	Patent applications 2014	Share of world total (%)
China	1,101,864	38.1
United States of America	589,410	20.4
Japan	318,721	11.0
Republic of Korea	213,694	7.4
European Patent Office	160,028	5.5
Others	505,083	17.5
World total	**2,888,800**	

Note: Application numbers are a sum of direct filings and PCT national phase entries received by offices (where applicable).

Source: WIPO Statistics Database, October 2015.

Table 5 Share in IP filing activity by Region (Data for year 2015)

a)

Patents

Geographical region	Applications	Share of total (%)
Africa	14,800	0.5
Asia	1,786,800	61.9
Europe	360,000	12.5
Latin America &Caribbean	65,600	2.3
North America	626,400	21.7

b)

Trademarks

Geographical region	Applications	Share of total (%)
Africa	233,200	2.8
Asia	4,669,800	55.3
Europe	2,041,400	24.2
Latin America & the Caribbean	654,800	7.8
North America	672,400	8.0

c)

Utility models

Geographical region	Applications	Share of total (%)
Africa	240	0.02
Asia	1,152,600	95.6
Europe	46,400	3.8
Latin America & the Caribbean	4,230	0.4

d)

Industrial designs**

Geographical region	Applications	Share of total (%)
Africa	16,300	1.4
Asia	778,100	68.0
Europe	281,000	24.5
Latin America & the Caribbean	15,000	1.3
North America	46,000	4.0
Oceania	8,400	0.7

**refers to design count – the total number of designs contained in industrial design applications.

Source: for all the above tables WIPO Statistics Database, October 2015.

Table No. 5 has four components hence it is divided into four separate small tables. That is patents, trademarks, utility models and industrial designs. These four are the main assets of knowledge capital and hence shows that maximum capital will be created in Asia.

India in the World Economy

If we look at the position of India in this regard we find that India has constantly shown a rising trend since last 14 years in areas of Patents, Trademarks, and Industrial designs.

Table 6 India's IP Filings (Resident + Abroad, Including Regional) and Economy)

Year	Patent	Trademark	Industrial Design	GDP (Constant 2011 US$)
2002	4,164	90,751	2,618	2858.92
2003	5,370	79,488	3,034	3083.65
2004	6,728	67,504	3,465	3327.96
2005	8,028	77,908	3,867	3636.96
2006	9,434	93,736	4,078	3973.88
2007	10,529	125,078	4,759	4363.38
2008	11,546	128,122	4,949	4533.16
2009	11,939	143,626	4,610	4917.56
2010	14,869	181,621	5,030	5422.1
2011	15,896	186,783	6,472	5782.04
2012	18,202	188,154	5,900	6097.53
2013	20,908	196,262	6,101	6486.92
2014	22,445	218,725	7,401	6973.78
2015	23,946	270,333	8,245	7532.38
2016	25,795	284,286	7,600	8067.71

Source: World Intellectual Property Organisation.

Intellectual property of India as a percentage of Asia 2015 data

Sr No	Type of Intellectual Property	Asia	India	%age
1	Patent Applications	1786800	45658	2.55
2	Trademark Applications	4669800	274810	5.88
3	Utility Model applications	1152600	-	-
4	Industrial design applications	778100	10290	1.32

Calculated on the basis of two separate tables on regional patterns and India's data

DISCUSSION

India because of its size is among the top 10/12 Economies of the world in terms of the GDP. Its rank in terms of patents filed is even better than some developed countries like Japan. Germany, Korea.

- The earlier literature shows that, in measurement of knowledge economy, Innovation is an important criterion. Patents and Intellectual property is the indication of innovation systems of the country. Hence we can say that India is on the path of knowledge capital creation. The knowledge regime has created challenges for many of the stable economies of the world. At the same time it has also created opportunities for many countries of the world. When Europe and America are lagging behind in growth rate of new patents applications, china has gone much ahead of everybody else.
- Table no1 and Table no2 clearly show that China and United states have maintained their positions as knowledge economy because of the total number of patents applied from these two countries. China has definitely created more knowledge capital than any other country of the world. Overall picture of the world shows that Asia Region is ahead of rest of the world and India enjoys a dominant position in Asian subcontinent.
- Table No.6 clearly highlights the rise in India's growth in patents is more but in number India has more trademarks than patents. Industrial designs also reflect the innovations in the field of engineering and technology where India has not done a remarkable performance as compared to other areas.
- If we are comparing India and China as world's future growth centers India is much behind china in terms of its intellectual capital and the rate or such capital formation. In fact the world will see China taking over USA in knowledge capital in near future. India is said to have growth potential in service sector.
- If more and more knowledge workers are found in service sector especially in Information Technology and computer software field then we should see more patents to be filed in those sectors. Though accurate measurement of knowledge economy is still difficult, it is clearly established that intellectual property like patents, trademarks, industrial designs are playing important role in the growth of GDP as well as in international trade, when the countries are getting rewards of their stock of knowledge capital then we have to examine our country's own position in this regard.

CONCLUSION

India has to nurture and encourage the innovation culture and also develop the systems where by this intellectual property not only results in actual production and exports but also earnings out of the patents and royalties sold to other countries' manufacturers. The Universities and the Educational Institutions are traditionally known as the knowledge centers of a county but in India the research that takes place in academics does not lead to innovations; it remains only for the academic purpose. The knowledge economy of India has created knowledge workers its time to create knowledge capital. While Asia has always been number one for all types of IP applications India's share in it is very less. The majority of Asia region is from China followed by Japan, India, Korea. India has a long way to go before it becomes a Knowledge Economy but the process as certainly began.

References

1. Walter W. Powell and Kaisa Snellman, 'The Knowledge Economy' Annual Reviews Sociol. 2004.
2. David J. Teece, 'Capturing Value from Knowledge Assets' by CALIFORNIA MANAGEMENT REVIEW VOL 40, NO, 3 SPRING 1998
3. Yuanyuan Chen, Anandhi Bharadwaj, Khim-Yong Goh, 'An Empirical Analysis of Intellectual Property Rights Sharing In Software Development Outsourcing. MIS Quarterly Vol. 41 No. 1, pp. 131-161/March 2017
4. J. Jaya Murthy, 'Managing innovations and developing Intellectual Property strategie for firms.
5. Deepa Ittimani Tholath, 'Knowledge Dimensions to Monitor Knowledge Growth in Service Sector'. The *IUP Journal of Knowledge Management*, Vol. XI, No. 3, 2013
6. Nowshade Kabir, 'knoeledge entrepreneurship in emerging economies' Newcastle University Business School, UK
7. Apte Vishakha, 'Management Education in Knowledge economy', Innovative Management Solutions For Competitive Advantage. Excel Publishers, New Delhi.

Websites

8. IMF for world economic outlook http://www.imf.org/en/Publications/WEO/Issues/2017/09/19/world-economic-outlook-october-2017
9. World Intellectual property organization. http://www.wipo.int/portal/en/index.html

Reports

10. OECD Report on Knowledge economy. https://www.oecd.org/sti/sci-tech/1913021.pdf
11. Gunnar Eliasson,' Role of knowledge in economic growth.' http://www.oecd.org/innovation/research/1825633.pdf
12. Asian Development Report by Asia Development Bank Spet 2014.

****

A study of Relationship between Training Effectiveness & Training Satisfaction and its impact on Organizational Positivity in Life Insurance companies

Article · June 2018

1 author:

Pravin P Chavan
CSIBER Kolhapur

RESEARCH REVIEW JOURNALS
Volume-03
Issue-06
June-2018

ISSN: 2455-3085 (Online)
RESEARCH REVIEW International Journal of Multidisciplinary
www.rrjournals.com [UGC Listed Journal]

A study of Relationship between Training Effectiveness & Training Satisfaction and its impact on Organizational Positivity in Life Insurance companies

*Dr. Pravin P. Chavan

Assist. Prof, Dept. of Management, Chhatrapati Shahu Institute of Business Education & Research, Kolhapur, Maharashtra (India)

ARTICLE DETAILS

Article History
Published Online: 02 June 2018

Keywords
Financial Advisors, Training Effectiveness, Training Satisfaction, Organizational Positivity

***Corresponding Author**
Email: pravin.chavan1983[at]gmail.com

ABSTRACT

In insurance business insurance agents also called as financial advisors play the most important role. Trained financial advisors provide an extra competitive edge to the company in the market. The research findings reveal that quality of training plays a significant role in enhancing job satisfaction and work performance of the employee. Besides, there is need to study whether the training satisfaction positively influences organization positivity. This study assessed the relationship between training effectiveness and training satisfaction and its impact on organizational Positivity in Life Insurance companies. The effectiveness of training was assessed on three parameters; they are Personal Skill Development abilities of the training, The Company and Product information generating ability of the training and Sales skill development ability of the training. The regression analysis result reveals a positive relationship between effective training imparted to the advisors and their training satisfaction. Logistic regression analysis results indicated that advisors satisfaction for the training enhances their organizational positivity.

1. Introduction

Insurance is defined as a contract between two parties, where one promises the other to indemnify or make good any financial loss suffered by the latter (the insured) in consideration for an amount received by way of 'premium'. In other words, the party agreeing to pay for the losses is the 'insurer'. The party whose loss makes the 'insurer' pay the claim is the 'insured'. The consideration involved in the contract or what the insured pays to the 'insurer' is called premium. The contract of insurance is referred to as the 'policy'[1].

In India Life Insurance Corporation a public sector enterprise enjoyed a monopoly in life insurance business up to 2000. The year brought a seismic change in the industry through opening its door for private players. Initially, the limit on FDI was 26 percent later in 2014 it was increased up to 49 percent. To harness the huge untapped opportunities offered by the Indian insurance market, a number of foreign firms entered the market. At present, the industry is exposed to tough competition as there are 24 companies operating in the Indian insurance market [2]

Insurance is one of the most difficult products to sell as insurance is not bought but it is sold. It is an unpleasant thing which has to be sold in a pleasant manner[3]. Entry of private and experienced foreign players in the market has intensified competition in the insurance sector. Customers are enjoying the fruits of competition. They are expecting best services from their insurance service provider[4]. Increasing customer's expectation fosters a number of challenges at front of insurers.

In insurance business insurance agents also called as financial advisors play the most important role. They act as front-line soldiers for the company. They identify the potential customers, schedule an appointment with the customers, offers them the best insurance solution through assessing their needs, convert the potential customer into the customer of the company, conduct primary underwriting of the customer, give effective after sales services to the customers to achieve up sales of the company's other insurance policies. Insurance salesmanship is a high pressured job that requires constant networking, and building new relationships which necessitate not the only high amount of people skill but also inner motivation[5]. The industry also witnessing the high amount of sales force turnover as 4-year retention rate in the insurance industry is as low as 13 percent[5]. As the insurance advisors perform the prime role in sales and distribution of insurance, advisors training are most important. Life insurance companies need to train their sales representatives to acquire competencies as problem-solving, communication, information technology utilization, culture compatibility, emotional intelligence, collective competence and ethics[6]. Training gives new or current employees the skills they need to perform their jobs[7]. Training needs analysis ensuring the effectiveness of the overall training process and imparts specified skills to the employees. The quality of training plays a significant role in enhancing job satisfaction and work performance of the employees[8]. This study intends to assess the relationship between training effectiveness and training satisfaction and its impact on organizational positivity in Life insurance companies.

2. Conceptual Framework

Training effectiveness: Training effectiveness is a measure of the extent to which training achieves its intended outcome, for instance, to improve work performance[9]. Training evaluation has the advantage of identifying the area that needs further improvement and it may also provide an insight into methods of improvement

Organisation Positivity: Positivity is the practice of being or tendency to be positive or optimistic in attitude[10]. Positive Organizational Behavior is an application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today's workplace[11].

3. Literature Review

Workplace performance is a complex phenomenon to measure, and establishing linkages between training and workplace performance is a difficult proposition. The relationship depends on the features of training and measure of performance considered[12]. Training is positively associated with job satisfaction and job satisfaction is positively associated with the workplace performance. Performance of the employees and productivity of the workforce increases as a result of proper attention towards quantity and type of training given to them[8]. One of the important factors that affect employees productivity is employees training. Employees show better performance when they are been trained[13]. Training benefits employees to enhance their knowledge, skills, ability, competences, and behavior. Organizational performance depends largely on manpower training and development. Training affects employee's performance and organizational effectiveness. Organizations should have regular and well-thought-out training and development programs for their employees[14]. Job training satisfaction is independent of demographic factors of the employees whereas there is a significant relationship between job type, job status, and job tenure. Employee participation in training, selection for training, methods of training and relevance of training to the work of the employees have an impact on the performance of employees with regards to their jobs[15]. Training is an important antecedent of performance. Performance of an organization relies on the employee commitment which in turn depends on the HR policy of training and development. Training has a significant influence on employee's work commitment and performance, it is important to reinforce and apply training as part of organizational agendas in achieving organizational goals. Training commitment, training needs assessment, training contents, and delivery approaches, and training evaluation positively and significantly influence the employee's work commitment, job satisfaction and job performance[16]. A well designed and executed training facilitates participant's involvement, attitudinal changes and this provides an opportunity for application of new skills and knowledge in the workplace, job commitment, employees' alignment to organizational visions and strategies[17].

Research Gap

The research findings reveal that there is a positive relationship between training and employees job performance. Besides, there is need to study whether the training satisfaction positively influences organization positivity.

4. Research Hypotheses

Hypothesis No.1

H_0: There is no significant relationship between training effectiveness and financial advisors training satisfaction.

Hypothesis No.2

H_0: There is no significant relationship between financial advisor's training satisfaction and organization positivity.

5. Research Methodology

Data Collection: The research was conducted with primary data collected through a structured questionnaire. The effectiveness of training was assessed on three parameters, they are Personal skill development abilities of the training, The Company and Product information generating ability of the training and Sales skill development ability of the training. Training effectiveness scale has Likert statements and the respondents were graded Likert statements on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Training satisfaction scale is a rating scale and the respondents rated satisfaction on the quality parameters of the training ranging from 1 (Highly dissatisfied) to 5 (Highly satisfied). To understand advisors opinion about their training impact on organization positivity dichotomous (Yes/No) response collected.

Sampling Design and Sample Size: The study was conducted in the Kolhapur city. There are seventeen insurance companies operating in the city. Out of total seventeen companies, ten companies having highest annual sales turnover were selected for the study. Total 1106 Advisors were associated with those companies; it was population under the study. At 5 % level of significance for 5 % confidence interval the calculated sample size was 345 advisors. Financial advisors to be contacted from each company were calculated using a proportion to population sample size estimation methods. Financial advisors willing to participate in the study were contacted for the data collection.

6. Analysis and Interpretation of Results

Tools of analysis: For analysis MS office Excel and SPSS 20.0 was used. To understand the relationship between advisors opinion for the effectiveness of training and training satisfaction regression analysis was used. Finally, logistic regression was used to analyze the relationship between advisors training satisfaction and organization positivity.

Hypothesis No.1

H0: There is no significant relationship between training effectiveness and financial advisors training satisfaction.

The important objective of the study is to assess the relationship between financial advisor's opinion about skill development ability of the training and satisfaction level for training. The skill development ability of the training is been assessed on three parameters. They were personal skill development abilities of the training, The Company and Product information generating ability of the training and Sales skill development ability of the Training. To study financial advisor's opinion about training on above-mentioned parameters three Likert scales were prepared. To study the financial advisor's satisfaction for training five points rating scale was prepared. Table No. 1.1 presents descriptive statistics of three scales prepared.

Multiple linear regression analysis is used to determine the significant relationships between independent variables (Quality Training Practices) and the dependent variable (Financial Advisors Training satisfaction). Table No. 1.2 gives model summary analysis. A correlation coefficient (R-value) for the model is 0.494, it indicates a positive relationship between dependent variable (Financial Advisors Training satisfaction) and independent variables (Personal Skill Development abilities of the training, The Company and Product information ability of the training and Sales skill development ability of the Training). The R Square value indicates 48.9 percent variations in the dependent variable are explained by the independent variable.

Table No: 1.1

Descriptive Statistics of Scales Used

Statements	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree	Total	Mean & Standard Deviation
Skill Development							
Objection handling during the sales Calls	12	35	86	109	103	345	Mean= 3.51 Std Dev=0.4
Convincing Power	12	35	99	113	86	345	
Speaking / Communication skills	9	42	89	137	68	345	
Personality Development and confidence Improvement	31	16	80	113	105	345	
Analysis of customer's economical And psychological need	16	37	83	142	67	345	
Spot decision making according to the Situation and requirement	25	34	165	79	42	345	
Analyzing skills	25	34	165	79	42	345	
Increase in sales figures	15	56	106	142	26	345	
Company / Organisation related							
Product Knowledge of all the products of the company	30	24	42	171	78	345	Mean=3.6 Std D=0.35
Company history and details	10	35	165	89	46	345	
IRDA rules and regulations	0	45	106	101	93	345	
Goals, objectives, and achievements Of company.	0	26	71	129	119	345	
Ability to select correct product according To customer's need	0	36	98	142	69	345	
Spot decision making according to the Situation and requirement	31	16	80	113	105	345	
Documentation procedure	12	35	86	109	103	345	
Licensing procedure and rules	36	57	95	105	51	344	
Advisor code activisation process	31	16	80	113	105	345	
Career opportunities and development	35	15	169	123	2	344	
Operations/Issuance procedure	16	37	83	142	67	345	
Ability Development							
After Sales Services to the customers of the company	12	35	86	109	103	345	Mean=3.22 Std D= 1.03
Proper Follow – up	39	19	147	96	44	345	
Identification of targeted customer	9	42	89	137	68	345	
Spot conversion & document collection (Spot Closing)	9	67	89	178	2	345	
The ability of handling of referral / cold calls	25	35	165	78	42	345	
Financial Advisors Training Satisfaction Scale							
Statements	**Highly dissatisfied**	**Dissatisfied**	**Neither dissatisfied Nor satisfied**	**Satisfied**	**Highly satisfied**	**Total**	**Mean & Standard Deviation**
Level of interest created	25	34	165	79	42	345	Mean= 3.65 S.D= 0.97
Duration of the training	35	15	169	123	2	344	
The content of the training	10	35	165	89	46	345	
Level of efficiency and skills of the trainer	0	26	71	129	119	345	
Tools and equipment used during the training	39	19	147	96	44	345	
Games and innovative activities conducted during training	31	16	80	113	105	345	
Location/Venue of the training	12	35	86	109	103	345	

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	27.208	3	9.069	110.814	.000(a)
Residual	27.909	341	0.082		
Total	55.117	344			

Table No. 1.2
Multiple Regression Model Summary

Table No. 1.2 Multiple Regression Model Summary			
R	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
.703(a)	0.494	0.489	0.286
Predictors: (Constant), Ability development, Com. & Product awareness generation, Skill development			
b Dependent Variable: Financial Advisors Training Satisfaction			

Table No. 1.3
ANOVA Summary

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	27.208	3	9.069	110.814	.000(a)
Residual	27.909	341	0.082		
Total	55.117	344			

Table No.1.3 shows the ANOVA results. F value is 110.814 and the corresponding P-value is 0.00. As P-value (0.00<0.05) it is significant at the 5 percent level of significance. Here the null hypothesis is rejected and it is concluded that there is a significant relationship between effective training practices and financial advisor's training satisfaction.

Table No. 1.4 Multiple regression model coefficients							
	Unstandardized Coefficients		**Standardized Coefficients**	**t**	**Sig.**	**Collinearity Statistics**	
	B	**Std. Error**	**Beta**			**Tolerance**	**VIF**
(Constant)	-0.20	0.21		-0.94	0.35		
Personal skill development	0.19	0.04	0.19	4.64	0.00	0.87	1.15
The Company and Product information ability of the training	0.63	0.05	0.55	13.4	0.00	0.88	1.13
Sales skill development ability of the Training	0.22	0.03	0.25	6.47	0.00	0.99	1.02
a Dependent Variable: satisfaction							

From Table No. 1.4 Coefficient table it is concluded that financial advisor's training satisfaction depends upon personal skill development abilities of the training, The Company and product information generating ability of the training and sales skill development ability of the training.

It can be explained by the following regression equation:

$Y = a + b_1*X_1 + b_2*X_2 + ... + b_p*X_p$
$Y= a + bX + e$
Y= The success of training and development
a = constant (-.195)
X_1 = Personal skill development ability of the training (.190)
X_2 = The Company and Product information generating ability (.626)
X_3 = Sales skill development ability of the Training.(.22)
b = regression of coefficient of X
e = an error term, normally distributed of mean 0 (usually e is assumed to be 0)

Y (Financial Advisors Training satisfaction) = -.195+ .190 (Personal skill development ability of the Training) + .626 (The Company and Product information generating ability) +.223 (Sales skill development ability of the Training).

Hypothesis No: 2

H_0: There is no significant relationship between financial advisor's training satisfaction and financial advisor's organization positivity.

Here research intended to find out the influence of financial advisor's training satisfaction, as an independent variable and financial advisors organization positivity. The dependent variable is a binary choice between "Organisation Positivity" and "No Organization Positivity".

To know financial advisor's organization positivity dichotomous question whether training has developed the senses of positivity toward organization was asked and respondents have given the answer in terms of “yes or no”.

Logistic regression is used to measure the relationship between a categorical dependent variable and one or several continuous independent variables by converting the dependent variable to probability scores[18]. Logistic regression is used when the dependent variables are 1) dichotomous, 2) nominal or 3) ordinal, and the independent variables are 1) nominal or 2) ordinal or 3) interval or rational and satisfy or fail normality assumptions.

Table No. 1.5
Omnibus Tests of Model Coefficients

	Chi-square	df	Sig.
Step	106.65	1	0
Block	106.65	1	0
Model	106.65	1	0

Table No. 1.5 shows the Omnibus tests of model coefficients. It gives general tests of how well the Model performs. This is the chi-square statistic. The statistics for the Step, Model and Block are the same because stepwise logistic regression or blocking is not used. In this case, the model is statistically significant because the P-value (0.00<0.05) is less than 5 percent level of significance.

Table No. 1.6
Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	362.812	0.266	0.358

Cox and Snell’s R-Square attempts to imitate multiple R-Square based on ‘likelihood’, but its maximum can be (and usually is) less than 1.0 Here it is indicating that 26.6 percent of the variation in the dependent variable is explained by the logistic model. The Nagelkerke modification that does range from 0 to 1 is a more reliable measure of the relationship.

Nagelkerke’s R^2 will normally be higher than the Cox and Snell measure. Nagelkerke’s R^2 is part of SPSS output in the ‘Model Summary' table and is the most-reported of the R-squared estimates. In this case, it is 35.8, indicating a moderately relationship of 35.8 % between the predictors and the prediction.

Table No. 1.7
Classification Table

		Predicted		
		Positivity		Percentage Correct
Observed		No Positivity	Positivity	
Positivity	No Positivity	89	56	61.4
	Positivity	27	173	86.5
Overall Percentage				75.9
a The cut value is .500				

Table No 1.7 The classification table summarizes the results of prediction about the organization positivity. In this study, 61.4 percent were correctly classified for the Non-Positivity group and 86.5 % for Positivity. The overall model predicts 75.9 % financial advisor's organization positivity correctly.

Table No. 1.8
Variables in the Equation

	B	S.E	Wald	Df	Sig.	Exp(B)
Training Satisfaction	3.62	0.44	66.59	1.0	0.00	37.40
Constant	-12.23	1.54	62.96	1.0	0.00	0.00

From Table No. 1.8 Variables in the Equation, Wald statistic and associated probabilities provide an index of the significance of each predictor in the equation. The Wald statistic has a chi-square distribution. The simplest way to assess Wald is to take the significance values and if it is less than .05 reject the null hypothesis as the variable does make a significant contribution. Here, financial advisor’s training satisfaction has significantly contributed to the prediction (P= .000<0.05) their organization positivity. The Exp(B) column in the table presents the extent to which raising the corresponding measure by one unit influences the odds ratio. Exp(B) is to be interpreted in terms of the change in odds. If the value exceeds 1 then the odds of an outcome occurring increase; if the figure is less than 1, any increase in the predictor leads to a drop in the odds of the outcome occurring. For example, the Exp(B) value associated is 37.404. Hence when financial advisor's training satisfaction raised by one unit the odds ratio is 37.404 times as large and therefore financial advisors are 37.404 more times likely to belong to the positivity group. The 'B' values are the logistic coefficients that can be used to create a predictive equation (similar to the b values in linear regression) formula. In this example:

$$\hat{p} = \frac{\exp(B_0 + B_1X)}{1+\exp(B_0 + B_1x)} = \frac{e^{B_0+B_1x}}{1+e^{B_0+B_1x}}$$

Where

P = The probability of Financial Advisor is having positivity towards the organization

e = the base of natural logarithms

b = regression of coefficient of X = 3.622 Constant= -12.234

The probability of financial advisor is positive towards organization is influenced by the value of exp. The value of exp is positively influenced by financial advisor's training satisfaction. The coefficient of this predictor is 3.622. It indicates positive relationships between financial advisor's training satisfaction and financial advisor's organization positivity.

The results indicate that the test of the overall model of independent variable financial advisor's training satisfaction with dependent variables financial advisor's organization positivity' is statistically significant, according to the model chi-square statistic (model chi-square X^2 = 106.65; df = 1; P = .000 < 0.05). Nagelkerke's R^2 = 0.358 which indicates the moderate relationship between the financial advisor's training satisfaction and financial advisor's organization positivity. The model also predicts a high percentage (75.90) of the responses correctly. According to the Wald criterion financial advisor's training satisfaction significantly influence financial advisor's organization positivity.

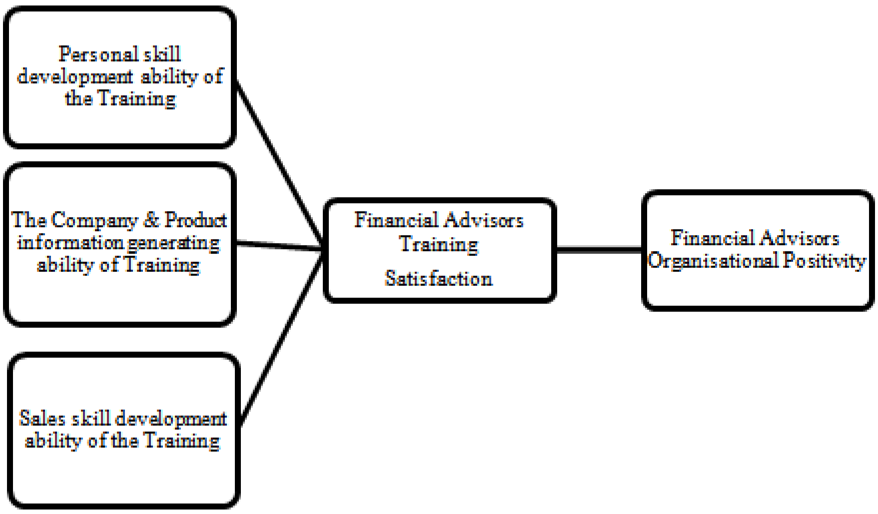


Figure 1. Relationship Model

7. Conclusion

The entry of foreign players intensified the competition in Indian insurance market. Insurance is one of the most difficult products to sell, as insurance is not purchased but it is sold by the advisor. Insurance advisors are front-line soldiers of any company. They play a prime important role in the promotion, sales, and distribution of the insurance product. The competent advisors of any insurance company give the company competitive edge in the market. Besides, being insurance advisor is a tough task; he has to withstand tremendous sales pressure and customer expectations. Advisors have to continuously upgrade their product knowledge to meet customer expectations. In a way advisors training is a tool in the hands of the company to develop advisors personality, his knowledge of the company & insurance product and sales abilities.

This paper attempts to answer two main questions question whether advisor opinion about the quality of training affects their training satisfaction. Second whether advisors training satisfaction determines their positivity towards the organization. The regression analysis result reveals a positive relationship between effective training imparted to the advisors and their training satisfaction. Logistic regression analysis results indicated that advisors satisfaction for the training enhances their organizational positivity. The study enforces the importance of quality of advisor's training in the insurance business.

References

1. ICAI, " ," Institute of Chartered Accountants of India, New Delhi:, Secretary of the Committee on Insurance and Pension of the Institute, 2008.
2. IRDA.. (2018, May) www.irdai.gov.in.. [Online]. https://www.irdai.gov.in/ADMINCMS/cms/NormalData_Layout.aspx?page=PageNo129&mid=3.1.9

3. Shilpa Varma, , Priya Vij, and R Gopal, "Study of Attrition of Sales Force in Life Insurance Sector," ," IOSR Journal of Business and Management (IOSR-JBM), vol. 18, no. 6, pp. 58-66, June 2016.
4. Venkataramani, R.Moha Kumar, and Brinda, "A study on the attitude of Consumers and Insurance Agents towards the proposed increase in Foreign Direct Investment (FDI) in Insurance sector in India," International Journal of Scientific and Research Publications, vol. 5, no. 2, pp. 1:7, February 2015.
5. Anuj Agrawal, "Sales Force Attrition Study in Indian Life Insurance Industry," Pacific Business Review International, vol. 8, no. 2, 2015.
6. C K Fan and C L Chengx, "A Study to Identify the Training Needs of Life Insurance Sales Representatives in Taiwan Using the Delphi Approach.," International Journal of Training and Development , vol. 3, pp. 212-226, 2006.
7. Gary Dessler, Human Resource Management.: Pearson, 2013.
8. Melanie K Jones, Richard J Jones, Paul L Latreille, and Peter J Sloane, "Training, Job Satisfaction and Workplace Performance in Britain:Training, Job Satisfaction and Workplace Performance in Britain:," 2008.
9. K Kraiger, J K Ford, and E Salas, "Application of Cognitive Skilled-Based and Affective Theories of learning Outcomes to New methods of Training Evaluation," Journal of Applied Psychology, vol. 78, no. 2, pp. 311-328, 1993.
10. oxforddictionaries.com. (2018, May) https://en.oxforddictionaries.com/definition/positivity. [Online]. https://en.oxforddictionaries.com/definition/positivity
11. F Luthans, Positive organizational behavior: Developing and managing psychological strengths., 2nd ed.: Academy of Management Executive, 2002.
12. I Grugulis and D. Stoyanova, "Skills and Performance ," 2006.
13. Ofobruku Sylvester Abomeh and Nwakoby Nkiru Peace, "Effects of Training on Employees' Productivity in Nigeria Insurance Industry," British Journal of Economics, Management & Trade, pp. 227-235, 2015.
14. Mohammed Salah, "The Impact of Training and Development on Employees Performance and Productivity," International Journal of Management Sciences and Business Research, p. 36, 2016.
15. Aidah Nassazi, "Effects of training on Employee performance. Evidence from Uganda," 2013.
16. Vasudevan, "Examining the Relationship of Training on Job Satisfaction and Organizational Effectiveness," International Journal Of Management And Business Research., pp. 185-202, 2014.
17. AlYahya Mohammed Saad and Norsiah Binti Mat, "EVALUATION OF EFFECTIVENESS OF TRAINING AND DEVELOPMENT: The Kirkpatrick Model," Asian Journal of Business and Management Sciences, vol. 2, no. 1, pp. 14-24.
18. Field Andya, DISCOVERING STATISTICS Using SPSS. New Delhi: Sage Publications, 2009.
19. Suman Pathak and Vibhuti Tripathi, "Sales Force Turnover: An Exploratory Study of the Indian Insurance Sector," The journal Management, vol. 5, pp. 3-19, 2010.

Exploratory Study on Factors Influencing Selection of Supermarket in Kolhapur City

Article · April 2018

1 author:

Pravin P Chavan
CSIBER Kolhapur

Exploratory Study on Factors Influencing Selection of Supermarket in Kolhapur City

Rohit Ravindra Landge
Asst. Professor,
Chhatrapati Shahu Institute of Business
Education and Research, Kolhapur.

Dr. Praveen P. Chavan
Asst. Professor,
Chhatrapati Shahu Institute of Business
Education and Research, Kolhapur.

Abstract:

Indian organised retailing is under changeover today through bringing a lot of changes in the formats of retailing to catering the needs of the customers. The customers enjoy the privilege of shopping the goods and services required by them in a variety of formats. The consumer behaviour is mostly influencing on various dimensions like product, price, facilities, promotion, convenience, services and physical appearance. The present study explores the factors influencing the selection of supermarket through using exploratory factor analysis in Kolhapur city. The empirical evidence of 154 customers reveals that product variety, product access, promotion, location; value-added facilities, price, refreshment facilities and reactive time.

Keywords: Consumer Behaviour, Retailing, Supermarket.

Introduction:

The Indian retail industry has emerged as one of the most dynamic and fast-growing industries due to the entry of several new players in the recent times along with rising income levels, growing aspirations, favorable demographics and easy credit availability. It constitutes over 10% of the country's Gross Domestic Product (GDP) and around 8% of the employment and is valued at USD 672 billion. Globally, India is a fifth-largest global destination in the retail space and is growing at a rate of 12% per annum (CARE Ratings, 2017).

Consumerism is increasing in India moving it to the fourth largest economy in respect to the purchasing power with USA, Japan, and China leading in order. Marketers predict customer needs, interpret them into products and pull the customers towards the products by manipulating the 4 Ps of marketing mix they are a product, price, place, and promotion. However, over the time, maintaining long-term relationships with customers emerged as an all-important mission for companies. There is an increase in competition among types of modern stores, grocery stores, supermarkets, discount stores, department stores, catalog showrooms; they are competing for the same customers. (Kotler & Keller, 2006). Therefore, the supermarket owners need to have not only the marketing strategies to give them an advantage over the competitors but also need to develop these in a manner that the uniqueness can be maintained. (THƯƠNG, February 2016.) The size and share of Indian hypermarket is expected to increase in the coming years, given the strong macroeconomic performance, favorable consumption pattern due to growing personal disposable income, rapid development of Tier II and III cities, availability of quality retail space

and recent entry of big industrial houses into retailing with focus on large store formats. This led to the development of super-supermarket or modern supermarket or Hypermarket. (Tabeck, June- 2014).

The Indian retail industry has emerged as one of the most dynamic and fast-paced industries due to the entry of several new players. The Indian retail trading has received Foreign Direct Investment (FDI) equity inflows totaling US$1.09 billion during April 2000–September 2017, according to the Department of Industrial Policies and Promotion (DIPP) (IBEF, 2018). The industry has exposed to intense competition. Entry of foreign players and Indian entrepreneurial has intensified the competition in the Industry. The customers have multiple options to select the supermarket to satisfy their needs. It has become immensely important to unfold the factors influencing the selection of a supermarket.

Objectives of The Study:

1. To Study the important factors in the selection of Supermarket.
2. To suggest, improve sales and functions in the departmental stores based on results.

Literature Review:

1. **(Tabeck, 2014)**The study conducted to understand the important factors for influencing purchase behaviour at Big Bazaar. The factor analysis result reveals that there are eleven factors that influence purchasing behavior at Big Bazaar. The factors are Product oriented, Affordability and Availability, Convenience, Easiness, Contract terms, Quality Products, Secure Information, Innovative Offers After sale service, Different Price ranges and Security and discounts. The research findings confirm that major reasons for customers purchasing in hypermarkets are, firstly, these are the one-stop shopping solutions for the needs and secondly, availability of product range.
2. **(Gomathi, Kishore, & Deepika, 2013)** The purpose of this paper is to find out consumer attitude towards Departmental stores a form of organized retail outlet in Erode city. The study found that customer satisfaction is independent to occupation and there is no relationship between perception for customer service and number of family members. Whereas satisfaction level of offers/Discounts is influenced by gender. The study conclude that customers are satisfied with the contributors made by departmental stores and they are interested in recommending it to other prospective customers.
3. **(Fatima & Rasheed, 2012)** the study is to identify the factors that affect the shoppers' loyalty towards shopping malls. Further the objective the study has tested a relationship between consumer loyalty factors and shopping malls performance. The study has found three attributes those are relevant to the shopping malls. They are Environment, Image and Convenience of shopping malls. All the three factors positively affect the consumer behavior or loyalty regarding shopping malls. And also influence the performance of the mall if any attribute is lacking in the mall. All the three factors positively affect the consumer behavior or loyalty regarding shopping malls.
4. **(Batra, 2014)**Indian Retail Market is going through a transition phase. With retail environment getting modernized and customers gradually shifting from the culture of shopping at small neighborhood Kirana stores to large hypermarkets. The share of organized retail in total retail market in India is growing at an impressive rate. The aim of the study was to identify the factors affecting consumer preference related to shopping at

organized retail store. The study shows six major factors that the consumers prefer to enter the retail stores. The factors are Availability and variety Products Ambience, Service, Pricing, Quality and Promotions. The study has concluded that understanding changing in consumer preferences attracting customers, persuade them to make purchase and satisfy them to earn loyalty has become big challenge at front of retailers.

5. **(Wel, Hussin, Asiah, & Nor, 2012.)** Malaysian retail market has seen interesting growth of new types of retail outlets such as the hypermarkets and specialty stores in the last 15 years. The study focuses on the household-level shopping behavior across retail formats in Malasia. Factor analysis result reveals that seven factors play important role in retail selection decision by the consumer those factors are Store Personnel and Physical Characteristics of the Store; Advertising by the Store; Store Convenience & Merchandise Selection; Convenience of Reaching the Store; Friends and Store; Product Variety & Quality; Services Offered by Store. The study has concluded customer shows polygamous loyalty as they purchase from hypermarket as well as various other retail formats.
6. **(Ariyanayagam & Ragel, 2014)** This study provided an in-depth look into the purpose of shopping, level of shopping enjoyment, level of leisure shopping, and demographic factor influences in retail environment. Customers feel that shopping is one of their favorite leisure activities. Enjoyment is a major component for leisure shoppers. the major factors affecting leisure shopping with reference to recreational facilities, location of store, shopping behavior, store loyalty, product attributes, services, brand value, perceived values and price. the growth of online shopping has also generated considerable interest
7. **(C.R.Mathuravalli,June2013)** In his Ph.D. research have Investigated the Consumer Preferences Towards Store Brands Purchase In Madurai District, his research mainly focuses on identify the consumers' perception and various parameters that influences consumer's purchase decisions the store choice behaviour towards stores, store brands and store loyalty in the Madurai district. He identifies that value for money, wide range of promotional offers and extensive varieties of products are the important store choice attributes. He also found that there is positive association exists in store image, consumer satisfaction and store loyalty but not with store brands in Madurai.
8. **(Wornchanok Chaiyasoonthorn And Watanyoo Suksa-Ngiam, December 2011)** in their research study "Factors Influencing Store Patronage: A Study of Modern Retailers in Bangkok Thailand" aiming on investigating what factors affect Thai customers purchasing goods and services from such types of retail stores in Bangkok, Thailand. He founds through study that factors correlated with purchase of goods and services from modern retail stores were distance from home, distance from workplace, purchase intention, customer satisfaction, perceived service quality, personal income, and household income. Also conclude that to create a predicting equation only three factors: distance from workplace, purchase intention, and personal income could be used.

Research Methodology:

Data Collection:

The study is exploratory in its nature. It intends to explore the factors the factors influencing the selection of supermarket. To achieve the stated objective primary data was

ISSN : 2348-7143
April 2018

collected through self-designed structured questionnaire. The questionnaire comprises of scales to assess the factors they consider while the selection of a supermarket. To unfold the important factors customer consider while the select supermarket, list of items were identified and customers were requested to grade the items at five-point category scale, where 1 represents highly unimportant and 5 highly important.

Sampling Design and Sample Size:

The study is conducted at D-Mart, Big Bazaar, Star Bazaar and Lucky Bazaar at Kolhapur city. Total customers visiting these supermarkets are the population under the study. The population under study is infinite in its nature. The customer visited these supermarkets and willing to fill up the questionnaire is the sample unit under the study. Hence sampling method for the study was convenience sampling. Customers were requested to fill-up the questionnaire once they availed the services at these supermarkets and their payments session is over, so as to get the customer's response entire experience at the outlet. Total 289 respondents have filled the questionnaire and it is the sample size of the study.

Data Analysis:

For analysis MS office Excel and SPSS 20.0 was used. To understand the factors the factors influencing the selection of supermarket principle component analysis was run on the scale prepared to understand the factors influencing the selection of supermarket.

Statistical Tools:

1. To measure the sampling adequacy & relationship among variables KMO and Bartlett's Test were conducted.
2. To analyze the data factor analysis were done to identify the important factors.

Data Analysis and Interpretation:

The objective of this research was to identify the factors influencing the selection of Supermarket. Factor analysis was used to on the scale prepared to identify the factors in selecting of a supermarket. Factor analysis is a data reduction statistical technique that allows simplifying the correlation relationships between numbers of variables. In order to establish the strength of the factor analysis solution, it is essential to check the validity of the data. It is done with the Kaiser-Meyer-Olkin (KMO) and Bartlett's Test. The Kaiser Meyer Olkin test is to be used for measuring sampling adequacy. The KMO statistic varies between 0 and 1. For the application of factor analysis, the value of KMO statistics should be greater than 0.5. The KMO statistics compare the magnitude of observed correlation coefficients with the magnitudes of partial correlation coefficients. A small value of KMO shows that correlation between variables cannot be explained by another variable.

Bartlett's test is used to show the relationship between variables. It also tests that the correlation matrix is an identity matrix. An identity matrix is a matrix in which all of the diagonal elements are 1 and all off-diagonal elements are 0. The correlation matrix is not an identity matrix. It checks the hypothesis that the correlation matrix of variables is insignificant.

Table No.1: Factor Analysis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.790
Bartlett's Test of Sphericity	**Approx. Chi-Square**	1582.514
	df	253
	Sig.	.000

Here from table No. 1, it is identified that the KMO statistics is0.790, it is well above 0.5. It indicates that factor analysis could be used for the given set of data. Further, Bartlett's test of Sphericity testing for the significance of the correlation matrix of the variables indicates that the correlation coefficient matrix is significant as indicated by the p-value corresponding to the chi-square statistics. The p-value is 0.000, which is less than 0.05, the assumed level of significance, indicating the rejection of the hypothesis that the correlation matrix of the variable is insignificant. It indicates that factor analysis could be used for the given set of data. Both the above test indicates that data is suitable for conducting factor analysis.

The above table shows all the factors extractable from the analysis along with their Eigenvalues, the percent of variance attributable to each factor, and the cumulative variance of the factor and the previous factors. To choose the criteria of Eigenvalues over 1 is used. From the above table, it is identified that there were eight factors with Eigen values greater than1.

Table No.2: Factor Loading for Influencing Factors

Total Variance Explained									
	Initial Eigenvalues			Extraction Sums of			Rotation Sums of Squared		
Compo-nent	Total	% of Varian	Cumulative %	Total	% of Varianc	Cumulative %	Total	% of Varian	Cumulative %
1	5.191	22.571	22.571	5.191	22.571	22.571	2.35	10.216	10.216
2	1.758	7.645	30.216	1.758	7.645	30.216	2.043	8.884	19.099
3	1.644	7.147	37.363	1.644	7.147	37.363	1.846	8.028	27.127
4	1.427	6.202	43.565	1.427	6.202	43.565	1.797	7.811	34.938
5	1.193	5.187	48.752	1.193	5.187	48.752	1.772	7.706	42.644
6	1.088	4.729	53.481	1.088	4.729	53.481	1.685	7.328	49.971
7	1.058	4.6	58.081	1.058	4.6	58.081	1.46	6.346	56.318
8	1.043	4.534	62.615	1.043	4.534	62.615	1.448	6.297	62.615
9	0.919	3.994	66.609						
10	0.855	3.716	70.325						
11	0.763	3.316	73.641						
12	0.743	3.229	76.87						
13	0.654	2.842	79.712						
14	0.624	2.715	82.427						
15	0.576	2.502	84.929						
16	0.561	2.44	87.369						
17	0.517	2.246	89.615						
18	0.475	2.066	91.68						
19	0.465	2.022	93.703						
20	0.433	1.881	95.584						
21	0.378	1.643	97.226						
22	0.33	1.436	98.662						
23	0.308	1.338	100						
Extraction Method: Principal Component Analysis.									

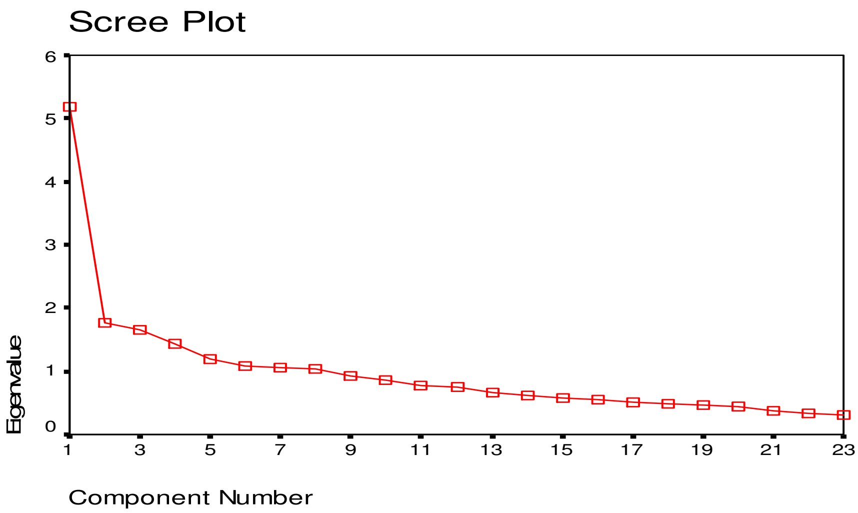
ISSN : 2348-7143
April 2018

Table No.2 shows all the factors extractable from the analysis along with their Eigenvalues, the percent of variance attributable to each factor, and the cumulative variance of the factor and the previous factors. To choose the criteria of Eigenvalues over 1 is used. From the above table, it is identified that there were eight factors with Eigenvalues greater than1.

The Eigenvalues for eight factors are 5.191, 1.758, 1.644, 1.427, 1.193, 1.088, 1.058 & 1.043 respectively. The percentage of the total variance is used as an index to determine how well the total factor solution accounts for what the variables together represent. The index for the present solution accounts 62.61 percent of the total variations for customers post-purchase experience. It is pretty good extraction as it can economize on the number of factors (from twenty three to eight factors). The percentage of variance explained by factor one to eight for selection of supermarket are 22.571, 7.645, 7.147, 6.202, 5.187, 4.729, 4.6 and 4.534.

Scree Graph

Graph No.1



A graph that plots the Eigenvalues against factors is called a screen plot. The below screen plot is useful for determining how many factors to retain. The point of interest is where the curve starts to flatten. It can be seen that curve begins to flatten between factor 8 and factor 9 and also the Eigenvalue for the factor 9 is less than one. So, only 8 factors have been retained which have Eigenvalue greater than one.

Table No. 3 shows the loadings of the twenty-three variables on eight factors extracted which influence on the selection of supermarket in Kolhapur City. The higher the absolute value of the loading, the more the factor contributes to the variable. Based on the pattern of factor loading, labels were assigned to the factors. So the table & chart reveals that Product Variety, Product Access, Promotion, Location, Value Added Facilities, Price, Refresher Facilities & Reactive Time are a most influencing factor in the selection of supermarket in Kolhapur City.

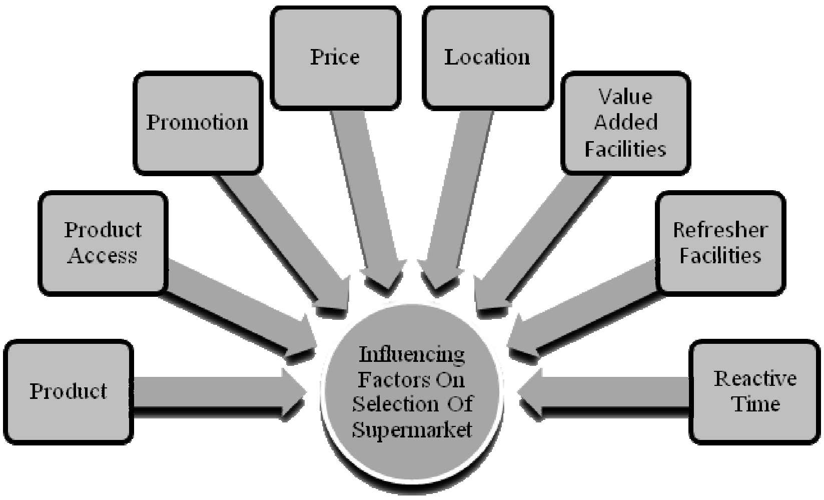
Table No.3: Rotated Component Matrix:

Sr.No.	Variables	Loaded Score	Factor Name
1	Product with Gifts and Discount Vouchers.	0.4877	**Product**
2	The range of choice in price	0.7278	
3	Variety and range of product	0.7241	

ISSN : 2348-7143
April 2018

4	Quality of product offered	0.6832	**Variety**
5	Guarantee and warranty of the product	0.6811	**Product Access**
6	Stock availability of the product	0.6411	
7	Visibility of the product	0.7100	
8	Number of Trolleys and baskets	0.5568	
9	Seasonal offers	0.7571	**Promotion**
10	Announcement of offers	0.7318	
11	Information in Leaflets & pamphlets	0.6007	
12	Location of supermarket	0.7544	**Location**
13	Accessibility of supermarket	0.8458	
14	Door Delivery Facility	0.5537	**Value Added Facilities**
15	ATM facility	0.7597	
16	Food court facility	0.6680	
17	Price level	0.7649	**Price**
18	Discount received on M.R.P.	0.7381	
19	Value for money	0.5821	
20	Washrooms Facility	0.7050	**Refreshment Facilities**
21	Hygienic drinking water	0.6054	
22	Parking facility	0.8394	**Reactive Time**
23	Billing time	0.4138	

Graph No.2 Influencing Factors



Discussion:

Eight factors have been extracted. These are the factors influence on selection of supermarket The factors are discussed below:

ISSN : 2348-7143
April 2018

Factor 1: Product Variety

It is the most vital factor which explains 22.571 percent of the variation and this factor has four significant variables such as Variety of Product provided with Gifts and Discount vouchers (0.4877), Range of choice in price (0.7278), Variety and range of product (0.7241) & Quality of product offered (0.6832). This variable mostly influences in the selection of the supermarkets per the respondent's perception.

Factor 2: Product Access

There are four loads to this factor of which influence on selection The variables that fall under this factor are: Guarantee and warranty of product (0.6811), Stock availability of the product (0.6411), Visibility of the product (0.7100), Number of Trolleys and baskets & (0.5568) This factor is extracted as the second most important factor which accounts for 7.645 percent variation.

Factor 3: Promotion:

This is a third important factor in the selection of supermarket, the variables that fall under this factor are Seasonal offers (0.7571), Announcement of offers (0.7318), Information in Leaflets & pamphlets (0.6007) with 6.202 percent of the variation in perception.

Factor 4: Location:

Another important factor as per the respondent's perception is the location of the supermarket there are three items assigned for this factor those are Location of the supermarket (0.7544), Accessibility of supermarket (0.8458) & Door Delivery Facility (0.5537).

Factor 5: Value Added Facilities:

The fifth important factor while the selection of supermarket is all those value-added facilities that supermarket are providing to the customers to make comfortable purchasing in the supermarket the variable under this are Door Delivery Facility (0.5537), ATM facility (0.7597) & Food court facility0.6680

Factor 6: Price:

This is the next important factor, which influences the respondent's perception towards the selection of supermarket with the variables Price level (0.7649), Discount received on M.R.P. (0.7381) & Value for money (0.5821) with 4.729 percent variation.

Factor 7: Refreshment Facilities:

This is another important factor contributing to the selection of supermarket Washrooms Facility (0.7050) & Hygienic drinking water (0.6054) with 4.6 percent variation in perception.

Factor 8: Reactive Time:

The last factor which is extracted by factor analysis which influences on the selection of supermarket is the reactive tile with the variables are billing time(0.4138) & Parking facility (0.8394) with 4.534 percent variation in perception.

Conclusion:

The evolution of the supermarket & hypermarket is has been started with the catering & fulfilling the maximum need of the customer under one roof through this concept is evolved the industry has to upgrade with the change in the dynamism of consumer buying behavior. For that

Supermarket should continuously update & maintain the variety of the products with sufficient stock level with energetic promotional activities, attracts the customer by different offers and implement new techniques to increasing the volume of, accurate product mix will increase the flash sale of the unsealed products & maintaining the facilitates which increase the comfort level Supermarket in Kolhapur will grab the larger amount of market share.

Bibliography:

1. Ariyanayagam, S., & Ragel, V. R. (2014). Leisure Shopping in the Supermarket Setup: A Behavioral Study. The IUP Journal of Marketing Management, 38-48.
2. Batra, A. (2014). Factors Influencing Consumer Purchase Decisions at Organized Retail Stores in New Delhi. INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH & DEVELOPMENT , 249-253.
3. Fatima, H., & Rasheed, M. (2012). Determining the Factors affecting Consumer Loyalty. Journal of Management and Business Studies .
4. Gomathi, ,. R., Kishore, ,. S., & Deepika, R. (2013). A Study on Customer Satisfaction towards Departmental Stores in Erode City. International Journal of Engineering and Management Research , 38-41.
5. Kanyi, N. I. (April 2010). Factors Influencing Consumer Choice Of Supermarkets In Nairobi, Kenya. School Of Business Kenyatta University .
6. Kotler, P., & Keller, K. L. (2006). Marketing Management, 12nd ed. Upper Saddle River: Pearson Education.
7. R.Gomath, S.Kishore, & R.Deepika. (October-2013). A Study on Customer Satisfaction towards Departmental Stores in Erode City. International Journal of Engineering and Management Research, Volume-3, Issue-5 .
8. Tabeck, P. S. (2014). Study on Factors Influencing Purchase Behaviour at Big Bazaar. Journal of Management Sciences and Technology , 10-14.
9. Tabeck, P. S. (June- 2014). Study on Factors Influencing Purchase Behaviour at Big Bazaar. Journal of Management Sciences and Technology 3 .
10. THƯƠNG, N. T. (February 2016.). Factors Influencing Customer Satisfaction Towards Supermarkets In Thai Nguyen City, vol. Iv, issue 2. International Journal Of Economics, Commerce And Management .
11. Wel, C. A., Hussin, S. R., Asiah, N., & Nor, S. M. (2012.). Important Determinant of Consumers' Retail Selection Decision in Malaysia. World Review of Business Research , 164 - 175.

ASSESSING THE ROLE OF CUSTOMER SATISFACTION IN ATTAINING CUSTOMER LOYALTY: A STUDY OF FAST FOOD RESTAURANT IN KOLHAPUR CITY

Article *in* Epitome : International Journal of Multidisciplinary Research · April 2018

Pravin P Chavan
CSIBER Kolhapur

Research Expo International Multidisciplinary Research Journal
ISSN: 2250 - 1630
Volume - 8, Issue - 4, April - 2018
Available Online at http://www.researchjournals.in
Quality Impact Factor: 5.93 (CARS)
U.G.C. Approved International Refereed Research Journal

ASSESSING THE ROLE OF CUSTOMER SATISFACTION IN ATTAINING CUSTOMER LOYALTY: A STUDY OF FAST FOOD RESTAURANT IN KOLHAPUR CITY.

Ritesh Shinde[1], Dr. Pravin Chavan[2], Dr. M. M. Ali[3]

[1]*Post Graduate Student Chh. Shahu Institute of Business , Education & Research, Kolhapur*
[2]*Assistant Professor, Chh. Shahu Institute of Business, Education & Research, Kolhapur.*
(Corresponding Author) pravin.chavan1983@gmail.com
[3]*Director, Chh. Shahu Institute of Business , Education & Research, Kolhapur*

ABSTRACT

Fast food refers the food that sold in a restaurant or store with preheated or precooked ingredients and served to the customer in a packaged form for take-out/take-away. India's growing middle class and their changing food habits offer unprecedented growth opportunities to the quick-service restaurant industry. To reap the benefits of Indian market many global brands have entered the market. In a competitive marketplace, customer satisfaction is seen as a key differentiator and important marketing objectives to be achieved. Customer satisfaction is the customers' evaluation of goods or services in terms of whether that goods or services have met his needs and expectations. Numerous studies show the positive and significant relationship between customer satisfaction and customer loyalty. Besides, there are studies indicating customer satisfaction is only one antecedent of customer loyalty. The present study explores components of customer satisfaction through using exploratory factor analysis at Rolls Mania a fast food service restaurant at Kolhapur City. The empirical evidence of 154 customers reveals that dining experience; accessibility, convenience & affordability and product test are the important components of customer satisfaction. The regression analysis result reveals significant relationship between customer satisfaction and customer loyalty.

KEYWORDS: Fast food restaurant, Customer satisfaction & Customer Loyalty.

INTRODUCTION

Fast food, the term was first defined by Merriam–Webster dictionary in 1951. Fast food refers the food that sold in a restaurant or store with preheated or precooked ingredients and served to the customer in a packaged form for take-out/take-away (Merriam–Webster dictionary). Fast food restaurants are traditionally separated by their ability to serve food via a drive-through (Dube, 2017). Fast food restaurants are also known as quick serve restaurants (QSR) (KPMG India, 2016).

According to the report, global fast food market was valued at over USD 539.63 billion in 2016, is expected to reach above USD 690.80 billion in 2022 and is anticipated to grow at a CAGR of slightly above 4.20 percent between 2017 and 2022 (Zion Market Research, 2017). India is not distanced from growth story of QSR global market. CRISIL, India's largest independent and integrated research house, estimated that Indian QSR Industry accounts for 34 billion dollars in 2012. CRSIL predicted, Indian

QSR industry to grow by leaps and bounds rate. The annual turnover of Indian QRS industry has reached to 70 billion USD in 2015-16, with an annual growth rate of 27 percent. CRISIL analyzed average per-household expenditure on organized fast food or QSR in Tier I and Tier II cities in India. Annual spend on QSR in Tier II city's middle-class family, expected to surge by 150 percent and reach 3750 customer per annum by 2015-16. Whereas, for the same period, Tier I cities are expected to grow by 60 percent with an average annual expenditure of 6000 INR. The growth is expected through both from existing QSR outlets and the opening of new outlets (CRISIL, 2013).

India's growing middle class and their changing food habits offer unprecedented growth opportunities to the Quick-Service Restaurant industry. To reap the benefits of Indian market many global brands have entered the market, either through company own stores for franchisee model or a mix of both (CRISIL, 2013). The Quick-Service Restaurant industry is a multi-billion dollar global industry that consists of multiple and diverse players in a market. In a competitive industry success of a quick-service restaurant is attributed to remarkable customer services offered and great product testing. (Ketana, 2014). Perceived good product performance is a key driver of brand loyalty and also significantly influences customer satisfaction (Awan & Rehman, 2014). The relationship between customers satisfaction is positive and significant with loyalty, because more the satisfied customer higher is the customer loyalty (Lee, Lee, & Hansuk, 2013).

In a competitive marketplace where businesses compete for customers, customer satisfaction is seen as a key differentiator and increasingly has become a key element of business strategy. As a result of customer satisfaction, the customer becomes loyal to your brand and loyal customers will consistently purchase products of their preferred brands, regardless of convenience or price (Bhatnagar & Kushwah, 2013).There is a significant positive relationship between customer perception towards the service quality, product quality, physical design, price, physical environment, taste, & promotion and customer satisfaction in the fast food restaurants (Manjunath & Reginald, 2016). The purpose of this study is to understand the components of customer satisfaction for a fast food restaurant and its impact on customer loyalty.

CONCEPTUAL BACKGROUND:

This research paper has mainly discussed Service quality, Customer satisfaction, and Customer Loyalty. An attempt is made to discuss these concepts.

Customer satisfaction: Customer satisfaction is the customers' evaluation of goods or services in terms of whether that goods or services have met their needs and expectations. To deliver a high level of customer satisfaction firm do things differently from their competitors (Lamb, Hair, Sharma, & McDaniel, 2012). Customer satisfaction is a key influencer on the future buying behavior of the people. The satisfied customer will buy the product again and tell others about their good buying experience. Dissatisfied customer on other hand switch to competitor's product and also discourages others from buying the product (Karunakaran, 2013). Customer satisfaction is core strategic objective for any firm. Customers are the primary source of all positive cash flows. Therefore, attracting and retaining profitable customers must be one of the firm's most fundamental tasks (Morgan, Anderson, & Mittal, 2005).

Service Quality: Quality can be defined broadly as superiority or excellence. Further, the term quality can be classified as objective quality and perceived quality. Objective quality" is the term used in the literature to describe the actual technical superiority or excellence of the products. The term refers to measurable and verifiable superiority on some predetermined ideal standard or standards (Zeithaml, 1988). Perceived service quality can be defined as the customer's judgment about the superiority or excellence of a product while the perceived value is the customer's overall assessment of the utility of a product based on perceptions of what is received and what is given (NQRC, 1995).

Customer Loyalty: Kincaid (2003) "defines loyalty of customer as a consumer behavior, built on positive experience and value, which leads to buying products, when that may not appear to be the most rational decision".The researchers classified loyalty basically into two types one behavioral (continued patronage), and attitudinal loyalty(beliefs, feelings and purchasing intention) (Buttle, 2009). Customer loyalty is viewed as the strength of the relationship between an individual's relative attitude and repeat patronage towards a company's product. The relationship is intervened by social norms and situational factors. Cognitive, affective, and conative antecedents of relative attitude are identified as contributing to loyalty, along with motivational, perceptual, and behavioral consequences (Dick & Basu, 1994).

Customer Satisfaction and Customer Loyalty: A study on the relationship between customer satisfaction and customer loyalty has remained the keenly interested subject for marketing researchers. There are numerous studies shows the positive and significant relationship between customer satisfaction and customer loyalty. Besides, there are studies indicating no significant relationship between customer satisfaction and customer loyalty.

Customer satisfaction is only one of the key determinant or antecedent for customers' propensity or willingness to retain availing the services (Tweneboah-Koduah & Farley, 2016). Trust towards the organization, organisation commitment, and consumer satisfaction simultaneously has a significant influence on customer loyalty (Sutanto & Djati, 2017). Customer expectations, perceived price level were the critical factor influencing on customer satisfaction and customer satisfaction significant influence customer loyalty (Al-Msallam, 2015). Companies some time inflict switching costs on their customers, to inhibit them from defecting to new suppliers; effects of switching costs on the association of customer loyalty, customer satisfaction and perceived value are significant only when the level of customer satisfaction or perceived value is above average (Yang & Peterson, 2004). Customers are more likely to visit stores that consistently deliver on service expectations and innovations play a major role in customer engagement and retention (Nanda, Kuruvilla, & Murty, 2013).

Satisfaction is one of several antecedents of loyalty. A key influence on loyalty is the offer of unique value-delivering advantages not provided by competitors (Buttle & Burton, 2002). Satisfaction and loyalty in a business services setting are different constructs and that while the relationship is positive, high levels of satisfaction do not always yield high levels of loyalty (Bennett & Rundle Thiele, 2004). Corporate image and customer satisfaction are not two separate routes to customer loyalty. Corporate image impacts customer loyalty directly whereas customer satisfaction does not. Customer satisfaction is not the primary route to customer loyalty. (Andreassen & Bodil, 1998)

LITERATURE REVIEW

Deivanai (2013) explained that Dominos pizza mostly competes on price, location and food quality. An adult plays an important role in the buying process reasons such as tasty and cleanliness. Convenience, family outings, and celebration of special occasions are considered important in buying pizza. Customers eat out for a change from home prepared food but they do not believe that fast foods provide good nutritional value.

Bhatnagar & Kushwah (2013), explained that the Domino name carries the company's main brand as the market leader in its field of operation. Since inception, Domino's understands customer's needs and publicising the Domino's brand with developing new products and use of technology (information technology and E-commerce). Predilection (liking), satisfaction, services, excitement, and influence, all the five factors showed liking and satisfaction level is in favor of Domino's Pizza.

Prabhavathi, Krishna, & Kumar (2014), explained that young, unmarried, working professionals having own lifestyle and well-educated persons forms major consumer segment in the fast food sector. Taste, convenience, and alternate to home food were found to be major reasons for consuming fast food. Fast food restaurants provide satisfaction to the young consumers in the form of matching their taste needs and relaxation with friends. Hence the affordable price of the menu, friends influence, healthy menu, service quality, taste, location proximity and restaurant ambiance were important factors which made the young consumers to prefer fast food restaurants.

Warraich, Ahmad, & Qureshi (2013), explained that in today's fast progressing competitive market, the baseline of a firm's promotion and marketing strategies, tactics and procedure are to make profits and add to the growth of the company. Customer satisfaction, contentment, quality of the service, excellence, and retention are the global matters which influence all organizations. This includes all type of organizations whether large or small, global or local profit or non-profit service providers.

Ling, Mun, & Ling, (2011), the role of perceived switching cost in mediating the relationship between trust and customer loyalty is studied in the research. The study depicts that corporate image; trust and perceived switching cost were positively related to the customer loyalty. The study emphasis that trusts is positively related to customer loyalty, mediated by perceived switching cost. The study recommended the strategies as offering value meal and implementing various corporate social responsibility activities and customer relationship management practices to increase the level of trust, perceived switching cost, corporate image and customer loyalty.

RESEARCH OBJECTIVES:

1. To check customer satisfaction towards Rolls Mania.
2. To understand factors determining customer satisfaction in fast food restaurants.
3. To find a relationship between customer satisfaction and customer loyalty in fast food restaurants.

HYPOTHESIS TESTING:

Following hypothesis was envisaged to study the relationship between customer satisfaction and customer loyalty.

H0: There is no significant relationship between customer satisfaction and customer loyalty.

H1: There is a significant relationship between customer satisfaction and customer loyalty.

RESEARCH METHODOLOGY:

Data Collection: The study is descriptive and diagnostic in its nature. It intends to describe the components of customer satisfaction in quick service restaurant and diagnosis its relationship with customer loyalty. To test the stated hypothesis primary data was collected through self-designed structured questionnaire. The questionnaire mainly comprises of two sections. Section I collects the basic demographic information about the respondents. Section II comprises of two scales one is to assess customer satisfaction level towards Rolls Mainia services and second to assess the level of customer loyalty. To assess the customer satisfaction the attributes of Rolls Mania services were identified and respondents were asked to grade their satisfaction on a five-point category scale, where 1 represents highly dissatisfied and 5 highly satisfied. The customer loyalty assessment scale comprises the Likert type statements, prepared through an extensive literature survey. The respondents were asked to grade Likert-type statements on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Sampling Design and Sample Size: The study is conducted at Rolls Mania, a quick service restaurant outlet at Kolhapur city. Total customers visiting the outlet of Rolls Mania were population under the study. The population under study is infinite in its nature. The customer visited the outlet and willing to fill up the questionnaire happens to be the sample unit under the study. Hence sampling method for the study was convenience sampling. Customers were requested to fill-up the questionnaire once they availed the services of Rolls Mania and their payments session is over, so as to get the customers response on entire experience at the outlet and their intention of post-purchase behavior. Total 154 respondents have filled the questionnaire and it was sample under the study.

Data Analysis: For analysis MS office Excel and SPSS 20.0 was used. To understand the attributes influencing of customer satisfaction principle component analysis was run on customer satisfaction scale and factors were identified. Reliability of the statements under each factor was assessed through Cronbach alpha. Finally, regression analysis was performed to test the hypothesis of a relationship between customer satisfaction and customer loyalty.

ANALYSIS AND DISCUSSION:

The important objective of this research work is to identify the factors contributing to customer satisfaction in the fast food industry. Here with a thorough literature review, fifteen category scale statement were prepared and respondents were asked to grade their satisfaction level for the services of Rolls Mania on the given statement. Factor analysis is used to identify the significant factors contributing to customer satisfaction.

Table No.1 Results of Sampling Adequacy Test and Validity of Factor Analysis Data

Test	Result
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.819
Bartlett's Test of Sphericity	.000

To test the sampling adequacy KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) test was performed. KMO test statistic score is 0.819. The Barlett's Test of Sphericity testing for the significance of the correlation matrix of the variables indicates that the correlation coefficient matrix is significant as indicated by the p-value(0.00) corresponding to the chi-square statistic. The sample size of 154 is more than 5 times the number of variables (seventeen). All these justify the use of factor analysis for the given set of data (Chawla & Sondhi, 2016).

Table No. 2 gives eigenvalues, variance explained and cumulative variance explained for factor solution.

Table No.2 Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.754	38.358	38.358	5.754	38.358	38.358
2	1.517	10.116	48.473	1.517	10.116	48.473
3	1.209	8.061	56.535	1.209	8.061	56.535
4	1.082	7.216	63.751	1.082	7.216	63.751
5	.972	6.481	70.232			
6	.775	5.168	75.400			
7	.746	4.976	80.376			
8	.592	3.945	84.321			
9	.505	3.370	87.691			
10	.419	2.791	90.482			
11	.384	2.557	93.040			
12	.343	2.285	95.325			
13	.323	2.155	97.480			
14	.214	1.424	98.904			
15	.164	1.096	100.000			

There are only four factors, each having Eigenvalue exceeding 1 for customer satisfaction. The Eigenvalues for the four factors are 5.754, 1.517, 1.209 and 1.082 respectively. The percentage of the total variance is used as an index to determine how well the total factor solution accounts for what the variables together represent. The index for the present solution accounts for 63.75 percent of the total variations in Customer satisfaction. It is good extraction as it can reduce the number of factors (from fifteen items to four factors). The percentages of variance explained by factor one to four in customer satisfaction are 38.358, 10.116, 8.061 and 7.216 respectively.

Table No.3 Factors with its Descriptive Statistics and Reliability Analysis

Variables	Factor load	Factor Name	Mean	Standard Deviation	Cronbach Alpha Score
Staff Communication	0.798	Dining experience	3.55	.63	0.805
Service	0.790				
Staff Guidance about product information	0.661				
Music System	0.654				
Dining	0.622				
Location	0.819	Accessibility	3.99	0.65	0.729
Overall Environment	0.743				
Packaging	0.651				
Parking	0.835	Convenience and Affordability	3.76	0.68	0.721
Billing Time	0.625				
Delivery System	0.613				
Price Offers and Discount	0.583				
Variety	0.670	Product Test	4.05	0.57	0.714
Quality	0.669				
Taste	0.568				
Total Customer Satisfaction Score			3.82	0.49	------

Table No. 3 shows the rotated factor loading score, title assigned for each factor, mean score, standard deviation, and Cronbach's alpha score. As Cronbach's alpha score for all factors is well above 0.7 hence the factor shows good reliability to measure the stated construct. (Zikmund, Babin, Carr, & Adhikari, 2013). Identified constructs are discussed below.

Dining experience: This is most important factor explains 37.0 percent of the variance. The factor has four significant variables. The variables are staff communication, services, and staff guidance about product information, music system and dining experience faced by the customer in the fast food outlet. When customers visit the fast food outlet he expects congenial communication and product information from the staff, efficient service, clean dining facility and pleasant music. Service quality is the most important attributes of a dining experience that influence on customer satisfaction (Canny, 2014).

Accessibility: This factor explains 9.5 percent variance. This factor explains the variables as location, overall environment and packaging. Fast food consumption is an impulse purchases decision. Customers won't travel to the fast food outlet as they travel to the countryside restaurant. Hence good location is essential for profitable fast-food operations (Love, 1972).

Convenience and Affordability: This factor explains 7.6 percent variance. It has variables as parking, billing time, delivery system, price offers & discount. The fast-food industry is based on the principles of quality food served fast (Brox, 2010). Hence the availability of quick parking, fast delivery and minimum billing time at affordable pricing is imperative.

Product Taste: This factor explains the 6.7 percent variance. It has significant variables as product variety, quality of the product and product taste. Presentation and taste of the product served to the customers significantly influence the customer purchase intention of fast food product (Shaharudin, Mansor, & Elias, 2011).

Customer Loyalty: Customer loyalty is viewed as the strength of the relationship between an individual's relative attitude and repeat patronage towards a company's product (Dick & Basu, 1994). To measure the customer loyalty scale was prepared. The scale comprises of five Likert type statements. Descriptive analysis and reliability of the scale are presented below.

Table No 4: Measurement Items & Descriptive Analysis of Customer Loyalty

Statement	Mean	Standard Deviation
Rolls Mania is ideal destination for satisfying fast food need	3.84	0.72
To be at rolls mania is enjoyable	3.81	0.79
Rolls mania is affordable treat	3.90	0.76
I would recommend rolls mania to my friends and relatives	4.18	0.72
I would like to visit rolls mania again & again	4.22	0.70

HYPOTHESIS TESTING RESULT:

The important objective of this study is to assess the relationship between customer satisfaction and customer loyalty. Customer satisfaction is measured using customer satisfaction scale; customer satisfaction has four attributes. Customer loyalty is measured using customer loyalty scale. Regression analysis is used to test the significant relationship between these two variables. Results are presented in the following tables.

Table No. 5: Regression Analysis Model Summary

R	.527
R Square	.277

A correlation coefficient (R square value) for the model is .527 it indicates a positive relationship between dependent variable (Customer Loyalty) and independent variables (Customer Satisfaction) because R-value is positive. The R square value indicates that 27.7 percent variations in the dependent variable are explained by the independent variable.

Table No.6: ANOVA Test Result

Test	F	**Significant**
R Square	14.295	.000

Table No.6, ANOVA results show F value 14.295 and the p-value is 0.00. It is significant at the 0.05 level. Here the null hypothesis is rejected and it is concluded that there is a significant relationship between customer satisfaction and customer loyalty**.**

Table No.7: Result of Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.129	.300		7.087	.000		

Dining experience	.286	.075	.346	3.808	.000	.588	1.700
Accessibility	.154	.070	.189	2.211	.029	.661	1.512
Convenience and Affordability	.158	.066	.206	2.411	.017	.662	1.511
Product Test	.200	.080	.216	2.519	.013	.659	1.517

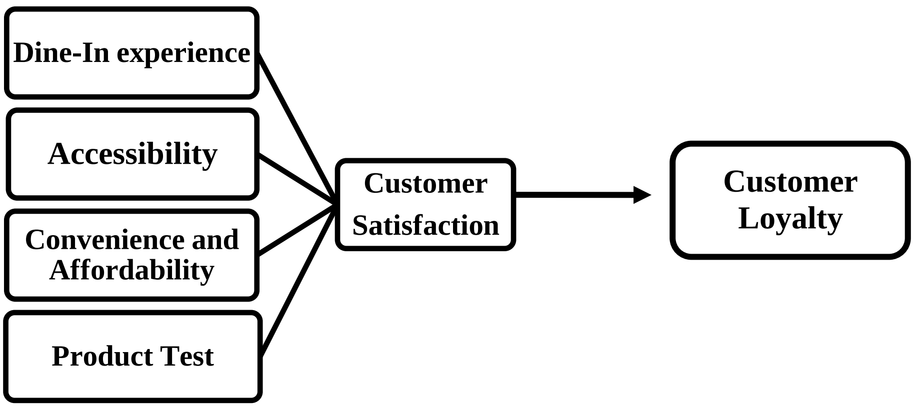
Table No. 7 indicates that The VIF value of less than 10 for all variables show that the problem of multicollinearity has not existed and all data are mutually exclusive. Here all four components of customer satisfaction dining experience (Beta 0.286 & P Vale 000), accessibility (Beta 0.15 & P Vale 0.029), convenience & affordability (Beta 0.158 & P- value .017) and product test (Beta .200 & P-value 0.013) are significant. As for all these four factors, P- value is lesser than 0.05 (P<0.05). Here the regression analysis result does not support the null hypothesis and it is concluded that there is a significant relationship between customer satisfaction and customer loyalty. It is interpreted that all four components of customer satisfaction dining experience, accessibility, convenience & affordability, and product test predicts customer loyalty. Fitted regression equation can be written as follows:

Y= 2.129 + 0.286*Dining experience + .154*Accessibility +.158*Convenience and Affordability + .200* Product Test

FINDINGS AND RESULTS DISCUSSION:

Determinants of Customer satisfaction: The study intends to understand the determinants of customer satisfaction in quick service fast food restaurant. Factor analysis result reveals that customer's perception of dining experience, accessibility, convenience, and product test determines the customer satisfaction towards quick service fast food restaurant.

The relationship between Customer Satisfaction & Customer loyalty: Regression analysis reveals the significant relationship between customer satisfaction and customer loyalty. Dining experience, accessibility, convenience and product test determinants of customer satisfaction significantly predict customer loyalty.



Conceptual Model: Based on the hypothesis testing results conceptual model of factors of customer satisfaction and its relationship between customers loyalty is proposed as above.

MANAGERIAL IMPLICATIONS

The findings have important implications for the marketers of Quick service restaurants. Customer satisfaction is one of the complex objectives QSR marketers have to achieve. This study has revealed that the customer satisfaction is an outcome of customer's perception of several service quality components offered by the QSR. An exploratory factor analysis result indicates that customer satisfaction is an outcome of customer’s opinion about the Dining experience, accessibility to the QSR, convenience & affordability of the product and product test.

Dining experience is customer's perception of staff communication, service and staff guidance about product information, music system and dining experience faced by the customer in the fast food outlet. Apart from enjoying the taste of fast food, important objective of customers visiting the particular fast food restaurant are they want a pleasant experience at the restaurant. Proper communication of staff members is important to make customers visit pleasant to the particular QSR. Marketers of QSR shall train their staff members for effective communication. Music spread enthusiasm in the environment, hygiene seating arrangement ensures the delivery of joy to the customers. Marketers shall focus on delivering a uniquely pleasant experience to the customers when they visit QSR.

Fast food consumption is an impulse purchases decision. Customers won’t travel to the fast food outlet as they travel to the countryside restaurant. Accessibility highlights the importance of location in the success of QSR. Effective packaging helps customers to carry the food for household consumption and increase total sales volume.

The fast-food industry is based on the principles of quality food served fast. QSRs are roadside outlets, where customers make impulse purchasing. For the success of QSR parking facility, quick billing time, and delivery system are important. Marketers shall ensure that sufficient and quick parking space availability, timely billing and delivery of the food item to the customer. Increase competition compels QSR for offering competitive prices, offers & discount in the market.

Product taste is a factor that explains the customer's satisfaction with product variety, quality of the product and product taste. Favorable customer opinion about these service factors leads to achieving customer satisfaction.

The hypothesis testing result reveals that there is a significant relationship between customer satisfaction and customer loyalty. Loyal customers have a positive attitude towards the brand and comparatively more patronage for a repeat purchase.

CONCLUSION

Changing lifestyle, an influence of westernized culture, the impact of media, people's readiness to explore new delicious food all these factors are fuelling the growth of fast food industry in India. Initially the industry was ruled by few dominant players, today seeing young Indian entrepreneurial minds venturing the opportunities of it. The industry is exposed to intense competition and customers are the beneficiary of the competition. To sustain in cutthroat competition achieving customer satisfaction and gaining customer loyalty has become a paramount marketing strategy at front of the QSR. The study has revealed that Dining experience, accessibility, convenience & affordability and product test are the important factors of customer satisfaction. The study reveals that there is a positive relationship between customer satisfaction and customer loyalty. However, the study results are based on customers contacted at one outlet of Rolls Mania in Kolhapur city. Results of the study may not applicable to other QSR outlets. Further studies needs to be conducted at various other fast food outlets to understand the factors of customer satisfaction and its impact on customer’s loyalty.

REFERENCES

Al-Msallam, S. (2015). The Relationship between Customer Satisfaction and Customer Loyalty in the Banking Sector in Syria. Journal of Marketing and Consumer Research .

Andreassen, ,. T., & Bodil, L. (1998). Customer loyalty and complex services: The impact of corporate image on quality, customer satisfaction and loyalty for customers with varying degrees of service expertise. International Journal of Service Industry Management , 7-23.

Awan, A. G., & Rehman, A.-u. (2014). Impact Of Customer Satisfaction On Brand Loyalty- An Empirical Analysis Of Home Appliances In Pakistan. European Centre for Research Training and Development UK , 18-32.

Bennett, R., & Rundle Thiele, S. (2004). Customer satisfaction should not be the only goal. Journal of Services Marketing , 514-523.

Beri, G. C. (2005). Multivariate Analysis II (Inter-Dependence Methods). In G. C. Beri, Marketing Research (pp. 613-614). Tata McGraw-Hill Education.

Bhatnagar, V. K., & Kushwah, D. (2013). Customer Satisfaction at Domino’s: An Empirical Study in Gwalior Region. Narosa Publishing House, New .

Brox, D. (2010). Fast Food Fast. www.qsrmagazine.com .

Buttle, ,. F., & Burton, J. B. (2002). Does service failure influence customer loyalty? Journal of Consumer Behaviour .

(2009). Customer Loyalty. In F. Buttle, Customer Relationship Management Concepts and Technologies (pp. 67-68). Burlington: Elsevier Ltd.

Canny, I. U. (2014). Measuring the Mediating Role of Dining Experience Attributes on Customer Satisfaction and Its Impact on Behavioral Intentions of Casual Dining Restaurant in Jakarta. International Journal of Innovation, Management and Technology , 25-29.

Chawla, D., & Sondhi, N. (2016). Factor Analysis. In D. Chawla, & N. Sondhi, Research Methodology Concepts and Cases (pp. 560-580). New Delhi: Vikas Publishing House.

CRISIL. (2013). Organised Fast Book In a Fast lane. CRISIL Research.

Deivanai, P. (2013). A Study on Consumer Behaviour towards Fast Food Products with Special Reference to Domino’s Pizza . International Research Journal of Business and Management – IRJBM , 46-52.

Dick, A. S., & Basu, K. (1994). Customer loyalty: Toward an integrated conceptual framework. Journal of the Academy of Marketing Science , Volume 22 (2), 99–113.

Dube, L. (2017). Just The factsIOI, Obesity Prevention: The Role of Society On Individual Behaviour. Content Technologies.

Hjorth-Anderson, & Chr. (1984). "The Concept of Quality and the Efficiency of Markets for Consumer Products," . Journal of Consumer Research , 11.

Karunakaran, K. (2013). Marketing Management. Mumbai: Himalaya Publishing House.

Ketana, ,. K. (2014). Analysing Competition in the Quick Service Reastaurants Industry. Retrieved Oct 26, 2017, from SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2402180

Kincaid, J. (2003). Customer Relationship Management: Getting it Right. London: Prentice Hall Professional.

KPMG India. (2016). India's Food Service Industry: Growth Recipe.

Lamb, C. W., Hair, J. F., Sharma, D., & McDaniel, C. (2012). MKTG, A south-Asian Perspective. Delhi: Cengage Learning Pvt. Ltd.

Lee, Lee, ,. J., & Hansuk. (2013). Does Satisfaction Affect Brand Loyalty? Academy of Marketing Studies Journal .

Ling, K. C., Mun, Y. W., & Ling, H. M. (2011). Exploring factors that influence customer loyalty among Generation Y for the fast food industry in Malaysia. African Journal of Business Management , 4813-4823.

Love, H. G. (1972). Fast Food Store Location Factors: A Comparison with Grocery Store Location Factors. JOURNAL OF FOOD DISTRIBUTION RESEARCH .

Manjunath, S. J., & Reginald, S. (2016). Customer Satisfaction In Fast Food Industry: A Case Study Of Mysore. International Journal of Research in Finance and Marketing , 72-78.

Morgan, N. A., Anderson, E. W., & Mittal, V. (2005). Understanding Firms' Customer Satisfaction Information Usage. Journal of Marketing , 69, 131–151.

Nanda, N., Kuruvilla, S. J., & Murty, B. B. (2013). Role of Service Innovation in Customer Satisfaction and Customer Loyalty:A Study on Organized Retail in India. International Journal of Business Insights & Transformation , 53-63.

NQRC. (1995). American Consumer Satisfaction IndexMethodology Repor. http://en.wikipedia.org/wiki/American_Customer_ Satisfaction_Index.

Prabhavathi, Krishna, K., & Kumar, R. (2014). Consumer Preference and Spending Pattern in Indian Fast Food industry. International Journal of Scientific and Research Publications, , 1-5.

Shaharudin, M. R., Mansor, S. W., & Elias, S. J. (2011). Food Quality Attributes among Malaysia's Fast Food Customer. International Business and Management .

Sutanto, J. E., & Djati, S. (2017). Effect of Trust, Satisfaction, and Commitment on Customer Loyalty At the Alfamart Retail in Surabaya, East Java - Indonesia. Advances in Intelligent Systems Research, .

Tweneboah-Koduah, E. Y., & Farley, A. Y. (2016). Relationship between Customer Satisfaction and Customer Loyalty in the Retail Banking Sector of Ghana. International Journal of Business and Management , 249-262.

Venkataramani, Kumar, R., & Brinda. (2015). A study on the attitude of Consumers and Insurance Agents towards the proposed increase in Foreign Direct Investment (FDI) in Insurance sector in India. 5.

Warraich, U. A., Ahmad, N., & Qureshi, F. (2013). Customer Retention in Fast Food Industry. Indus Journal of Management Sciences .

Yang, Z., & Peterson, R. (2004). Customer perceived value, satisfaction, and loyalty: The role of switching costs. Psychology & Marketing , 799–822.

Zeithaml, V. A. (1988). Consumer Perceptions of Price, Quality, and Value: A Means-End Model and Synthesis of Evidence. Journal of Marketing, , 52, 1-22.

Zikmund, W. G., Babin, B. J., Carr, J. C., & Adhikari, A. (2013). Measurement & Scaling Concepts. In Business Research Methods A South Asian Perceptive (pp. 318-334). New Delhi: Cengage Learning.

Zion Market Research. (2017, March 01). globenewswire. Retrieved Oct 25, 2017, from globenewswire: https://globenewswire.com/news-release/2017/03/01/929307/0/en/Global-Fast-Food-Market-will-reach-USD-690-80-Billion-in-2022-Zion-Market-Research.html

ROLE OF NON-PARAMETRIC TEST IN MANAGEMENT & SOCIAL SCIENCE RESEARCH

Pravin P Chavan
CSIBER Kolhapur

Quest International Multidisciplinary Research Journal
ISSN: 2278 - 4497
Quality Impact Factor: 6.89 (CARS)
Volume – VI, Issue – IX, November - 2017
Available at http://www.researchjournals.in

ROLE OF NON-PARAMETRIC TEST IN MANAGEMENT & SOCIAL SCIENCE RESEARCH

Dr. Pravin Chavan
Assistant Professor,
Department of Management.
Chhatrapati Shahu Institute of Business Education and Research.
Shivaji University Kolhapur.
pravin.chavan1983@gmail.com

Dr. R. V. Kulkarni
Professor, & Head of the Department of Computer Science.
Chhatrapati Shahu Institute of Business Education and Research.
Shivaji University Kolhapur.
drrvkulkarni@siberindia.edu.in

ABSTRACT

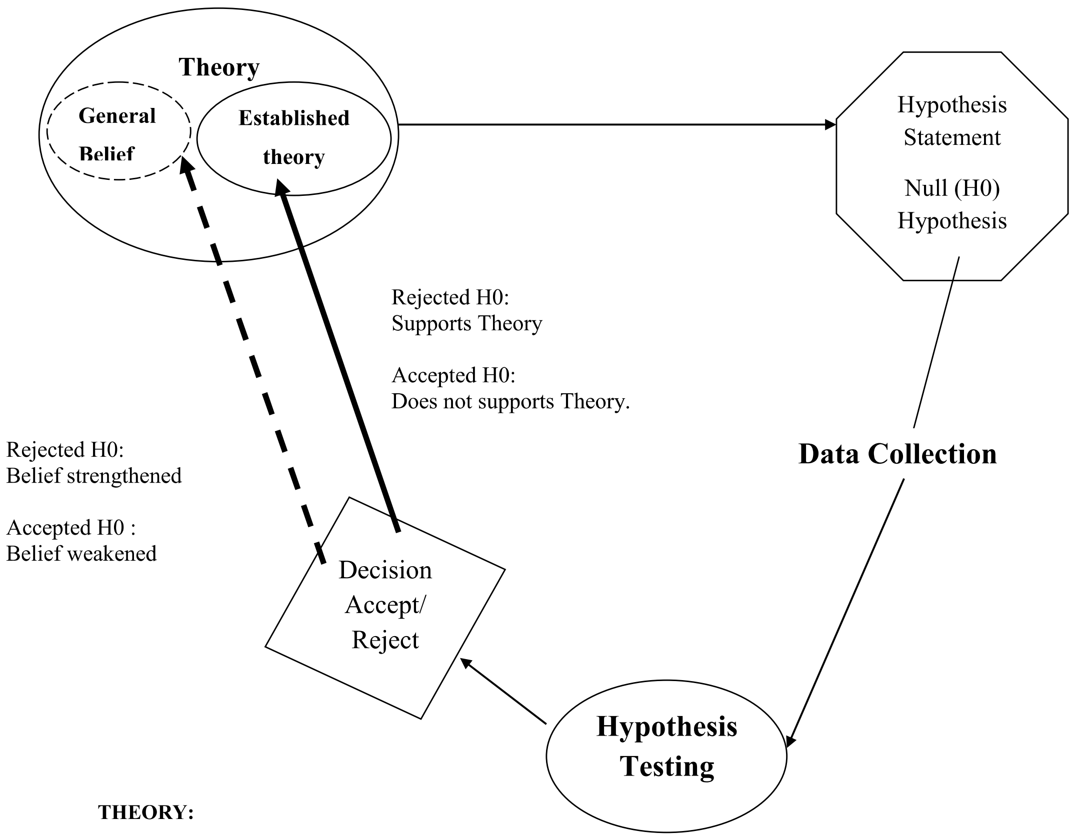
Research scientifically studies the relationship between variables and generalizes the finding to make additions to existing stock of knowledge. The assumption, idea or an opinion researcher has stated in researchable terms, is called research hypothesis. Hypothesis testing results, lead to the strengthening of an existing theory or proposing a new improved theory, in the branch of knowledge. All hypothesis test offered by statistics are basically divided into two types, Parametric versus nonparametric test. Parametric tests are used when certain properties of the parent population are known, from which samples are drawn. In social science when we perform research, often we don't know the parameters of the population. Besides, collected data is qualitative in its nature and measured at nominal or ordinal level. Another important assumption that has to be followed while using parametric test is that samples are drawn from the population that follows a normal distribution. Failure of the normality assumption makes use of parametric hypothesis test invalid. In a way, nonparametric tests are more suitable for testing the hypothesis in social science research. Nonparametric tests are the distribution free test as they do not require any distribution to be satisfied before their application. The social science research scholars face problem in knowing which test is to be used for testing given hypothesis. The objective of this paper is to explain the use of important nonparametric tests with its management and social science applications. The paper illustrates step by step procedure to perform the nonparametric test and interpret the results of the SPSS outcome.

KEYWORDS: *Social Science, Hypothesis Testing, and Non Parametric test*

Quest International Multidisciplinary Research Journal
ISSN: 2278 - 4497
Quality Impact Factor: 6.89 (CARS)
Volume – VI, Issue – IX, November - 2017
Available at http://www.researchjournals.in

INTRODUCTION

It is the research that scientifically studies the relationship between variables and generalizes the finding to make additions to existing stock of knowledge. All research whether it is in physical sciences or in social sciences involves the scientific methods. The scientific method is the way researchers go about using knowledge and evidence to reach objective conclusions about the real world. (Thakur, 2003). The assumption, idea or an opinion researcher has stated in researchable terms, is called research hypothesis. A hypothesis is a proposition that is stated in a testable form and that predicts a particular relationship between two or more variables (Bailey & Kenneth, 1978). The next step involves testing the hypothesis against empirical evidence. Evidences either support the hypothesis or do not support it (Zikmund, 2013). It is through continued replication of hypothesis testing results; a proposition of relationship is accepted or rejected. The Hypothesis testing result, lead to a strengthening of an existing theory or proposing a new improved theory in the branch of knowledge (Dyer, 2015). The purpose of science is an expansion of knowledge and the search for truth. Through theory building, researcher tries to achieve this purpose. The process of theory building is illustrated in the following diagram.



THEORY:

THEORY

A theory is a formal testable explanation of some events that includes predictions of how things relate to one another. Theories can be basically classified into two types;

1. **General Beliefs:** Society has certain beliefs about things happening around them. These beliefs have cause and effect relationship among variables. However, the relationship is not yet tested empirically. Researchers convert those beliefs into null hypothesis statements and test the relationship empirically. Rejecting of null hypothesis signifies the relationship between variables and the belief strengthen. Testing and retesting of the belief eventually leads to addition into existing stock of knowledge and formation of a new theory. Acceptance of null hypothesis reveals that there is no significant relationship and if relationship reveals it is only a matter of chance.
2. **Established theories are the stock of knowledge.** However, the knowledge has to be tested and retested in different time period, in different contexts. It has to be ensured that the theory holds good even in changed context. Retesting of the theory improves it and enforces the relationship between variables stated in the theory. Henceforth, testing of hypothesis is imperative in knowledge building, whether it is natural science or social science.

PHYSICAL SCIENCE AND SOCIAL SCIENCE:

Conducting a scientific research is up to a large extent possible in physical science. Physical sciences are sciences such as Physics, Chemistry, Biology, Engineering and Agriculture et. In physical sciences, scientific research can be conducted and the relationship between variables can be tested in controlled laboratory.

However social science is distinct from Physical science. Wbester's third new international dictionary defines; Social science is a branch of science that deals with the institutions and functioning of human society with the interpersonal relationships of individuals as members of society (Vyas, 1992).

Social Science includes the branches of knowledge as, Economics, Sociology, Politics, Commerce, and Management et. All social sciences study the human behavior, its actions, and reactions. It is a debated that whether human behavior can be studied and predicted with certainty, whether conducting a scientific research is possible in social science. The social science philosophers and researchers have advocated that it is possible to conduct a scientific research in social science as well. As like physical science, social science also seeks to discover the degree of regularity in human behavior, although the degree and accuracy differs to physical science (Mishra, 2015).

Measurement and scaling technique in Social Science:

An important utility of any scientific research is to measure the variables and establish the relationship between variables. The term measurement means assigning numbers or some other symbols to the characteristics of certain objects. The measurement means not measuring the object but characteristics of it (Chawla & Sondhi, 2016). Most of the time social science studies variables that are qualitative in nature. As Attitude, Perception, Satisfaction, Loyalty, empowerment etc.

Scaling is an extension of measurement. Scaling involves creating a continuum on which measurements on the object are located (Malhotra & Dash, 2011). For example suppose you want to measure the customer satisfaction level towards services provided by a particular restaurant and five-point Likert item statement is used for the same purpose, where 1 indicate Highly Dissatisfied and 5 indicate Highly Satisfied. The Measurement means actual assignment of number for each respondent, whereas the scaling is a process of placing respondent on a continuum with respect to their satisfaction (Chawla & Sondhi, 2016).

The techniques adopted in measuring these qualitative variables are very much different from physical science. Use of statistical techniques for analysis and hypothesis testing tests to be used, dependents upon the level of measurement adapted to measure the variables. Basically, there are four levels of measurement; they are Nominal, Ordinal, Interval and Ratio (Singh, 2015).

Nominal scale: Nominal scale is simply a system of assigning number symbols to events in order to label them. The numbers function as a name or label and do not have numeric meaning. (Boslaugh & Watters, 2008)

Ordinal Data: Ordinal data refers to data that has some meaningful order so that higher values represent more of some character than lower values. (Boslaugh & Watters, 2008)

Interval Data: Interval data has a meaningful order and also has the quality that measures equal intervals between measurements, represent equal changes in the quantity of whatever is being measured. (Boslaugh & Watters, 2008)

Ratio Data: Ratio data has all the qualities of interval data (natural order, equal intervals) plus a natural zero point. Many physical measurements are ratio data, for instance, height, weight, and age. (Boslaugh & Watters, 2008)

Parametric Versus Non-Parametric Hypothesis Tests:

All hypothesis test offered by statistics are basically divided into two types, Parametric versus non-parametric test. Parametric tests are used when certain properties of the parent population are known from which samples are drawn (Kothari, 2010). Parametric tests are useful when samples are drawn from known continuous distributions and data is measured at ratio or at least interval scale. While using parametric test the important assumption that is samples are drawn from the population that follows the normal distribution, has to be fulfilled. (Zikmund, 2013). Important parametric tests are product movement correlation analysis, regression, Z test, t-test, and analysis of variance (ANOVA) for comparing a significant mean difference.

One of the important assumptions that have to be fulfilled while using parametric test is that samples are drawn from the population that follows the normal distribution. When normality assumption for the data is failed, non-parametric statistics tests are suitable (Heiman, 2011). Non-parametric tests are the distribution-free test of hypotheses, they are useful even when samples are drawn from unknown distribution or data is measured at nominal or ordinal scale (Heiman, 2011). The tests are highly used in social science because they can be used even for a small sample, more specifically in pilot surveys in social science research (Scahdeva, 2014). Important non-parametric tests are the Chi-Square test, One Sample Wilcoxon Signed-Rank Test, Wilcoxon Signed-Rank Paired sample Test, The Kruskal-Wallis Test, Mann-Whitney U Test, and Spearman's Rank Correlation Test.

TESTING OF HYPOTHESIS:

There are basically two popular approaches towards hypothesis testing, one is critical region method also called as a traditional method, and other is P-value method. The critical value is more suitable when hypothesis test statistic value is manually calculated. Under this approach, calculated test statistic value is compared with some standard sampling distribution value at the specified level of significance (alpha). If the calculated test statistic value is greater than standard value null hypothesis is rejected otherwise not.

P-value method: P-value means the probability value; it is the probability of getting given the sample when the null hypothesis is true. The smaller the p-value, the less like it is that the observed sample would have come from the assumed population (Sharma & Gupta, 2010). The p-value defines the smallest value of a level of significance for which the null hypothesis can be rejected. For example, if the p-value of a test is .038, the null hypothesis cannot be rejected at = .01 because .038 is greater than alpha (0.01) value for which the null hypothesis can be rejected. However, the null hypothesis can be

Quest International Multidisciplinary Research Journal
ISSN: 2278 - 4497
Quality Impact Factor: 6.89 (CARS)
Volume – VI, Issue – IX, November - 2017
Available at http://www.researchjournals.in

rejected for = .05. (Black, 2010). In case of one-tailed test, the reported P-value is to be divided by 2 to obtain the desired p-value and compared with alpha. (Chawla & Sondhi, 2016). Advancement in computer technology has simplified the task of researchers, almost all software compute both test statistic value and p-value. The advantage of P-value approach is that the p-value can be directly compared to the level of significance.

CHI-SQUARE TEST (X^2):

Chi-square is an important non-parametric test highly used in social science to test the association between variables. The test is most popular in social science as it is not based on rigid assumptions in respect of the type of population (Kothari, 2010).

As a test of independence, Chi-Square test enables us to explain whether two attributes are associated with each other or not. Chi-Square test is used to test the significance of association or relationship between two attributes when data is measured at nominal or ordinal level scale. It is to be noted that X^2 is not a measure of the degree of relationship or the form of relationship between two attributes, but is simply a technique of judging the significance of association or relationship between two attributes. (Kothari, 2010). To measure the strength of association the phi coefficient is used in 2 X 2 contingency table (Chawla & Sondhi, 2016).

Example: If researchers want to know whether employee's job satisfaction is associated with the employee's perception about their salary package offered to them by the company Chi-Square test can be performed. To know the employee's perception about their salary they were asked to grade their salary in terms of High Salary, Medium Salary, and Low Salary. Next employees where asked to grade their Job Satisfaction on 5 points Likert item.

Hypothesis:

H0: Employee's Job satisfaction is independent of their salary perception.

H1: Employee's Job satisfaction dependent on their salary perception.

Step 1: *Analysis > Descriptive Statistics > Cross Table.*

Step 2: Transfer the Variables to Test Fields

Step 3: Statistics>Chi-Square

The Syntax for Performing Chi-Square analysis:

- Analysis > Descriptive Statistics > Cross Table.
- This will open cross table dialogue box. Transfer “Employee perception about salary” (Independent Variable) to Rows Box, and “Employee Job Satisfaction” to Column(s) box.
- Click – Statistics – this will open cross table statistics box. Activate Chi-square box.
- Click- Continue – you will be directed to cross table dialog box.
- Click OK.

The following result will be displayed.

		Job satisfaction					Total
		Strongly satisfied	Satisfied	Neither Satisfied Nor Dissatisfied	Dissatisfied	Strongly Dissatisfied	
Salary	Low Salary	6	14	14	6	6	46
	Not Low, Not High	10	14	10	10	6	50
	High	16	10	12	8	8	54
Total		32	38	36	24	20	150

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	7.024(a)	8	.534
Likelihood Ratio	7.085	8	.527
Linear-by-Linear Association	.365	1	.546
N of Valid Cases	150		
a 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.13.			

Result: The calculated value of Pearson Chi-Square is 7.024 and ‘P’ value is 0.534. Here at 5% level of significance, there is no sufficient evidence to reject the null hypothesis (P>0.05). The test is not significant. Hence; the null hypothesis job satisfaction of the employees is independent to salary package offered is accepted.

ONE SAMPLE WILCOXON SIGNED-RANK TEST

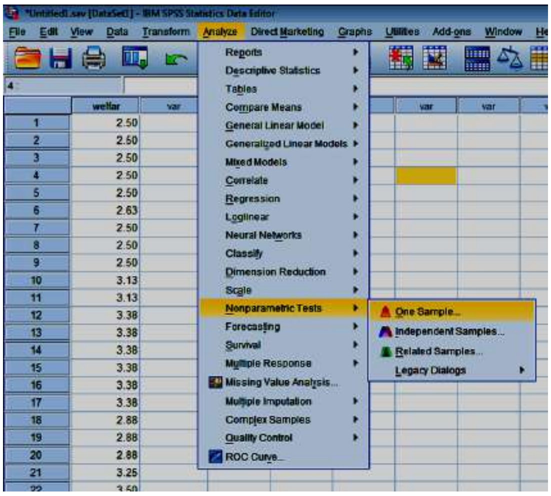
The One-Sample Wilcoxon Signed-Rank Test is a non-parametric alternative to one-sample t-test (Bluman, 2009). The test determines whether the median of the sample is equal to some specified value (Gupta, 2013).

Example: To increase employee’s loyalty towards the company, the company wants to provide quality welfare facility. They want to assess what extent employees are satisfied with present welfare facility offered by the company. To assess the employee’s welfare satisfaction, 5 points Likert scale is prepared. In the scale 1 represent highly satisfied, 2 Satisfied, 3 Neither satisfied nor dissatisfied, 4 satisfied and 5 highly satisfied. The employee’s welfare satisfaction score is measured against value 3. Here 3 is the midpoint, employee’s response below 3 indicate lower employee satisfaction. Statement of the hypothesis is as follows:

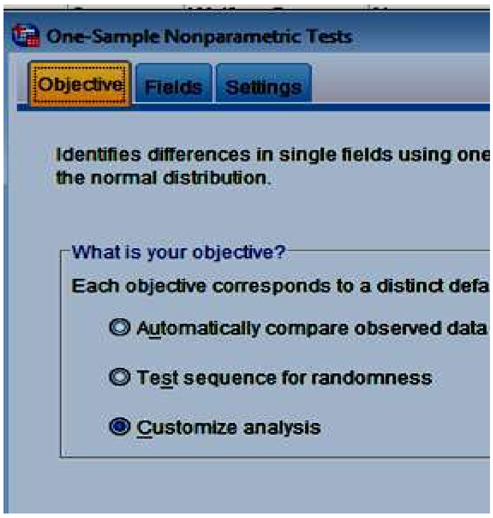
H0: Welfare facilities in the company are satisfactory.

H1: Welfare facilities in the company are not satisfactory.

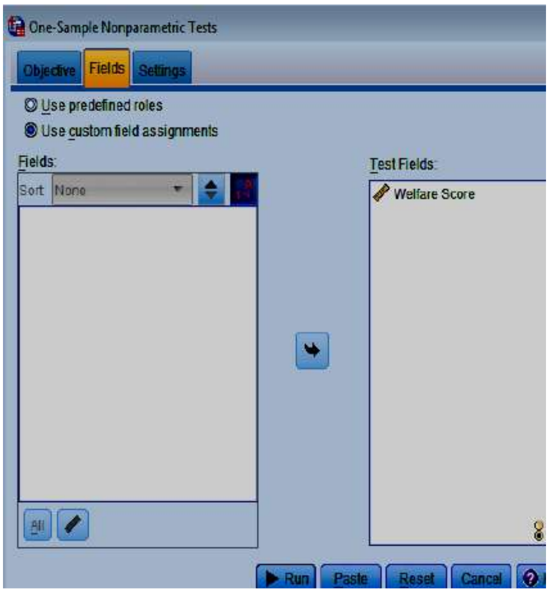
. H_0: η = 3 H_1: η ≤ 3



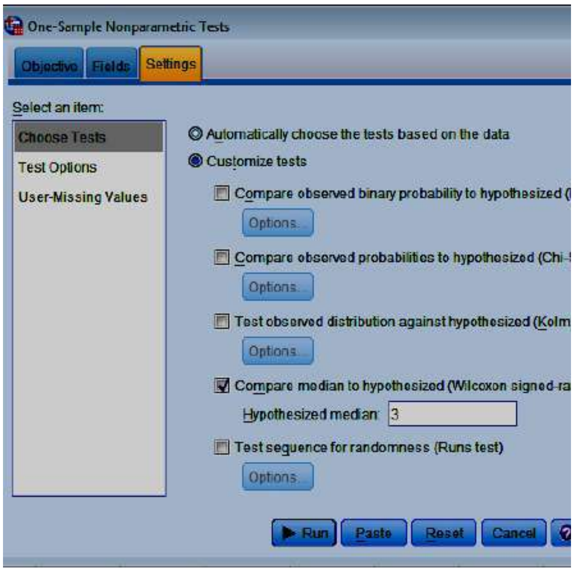
Step1:*Analysis > Nonparametric Test > One Sample***.**



Step 2*: Objective activate "Customize Analysis"*



Step 3: *Fields>Use custom field assignments*



Step 4: *Settings>Choose Test> Customize Tests> Compare Median to hypothesized (Wilcoxon Signed Rank Test)>Test value.*

The Syntax for performing Wilcoxon one Sample sign test.

- ***Analysis > Nonparametric Tests > One Sample.***
- This will open **One Sample Nonparametric Test Dialog box**.
- From Menu Click "Objective" and activate "Customize Analysis".
- From Menu Click "Fields" and activate "Use custom field assignments".
- From Fields column, transfer the variable to be tested for hypothetical value to "Test Fields".
- From Menu Click Settings
- From setting select an Item Column-"Click Choose Test" and Select "Customize Tests".
- Activate Checkbox "Compare Median to hypothesized (Wilcoxon Signed Rank Test)".
- Specify the hypothesis test value in below given "Hypothesized Median". In the above example test value is "3".

Quest International Multidisciplinary Research Journal
ISSN: 2278 - 4497
Quality Impact Factor: 6.89 (CARS)
Volume – VI, Issue – IX, November - 2017
Available at http://www.researchjournals.in

- Finally Click "Run".

The following result will be displayed.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The median of Welfare Score equals 3.00.	One-Sample Wilcoxon Signed Rank Test	.623	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

The calculated value of One-Sample Wilcoxon Signed Rank Test 'P' value is 0.623. Here at 5% level of significance, there is no sufficient evidence to reject the null hypothesis (P>0.05). The null hypothesis welfare facilities in the company are satisfactory is accepted.

WILCOXON SIGNED-RANK PAIRED SAMPLE TEST

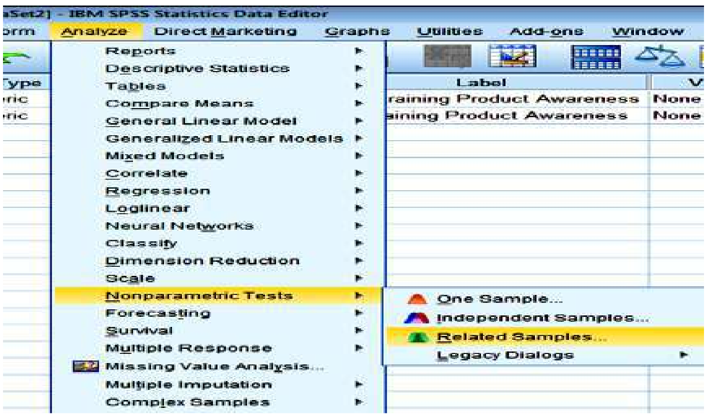
When the sample data consists of paired observations, where subjects are studied before and after experimentation Wilcoxon signed rank test shall be used. The test is a non-parametric counterpart for paired sample t-test (Andya, 2009). The t-test is based on a strong assumption of a sample is drawn from a normal population. When the normality assumption is violated and a significant difference between before and after treatment is to be checked, Wilcoxon Signed-Rank Test is to be used (Dalgaard, 2008). Paired sample signed test is also a non-parametric test used to test the significant difference between before and after treatment. However, an important limitation of the test is that it is only based or direction (Positive and Negative) no weight was assigned to the magnitude of the direction. Wilcoxon Signed-Rank Paired sample Test overcomes this limitation and assigns greater weight to the matched pair with a larger difference. (Chawla & Sondhi, 2016)

Example: The area sales manager of the company has observed that performance of 20 sales executives was not improving. The manager measured product knowledge of executives and identified that poor product knowledge is the important reason for their lower performance. The company has decided to impart the product knowledge training to the sales executive. After completing the training, the company wants to assess the effectiveness of the training. They wanted to check whether there is a change in product knowledge of the employees after training. Statement of the hypothesis is as follows:

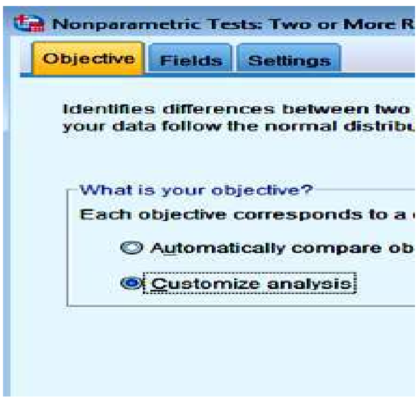
H0: There is no a significant change in product knowledge of employees after training.

H1: There is a significant change in product knowledge of employees after training.

Performing Wilcoxon Signed-Rank Paired sample Test with SPSS

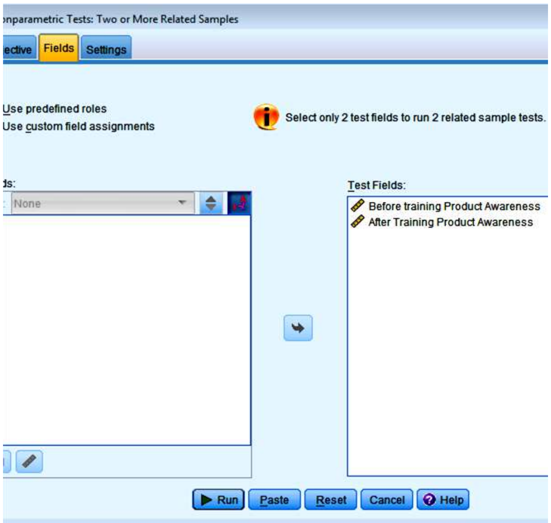


***Step :1** Analysis > Nonparametric Tests > Related Samples.*

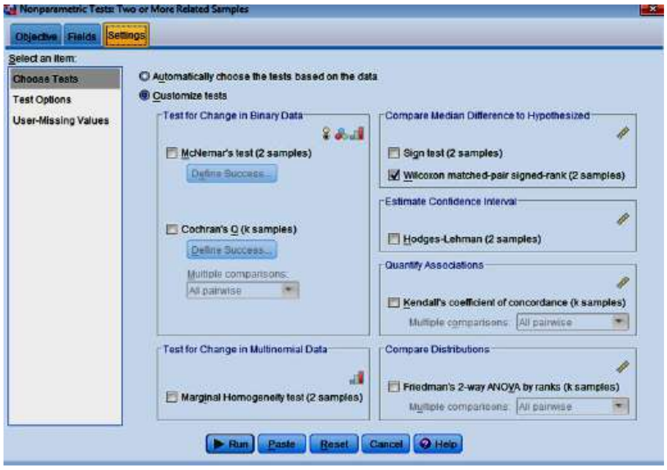


***Step :2** Objective> Customize*

Quest International Multidisciplinary Research Journal
ISSN: 2278 - 4497
Quality Impact Factor: 6.89 (CARS)
Volume – VI, Issue – IX, November - 2017
Available at http://www.researchjournals.in



Step 3: *Transfer the Variables to Test Fields*



Step 4:*Settings>Click Choose Test>. Wilcoxon Matched-Pair Signed-rank (2 Samples)*

The Syntax for performing Wilcoxon Signed-Rank Paired sample.

- ***Analysis > Nonparametric Tests > Related Samples.***
- This will open **Nonparametric Test: Two or More Related Samples** dialog box.
- From Menu Click "Objective" and activate "Customize Analysis".
- From Menu Click "Fields" and activate "Use custom field assignments".
- From Fields column transfer the Variable that is to be tested for hypothetical value to "Test Fields".
- From Menu Click Settings
- From setting select an Item Column-"Click Choose Test" and Select "Customize Tests".
- Activate Checkbox at front of "**Wilcoxon Signed-Rank Paired sample**".
- Finally Click "Run".

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The median of differences between Before training Product Awareness and After Training Product Awareness equals 0.	Related-Samples Wilcoxon Signed Rank Test	.001	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

The Wilcoxon Matched-Pair Signed-rank 'P' value is 0.001. Here at 5% level of significance test is significant and the null hypothesis is rejected (P>0.05). The null hypothesis, that there is no significant change in product knowledge of employees after training is rejected and it is concluded that there is a significant change in product knowledge of employees after training.

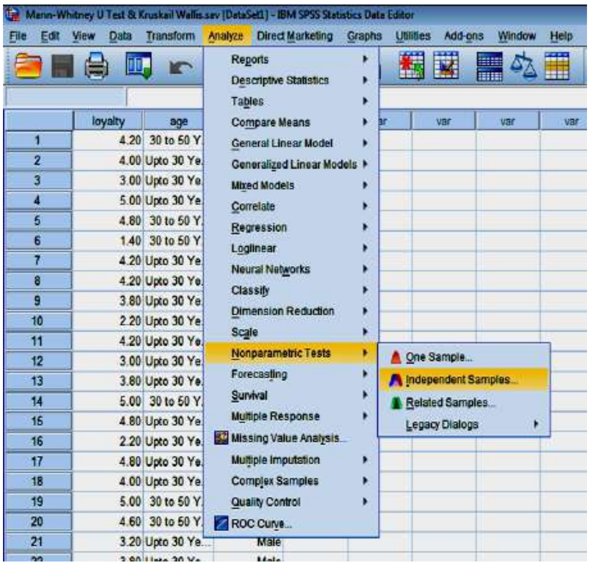
The Kruskal-Wallis Test

Analysis of Variance (ANOVA) is a technique commonly used to test whether there are statistically significant differences between two or more independent groups. (Boslaugh & Watters, 2008). ANOVA test is based on a strong assumption of samples are drawn from a normal distribution and multiple samples to be tested for having an equal variance, violation of this assumption makes use of ANOVA inappropriate. The Kruskal-Wallis test offer the solution to test the hypothesis that whether there are statistically significant differences between two or more independent groups (Kanji, 2006)

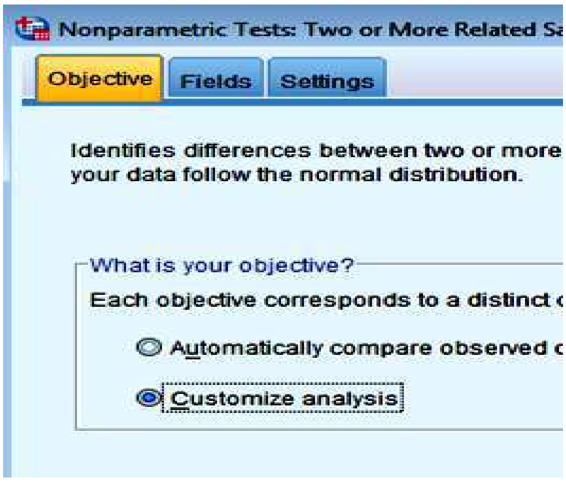
Example: A market leader Telecom Service provider wants to devise the marketing strategy to increase customer Loyalty. The company measured the level of customer loyalty and wants to know whether customer loyalty defers as per the age group of the customer. The company has conducted a sample study on its 480 customers and measured their customer loyalty. Total sampled customers were classified in terms of their age stating up to 30 years, "Young age", 30 to 50 years "Middle age" and above 50 years "Older age".

H0: Customer loyalty is independent of the age group of the customer.

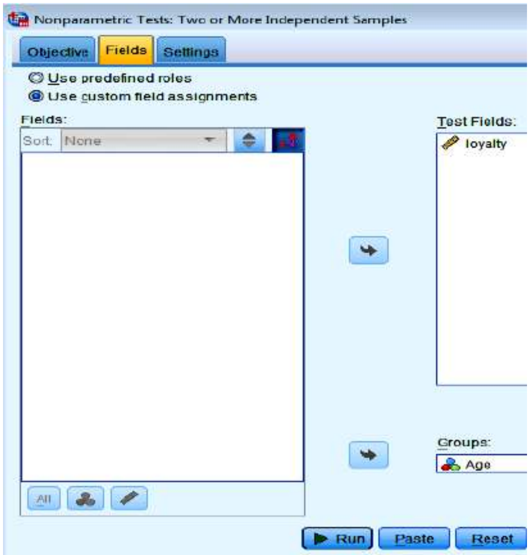
H1: Customer loyalty dependent on the age group of the customer.



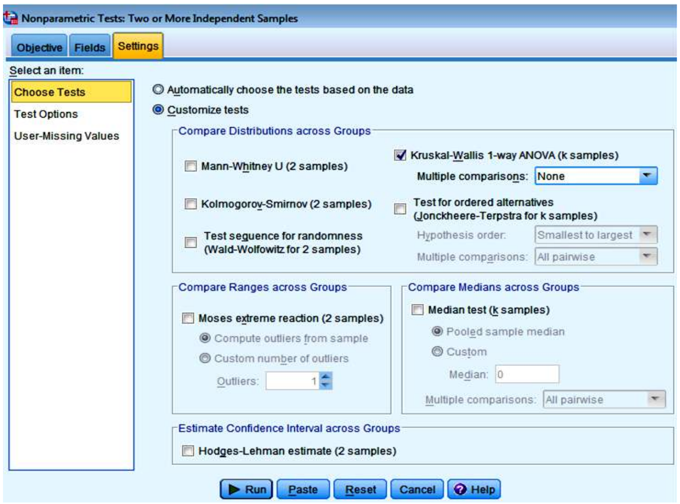
Step :1 Analysis > Nonparametric Tests > Independent samples.



***Step :2** Objective> Customize Analysis".*



***Step 3**: Transfer the Variables to Test Fields*



Step 4:*Settings>Click Choose Test>. Kruskal-Wallis 1-way ANOVA (k samples)*

The Syntax for performing Kruskal-Wallis Test.

- *Analysis > Nonparametric Tests > Independent Samples.*
- This will open **Nonparametric Tests: Two or More Independent Samples** Dialog box.
- From Menu Click "Objective" and activate "Customize Analysis".
- From Menu Click "Fields" and activate "Use custom field assignments".
- From Fields column, transfer dependent Variable (Customer Loyalty) to "Test Fields" and an independent variable into "Groups" (Age).
- From Menu Click "Settings".
- From select an Item Column-"Click Choose Test" and Select "Customize Tests".
- Activate Checkbox at front of "Kruskal-Wallis 1-way ANOVA (k samples)".
- Finally Click "Run".

The following result will be displayed.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of loyalty is the same across categories of Age.	Independent-Samples Kruskal-Wallis Test	.117	Retain the null hypothesis.

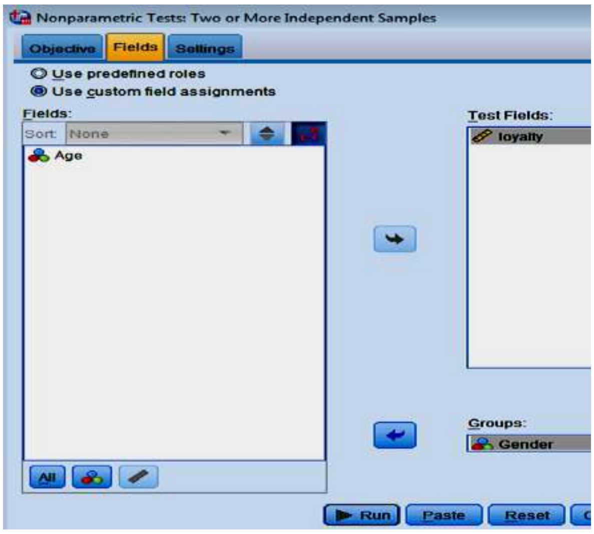
Asymptotic significances are displayed. The significance level is .05.

Above table reveals that the Independent Samples Kruskal-Wallis Test 'P' value is .117 (P >0.05). Here null hypothesis is accepted. The result indicates that Customer loyalty is independent to age group of the customer.

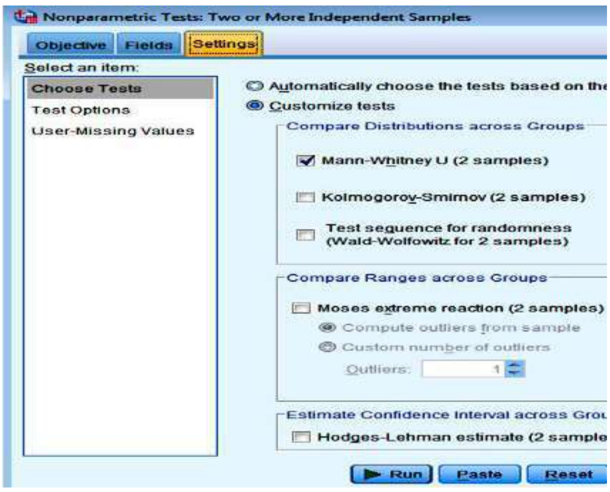
Mann-Whitney U Test

This test is a non-parametric alternative to't-test' for testing the equality of means of two independent samples. While using t test it is important to follow the assumption that sample is drawn from a normal population. If normality assumption is violated, Mann-Whitney U Test can be used as an alternative to a t-test. (Chawla & Sondhi, 2016)

Example: Now the telecom company wants to assess whether customer loyalty differs to the gender of the customer. Here to test the significant difference between two independent samples Mann-Whitney U Test is useful.



Step 3: Transfer the Variables to Test Fields



***Step 4**:Settings>Click Choose Test>. Mann-Whitney U Test*

The Syntax for performing **Mann-Whitney U Test**.

- ***Analysis > Nonparametric Tests > Independent sample***
- This will open **Nonparametric Tests: Two or More Independent Samples** Dialog box.
- From Menu Click "Objective" and activate "Customize Analysis".
- From Menu Click "Fields" and activate "Use custom field assignments".
- From Fields column, transfer dependent Variable (Customer Loyalty) to "Test Fields" and an independent variable into "Groups"(Gender).
- From Menu Click "Settings".
- From select an Item Column-"Click Choose Test" and Select "Customize Tests".
- Activate Checkbox at front of "**Mann-Whitney U Test** (2 samples)".
- Finally Click "Run".

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of loyalty is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.753	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Above table reveals that the Independent **Mann-Whitney U Test** 'P' value is .753 (P >0.05). Here null hypothesis is accepted. The result indicates that Customer loyalty is independent of the gender of the customer.

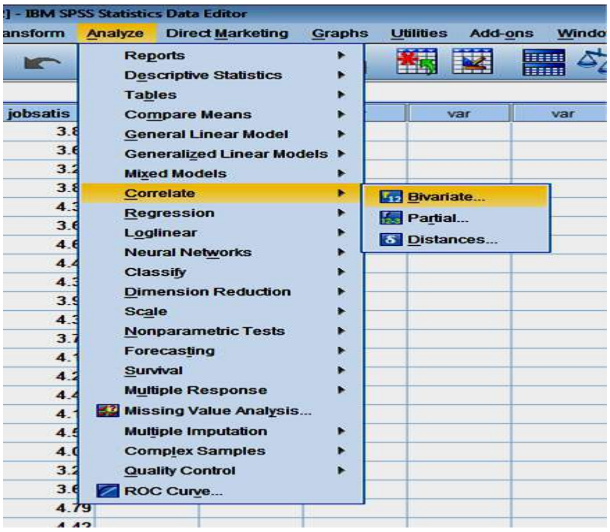
Spearman's Rank Correlation

Spearman's rank correlation coefficient test is popularly known as Spearman's rho test. The Spearman's rank-order correlation is the nonparametric version of the Pearson product-moment correlation. Spearman's correlation coefficient measures the strength and direction of the association between two ranked variables when data is measured at ordinal, interval or ratio scale (Tulsian & Jhunjhnuwala, 2010). Although Pearson product-moment correlation test is used to test the correlations between variables when data is measured on interval or ratio data, the Spearman correlation can be used when the assumptions of the Pearson correlation are violated. (statistics laerd.com).

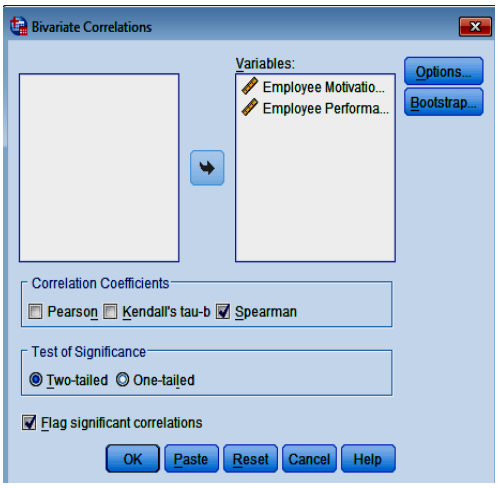
Example: In the company, Human Resource Manager has a task to continuously improve the performance of the employees. The manager wants to know the factors influencing the performance of the employees. One of the variables identified by the manager that may influence the employee's performance was motivations level of the employees. The manager contacted few sampled employees collected data on their level of motivation and performance using respective scales. The manager is interested to know whether there is a significant correlation between employee's level motivation and their performance. Statement of the hypothesis is as follows:

H0: There is no significant correlation between employee motivation and employee performance.

H1: There is a significant correlation between employee motivation and employee performance.



Step 1: *Analysis > Correlate > Bivariate*



Step 3*: Transfer the Variables to Test Fields*

The Syntax for performing Wilcoxon Signed-rank Test for Paired Sample test.
Analysis > Correlate > Bivariate
This will open **Bivariate Correlations** Dialog box.
Transfer the test variables into **"Variables Column".**
Activate "**Spearman**" Checkbox.
Finally, Click "OK".
This is lead to display the following result.

Correlations

			Employee Motivation	Employee Performance
Spearman's rho	Employee Motivation	Correlation Coefficient	1.000	.732**
		Sig. (2-tailed)	.	.000
		N	327	327
	Employee Performance	Correlation Coefficient	.732**	1.000
		Sig. (2-tailed)	.000	.
		N	327	327

**. Correlation is significant at the 0.01 level (2-tailed).

The table shows that **Employee Motivation and Employee Performance** p-value is 0.000 it is less than the significant level of 0.05, ($p<0.05$). Therefore, H0 is rejected and H1 is accepted. There is a correlation between **Employee Motivation and Employee Performance**.

CONCLUSION

Unlike physical science measurement in a social science is comparatively difficult. Most of the time social science intends to measure the behavior and attitude of individual or group. Measurement of qualitative variables poses a major problem, as a response is influenced by the respondent's situation, and the measurer. Getting a response in terms of absolute numbers (ratio scale) is difficult in social science; instead ranking one variable over another is a suitable alternative. In these cases, non-parametric tests are best suited for the data. The major advantage generally attributed to nonparametric tests is that they do not rely on any very seriously restrictive assumptions concerning the shape of the sampled population(s) (Howell, 2010). Use of nonparametric statistics is advised when dependent variables score default to show normal distributions of data, population variance is not homogeneous, or when scores are measured using ordinal or nominal scales (Heiman, 2011).

The most popular non-parametric test is Chi-Square test used to test the association between categorical data. Spearman's Rank Correlation tested is also used to test the relationship when the assumption of normality of data is been violated and data is measured at interval or ratio scale. Wilcoxon one Sample sign test and Wilcoxon Signed-Rank Paired sample Test are nonparametric tests used as an alternative to the parametric t-test. Both the test are based on a median comparison, Wilcoxon one Sample sign test is used as an alternative to One sample t-test, Wilcoxon Signed-Rank Paired sample test is used as an alternative to Paired sample t-test. Mann-Whitney U Test is a useful test to compare whether there is a significant difference between two independent samples. It is alternative to two independent sampling t-test. The Kruskal-Wallis test is used to test the hypothesis, whether there are statistically significant differences between two or more independent groups. Non-parametric tests are even useful if a strong assumption of normality of data and homogeneity of equal variance (Levene's Test) are violated. The social science researcher does not need to fall into complexities of calculating hypothesis test results. Advancement in technology and availability of user-friendly software as SPSS offer help to perform the complex calculations of hypothesis testing. The prime interest of social science researcher is to interpret test result, for assessing, validating, and updating relations between social variables.

REFERENCES

1. Andya, F. (2009). *DISCOVERING STATISTICS Using SPSS.* New Delhi: Sage Publications.
2. Bailey, & Kenneth, D. (1978). *Methods of Social Research* . New York: The Free Press.
3. Black, K. (2010). *Business Statistics For Contemporary Decision Making.* Hoboken,: John Wiley & Sons, Inc.
4. Bluman, A. G. (2009). *Elementary Statistics.* New Delhi: Mc Graw Hill.
5. Boslaugh, S., & Watters, P. A. (2008). *STATISTICS IN A NUTSHELL.* Sebastopol: O'Reilly Media, Inc.
6. Chawla, D., & Sondhi, N. (2016). *Research Methodology Concepts and Cases.* New Delhi: Vikas Publishing House Pvt Ltd.
7. Dalgaard, P. (2008). *Introductory Statistics With R;* . Springer.
8. Dyer, C. (2015). Science And psychology. In C. Dyer, *Research In Psychology* (pp. 5-14). New Delhi: Wiley India Pvt Ltd.
9. Gupta, S. C. (2013). *Fundamentals of Statistics.* Mumbai: Himalaya Publishing House.
10. Heiman, G. (2011). *Basic Statistics for the Behavioral Sciences.* Cengage Learning.
11. Howell, D. (2010). *Statistical Methods for Psychology.* Cengage Learning.
12. Kanji, G. (2006). *100 Statistical Test.* New Delhi: Sage Publications Ltd.
13. Kothari, C. R. (2010). *Research Methodology.* Mumbai: New Age International Publishers.
14. Malhotra, N. K., & Dash, S. D. (2011). Factor Analysis. In *Marketing Research An Applied Orientation* (pp. 587-609). New Delhi: Pearson Prentice Hall.
15. Mishra, P. (2015). Introduction to Research. In P. Mishra, *Business Research Methods* (p. 8). New Deli: Oxford University Press.
16. Scahdeva, J. K. (2014). *Business Research Methods.* Mumbai: Himalaya Publishing House.
17. Sharma, M., & Gupta, A. (2010). *Business Statistics* . Delhi: Khanna Book Publishing Co.

Quest International Multidisciplinary Research Journal
ISSN: 2278 - 4497
Quality Impact Factor: 6.89 (CARS)
Volume – VI, Issue – IX, November - 2017
Available at http://www.researchjournals.in

18. Singh, K. (2015). *Quantitative Socail Research Methods* . New Delhi: Sage Publisher.
19. statistics laerd.com. (n.d.). *Spearman's Rank-Order Correlation*. Retrieved June 21, 2017, from statistics.laerd.com: statistics.laerd.com/statistical-guides/spearmans-rank-order-correlation-statistical-guide.php
20. statisticssolutions.com. (n.d.). *http://www.statisticssolutions.com/non-parametric-analysis-mcnemars-test/*. Retrieved 06 21, 2017, from http://www.statisticssolutions.com: http://www.statisticssolutions.com/non-parametric-analysis-mcnemars-test/
21. Thakur, D. (2003). Scientific Methods of Research. In D. Thakur, *Research Methodology In Social Sciences* (p. 3). New Delhi: Deep & Deep Publications PVT. LTD.
22. Tulsian, P. C., & Jhunjhnuwala, B. (2010). Non Parametric Tests. In P. C. Tulsian, & B. Jhunjhunwala, *Business Statistics* (p. 22.6). New Delhi: S. Chand.
23. Vyas, S. D. (19192). *Social Science Information in India: Efforts Towards Bibliographical Control.* New Delhi: Concept Publishing Company Ltd.
24. Zikmund, W. (2013). The Scientific Method. In W. G. Zikmund, *Business Research Methods* (p. 7). Delhi: Cengage learning.

Governance System of Family Business: A Case study of Godrej Group

Article · April 2018

1 author:

Sanket Ravan
CHHATRAPATI SHAHU INSTITUTE OF BUSINESS EDUCATION AND RESEARCH

ISSN : 2348-7143
April 2018

Governance System of Family Business: A Case study of Godrej Group

Mr. Sanket V. Ravan
Assistant Professor,
Chhatrapati Shahu Institute of Business Education and Research
(CSIBER), Kolhapur.

Abstract :

This paper studies about family business i.e. a corporation that is entirely owned and managed by members of a single family. Also studies how family business is managed by using good family business governance system for effective control. Good governance in terms of separate family governance structure and business governance structure. This paper studies about family business governance system of Godrej Group a very popular family business in India.

Key Words - Family Governance structure, family council.

I. Introduction

A family business means the business actively owned and or managed by more than one member of the same family. A family business is characterized by commitment of family members, reliability, pride, utilization of family human capital etc. To manage family business effectively is called as family business management. To manage family business we require proper governance system for family as well as business since both are separate entities and their management and control required is separate. In India family business is facing various challenges like succession planning, compensation problem, nepotism, lack of talent in family etc. to solve some of these issues good governance system is required.

II. Review Of Literature

K. Ramachandran (2005) in their paper entitled "Indian Family Businesses: Their survival beyond three generations" studied how families grow their business beyond three generations, in highly competitive environments a six Indian case studies were analyzed have all fourth generation family businesses with diversified portfolios, managed by family members and outside professionals. He conclude that the quality of family leadership reflected in the level of Compassion Orientation nurtured in the families is found to be critical for building Competitive Orientation in the group's business.

R.Vani and etal. (2014) in their paper entitled "Family Business Management in Small and Medium Enterprises at Nellore District" conclude that Many family businesses have non-family members as employees, but, particularly in smaller companies, the top positions may be allocated to family members" Family Business contributes 60-70 percent of GDP of most developed & developing countries. Number of challenges face by Indian family business like Finance and Marketing were major challenges.

This study covers family business governance system used by Godrej group.

III. Objectives of the Study

1) To study business governance system used by Godrej family business.
2) To study family governance system used by Godrej family business.

IV. Research Methodology

For the completion of research paper researcher has used Descriptive research method.It is based on secondary data available in various journal articles, websites, books and magazines. This study is based on earlier research done in this particular aspect.

Data collection:

In this study the data has been collected from secondary sources.

Secondary Data:

Secondary data collected from the Books, Internet, magazines, Journals and different types of research papers etc.

V. Limitations Of The Study

The study was conducted through secondary data sources.

VI. DISCUSSION

Theoretical background-

Definition- Family business has been defined as a business that is owned and managed (i.e, controlled) by one or more family members (handlers ,1989.,Hollander & Elman ,1988).

Family business examples:

Aditya Birla Group , Godrej group, Dabur Group, Wipro, Hero MotoCorp, Ford, Raymond Group, Samsung, Tata Group , Toyota, Wal-Mart, WWE.

Governance in a family business can be thought of in terms of:
a) Structures, such as creating a family learning and development committee;
b) Processes, for example, creating and running ongoing ownership education programs and the annual preparation of a personal development plan; and
c) Policies, for example, an aspect of the family employment policy could be that family member employees are expected to participate in the family learning and development programs.

A well functioning family governance structure will mainly aim at:

- Communicating the family values, mission, and long term vision to all family members.
- Keeping family members (especially those who are not involved in the business) informed about major business accomplishments, challenges, and strategic directions.
- Communicating the rules and decisions that might affect family members' employment, dividends, and other benefits they usually get from the business.
- Establishing formal communication channels that allow family members to share their ideas, aspirations and issues.
- Allowing the family to come together and make any necessary decisions.

The major constituents of a family governance structure are:

• **Family institutions** which can have different forms and purposes, e.g. Family assembly, family council, and other family committees.

ISSN : 2348-7143
April 2018

• **A family constitution** that clearly states the family vision, mission, values, and policies regulating family members' relationship with the business.

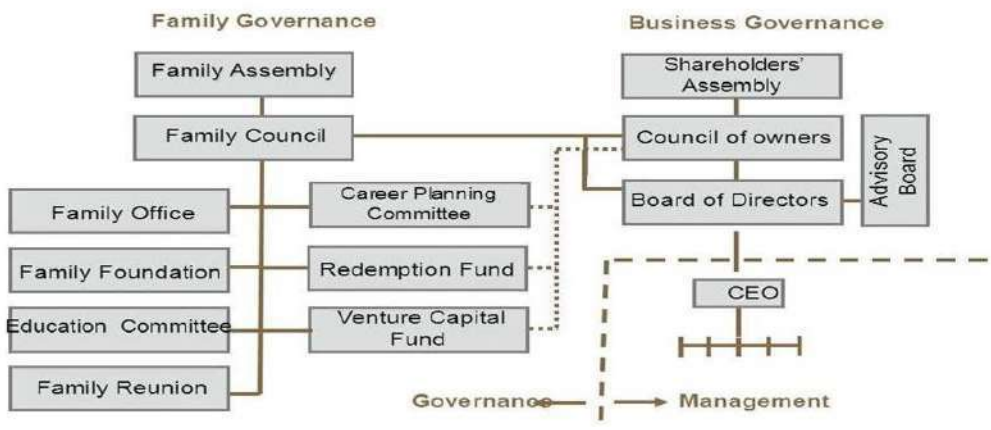


Fig- Governance structure for complex family business enterprise
Source-International Institute for family enterprises http://slideplayer.com/slide/9100923/

Family Governance Institutions-

Family Assembly-

The family assembly is a formal forum for discussion for all family members about issues of business and family. During the founder(s) stage of the business, the family assembly is replaced by a more frequent and informal "Family Meeting". Meeting 1-2 times a year.

Issues handled during family assemblies include:

- Approval of any change in the family values and vision.
- Education of family members about their rights and responsibilities.
- Approval of family employment and compensation policies.
- Election of family council members (if the council exists).
- Election of other family committees' members.
- Other important family matters.

Family Council- "Family Supervisory Board", "Inner Council"

The family council is a governance body that focuses on family matters. It is to the family what the board of directors is to the enterprise. The council is usually established once the family reaches a critical size, i.e. more than 30 members. M**anageable size, i.e. from 5 to 9 members**. These members are usually elected by the family assembly by taking into consideration their qualifications and availability to perform the council's duties, meet from 2 to 6 times per year.

Family council tasks:

- Serve as a vehicle for transparency and for good, timely communication
- Educate family members about the difference between ownership, management, and family membership
- Allow for policy making, e.g., family employment policy, ownership transfers, and other similar Matters
- Problem-solving and conflict resolution

ISSN : 2348-7143
April 2018

- Providing forum for celebration.

Family Office-

The family office is an investment and administrative centre that is organized and overseen by the family council. Family offices are usually very common within large and wealthy families in business, whose members express a need for getting personal financial, banking, accounting, and other advice, usually populated by professional managers who monitor the investments, tax compliance, insurance, financial planning, and intra-family transactions such as gifts of stocks and estate plans.

Advisory boards-

The advisory board is a group of experienced and respected individuals that many family businesses form when their own boards of directors remain only composed of family members and company senior managers. Practical size for an advisory board is from 3 to 7 members

Board of Directors-

Board size, i.e. 5 to 9 members.

Main tasks assigned to the board of directors include:

- Securing senior management succession.
- Ensuring the availability of financial resources.
- Ensuring the adequacy of the company's internal controls and risk management systems.
- Reporting to the owners and other interested parties.

Make up of Board of director

- Small group—five to nine members
- Majority should be independent
- Outsiders should not be friends of family
- Should not be business's service providers
- No managers other than CEO
- Successors only when succession imminent
- At-large family representation

Family constitution- Family policies and guiding vision and values that regulate members relationship in business.

The family constitution is also referred to as "Family Creed", "Family Protocol", "Statement of Family Principles", "Family Rules and Values", "Family Rules and Regulations", and "Family Strategic Plan". The family constitution is a statement of the principles that outline the family commitment to core values, vision, and mission of the business.

- Family values, mission statement, and vision.

Authority, responsibility, and relationship among the family, the board, and the senior management.

- Policies regarding important family issues such as family members' employment, transfer of shares, CEO succession, etc

Family values: **the key principles underlying culture :**

Family values are the underlying values, beliefs and ambitions of the (individual members of the) family who are involved with the business. They determine how things are done within the family values like respect, honesty, trust, loyalty, good governance etc.

Discussion-

A Case of Godrej Group-

The 120 years old **Godrej Group** is very popular and successful family businesses in India, not only for its economic achievements but also for its continuous focus on achieving excellence in corporate governance. The group was established by lawyer Ardeshir Godrej, who gave up his profession to make locks in 1897. Key group companies include Godrej Consumer Products, chaired by Adi Godrej's daughter Nisaba and Godrej Properties, run by his son Pirojsha.*(v)

Business Governance structure-

- Godrej group appointed 6 independent directors (non family members) on their board. They have involved professional from various areas legal , accounting etc. for effective governance.
- Chairman is Adi Godrej but Vivek Gambhir is MD&CEO of Godrej Consumer Products Ltd. who is non family member.
- In management also they have appointed external professionals for better governance and success.

Composition of Board of Godrej Consumer Products Limited-

Category	No. of Directors as on March 31, 2017	No. of Directors as on date of this Report
i) Non-Independent Directors		
Executive Chairman	1	1
Managing Director	1	1
Executive Director	1	1
Non-Executive Promoter Directors	3	4
Sub Total	6	7
ii) Independent Directors	6	7
Total Strength (i + ii)	12	14

Source- Report on corporate governance 201617 (http://www.godrejcp.com/Resources/uploads/reports/201617/10.ReportonCorporateGovernance201617.pdf)*(ii)

Name of Directors	Date of original appointment	Relationship with other Directors	Category
Adi Godrej #	November 29, 2000	Brother of Nadir Godrej, Father of Tanya Dubash and Nisaba Godrej	Promoter/ Executive Chairman
Jamshyd Godrej	March 1, 2001	None	Promoter/ Non-Executive

ISSN : 2348-7143
April 2018

Nadir Godrej	November 29, 2000	Brother of Adi Godrej	Promoter/ Non-Executive
Tanya Dubash	May 2, 2011	Daughter of Adi Godrej and Sister of Nisaba Godrej	Promoter/ Non-Executive
Nisaba Godrej #	May 2, 2011	Daughter of Adi Godrej and Sister of Tanya Dubash	Promoter/ Executive
Vivek Gambhir ##	April 30, 2013	None	Managing Director / Executive
Narendra Ambwani	May 2, 2011	None	Non-Executive/ Independent
Bharat Doshi	April 1, 2001	None	Non-Executive/ Independent
Omkar Goswami	June 18, 2008	None	Non-Executive/ Independent
Aman Mehta	April 26, 2006	None	Non-Executive/ Independent
D Shivakumar	April 1, 2009	None	Non-Executive/ Independent
Ireena Vittal	April 30, 2013	None	Non-Executive/ Independent

Committees of the Board- The Company has constituted Audit Committee, Stakeholders' Relationship Committee formed in accordance with Regulation which looks into the investor grievances. The Company has also formed a Nomination & Remuneration Committee in accordance with Section 178 of the Companies Act, 2013, which looks after the appointment, remuneration, and performance evaluation of the Directors. The Company also has a Risk Management Committee in accordance with Regulation 21 of the Listing Regulations.*(ii)

Family Governance structure-

Family Council- Godrej created a family council. All family shareholders above 18 are members. Of the 16 such members, eight have executive roles in the group. The council meets four to six times a year.*(iv)

Family Constitution-

The Godrej family set up its Family Business Board in 2010 and though it has no detailed constitution, it has laid down guiding principles outlining the roles and expectations of family members as well as a governance process.
Godrej has clear set of guiding principles that lays down the norms of stewardship for the family.

Mission and Values of Godrej Group *(i)

Vision

Godrej in Every Home and Work Place

Mission

Enriching Quality of Life Everyday Everywhere

Values

Integrity | Commitment | Team work | Continuous Learning | Environmental Sustainability

Godrej has also set **Code of Conduct** for the Board of Directors and Senior Management.

ISSN : 2348-7143
April 2018

VII. Conclusion :

This study concludes that now a day's managing family business is difficult task. It requires proper governance system to manage business effectively as well as maintain harmony and relationship between family members. So, it is essential that separate family governance system and business governance system a family business must adopt. As in case of Godrej group they got success because of proper governance system for business and family also they have set example for other business by involving more independent outside directors on board for better governance. Also they have good family constitution in terms of vision, mission and values. Indian family businesses are facing certain challenges like succession planning, nepotism, poor governance structure, lack of professional management etc. To overcome these issues if family businesses use proper governance system then family business becomes successful.

References :

Books & Journals:

Carlock, R.S. and Ward, J.L. (2001). Strategic Planning for the Family Business: parallel planning to unify the family and business, New York. Palgrave.

Ernesto J. Poza -Family Business, Third Edition.

Family Business Management (generation to generation) from family business to business family-Prof.(Dr.) Mukesh Bhatia

IFC Family Business Governance Handbook

- Ramachandran, K., Indian Family Businesses: their survival beyond three generations, 35th EISB Conference, Barcelona, 12-14 September 2005.
- R. Vani, M. Chandraiah, C. Prakash "Family Business Management in Small and Medium Enterprises at Nellore District" International Journal of scientific research and management (IJSRM),Volume 2,Issue8,Page 1249-1266 (2014)
- Mohd abass bhat, Javeed Ahmad Shah, Aijaz Ahmad Baba "A Literature Study on Family Business Management from 1990 To 2012" IOSR Journal of Business and Management (IOSR-JBM)e-ISSN: 2278-487X. Volume 7, Issue 6 (Jan. - Feb. 2013), PP 60-77
- Dibyendu Ganguly , Shailesh Menon Priyanka Sangani, "How Indian business families are adapting ideas from Hindu united family structure" ET Bureau|
  Updated: Oct 16, 2015, 05.26 AM IST

Website-

i. http://www.godrejgreenbuilding.com/abt_mission.aspx
ii. http://www.godrejcp.com/Resources/uploads/reports/2016-17/10.ReportonCorporateGovernance201617.pdf
iii. http://isbinsight.isb.edu/corporate-governance-in-the-context-of-family-controlled-businesses/
iv. https://www.businesstoday.in/magazine/features/family-business-godrej-group/story/17235.html
v. https://www.forbes.com/profile/godrej/

Aarhat Publication & Aarhat Journal's

AARHAT MULTIDISCIPLINARY INTERNATIONAL EDUCATION RESEARCH JOURNAL

Peer Reviewed Multidisciplinary Research Journal

ISSN- 2278-5655

Online and Print Journal

Impact Factor: 3.117 (IIJIF)

UGC Approved Journal No 48178, 48818

Aug - Sep 2017

Vol VI Issues No V

Chief Editor

Mr.Amol Ubale

Contents

Aarhat Multidisciplinary International Education Research Journal (AMIERJ)

(UGC Approved Journal No 48178, 48818) ISSN [illegible]

SUSTAINABLE DEVELOPMENT: THE ROLE OF UNIVERSITIES IN SEMINAL THE FUTURE

Dr. Amardeep D. Jadhav

Assistant Professor

Chhatrapati Shahu Institute of Business Education and Research

(An Autonomous Institute), Kolhapur

Affiliated to Shivaji University, Kolhapur

ABSTRACT:

Certainly, sustainable development has to be an essential part of strategy for the future development of the education sector in India. The main objective of this concept is to make the higher education to be recognized as the foremost contributor to society's efforts to achieve sustainability. Acquiring sustainable development needs cooperation among sectors and institutions, and the involvement of all the concerned partners and individuals. Nevertheless, there are a lot of diverse ways people and institutions can work together to share knowledge, to advocate and to take action. These consist of campaigning networks, communities of practice, knowledge networks, public-private partnerships, multi- stakeholder partnerships and strategic alliances. These have all become vital mechanisms for pin pointing priorities, conducting combined research and for appealing other stakeholders in initiating practicable solutions. By means of combining their efforts, members of networks and partnerships are able to have a bigger impact on policy and practice than they would have on their own. An infrastructure building is one of the meager elements of sustainable development and engineering universities play vital role to spread it inconsonance with the social needs. There is great need to establish practical liaison between the engineering sector and the social development sector, it is important for the establishment and maintenance of social cohesion for building the infrastructure for the well being of the masses. This paper highlights the reasons which make the institutions of higher education in India suitable contenders to lead the notion of Education for Sustainable Development. There is no reason that the achievement of this objective cannot be assured exclusively and without proper linkages with government, communities, NGOs and private sector.

Keywords: *Environmental Education, Education for Sustainable Development (ESD).*

'RESEARCH JOURNEY' *International Multidisciplinary E- Research Journal*
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) –0.676 (2013)
Vol. 4, Issue 4 : Commerce & Management
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
Oct-Nov-Dec. 2017

Employee Grievance Handling in Sound Castings Kolhapur.

Dr. C. S. Kale
Assistant Professor,
CSIBER Kolhapur

Introduction

Grievance is any discontent or dissatisfaction that affects organizational performance. As such it can be stated or unvoiced, written or oral, legitimate or ridiculous. If the dissatisfaction of employees goes unattended or the conditions causing it are not corrected, the irritation is likely to increase and lead to unfavorable attitude towards the management and unhealthy relations in the organization.

Discipline' means one who gets instruction from another, a learner, a follower or seeker of knowledge. According to Richard D. Calhor, "Discipline may be considered as the force that prompts the individuals or groups to observe rules, regulations, standards and procedures deemed necessary for organization."

In traditional organization employing a large number of illiterate or semiliterate workers mainly for manual operations, discipline may be identified with the maintenance of proper subordination, i.e., obedient and orderly behavior.

Good grievance management can improve employee relationships, improve communication and avoid problems escalating. Without effective grievance procedures, difficult situations may escalate- potentially resulting in employment tribunals that could have been avoided.

In their working life, employees do get dissatisfied with various aspects of working may be with the attitude of the manager, policy of the company, working conditions, or behavior of colleagues. Employers try to ignore or suppress grievances. But they cannot be suppressed for long. Grievance acts as rust which corrodes the very fabric of organization. An aggrieved employee is a potent source of indiscipline and bad-working.

In the light of above discussion the researcher carried out of study entitled **"A Study of Employee Grievance Handling in Sound Casting Kolhapur"**.

Objectives of the study

- To study the procedure of grievance handling in the selected organization.
- To study the effectiveness of the grievance handling in the organization.
- To study the benefits of grievance handling in the organization.
- To provide suggestions if any to improve the grievance in the organisation.

Scope of the Study

The study focused on the employee of various departments in the Sound Castings Kolhapur.

Sources of the data:

Primary Data:

Primary data was collected from the employees of Sound Castings Company Ltd. Kolhapur through the survey method with the help of questionnaire.

Method for collecting primary method:

/ 174 ~~210~~

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

A Review of Literature on Growth of E-Banking in India

Swati R. Deshmukh
M.Phil. Student
CSIBER, Kolhapur.

Dr. C. S. Kale
Asst. professor
CSIBER, Kolhapur

Introduction :

Economic growth and development of a country is mainly depends on the advancement of the banking sector in that particular nation. Banks play a vital role in the financial sector. During the recent times of technology, demand for financial services is growing fast. The globalization has transformed the face of Indian banking industry from past few years. Banks have customarily been in the front position of exploiting technology to push their products/services and working competence for the past few decades banks have green utilizing electronic and telecommunication modes for distributing a wide range of value integrated products and services. The transaction channels include private networks, public networks etc. and the devices include phone, computers, ATM's etc. The extensive utilization of computers, laptops, tablet, mobile phones etc. makes an access to internet and world wide web. This kind of banking is also known as Electronic Banking , the range of products and services offered by these different banks vary considerably both in their content and quality. From the above point of view of banking products and services being offered through internet, debit and credit cards, ATM's, mobiles, e-banking is nothing mobiles, e-banking is nothing more than traditional banking services distributed through an electronic communicate system. Intact, there are not many inventions that have transmuted the business of banking as fast as the e-banking revolution. All over the worlds, banks are reorienting their business strategies towards new opportunities offered by e-banking. Moreover, E-Banking has enabled banks to scale borders and thus bring about new opportunities. In this paper the researchers made an attempt to study past and present studies which are as follows.

The study by England et. at (1998) was the first study, which estimated the number of US banks offering internet banking and analyzed the structure and performance characteristics of these banks. The study reveals the banks in all size and categories offering internet banking were more profitable and tend to rely less heavily on traditional banking activities in comparison to non-internet banks.

Haran et. al (2002) found that the internet banking institutions were preforming significantly better than non-internet groups. More over the risk, variables associated with the internet group continued to be lower relation to the non-internet group. The asset-liability variables raveled that on average the banks in the internet group were larger and had significantly higher trading and investment activities and less dependent on real deposits (Both demand and saving deposits) relative to the non-internet group.

The study by Hernanado and Nieto (2005) examined the performance of multichannel banks in Spain between 1994 and 2002. The study indicated higher profitability for multichannel banks through increased commission income, increased brokerage fees and (eventual) reductions

'RESEARCH JOURNEY' *International Multidisciplinary E- Research Journal* | ISSN : 2348-7143
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) –0.676 (2013) | Special Issue 56 : | April 2018
UGC Approved No. 40705 & 44117

17-18
(6)

A Review of Literature on Job Related Stress and its Impact on Employee Performance

Mahejbin Mubarak Kazi
M. Phil. Student,
CSIBER, Kolhapur.

Dr. C. S. Kale
Asst. Professor,
CSIBER, Kolhapur.

Introduction :

There are many misconceptions about stress. It is therefore important to understand stress well before thinking of managing it. The meaning of stress has changed over the years. In the initial stages stress was considered as environmental pressure, Stress within the person. Basically, stress is a psychological and shysical state that results when the resources of the individual are not adequate to cope with the demands and pressures of the situation. Therefore, stress is more likely in some situations than others and in some individuals than others. Moreover, stress as a response to a demand that is placed upon a person. It can be simply understood as a condition where on experiences as gap between the present state and a desired state. Merriam Webster defined stress as a physical, chemical or emotional factor that causes bodily or mental tension and may be a factor in disease causation. It is also a normal reaction when the brain recognizes a treat. When the treat is perceived, the human body releases hormones that activate its fight or flight response. Stress can be minimized if we know the sources of stress. Occupational stress is a significant and costly problem and that the challenge for the organization is to manage work stress in order to reduce health care costs and improve productivity. In this paper an attempt has been made by the researchers to critically examine various studies that are available. So far, these studies are as follow.

The study by Laiba DAR et.al (2011) Stated that many demographic factors are associated with stress such as, age, gender, qualification, designation and salary. The study showed that male posses more stress bearing capacity than females. The burden of stress is also very on the nature and position of the job. The results show that stress is also increases with the designation.

Balaji R. (2014) in his study stated that, stress can not be avoided altogether, in fact a little bit of stress is necessary to spur productivity and innovation. But it must be kept at a reasonable level or else it will cause harm to employees and the organization. Managers are responsible for not over working or stressing out their employees they should act as role models in coping skills for their employees. Moreover, human resource departments are responsible for making stress management resources available and raising organizational awareness about them.

The study by Ratanwat R. G. and Jha P. C. (2014) mentioned that for male factory workers the financial problems, low wages followed by poor physical environment, dual career, threat to job. Security, social and physical isolation, personal and family problems, on role in decision making boring and repetitive work, frustration over career ambition and harassment and bullying were found to be important stress contributing factors. Female workers do have the similar problems and most significant was threat to job security.

'RESEARCH JOURNEY' *International Multidisciplinary E- Research Journal* | ISSN : 2348-7143
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) –0.676 (2013) | Oct-Nov-Dec. 2017
Vol. 4, Issue 4 : Commerce & Management
UGC Approved No. 40705 & 44117

A Review of Literature on Saving and Investment Pattern of School Teachers

***Sayali S. Patakure & **Dr. C.S. Kale**
*M. Phil. Student CSIBER, Kolhapur.
**Asst. Professor, CSIBER, Kolhapur.

Introduction

Essentially, saving means sacrificing the current consumption in order to increase the living standard and fulfilling the daily requirements in future. From the economists perspective people allocate disposable income between consumption and savings and at various level of income, there will be corresponding level of consumption and savings. According to classical definition, saving is income minus consumption and is residual in character. Moreover, savings can also be defined as stock, wherein savings stands for change in wealth over a period of time. In this sense it is regarded as the sacrifice in the present consumption for the future.

From the accounting perspective, saving may be defined as the residual that is left from income after the consumption choice has been made as part of the household utility maximization process. Saving is future consumption, and it is an important example of inter – temporal decision, Division of income between consumption and saving is driven by preferences between present and future consumption and the utility derived from day to day consumption. Basically, every individual has a psychological equally certain future consumption. Saving means going against this preference and hence involves sacrifices of the preference (Mehta J. K. 1961). Therefore, saving is an activity that involves both pain of foregoing consumption and pleasure at a particular moment in time for an anticipated future. Savings behavior is influenced by several factors, such as income, wealth, education, employment status, stages in life cycle, dependence ratio, fiscal policy, pension etc.

As far as investment is concerned, it is an economic activity of employment of funds with the expectation of receiving a stream of benefits or returns in future. Investment is the utilization of resources in order to increase income or production output in the future. An amount deposited into a bank of machinery that is purchased in anticipation of earning income in the long run is the both examples of investments. In this paper an attempt has been made by the authors to review the previous and present studies on saving and investment pattern of schools teachers, in order to gain some insights on this topic.

The study by Richard A. D. and E. Wright (1989) examined the manner and the degree to which science teachers considered the nature of the subject matter in their decision making addressing the planning and the delivery of instructional tasks.

Goymda R and Jose Phine Y (2005) provided an overview of (Para) teachers in India. It examined the origin of Para – teacher schemes in the country and analysed the changing policy context where in poorly paid and trained Para – teachers on contract were increasingly being recruited in place of regular teachers in government schools. Drawing upon available research studies, the authors draw attention to the detrimental implications that Para – teacher programmes had for professionalization of teachers, the quality of schooling and equity concerns in education.

177 ~~213~~

'RESEARCH JOURNEY' *International Multidisciplinary E- Research Journal*
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) – 0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117

ISSN : 2348-7143
April 2018

A Review of Literature on Emotional Intelligence among Management Students in Inida

Dr. Pooja S. Kabadge
M. Phil. Student,
CSIBER, Kolhapur.

Dr. C. S. Kale
Asst. Professor,
CSIBER, Kolhapur.

Introduction :

Now a day's emotional intelligence has emerged as a critical ingredient in the business management. The seminal work of Daniel Goleman in the Nineties much has been written on this topic in the work place. The ability to manage ones interactions with others is equal to effective managerial leadership. Moreover, it is an absolute necessity that we become aware of and act on our emotions in appropriate ways. Unfortunately our culture taught differently. The intellect rules and the emotions must be submerged if we are to be successful, in fact the truth opposite. Emotions do matter in everyday livings and when recognized and used appropriately they can enrich our liver. During sixties Douglas M. in his book human side of enterprise began to call attention to the human values and characteristics that needed to be addressed by a work place that was pretty much separated from human meaning. However, the term emotional intelligence gained recognition during Nineties more research began to support the relevance and the integration of this concept into areas such as the workplace, relationships, personal fulfillment and development. In this paper an attempt has been made by the authors to examine critically the concept of emotional intelligence written by previous and existing authors which are as follows.

The study by Frank B. (2008) observed that, teaching emotional intelligence in the business school has an important activity. Corporations and businesses are not run like a scientific experiment, but rather as a giant problem solving Endeavour which attempts to shift through complex way of social and human factors in order to arrive at decisions, often made with insufficient data which hopefully can result in desired outcomes. In all of this the human factor plays a key role in its success.

The study by Anita Devi S. (2012) stated that, emotionality and impulsiveness self acceptance, problem solving orientation, self awareness, self confidence, decisiveness and independence, personal fulfillment, empathy anxiety and stress and assertiveness are the factors that play a role in dealing with others at workplace.

The study by Chi-Sumwong et.al in their study stated that emotional intelligence has been a hot topic for both parents and educators in Hong-Kong in recent years. Broadly speaking, emotional intelligence should be related to students life satisfaction, positive attitude towards life and the attainment if various education goals. However, despite its growing popularity, there is relatively little empirical evidence showing these relationships. The study results shows that emotional intelligence is positively related to life satisfaction, and performance in moral, social and intellectual development it is also negatively related to powerlessness in life.

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Vol. 4, Issue 4 : Commerce & Management
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
Oct-Nov-Dec. 2017

Stress Among the Selected Employees of M.S.R.T.C. in Kolhapur Division

Dr. C.S.Kale
Assistant Professor
CSIBER, Kolhapur

Introduction :

Organizational stress can have a profound effect on production and motivation in the workplace. Worries about job security or the demands of a heavy workload increase stress levels and cause a variety of emotional and physical ailments. When stress factors, or stressors, are coupled with ineffective or uncaring management, stress can become a problem that extends to the entire department or company.

Stress also can affect once ability to perform their job well. Stress can make it difficult to concentrate on complex problems or issues, and it might affect memory. One might neglect to complete certain important tasks or forget to perform a key part of a procedure. If one doesn't feel as if management supports or empowers them, they might feel that no reason exists to do their best work. Stress can lead to feelings of negativity, lack of enthusiasm and apathy. When one experiences these feelings, one might no longer care about doing a good job.

Stress is an important and increasing problem in the organization. It is subject of interest to researchers across fields. Occupational stress is increasing globally and affects all countries, all professions and all categories of workers, as well as families and society in general .

The researcher intends to study the problems entailed "Stress among the selected employees of M.S.R.T.C. in Kolhapur division"

Objective of the study :

1. To measure stress level experienced by employee of M.S.R.T.C with special reference to Kolhapur division.
2. To study the sources or reasons of stress.
3. To study the measures adopted by the management and employees to minimize their job stress.
4. To suggest remedial measures to reduce the stress level in the study unit.

Research Methodology Adopted :

For the present study survey method has been adopted with objective of collecting data

Sources of data :

Primary Data :

In order to collect primary data interview schedule was prepared The interview schedule is filled by 120 employees from the following departments

- Administration Department
- Workshop and
- Traffic Department

Secondary Data :

It was collected from books,Articles,Journals,Newspapers,E journals and Websites

Impact Factor – 3.452 **ISSN – 2348-7143**

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

Multidisciplinary International E-research Journal

PEER REFREED & INDEXED JOURNAL

April 2018

Special Issue - LIVI

विश्वविद्यालय अनुदान आयोग
University Grants Commission
quality higher education for all

Home About Us Organization Commission Universities Colleges Publications

UGC Approved List of Journals

You searched for **research journey**

Total Journals : 2

II Home II

Show 25 entries Search:

View	Sl.No.	Journal No	Title	Publisher	ISSN	E-ISSN
View	1	40705	Research Journey International E Research Journal	Swatidhan Pub. Yevla		23487143
View	2	44117	Research Journey	Swatidhan International Publication		23487143

Showing 1 to 2 of 2 entries

Previous 1 Next

Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

This Journal is indexed in :

- **University Grants Commission (UGC) List No. 40705 & 44117**
- **Scientific Journal Impact Factor (SJIF)**
- **Cosmoc Impact Factor (CIF)**
- **Global Impact Factor (GIF)**
- **Universal Impact Factor (UIF)**

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) –0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

INDEX

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

Environmental Management in Sugar Industries in Kolhapur and Sangli Districts : A Comparative Study

Dr. M. M. Ali
Director
CSIBER, Kolhapur

Dr. G. Haresh
Associate professor
CSIBER, Kolhapur

Introduction :

Global environmental change has become as major issue of concern among academicians, specific regions have thrown up specific problems and they cannot be soloed in a global or universal manner but each solution has to be area specific and problem specific. There has been a tendency among the environment conscious to concentrate mainly on visible environmental Hazards and their impacts. Management Scientists consider invisible impacts, some of which can be measured in physical forms. These include the quantities and qualities of waste water summing into as river, air pollution and noise pollution at the workplace or in the vicinity of a plant. In economic throes, this tends to be described as social costs or externalities of private enterprise.

Sugar industry is one of the largest consumer goods industries in the economic consumer goods industries in India and plays an important role in the economic development of the country. It also forms as strong base for the development of the rural economy through backward and forward linkages. Thus the industry has as great potential for providing employment as well as meeting the demand for sugar in the country. Sugar industry is the largest agro based industry located in rural Indian in Maharashtra there are some cooperative sugar factories sum very successfully. The sugar and private sugar factories are playing a vital role in the development of Maharashtra.

The industrial waste and the contaminated water are being diverted towards the rivers and canals without much further treatment. Therefore, the hazardous material thrown out of these industries is causing air pollution, noise pollution and water pollution. Similar is the case of sugar factories in India. The sugar industry is responsible for more biodiversity loss than any other crop, due to its destruction of habitat to make way for plantations, its intensive use of water for irrigation, its heavy use of agricultural chemicals and the polluted waste water that is routinely discharged in the sugar production process. Keeping the above points in mind the researchers made an attempt to study the topic entitled, Environmental management in sugar industries in Kolhapur and Sangli Districts : A comparative study.

2. Objectives of the Study

Impact Factor – 3.452

ISSN – 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

Multidisciplinary International E-research Journal

PEER REFREED & INDEXED JOURNAL

April 2018

Special Issue - LVIII

विश्वविद्यालय अनुदान आयोग
University Grants Commission
quality higher education for all

Home | About Us | Organization | Commission | Universities | Colleges | Publications

UGC Approved List of Journals

|| Home ||

You searched for **research journey**

Total Journals : 2

Show 25 entries

Search:

View	Sl.No.	Journal No	Title	Publisher	ISSN	E-ISSN
View	1	40705	Research Journey International E Research Journal	Swatidhan Pub. Yevla		23487143
View	2	44117	Research Journey	Swatidhan International Publication		23487143

Showing 1 to 2 of 2 entries

Previous 1 Next

Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

This Journal is indexed in :

- University Grants Commission (UGC) List No. 40705 & 44117
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- Universal Impact Factor (UIF)

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 58 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

INDEX

Our Editors have reviewed paper with experts' committee, and they have checked the papers on their level best to stop furtive literature. Except it, the respective authors of the papers are responsible for originality of the papers and intensive thoughts in the papers.

'RESEARCH JOURNEY' *International Multidisciplinary E- Research Journal* ISSN : 2348-7143
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 58 : April 2018
UGC Approved No. 40705 & 44117

Microfinance and its Impact on Women Empowerment in India: A Review

Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur.

Dr. M.M. Ali
Director
CSIBER, Kolhapur.

Introduction

Through the world women workers contribute to the growth, development and sustainable livelihoods of their families and communities. In fact, microfinance helps empower women from poor households to make this contribution. Moreover, Microfinance which is the provision of financial services to the poor in a sustainable manner utilize credit, savings and other products such as micro insurance to help families take advantage of income generating activities and better cope with risk. Especially, women benefit from microfinance as many as microfinance institutions which target female clients. Microfinance services basically lead to women's empowerment by positively influencing women's decision making power and enhancing their overall socio-economic status. Microfinance services are growing rapidly over a period of time thought the world. Apart from this, microfinance has the potential to make a significant contribution to gender equality and promote sustainable livelihoods and better working conditions for women.

Women's empowerment through microfinance is key for promoting International Labour Organizations (ILO's) agenda. By increasing women's access to financial services, microfinance ultimately contributes to KLO core values of greater gender equality and non-discrimination. In this paper an attempt has been made by the author to examine various studies critically and these studies are as follows.

The study by HUNT J. and NALINI K. (2002) reveals that equity and efficiency arguments for targeting credit to women remain powerful, the whole family is more likely to benefit from credit targeted to women, where they control income, than when it is targeted to men. The findings indicate that only a minority of women receiving credit from poverty oriented microfinance programmes are controlling their loans. Moreover, individual factors which appear to increase the likelihood of a woman controlling her loan and the income generated from it are absence of husband (due to health) or long- term migration and use of the loan for a traditional female activity, particularly where the woman is able to market her goods from home one of key factors which constrain women in Bangladesh and India from taking control of loan and profit is lack of access to the market for the purchase of inputs and for the sale of goods, particularly for non-traditional income generating business activities.

NATHALIE H. (2005) observed that decision making

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 58 : UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

Organizational Learning: A Strategic Tool for Sustainable Development

Bhakti Bhadra
M.Phil Research Scholar
Chhatrapati Shahu Institute of Business Education and Research, Kolhapur

Dr. M. M Ali
Director
Chhatrapati Shahu Institute of Business Education and Research, Kolhapur

Introduction:

During the last four decades, the concept of learning has become a dominant concept in theory and research about organizations. In fact, the notion of the learning organization has become increasingly accepted as an organizational development or change strategy in business and industry. Concepts of organizational learning are no longer peripheral in organizational theory but have entered core domains such as strategic planning and change (Mintzberg, 1994) as well as production management and innovation.

In today's competitive environment, only a learning organization will survive. Its abilities to learn, create, modify and utilize knowledge faster than its rivals -and quicker than the environmental changes- will provide tomorrow's corporation a competitive edge that is sustainable forever. Indeed, since the core competence of any organization is nothing but the individual and collective learning of its entire people, corporation of the coming age must be built around people. A learning organization is understood as the one that has developed the capacity to adapt and change.

"Learning organizations are characterized by total employee involvement in a process of collaboratively conducted, collectively accountable change directed towards shared values or principles. -Watkins & Marsick "

The definition of continuous learning in the Learning Policy captures the core of the idea: **Continuous learning** — a lifelong process of training, development, and learning. Once individuals work in an environment where these three activities are present, and actively participate in each, lifelong learning becomes a reality.

Learning Culture:

The term is important to the present discussion because the drive to build a learning organization is often seen as a sustained transformation of the learning culture within an organization. In this respect, building a learning organization goes deep. Individuals, groups, and the organization as a whole must question current beliefs and come to see themselves in a new way if the learning culture is to be transformed. In addition to the individuals within it, an organization is a set of programs, processes, systems, structures, relationships, and beliefs, and practices.

Quality Impact Factor : 6.89 (CARS)

U.G.C. Approved International Refereed Monthly Research Journal

Quest
International Multidisciplinary Research Journal

ISSN : 2278 - 4497 http://www.researchjournals.in

Volume – 7, Issue – 2
February – 2018

Published by
Publish World
Anand, Gujarat (India)
http://www.publishworld.org

Contents

Quest International Multidisciplinary Research Journal
ISSN: 2278 - 4497
Volume - 7, Issue - 2, February, 2018
Available Online at http://www.researchjournals.in
Quality Impact Factor: 6.89 (CARS)
U.G.C. Approved International Refereed Research Journal

DIRECT BENEFIT TRANSFER THROUGH AADHAAR: A BOON FOR AAM ADMI

Mr. Krishnat H.Chougale[1], Dr. M.M.Ali[2]
[1]Ph.D. Student, Shivaji University, Kolhapur, Maharashtra (India)
[2]Director, CSIBER, Kolhapur, Maharashtra (India)

ABSTRACT

A landmark phase direct benefit transfer scheme where the subvention amount will go directly into the aadhaar linked bank accounts of the beneficiaries. It is a poverty reduction measure in which government subsidies, pension scheme benefit and other benefits are given directly to the poor in cash rather than in the form of subsidies. The paper contains brief view on the benefits of the schemes which government reach out to identify beneficiaries and can plug leakages. As currently, ration shop owners divert subsidized kerosene to open market and make fast buck. Such Leakages could stop. The scheme will also enhance efficiency of welfare schemes. Implementation of the scheme strategy where money is directly transferred into aadhaar linked bank accounts of beneficiaries. LPG and kerosene subsidies, pension payments, scholarships and employment guarantee scheme payments as well as benefits under other government welfare programs will be made directly to beneficiaries.

KEYWORDS: Aadhaar, Direct Benefit Transfer, UIDAI

INTRODUCTION

The Direct Benefit Transfer (DBT) system was launched in January, 2013 in 20 districts covering scholarship and social security pensions.DBT is an attempt to change the mechanism of transferring subsidies launched by government of India on 1st January 2013. This program aims to transfer subsidies directly to the people through their aadhaar linked bank accounts. It is hoped that crediting subsidies into bank accounts will reduce leakages, delay, etc. The DBT system is an experiment in delivering service to citizens. It provides the guarantee that the funds are received only by the beneficiaries. It also ensures that the funds are withdrawn by the beneficiaries themselves. The amount is dynamic which is proposed and already sanctioned through DBT system.

REVIEW OF LITERATURE

(Thakkar & Vyas, 2015), concluded in research paper published in International Multidisciplinary Research Journal on Direct Cash Benefit Transfer Scheme in India, that the Direct Cash Benefits Transfer policy, introduced in January, sees the poor receiving cash payments directly in their bank

Impact Factor - 3.452 ISSN - 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

Multidisciplinary International E-research Journal

PEER REFREED & INDEXED JOURNAL

April 2018

Special Issue - LIVI

विश्वविद्यालय अनुदान आयोग
University Grants Commission
quality higher education for all

Home About Us Organization Commission Universities Colleges Publications

UGC Approved List of Journals

You searched for **research journey**

Total Journals : 2

II Home II

Show 25 entries Search:

View	Sl.No.	Journal No	Title	Publisher	ISSN	E-ISSN
View	1	40705	Research Journey International E Research Journal	Swatidhan Pub. Yevla		23487143
View	2	44117	Research Journey	Swatidhan International Publication		23487143

Showing 1 to 2 of 2 entries Previous 1 Next

Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

This Journal is indexed in :

- University Grants Commission (UGC) List No. 40705 & 44117
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- Universal Impact Factor (UIF)
- International Impact Factor Services (IIFS)
- Indian Citation Index (ICI)
- Dictionary of Research Journal Index (DRJI)

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

INDEX

Our Editors have reviewed paper with experts' committee, and they have checked the papers on their level best to stop furtive literature. Except it, the respective authors of the papers are responsible for originality of the papers and intensive thoughts in the papers.

- Executive Editor-

Published by -

© Mrs. Swati Dhanraj Sonawane, Director, Swatidhan International Publication, Nashik

Email : swatidhanrajs@gmail.com Website : www.researchjourney.net Mobile : 9665398258

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

A Review of Literature on Gold Buying Behaviour in India

Vinay Kalyan Kamble
M. Phil. Student,
CSIBER, Kolhapur.

Dr. M. M. Ali
Director, CSIBER, Kolhapur.

Introduction :

Essentially, Consumer behaviour refers to how and why people make the purchase decisions they do. Infect, marketers make efforts to understand this behavior, so they can better formulate appropriate marketing stimulus that will result in reseal sales and brand loyalty. Marketing profession is responsible for the variety of goods on the markets. The skill of evaluating and influencing consumer behavior is foremost in determining which marketing efforts will be used and when. Consumer buying behavior in Jewellery industry can be calculated on the internal parameters such as popularity of the brand, trust in the brand, impact of any occasions such as festivals, Birthday, Marriage, engagement, etc. celebrity Endorsement, promotion, Brand name, Exhibitions, Launch of new collections.

As far as Gold, is concerned, gold, is a unique precious metal with which mankind has had a long and intimate relation. For Indians gold is more tan a precious metal. From time immemorial Indians have considered gold as a symbols of purity, luxury, wealth, status beauty, affection, food fortune etc. unlike any other metal this metal creates strong emotional attachments in people. In India culture, gold is an inseparable element during the occasions of birth and marriage. For same people irrespective of sender possessing gold has even become an obsession. Gold has always been considered as a safer mode of investment, equivalent to liquid cash and as risk collateral. Due to all these the gold market in Indian is the largest in the world in terms of consumption. It has great ornamental value and it is passed down from generation to generation as an ancestral property. Taking into all above factors into consideration gold industry occupies an enviable position in Indian economy. It is useful to understand and identity the consumer behavior and various factors which influence the consumer behavior in gold market. In this paper the authors made and attempt to critically examine the various previous and present studies, which are as follows:

The study by Mathur Asha Rani (2007) identified the fabulous wealth of India for centuries, gold bought to her land both merchants and invaders. Mathur's study is a right of Indian Jewellery in its totality.

The study by Kannan R. and Sarat D. (2008) attempted to identity the key drivers for the demand for the gold, in India during the period 1980-2005 and concluded that demand for gold is significantly influenced by real income and that the other factors such as rate of exchange, rate of Interest, personal tax and the relative price of gold and equally affects the demand.

Anil Suresh (2011) observed that the behavior of Indians towards gold (being more than a status symbol) has changed but still the demand for gold, has not decreased inspire of ever increasing price and also did an comparative study between people's quest for real income, savings and price of gold to decide which factor actually impacts the demand for gold it is conclusions were the demand for gold is a product of savings and peoples quest for real income

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

17-18
(6)

A Review of Literature on Job Related Stress and its Impact on Employee Performance

Mahejbin Mubarak Kazi
M. Phil. Student,
CSIBER, Kolhapur.

Dr. C. S. Kale
Asst. Professor,
CSIBER, Kolhapur.

Introduction :

There are many misconceptions about stress. It is therefore important to understand stress well before thinking of managing it. The meaning of stress has changed over the years. In the initial stages stress was considered as environmental pressure, Stress within the person. Basically, stress is a psychological and shysical state that results when the resources of the individual are not adequate to cope with the demands and pressures of the situation. Therefore, stress is more likely in some situations than others and in some individuals than others. Moreover, stress as a response to a demand that is placed upon a person. It can be simply understood as a condition where on experiences as gap between the present state and a desired state. Merriam Webster defined stress as a physical, chemical or emotional factor that causes bodily or mental tension and may be a factor in disease causation. It is also a normal reaction when the brain recognizes a treat. When the treat is perceived, the human body releases hormones that activate its fight or flight response. Stress can be minimized if we know the sources of stress. Occupational stress is a significant and costly problem and that the challenge for the organization is to manage work stress in order to reduce health care costs and improve productivity. In this paper an attempt has been made by the researchers to critically examine various studies that are available. So far, these studies are as follow.

The study by Laiba DAR et.al (2011) Stated that many demographic factors are associated with stress such as, age, gender, qualification, designation and salary. The study showed that male posses more stress bearing capacity than females. The burden of stress is also very on the nature and position of the job. The results show that stress is also increases with the designation.

Balaji R. (2014) in his study stated that, stress can not be avoided altogether, in fact a little bit of stress is necessary to spur productivity and innovation. But it must be kept at a reasonable level or else it will cause harm to employees and the organization. Managers are responsible for not over working or stressing out their employees they should act as role models in coping skills for their employees. Moreover, human resource departments are responsible for making stress management resources available and raising organizational awareness about them.

The study by Ratanwat R. G. and Jha P. C. (2014) mentioned that for male factory workers the financial problems, low wages followed by poor physical environment, dual career, threat to job. Security, social and physical isolation, personal and family problems, on role in decision making boring and repetitive work, frustration over career ambition and harassment and bullying were found to be important stress contributing factors. Female workers do have the similar problems and most significant was threat to job security.

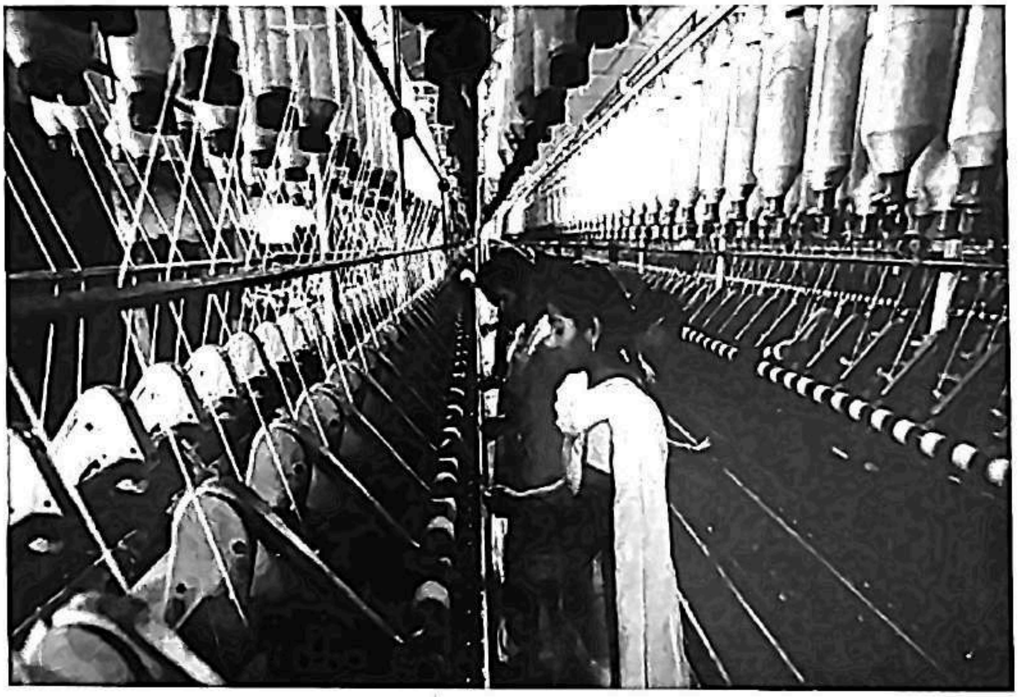
Review of Research

International Online Multidisciplinary Journal

Volume - 6 | Issue - 9 | June - 2017

3.8014(UIF) 2249-894X

IMPORTANCE OF INVENTORY CONTROL IN SPINNING MILLS



Mrs. S. S. Kadam

S.S. Kadam

D. R. K. College of Commerce, Kolhapur.

ABSTRACT:- Inventory control is the scientific method where all stocks of goods are promptly and properly issued and accounted. Inventory control is a method designed by the top level management. Inventory is a major component of working capital. The basic objective of inventory ...Page No - 38

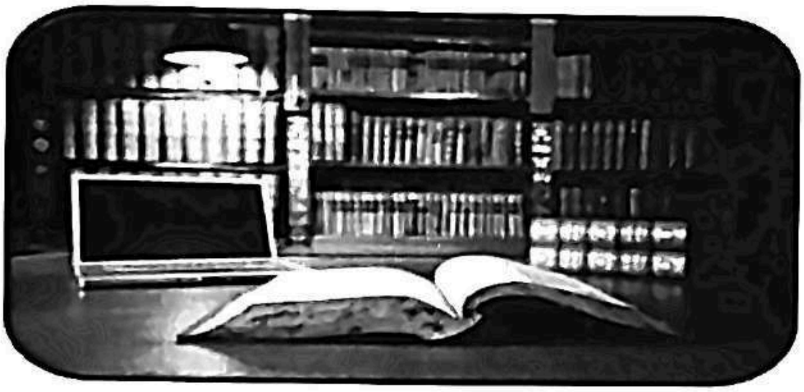
Editor - In - Chief - Ashok Yakkaldevi

International Online Multidisciplinary Journal

Review of Research

Save Tree. Save Paper. Save World

ISSN NO:- 2249-894X Impact Factor : 3.8014(UIF) Vol.- 6, Issue - 9, June-2017

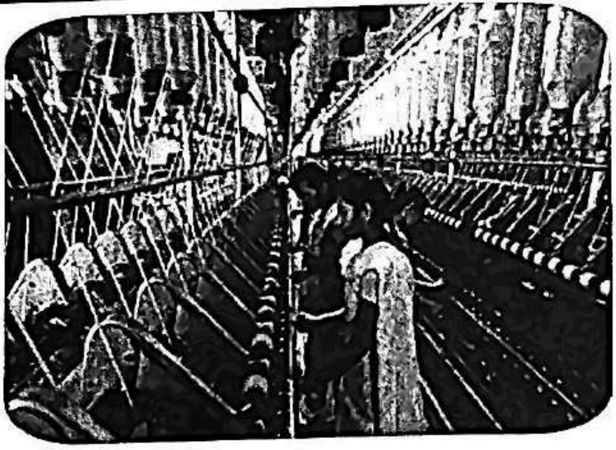


ISSN: 2249-894X
IMPACT FACTOR : 3.8014(UIF)

REVIEW OF RESEARCH

VOLUME - 6 | ISSUE - 9 | JUNE - 2017

IMPORTANCE OF INVENTORY CONTROL IN SPINNING MILLS



Mrs. S. S. Kadam[1] and Dr. U. M. Deshmukh[2]
[1]D. R. K. College of Commerce, Kolhapur.
[2]CSIBER, Kolhapur.

ABSTRACT:
Inventory control is the scientific method where all stocks of goods are promptly and properly issued and accounted. Inventory control is a method designed by the top level management. Inventory is a major component of working capital. The basic objective of inventory control is to optimize the size of inventory in the spinning mill. So that smooth performance of production and sales function may be possible at minimum cost. Mismanagement of inventories and poor control on inventories have resulted poor performance of spinning mills. This paper is aimed to study how inventories in spinning mills are managed across the globe and focused on techniques and important concepts of inventory used in spinning mill. India is the largest employer in textile industry and it is contributed 4% domestic product, 20% manufacturing exports and 20% industrial production. So, it is very necessary to control the inventory and to achieve the maximization of profit in spinning mill.

KEYWORDS: *Optimize, Size of Inventory, Objective, Mismanagement, Techniques, Profit, Domestic, Performance.*

INTRODUCTION

Inventories constitute a major portion of current assets maintained for smooth business operation. In any organization if it is not managed effectively, it directly affects the profit of organization. Inventory is an important resource of an enterprise. Inventory management is an important scientific device for controlling inventory and eliminating wastage. Inventory control is also helps for minimization of investment in inventories as well as achieving smooth production, minimization of inventory carrying cost, ordering cost and efficient service to the customers. The efficient management and control of inventory is not only solves the acute problem of liquidity but it also enhances annual profit and it is useful to reduce the blocked inventory in working capital. In spinning mills numbers of items are required for yarn production. So, it is very necessary to purchases the various items at optimum level and it is reduce the unrequird over burden on finance. Basically in spinning mills raw material, work in progress, finished goods and spares and stores are very important inventories.

OBJECTIVES OF THE STUDY :

1) To study the need of inventory control in spinning mills.
2) To study the importance of inventory control in spinning mills.
3) To study the techniques of inventory control in spinning mills.
4) To study the benefits of scientific inventory control in spinning mills.

Volume - 5 | Issue - 8 | February - 2018

RESEARCH DIRECTION

International Recognition Interdisciplinary Research Journal

Impact Factor 5.1723(UIF)

ISSN 2321-5488

THE IMPORTANCE OF HUMAN CAPITAL AND THE ROLE OF H.R.M. IN THE ORGANIZATION

Mr. G . N. Remane

Mr. G. N. Remane

ABSTRACT:- The factors of production well known as 4 M , i.e. man, material, machine & money are the basic resources .Out of above the man is a live factor & collects the other remaining resources and starts the further manufacturing of

Research Directions

Content

ISSN NO:- 2321-5488 Impact Factor : 5.1723(UIF) Volume 5 , Issue 8 / Feb 2018

RESEARCH DIRECTIONS
ISSN: 2321-5488
IMPACT FACTOR : 5.1723(UIF)
VOLUME - 5 | ISSUE - 8 | FEBRUARY - 2018

THE IMPORTANCE OF HUMAN CAPITAL AND THE ROLE OF H.R.M. IN THE ORGANIZATION

Mr. G . N. Remane and Dr. U. M. Deshmukh

1)ABSTRACT: -

The factors of production well known as 4 M , i.e. man, material, machine & money are the basic resources .Out of above the man is a live factor & collects the other remaining resources and starts the further manufacturing of the good/services. Therefore a vital importance goes to human as he is a key player to organize the business. His physical & mental strength as well as many qualities, abilities and efforts are pushing the business to-wards achieving its goals & finally the growth of business.

2)KEYWORDS: *Human capital, current scenario, roll of human capital, responsibilities of HRM.*

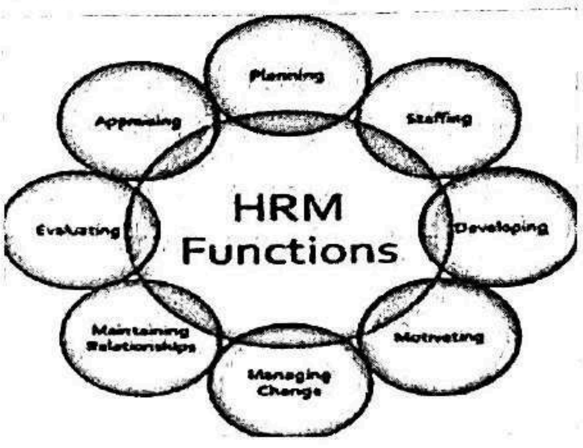
3)INTRODUCTION :

Now a days there are tremendous sea changes are observed in all type of business as of the business had shifted from cottage industry to the concept of globalization. However in this current scenario it also true that due to this large scope of business range it started facing the lot of problems which are summarized as below -

1) Cut thought competition.
2) Rapid technological changes.
3) Pressure of external environment and its impact on business.
4) Less profit margins.
5) Problematic customer(He is analytical,cleaver,and having always more exceptions than business is thinking.)
6) Every movement there are changes in the market which are unpredictable.
7) Many other internal and external forces which are creating unrest in the business operation.

3.1) Therefore for survival of the business no any other alternatives left to business than-------

1) To face this situation very smartly.



2) To adjust with the changing environment.
3)To match up with the internal & external forces.
4)To adopt the new & latest technology.
5)Implementation of innovative ideas and techniques like JIT. Supply Chain.,5,S, ISO/TS Quality System, Quality Circles, Team working, etc.
6)Continous watch on the market condition, getting the new customers & retaining the old.
7)Periodic review of business progress and comparing it with pre-decided norms, vision , mission and the objectives of business.
8)Analysis of compititors strategies and finding out which are against our business and harmful and taking further corrective

Volume - 3 | Issue - 9 | January - 2018

RESEARCH DIMENSIONS

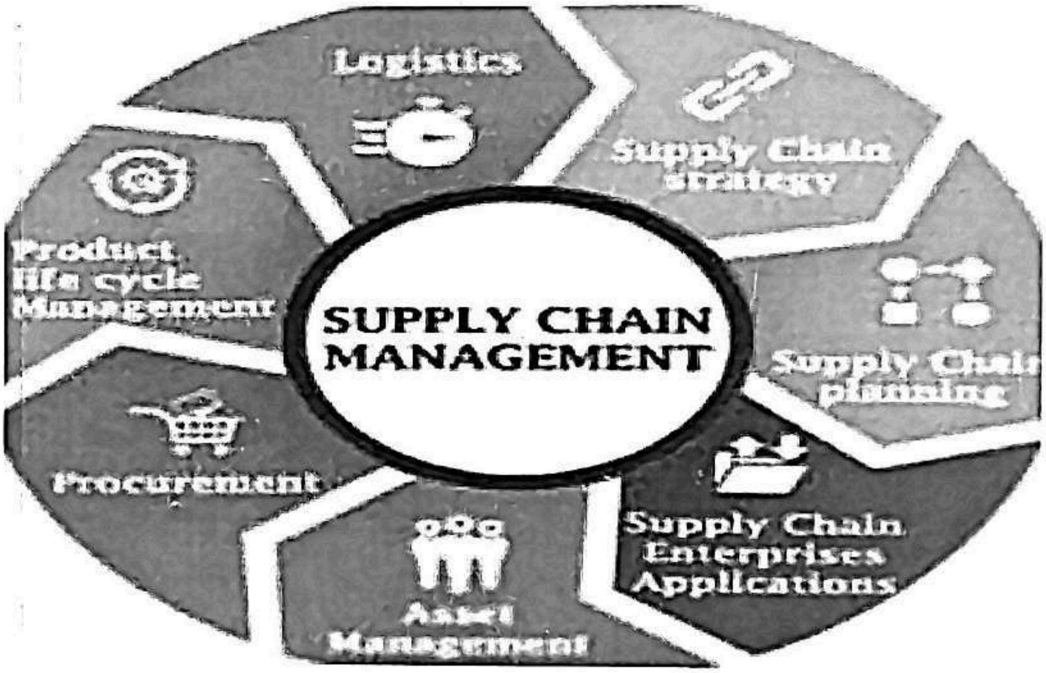
UGC APPROVED

International Recognition Interdisciplinary Research Journal

Impact Factor 5.1899

ISSN 2249-3867

SUPPLY CHAIN MANAGEMENT: A DEADLY WEAPON FOR RAPID BUSINESS GROWTH AND HIGHER PROFITABILITY



Mr. G. N. Remane

Mr. G. N. Remane

ABSTRACT:- The last decade of the 20th century was a period of rapid and sea changes in the business and actually increases in 21st Century. Therefore for any organization, to have an excellence and sustaining in the business is becoming a

Editor - In - Chief - S.P. Rajguru

RESEARCH DIMENSIONS

Content

ISSN NO:-2249-3867 Impact Factor : 5.1899(UIF) Volume 3 , Issue 9/ January 2018

RESEARCH DIMENSIONS

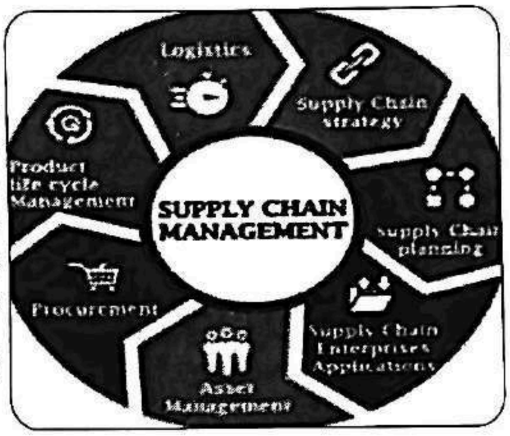
ISSN: 2249-3867
IMPACT FACTOR : 5.1899(UIF)
VOLUME - 3 | ISSUE - 9 | JANUARY - 2018

SUPPLY CHAIN MANAGEMENT: A DEADLY WEAPON FOR RAPID BUSINESS GROWTH AND HIGHER PROFITABILITY

Mr. G. N. Remane and Dr. U. M. Deshmukh

1)ABSTRACT: -

The last decade of the 20th century was a period of rapid and sea changes in the business and actually increases in 21st Century. Therefore for any organization, to have an excellence and sustaining in the business is becoming a very challenging. Further all the internal and external forces are also having the great impact on the business. So to adjust with this organization need to change in various functional areas of it as well as adopting the concept of supply chain management for the rapid business growth and higher profitability.



2)KEYWORDS: *Supply Chain Management, Deadly weapon.*

3)INTRODUCTION :

in current scenario if you are not ready or slow in this business changing process then your exist from the business is 100% sure because the rate of change by others is definitely faster outside. In short the inference is that there are lot of challenges to the organization to remain competitive in the market. Therefore organization now should work smartly mainly by focusing on the following business aspects and gain the profits.

1. The periodic review of the business progress as compare to vision, mission and pre decided objectives of the organisation.
2. Frequent study of the market conditions.
3. Continuous watch on the activities and strategies of your competitors and analyzing it which are formed against your business.
4. Powerful R & D activities for modification / alternation in existing product, and introducing new product.
5. The business should have strong IT Department.

In conclusion we can say that in business the changes are must and on going process and internal and external forces are not in control and creating the high pressure and various challenges. This can be faced and handled by implementing the supply chain management system in the organisation which introduced first in 1980 and taken a good shape in last 20-25 years.

4) OBJECTIVES –

4.1) This article mainly explains to know the basic concept of supply chain management, the activities comes under the scope of supply chain management and to explore the role, significance of the supply chain system. It also speaks about the benefits of supply chain management after its implementation in the organization.

4.2)The author aims to answer how the supply chain management helps to increase the profitability and growth of the business?

REVIEW OF RESEARCH
ISSN: 2249-894X
IMPACT FACTOR : 5.2331(UIF)
VOLUME - 7 | ISSUE - 6 | MARCH - 2018

"MARKET POTENTIAL AND PENETRATION OF HEALTH CARE PRODUCTS IN WESTERN AND KOKAN REGION OF MAHARASHTRA ."

Vikas Bamane
Research Student, Dr U.M. Deshmukh Chairman, M.Phil Program,
CSBER, University Road, Kolhapur.

ABSTRACT

Day by day rate of population have been increasing. With this growing rate, business & industrial activities also were increasing. Due to this growing industry sector pollution problem has come up. It consists of all types of pollution problem. Air pollution has directly affected on the human body which results in chronic diseases like skin infections, viral skin infections, wrinkle lines, fine lines, dull skin, pigmentation, teania infections, Hair fall etc.

KEY WORDS: *industrial activities , human body , wrinkle lines, fine lines.*

INTRODUCTION

All the above mentioned problems followed by consultation of doctors like a dermatologist, cosmetologist, pediatrics, general physicians &gynecologist, etc. They are prescribing such health care products to their particular patients.

This area of the study is of four districts of Maharashtra viz. Kolhapur, Sangli, Satara & Ratnagiri. These districts having more industrial area so simulteniously the health problems are more. Also the standared of living of the people has been increasing with the higher earning incomes. So people became more & more causious about beauty and appearance and they are buy usage of thses products has been increased substentially. In this background the reasearcher has dicided to study market of health care products of cipla and assess their acceptance. This also includes market penetration of ciplas heath care products in selected districts of Maharashtra.

There fore the following are the objectives are the study

1. To study market of health crae products of Cipla
2. To study market penetration of Ciplas health care Products in selected districts of Maharashtra.

1. Reasearch Methodology

The research study is both exploratory as well as descriptive in nature

- **Sample size:**

The researcher had collected data from stockiest in all the four districts viz. Kolhapur, Sangli, Satara & Ratnagiri. The total number of stockist in all four districts together are 30 in number stockiest and the data is collected by admistring quetionnair to all theses stockiest. Thus senses survey method is adopted in the

Journal of Advance Management Research, ISSN: 2393-9664
Vol.05 Issue-05, (December2017), Impact Factor: 4.598

THE BUILDER'S PERCEPTION TOWARDS THE BUSINESS OPPORTUNITIES FOR THE RESIDENTIAL ECO- FRIENDLY BUILDINGS IN PCMC, PUNE - A QUALITATIVE STUDY

MRS. NANDINI SANJAY DESAI. MBA, M.Phil

Ph.D Research Scholar, Department of Commerce and Management, Shivaji University, Kolhapur – India

DR. U.M DESHMUKH. MBA, Ph.D, FDPM (IIMA)

Chairman, M.Phil programme of Chhatrapati Shahu Institute of Business Education and Research

Abstract:

This research paper is an endeavour to unfold the findings of a qualitative study that consider builders insight for the eco- friendly buildings. What is the perception of the builders for the implementation of the eco- friendly concept, assessment criteria and engagement in adopting sustainable solutions for their building projects and perceived barriers in implementing green concept in construction. It also identifies their perception towards the remedial measures to uptake sustainable solutions for the residential buildings.

1. Introduction:

Residential real sector is one of the imperative sectors which contribute to the national GDP and generates job opportunities to the people. This sector is growing very fast and supported by all the corners, but still it is facing lot of challenges in recent years. Low consumer demand, demonetisation, implementation of RERA act, have sluggish the growth, current prices has created stress in this sector. Absorption rates have stagnated, delayed the process all across the major cities of India. It is a worst hit to the sector. Builders, those who can sustain and have holding capacity prefer to "wait and watch" without lowering prices. At the same time those who cannot sustain and experienced cash - crunched and unable to sell their products have option of closing down the business or borrowing money at high costs to survive. The Reserve Bank of India (RBI) is leading the way and initiated few steps for rejuvenate the sector. The Real Estate (Regulation and Development) Act, 2016 was passed by the Rajya Sabha on 10 March 2016 and by the Lok Sabha on 15 March 2016 which protects home-buyers as well as help to boosts the investments in the real estate industry. The Act came into force from 1 May 2017 with 69 of 92 sections notified. This act is more customer-centric and process adherence. The Act insists that 70% of the total amount has to be deposited in bank account through cheque payment. This will restrict unaccounted money from being pumped into this sector. A major benefit for consumers is they need to pay the prices as per the carpet area and not super built-up area. As per this act carpet area includes usable spaces like kitchen, toilets

International Journal of Research in Economics and Social Sciences(IJRESS)
Available online at:http://euroasiapub.org
Vol. 7 Issue 11,November- 2017,
ISSN(o): 2249-7382 | Impact Factor: 6.939|

A STUDY OF POTENTIAL BUYER'S ATTITUDE TOWARDS THE ECO- FRIENDLY BUILDING PROJECTS IN PUNE CITY

MRS. NANDINI SANJAY DESAI. MBA, Mphil
Ph.D Research Scholar, Department of Commerce and Management, Shivaji University, Kolhapur – India
DR. U.M DESHMUKH. MBA, Ph.d, FDPM (IIMA)
Chairman, M.phil programme of Chhatrapati Shahu Institute of Business Education and Research

ABSTRACT

In Indian economy Residential sector is one of the key domains which contribute to the development of the Indian economy. However, real estate sector is transient through tough period and it is essential to understand the expectations and the factors affecting the purchase decision of the buyers. With the improved purchasing power and awareness, many individuals could buy residential property. Therefore the construction industry witnessed growth and improved demand from the buyers. The building industry had a high environmental impact on ecosystems, natural resources, and society. The number of construction of new buildings is increasing, and so the impact on the ecosystem is a big issue all over the globe. The percentage of greenhouse gasses is tremendous and reduction of this has become necessary all over the globe. It is must to avoid the harm to the environment and climate change. Adopting eco-friendly building practices can be the solution which improves the environmental performance of the homes. The consumer's interest in green homes and builders need to adopt these practices. Builders are facing challenges to market their housing projects. Buyer's expectation for the higher quality at affordable prices and competition in the market creates pressure on them. Selection and Purchasing of Eco- friendly Residential property is depend upon the various factors. It is essential for the construction industry to understand such factors and continuously progress towards the excellence. This paper focuses on the demographic profile of the existing buyer's and the impact of buyer's attitude towards the eco- friendly buildings on the purchase decision towards the Residential flats in Pune city. This will help the builders to understand the perspective for the eco- friendly buildings in Pune. It will also help to prepare marketing strategies and to improve their sustainability in the market.

Keywords: ***Eco- friendly buildings, Attitude, purchase decision, Residential flats, Demographic profile***

1.1. Introduction:

The uncontrolled impact of industrial as well as personal activities creates ecological imbalance. This creates major substance on the environment and on the health of the people. Saving the environment has become a big issue in recent times. This leads to the natural disasters causes massive losses of life and property. This creates a threat to mankind, formations, and economic assets. The fast pace of development has led to many unwanted results but because of efforts and strong emphasis given by all the stakeholders, the public awareness had been improved which creates sensitivity amongst the citizens of the society.
To match this contemporary approach, organisations are changing their business strategies as

Aarhat Publication & Aarhat Journal's

AARHAT MULTIDISCIPLINARY INTERNATIONAL EDUCATION RESEARCH JOURNAL

Peer Reviewed Multidisciplinary Research Journal

ISSN- 2278-5655

Online and Print Journal

Impact Factor: 3.117 (IIJIF)

UGC Approved Journal No 48178, 48818

Aug - Sep 2017
Vol VI Issues No V

Chief Editor
Mr.Amol Ubale

Contents

SUSTAINABLE DEVELOPMENT: THE ROLE OF UNIVERSITIES IN SEMINAL THE FUTURE

Dr. Amardeep D. Jadhav

Assistant Professor

Chhatrapati Shahu Institute of Business Education and Research

(An Autonomous Institute), Kolhapur

Affiliated to Shivaji University, Kolhapur

ABSTRACT:

Certainly, sustainable development has to be an essential part of strategy for the future development of the education sector in India. The main objective of this concept is to make the higher education to be recognized as the foremost contributor to society's efforts to achieve sustainability. Acquiring sustainable development needs cooperation among sectors and institutions, and the involvement of all the concerned partners and individuals. Nevertheless, there are a lot of diverse ways people and institutions can work together to share knowledge, to advocate and to take action. These consist of campaigning networks, communities of practice, knowledge networks, public-private partnerships, multi- stakeholder partnerships and strategic alliances. These have all become vital mechanisms for pin pointing priorities, conducting combined research and for appealing other stakeholders in initiating practicable solutions. By means of combining their efforts, members of networks and partnerships are able to have a bigger impact on policy and practice than they would have on their own. An infrastructure building is one of the major elements of sustainable development and engineering universities play vital role to spread it inconsonance with the social needs. There is great need to establish practical liaison between the engineering sector and the social development sector, it is important for the establishment and maintenance of social cohesion for building the infrastructure for the well being of the masses. This paper highlights the reasons which make the institutions of higher education in India suitable contenders to lead the notion of Education for Sustainable Development. There is no reason that the achievement of this objective cannot be attained exclusively and without proper linkages with government, communities, NGOs and private sector.

Keywords: *Environmental Education, Education for Sustainable Development (ESD).*

Impact Factor – 3.452 ISSN – 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

Multidisciplinary International E-research Journal

PEER REFREED & INDEXED JOURNAL

April 2018

Special Issue - LIVI

विश्वविद्यालय अनुदान आयोग
University Grants Commission
quality higher education for all

Home About Us Organization Commission Universities Colleges Publications

UGC Approved List of Journals

You searched for research journey

Total Journals : 2

Show 25 entries Search:

View	Sl.No.	Journal No	Title	Publisher	ISSN	E-ISSN
		40705	Research Journey International E Research Journal	Swatidhan Pub. Yevla		23497143
		44117	Research Journey	Swatidhan International Publication		23487143

Showing 1 to 2 of 2 entries Previous 1 Next

Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

This Journal is indexed in :

- University Grants Commission (UGC) List No. 40705 & 44117
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- Universal Impact Factor (UIF)
- International Impact Factor Services (IIFS)
- Indian Citation Index (ICI)
- Dictionary of Research Journal Index (DRJI)

INDEX

Our Editors have reviewed paper with experts' committee, and they have checked the papers on their level best to stop furtive literature. Except it, the respective authors of the papers are responsible for originality of the papers and intensive thoughts in the papers.

- Executive Editor-

Published by -

© Mrs. Swati Dhanraj Sonawane, Director, Swatidhan International Publication, Nashik

Dr. C. S. Dalvi
Faculty of Marketing CSIBER,
Kolhapur

Abstract :

The present study of service quality of livestock (Veterinary) services showed higl expectation scores for reliability and responsiveness dimensions of ***SERVQUAL****. Whil perceptions were high for the empathy and assurance dimensions .The negative unweighted a well as weighted* ***SERVQUAL*** *scores (service gaps) were observed in the study. The preliminar data of the respondents showed that majority of the population of the livestock owners belongs t the small and marginal farmers' category. In this study five* ***SERVQUAL*** *dimensions are studie however, studies involving other marketing mix and service quality attributes like price, ease o access. communications, understanding the customers, professionalism i.e. qualification of th livestock service providers could be some of other dimensions of the livestock service quality.*

Keywords:- SEREQUAL, Tangible, Reliability, Responsiveness, Assurance, Empathy

Introduction:

India has now become the world's largest milk producing country with the livestocksector forming the significant part of GDP of the country; Crossbreeding with the frozen semen technology has made the tremendous changes in the practices of livestock. Livestock rearing is no longer a subsistence activity but it has become the principal occupation of many farmers of the country .Today's livestock owners demand livestock services with more enhanced technical and functional qualities. From the management perspective, these livestock owners can be considered as consumers and the Government, or the Co-operatives, or the Private vet / Para Vet can be considered as service providers or producers. In the proposed study we attempted to study the perceptions and expectations of livestock owners(Consumers) about livestock services being rendered to them by three different service providers namely ***1) Government Machinery, 2)Milk Co-operatives, and 3) Private Vet / Para vet.*** This would help us to know present status of livestock services as perceived by the livestock owners and similarly their expectations from these service providers along the five dimensions of **SERVQUAL**[1]* which is the standardized questionnaire model proposed by Parasuraman et al in 1991. The livestock service quality expectations and perceptions of the livestock owners will help us to know the service quality gaps in the five dimensions of **SERVQUAL** thereby suggesting the areas of improvement for the different livestock service providers.

Such kind of study was taken up in the Kolhapur District (Maharashtra State) .As a result the observation related to this aspect in Kolhapur was not available till date .By way of this study we attempted to fill this gap in research. It was also thought to study that which of service quality dimensions is most important to the livestock owners and which one is the least

Research Paper
Impact Factor: 4.729
Refereed, Listed & Indexed

IJBARR
E- ISSN -2347-856X
ISSN -2348-0653

EFFECT OF ADVERTISEMENT ON BUYING BEHAVIOR FOR FAST MOVING CONSUMER GOODS AMONG WOMEN IN KOLHAPUR CITY

Mahejabeen Patil* Dr.C.S. Dalvi**
*M. Phil. Scholar - CSIBER, Kolhapur.
**Associate Professor- CSIBER, Kolhapur.

Abstract
Advertising has become a common practice in order to influence the buying decision of consumer in a highly competitive environment. The final aim of every advertising strategy, is to instigate the actual consumption. If an advertising strategy fails to achieve the same, the million dollars spent are not worth it.
Women are great influencers when it comes to making a buying decision for the family. No doubt when it comes to individual buying. Today's woman, be it a working woman or a housemaker, strives to be more attractive and presentable in all ways. They strive hard to show the world that they are modern women and for the same reason, advertising is the most effective way to manipulate the minds of women buyers.

This study thus, studies the effect of advertisement on the buying behavior of women for selected FMCG products in Kolhapur City.

Keywords: - Advertisement, Women, Buying Behavior, FMCG Products, Product Categories.

Introduction and Research Methodologies

Advertising has become a common practice in order to influence the buying decision of consumer in a highly competitive environment. The final aim of every advertising strategy, is to instigate the actual consumption. If an advertising strategy fails to achieve the same, the million dollars spent are not worth it.

Women are great influencers when it comes to making a buying decision for the family. No doubt when it comes to individual buying. Today's woman, be it a working woman or a housemaker, strives to be more attractive and presentable in all ways. They strive hard to show the world that they are modern women and for the same reason, advertising is the most effective way to manipulate the minds of women buyers. Advertisements show a range of products and services in various ways by which consumer appropriately fall into the trap to buy the products. Women mostly fall prey to product such as cosmetics, beauty products, home and kitchen décor and products for the case of household chores. Through advertising, one can showcase all such products in a very ravishing way, by which women buyers feel an urge to buy those products. Most often we think why women take longer duration in buying as compared to men or why they buy things that according to us are not required at that time. On a deeper analysis, we see that how science has affected the buying behavior of women.

This study is an attempt to measure the effect of advertising on consumer behavior in the consumer durable market. In fact, this study will help to know the effectiveness of advertising on consumers, the attitude of consumers towards advertising and the relationships between the demographic character of consumers and advertising strategies problem faced by consumer durables market into a research problem. The topic of the study was identified as "Effect of advertisement on buying behavior for FMCG". The title of the research problem is to be framed as follows: - **"Effect of advertisement on buying behavior for fast moving consumer goods among women in Kolhapur city."**

Need of the study

Nowadays, there are huge number of options available for purchase of the fast-moving consumer goods. As opposed to the earlier times, when people use to depend on specific brands for specific products, in today's world, there are N number of products available for each FMCG category and the sale of each product is still going up month by month. This means that the dependency on the brand is no more the factor involved while purchasing these products.

Also, in the recent times, the number of ways of advertisements for all products have increased dramatically. There is bombardment of advertisements on consumers by each of this method of advertisement. Thus, it becomes necessary to study, the effect of advertisement on the buying behavior of the consumers.

Statement of the Problem

In the backdrop of the above, the researcher decided to study the problem, "Effects of Advertisement on buying behavior of selected Fast-Moving Consumer Goods, among women in Kolhapur City".

Research Paper
Impact Factor: 4.729
Refereed, Listed & Indexed

IJBARR
E- ISSN -2347-856X
ISSN -2348-0653

Importance of the study

This study dealt with the advertisement and its impact on women buying behavior, it helps marketers to understand what factors attracts women towards Particular product. Also, it helps to FMCG companies to develop suitable promotional strategy. And, this study suggests useful ways to convince target customers

Objectives

The present research endeavor had the following objectives

1. To study the effect of advertisement on women buying behavior.
2. To study the consumer decision making process.
3. To study the factors influencing women buying behavior.
4. To identify the product categories which are preferred due to advertising.
5. To put forth suggestions if necessary.

Hypothesis

1. There is no relationship between women's buying behavior and the advertisement of FMCG products.
2. There is negative relationship between buying decision and recommendation.

Research Design

In order to study the consumer buying behavior and attributes of advertisement, researcher has used exploratory design. The researcher has gone through various literature related to the topic and identified the attributes of advertising.

After identification of research attributes, the researcher has carried field survey. Under descriptive design field survey was carried out using structured questionnaire method in order to understand relation between advertising and women consumer buying behavior. The researcher has made data analysis and interpretation and hypothesis testing.

1. Universe of the study –Women of Kolhapur city.
2. The sample design sample size – 250.
3. The study is focused on selected FMCG goods in Kolhapur city.
4. The total number of women but specifically housewives, married women in Kolhapur city were considered a population.
5. Sampling design was random sampling method to reach 250 women of Kolhapur city.

Scope

1. Geographical- This study helps to know marketing of FMCG products in Kolhapur city.
2. Topical – This study helps to know the impact of advertisement on women consumer's buying behavior.
3. Analytical – By using statistical tool the data was analyzed.
4. Functional – This study was related to consumer buying behavior.

Design

Primary Data

1. Structured questionnaire- Researcher surveyed the market by circulating the structured questionnaire in shopp malls like R-mall, Super markets like Lucky bazar, D Mart etc.
2. Face to face interview – Researcher planned for face to face interview to understand the exact consumer deci making process.

econdary Data

1. Books.
2. Websites.

ampling Design

/omen were considered as population of the research. the population was divided in to various age groups and sampl rawn from each stratum.

Consumer Behaviour at Retail Outlets in Western Maharashtra

Dr. C. S. Dalvi- Associate Professor, CSIBER, Kolhapur, Maharashtra, India.
drcsdalvi@siberindia.edu.in

(Sponsored Minor Research Project of ICSSR, New Delhi)

Abstract - Retail Industry India is expected to grow at 10 per cent a Compound Annual Growth Rate (CAGR) of to $ 1.6 trillion by 2026 from $ 641 billion in 2016. Overall retail market of consumer is likely grow at the rate of 12 per cent per annum, retail though organized retail industry may grow at the rate of 20 per cent per annum as compared to the traditional retail or unorganised retail market which is likely to grow at the rate of 10 per cent.

Lifestyle in India is changing and the concept of 'value for money' is picking up local companies and local-foreign joint ventures are expected to more advantageously position than the purely foreign ones. Up and coming modern retail channels such as hypermarkets, supermarkets, convenience stores and discounters were unable to make a significant mark in grocery retailers' value due to a limited geographical spread in consumer reach. Department stores within mixed retailers were the forerunner in growth, being boosted by the introduction of lifestyle concept stores. The average Indian deserves consumption of good quality of products at prices he can afford. In a developing country like India, a major chunk of a consumer's expenditure is on retail products.

Keywords:- Retailing, modern retails, GDP,, FDI, Unorganised retail, Customer.

I. INTRODUCTION

Γhe term 'retailing' refers to any activity that involves a ale to an individual customer. Currently, Retailing is the uzzword in Indian Industry. The Indian retail industry has merged as one of the most dynamic and fast-paced ndustries due to the entry of several new players. It ccounts for over 10 per cent of the country's Gross Domestic Product (GDP) and around 8 per cent of the mployment. India is the world's fifth-largest global estination in the retail space. Retail Industry in India is xpected to grow at 10 per cent a Compound Annual irowth Rate (CAGR) of to $ 1.6 trillion by 2026 from $ 41 billion in 2016. Overall retail market of consumer is kely to grow at the rate of 12 per cent per annum, even rough organized retail industry may grow at the rate of 20 er cent per annum as compared to the traditional retail or norganised retail market which is likely to grow at the rate f 10 per cent. (India Brand Equity Foundation, 2018)1

dia's Business to Business (B2B) e-commerce market is pected to reach US$ 700 billion by 2020.India has placed China as the most promising markets for retail pansion, supported by expanding economy, coupled with oming consumption rates, urbanizing population and owing middle class. India is expected to become the orld's fastest growing e-commerce market, driven by bust investment in the sector and rapid increase in the Indian e-commerce sales are expected to reach US$ 120 billion by 2020 from US$ 30 billion in FY2016. Further, India's e-commerce market is expected to reach US$ 220 billion in terms of gross merchandise value (GMV) and 530 million shoppers by 2025, led by faster speeds on reliable telecom networks, faster adoption of online services and better variety as well as convenience. The size of modern retail in India is expected to double to Rs 171,800 crore (US$ 25.7 billion) from Rs 87,100 crore (US$ 13 billion) in three years driven by Omni-channel retail. (India Brand Equity Foundation, 2018)2

Lifestyle in India is changing and the concept of 'value for money' is picking up local companies and local-foreign joint ventures are expected to more advantageously position than the purely foreign ones. Up and coming modern retail channels such as hypermarkets, supermarkets, convenience stores and discounters were unable to make a significant mark in grocery retailers' value due to a limited geographical spread in consumer reach. Department stores within mixed retailers were the forerunner in growth, being boosted by the introduction of lifestyle concept stores.

II. OBJECTIVES OF STUDY

1. To understand customer opinion about organized retail stores in selected cities in western Maharashtra.
2. To know customer buying behaviour when they

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

17-18
(6)

A Review of Literature on Job Related Stress and its Impact on Employee Performance

Mahejbin Mubarak Kazi
M. Phil. Student,
CSIBER, Kolhapur.

Dr. C. S. Kale
Asst. Professor,
CSIBER, Kolhapur.

Introduction :

There are many misconceptions about stress. It is therefore important to understand stress well before thinking of managing it. The meaning of stress has changed over the years. In the initial stages stress was considered as environmental pressure, Stress within the person. Basically, stress is a psychological and shysical state that results when the resources of the individual are not adequate to cope with the demands and pressures of the situation. Therefore, stress is more likely in some situations than others and in some individuals than others. Moreover, stress as a response to a demand that is placed upon a person. It can be simply understood as a condition where on experiences as gap between the present state and a desired state. Merriam Webster defined stress as a physical, chemical or emotional factor that causes bodily or mental tension and may be a factor in disease causation. It is also a normal reaction when the brain recognizes a treat. When the treat is perceived, the human body releases hormones that activate its fight or flight response. Stress can be minimized if we know the sources of stress. Occupational stress is a significant and costly problem and that the challenge for the organization is to manage work stress in order to reduce health care costs and improve productivity. In this paper an attempt has been made by the researchers to critically examine various studies that are available. So far, these studies are as follow.

The study by Laiba DAR et.al (2011) Stated that many demographic factors are associated with stress such as, age, gender, qualification, designation and salary. The study showed that male posses more stress bearing capacity than females. The burden of stress is also very on the nature and position of the job. The results show that stress is also increases with the designation.

Balaji R. (2014) in his study stated that, stress can not be avoided altogether, in fact a little bit of stress is necessary to spur productivity and innovation. But it must be kept at a reasonable level or else it will cause harm to employees and the organization. Managers are responsible for not over working or stressing out their employees they should act as role models in coping skills for their employees. Moreover, human resource departments are responsible for making stress management resources available and raising organizational awareness about them.

The study by Ratanwat R. G. and Jha P. C. (2014) mentioned that for male factory workers the financial problems, low wages followed by poor physical environment, dual career, threat to job. Security, social and physical isolation, personal and family problems, on role in decision making boring and repetitive work, frustration over career ambition and harassment and bullying were found to be important stress contributing factors. Female workers do have the similar problems and most significant was threat to job security.

2018 – 19

ISSN: 2249-894X

REVIEW OF RESEARCH

UGC APPROVED

International Online Multidisciplinary Journal

Volume - 8 | Issue - 3 | December - 2018

Impact Factor : 5.7631(UIF)

A STUDY OF PROBLEMS AND PROSPECTS OF AUTO LOOM (SHUTTLE-LESS) SECTION IN ICHALKARANJI

REVIEW OF RESEARCH
IMPACT FACTOR : 5.7631(UIF)
UGC APPROVED JOURNAL NO. 48514
ISSN: 2249-894X
VOLUME - 6 | ISSUE - 3 | DECEMBER - 2016

A STUDY OF PROBLEMS AND PROSPECTS OF AUTO LOOM (SHUTTLE-LESS) SECTION IN ICHALKARANJI

Mrs. Madhura O. Kanitkar[1] and Dr. Amardeep D. Jadhav[2]
[1]Research Scholar, CSIBER Kolhapur.
[2]Research Guide, CSIBER Kolhapur.

ABSTRACT

The Indian textiles industry is very diverge, right from hand-spun and hand-woven textiles at one end, while the capital intensive sophisticated mills sector at the other end of the spectrum. Before the period of 1980 Ichalkaranji was purely famous for cotton saris, cotton poplin and dhoti. In middle of 1980, weavers of the Ichalkaranji town started producing denim, chiffon, canvas, and fabric for school uniforms which is also known as khakhi. Fabrics like seersucker, Oxford, ripstop, tweed, chambray, and twill made in and around Ichalkaranji city are used by many domestic as well as international fashion brands like as Raymond's of India, John Player and international brands like Armani, Banana Republic, Hugo Boss, and Paul Smith. In Ichalkaranji looms have been gradually upgrading from handlooms, to power looms to semi-automatic looms, to fully automatic looms. The author analyzes production, labour, finance, marketing and managerial problems faced by the auto-loom owners in Ichalkaranji. Ichalkaranji said as "Manchester of Maharashtra is sunk itself into textile industry. From this vast ocean researcher wants to research or find out:-

KEYWORDS: *Airjet, Rapier looms.*

1.0 INTRODUCTION:-

The auto-looms industry is a household activity carried out usually by the members of family. Looms industry from long time has pre- dominance of male members of family. The installation of looms is done at one place but it has internal segregation of looms unit wise. Each unit is under the name of one of the family members. Though it is under the name of female members but actually the business is purely looked after by the male members of family. Ichalkaranji has more tendency of inherited business. Many people who had set their plain looms or power looms previously replaced that machinery with automatic shuttle-less looms. The first generations had started up with plain or power looms and flourished a lot during the period of 1980 -2000. Gradually when automatic looms started holding pace with the advanced technology which was superior in both quality and quantity these men gradually started diverting their funds to settlement of shuttle-less looms. In case of auto looms in Ichalkaranji it can be said that the business is carried on in a decentralized manner. Majority is in form of Proprietorship and few of them can be seen under Partnership form of organization. There are a very few big companies like Reliance, Indocount working in centralized form which are in Kagal Industrial Area. Otherwise almost all of them are in decentralized form.

2.0 STATEMENT OF THE PROBLEM

Ichalkaranji has been a prominent textile hub today with continuous changes and up gradations since 19th century. Ichalkaranji city has seen the very beginning of looms those are pit looms, hand looms, power looms, power shuttle looms, and at present Shuttle-less looms. Knowing the current trends,

Peer Reviewed Referred
and UGC Listed Journal
(Journal No. 40776)

ISSN 2277 - 5730
AN INTERNATIONAL MULTIDISCIPLINARY
QUARTERLY RESEARCH JOURNAL

AJANTA

Volume-VIII, Issue-I
January - March - 2019
Part - I

IMPACT FACTOR / INDEXING
2018 - 5.5
www.sjifactor.com

Ajanta Prakashan

VOLUME - VIII, ISSUE - I - JANUARY - MARCH - 2019
AJANTA - ISSN 2277 - 5730 - IMPACT FACTOR - 5.5 (www.sjifactor.com)

CONTENTS OF PART - I

1. Role of Higher Education in Entrepreneurship Development in India

Dr. Amardeep D. Jadhav

Chh. Shahu Institute of Business Education and Research, Kolhapur (An Autonomous Institute)

Abstract

The Indian economy needs emergence of new, innovative and enthusiastic entrepreneurs and education is an important factor in developing entrepreneurial competencies in individuals. India is a young country with average of about 63 per cent population currently being in the working age group of 15 to 59 years. Studies have found that entrepreneurship prevalence rates are highest in the 25-34 age groups. But this advantage could become a barrier if the youth is not able to develop the appropriate skills including entrepreneurial skills. The educational institutes have a major role to play in this.

After 1991, when India opened its economy to the world a greater emphasis have been laid down upon the entrepreneurship. Attempts at various levels have been made to promote entrepreneurship among individuals. Unfortunately, the education system prevailing in India prepares individuals to seek for traditional employment rather than instilling the confidence to do something that one likes. It is important to note that the curriculum in universities is designed such that it results in an individual as a job seeker and not job provider. Universities need to differentiate between their related business and entrepreneurial courses. Entrepreneurship is the need of hour and educational institutions play a vital role to fuel entrepreneurship in the youth.

This paper aims at explaining the importance of entrepreneurial education and early motivation of potential entrepreneurs and challenges faced by the entrepreneurs. This paper tries to explain the role of educational institutions in developing and nurturing the entrepreneurial competencies in the youth. It also discusses the steps taken towards the promotion of entrepreneurial education.

Keywords: Education, Entrepreneurship, Entrepreneurship Education, Entrepreneurship Process, Education Strategy, Entrepreneurship Typology, Virtual Organization

Time-series Analysis and Forecasting of Rainfall at Idukki district, Kerala: Machine Learning Approach

Kamath R.S.[1]* and Kamat R.K.[2]
1. Department of Computer Studies, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur 416004, INDIA
2. Department of Electronics, Shivaji University, Kolhapur 416 004, INDIA
*rskamath@siberindia.edu.in

Abstract
We report machine learning model for the time-series analysis and forecasting of rainfall at Iddukki district, Kerala. We have used the rainfall dataset from Knoema, a free to use web based open data platform. This work exhibits performance evaluation of various time-series analysis models and compares the forecast accuracy. The models include the Autoregressive Integrated Moving Average (ARIMA), Artificial Neural Network (ANN) and Exponential Smoothing State Space (ETS).

The comparative study is conducted on modelling fits and outputs. Each of these techniques is applied to model the monthly rainfall at Idukki district for the duration from January 2006 to December 2016. The reported investigation depicts ARIMA modelling outperformed the rest of the models. The performance of the model is evaluated with reference to Root Mean Squared Error (RMSE) and model fit.

Keywords: Kerala flood, Rainfall, Natural disaster, Time-series model, Machine Learning, Soft computing.

Introduction

Beginning in July 2018, extreme flood influenced the Kerala because of unusually heavy rainfall during the monsoon. It was the most exceedingly bad flooding in Kerala in about a century[1]. Extreme rainfall at Idukki district has caused heavy damage. As per the Kerala government, one-sixth of the number of inhabitants in Kerala had been specifically influenced by the floods and related occurrences[16]. Rainfall is the most imperative climatic facet that persuades the agriculture. An early forecast of heavy rainfall could minimize the disaster connected with floods by evaluating the intermingling of risk and the weakness of a given territory.

Constructing a forecast system for accurate rainfall is a challenging issue for researchers. The common question here is how to analyse the past and predict the future. One such solution is Time Series Modelling, involves functioning on time-based data to derive concealed insights for informed decision making.

Many research groups have carried out the analysis and forecasting of the rainfall based on different approaches. Graham and Mishra[6] have reported ARIMA time series seasonal approach for forecasting rainfall at Allahabad region. The performance of the model is evaluated by correlation coefficients. Sumi et al[17] have presented machine learning technique for predicting daily rainfall at Fukuoka city in Japan. They have carried out the comparative study of models such as multivariate adaptive regression, support vector machine, k-nearest neighbour and radial basis artificial neural network.

Partheepan et al[15] have incorporated forecasting approach for the climatic variability of the Batticaloa district Sri Lanka. They have analysed rainfall time-series using statistical models to study the climatic trend and variability. Parmar et al[14] have compared and reported the review of various approaches for rainfall forecasting. This study revealed that ANN is a most preferred solution since it handles nonlinear relationships in the data and ANN has the ability of learning from past data. Naill and Momani[13] have utilized Box-Jenkins approach to build ARIMA model for monthly rainfall data for Amman airport station. Their study concluded that time-series analysis could be used to anticipate the peak values of rainfall data.

Thirumalai et al[18] have carried out heuristic forecasting of rainfall using machine learning techniques. The result of this study is beneficial for farmers to make correct decisions. Chiang Hong[2] has derived and reported the hybrid model of recurrent artificial neural network and support vector machine to forecast rainfall depth values for Northern Taiwan. The study revealed that the hybrid model is a promising solution for rainfall forecasting.

Thus, the literature review indicates a possibility to exploit machine learning approach for the forecasting of rainfall at Iddukki district, Kerala. This has in fact served as motivation for us to carry out time-series analysis of rainfall data in the present investigations. The time series modelling is a method of forecasting involving time-based data to retrieve hidden insights for early prediction. We have retrieved the required dataset from Knoema[7]. The proposed study of time-series analysis and forecasting of rainfall at Idukki is carried out in R, an open source data mining environment[19]. The comparative study of the three models; ANN, ETS and ARIMA was carried out[10]. The performance evaluation revealed that ARIMA model outperformed the rest of the models.

Material and Methods

Study Area: The prime objective of the present study is to design a machine learning model to simulate monthly

International Journal of Modern Electronics and Communication Engineering (IJMECE) ISSN: 2321-2152
Volume No.-6, Issue No.-6, November, 2018

Modelling Physicochemical Properties for Protein Tertiary Structure Prediction: Performance Analysis of Regression Models

R.S. Kamath
Department of Computer Studies
Chhatrapati Shahu Institute of Business Education and Research
Kolhapur, India
E-mail: rskamath@siberindia.edu.in

R.K. Kamat
Department of Electronics
Shivaji University
Kolhapur, India
E-mail: rkk_eln@unishivaji.ac.in

Abstract: This paper explores performance analysis of various regression models for the prediction of protein tertiary structure by modelling physiochemical properties. The protein structure dataset for the study is retrieved from UCI Machine Learning repository. The research exhibits performance evaluation of various regression models and compares the prediction accuracy using R-squared value. The models include Decision Tree, Random Forest (RF), Neural Network and Linear Regression. The reported investigation depicts Random Forest model outperforms the rest of the models in prediction of protein tertiary structure. The measures of variable importance using RF algorithm reveals that physicochemical property F4 is stands at the top whereas F1 is least important.

Keywords: protein tertiary structure, machine learning, R data mining, random forest, biological significance

I. INTRODUCTION

Proteins are essential organic polymers shaped from building blocks called amino acids [2]. The three-dimensional structure and biological action of proteins rely upon the physicochemical properties of amino acids. The translation of protein sequences into tertiary forms is required to carry out various biological functions. The anticipation of high resolution protein structure is one of the great challenges in computational biology. Many research teams have carried out different models for the classification or prediction of protein structures.

Mishra et al have reported machine learning models for the classification of protein structures using physical and chemical properties [3]. The study concluded that random forest model is apt for the classification of protein structures. Gromiha has presented a simple linear regression model for the anticipation of protein folding rates using amino acid sequences [4]. This study has shown a good correlation between experimental and predicted values. Yet another paper by Pathak et al, explored machine learning models for the prediction of protein structures [5]. The result concluded that random forest outperforms the other model in structure prediction. The experiment conducted by Jani et al reported that Support Vector Machine with Principal Component Analysis feature extraction is performing better for the classification of protein tertiary structure [6]. Mishra and Ahiwar have reported the comparative study of supervised learning models for the prediction of protein structure [7]. Yet another research by Iraji and Ameri, proposed a soft computing model to reduce the predicted Root-mean-square-deviation error for protein tertiary structure [8]. Kamath and Kamat have depicted a decision tree model for protein expression levels for Down syndrome [9]. The experiment is simulated in R data mining environment.

In the backdrop of the research rendered here, this paper explores performance analysis of regression models for the prediction of protein tertiary structure. The dataset for the present study is taken from UCI repository [1]. The physicochemical properties of protein structure are analyzed using different prediction algorithms. Root Mean Square Deviation (RMSD) is an indicator of these algorithms. The performance accuracy reveals that Random Forest model is appropriate for predicting protein tertiary structure.

The rest of the paper is arranged as follows; brief introduction follows materials and methods in section two. The third section outlines computation details with results and discussion of machine learning techniques for protein tertiary structure prediction. The conclusion at the end explains the appropriateness of Random Forest model for modelling physiochemical properties of protein.

II. MATERIALS AND METHODS

The dataset comprises physicochemical properties of Protein Tertiary Structure is taken from CASP 5-9 [1]. The dataset contains 45730 instances based on nine features. These attributes are Total surface area, Non polar exposed area, Fractional area of exposed non polar residue, Fractional area of exposed non polar part of residue, Molecular mass weighted exposed area, Average deviation from standard exposed area of residue, Euclidian distance, Secondary structure penalty, Spacial Distribution constraints. RMSD is a response variable denotes root mean square deviation of protein tertiary structure. Exploratory analysis of the dataset is shown in figure 1.

International Journal of Modern Electronics and Communication Engineering (IJMECE) ISSN: 2321-2152
Volume No.-6, Issue No.-5, September, 2018

Modeling Human Activity Recognition using Kears and Tensorflow: Deep Learning Approach

R.S. Kamath
Department of Computer Studies
Chhatrapati Shahu Institute of Business Education and Research
Kolhapur, India
E-mail: rskamath@siberindia.edu.in

R.K. Kamat
Department of Electronics
Shivaji University
Kolhapur, India
E-mail: rkk_eln@unishivaji.ac.in

Abstract: Authors report Deep Learning (DL) model for Human Activity Recognition (HAR) in Ambient Assisted Living (AAL) using Keras and Tensorflow. DL is a set of algorithms that is inspired by the structure and function of the brain accounts for the use of many hidden neurons and layers as an architectural advantage combined with new training paradigms. The present research exhibits performance evaluation for various deep learning network configurations and compare the classification accuracy. The reported investigation depicts optimum DL architecture achieved by tuning the number layers, number of hidden neurons of neural network model. Result concluded that model of three hidden layers with number of hidden nodes 378, 262 and 168 outperform other combinations significantly. Moreover the performance of the model is evaluated with reference to accuracy and loss.

Keywords: Ambient assisted living, Machine learning, Sequential model, Sensors, Health care, Multi layer perceptron

I. INTRODUCTION

Data analytics has prompted increasing interests in the generation of analytical, data driven models based on machine learning in health informatics. Deep learning, a subfield of Machine Learning with its foundation in Artificial Neural Networks promising to reshape the future of Artificial Intelligence. Human activity recognition systems expect to capture the state of the user by exploiting heterogeneous sensors attached to the human body and permit continuous monitoring of various physiological signs mirroring the condition of human activities [9]. Successful identification of human activities can be colossally valuable in healthcare applications for AAL [8]. HAR is a process of interpreting sensor data to classify human activities. It has received a lot of attention due to the high number of promising applications.

Ruben et al have proposed a user adaptation technique for improving a HAR system based on Hidden Markov Models [1]. This system segments and recognizes six different physical activities using inertial signals from a smartphone. Charissa et al have elaborated a deep convolutional neural network to perform effective HAR using smartphone sensors by exploiting the inherent characteristics of activities [2]. Experiments showed an almost perfect classification on moving activities, especially very similar ones which were previously perceived to be very difficult to classify. Yet another paper by Yinglan et al has explored Support Vector Machine approach to recognize human activities using accelerometer data from smartphones [3]. The dataset comprised of acceleration signals recorded from four positions that are representable for smartphones and wearable devices. Ranasinghe et al have reported the applications of activity recognition systems and survey their state of the art [4]. They have categorized such applications into active and assisted living systems for smart homes, healthcare monitoring applications and surveillance systems. Yet another paper by Robertas et al proposed the method for activity identification based on random projections, where the classes are separated using the Jaccard distance between probability density functions of projected data [5].

Daniele et al have reported a comprehensive up-to-date review of research employing deep learning in health informatics, providing a critical analysis of the relative merit, and potential pitfalls of the technique as well as its future outlook [12]. Authors have focused on key applications of deep learning in the fields of translational bioinformatics, medical imaging, pervasive sensing, medical informatics, and public health. Hammerla et al have explored deep, convolutional, and recurrent approaches across three representative datasets that contain movement data captured with wearable sensors [13]. Murad and Pyun have proposed the use of long short term memory based deep recurrent neural networks for building human activity recognition model [14]. Experimental result of their research shows that the model outperforms conventional machine learning techniques.

In the backdrop of the research endeavors portrayed above, the present paper reports the Deep Learning model for human activity recognition [9]. Deep Learning algorithms are stacked in a hierarchy of increasing complexity and abstraction, in which each level of abstraction is created with knowledge that was gained from the preceding layer of the hierarchy. In the present investigation, we demonstrate the modeling of smartphone dataset for HAR [6]. Activity recognition is defined as the process of how to interpret sensor data to classify a set of human activities [10-11]. The dataset with 4252 records

Rs. 25.00
ISSN-0566-2257

University News

A Weekly Journal of Higher Education

Association of Indian Universities

Vol. 57 No. 03 • January 21-27, 2019

Visualization of University Clusters based on NIRF and NAAC scores: K-means Algorithm Approach

R.S. Kamath[1] and R.K. Kamat[2]

1: Department of Computer Studies, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur 416004, India

2: Department of Electronics, Shivaji University, Kolhapur 416004, India

Abstract

India has one of the biggest and diverse education systems in the world with 799 universities and 39,701 colleges. For analytical purposes, it is essential to classify Higher Educational Institutes (HEIs) in groups based on various quality attributes. The government powered organizations like National Assessment and Accreditation Council (NAAC) and National Institutional Ranking Framework (NIRF) survey these HEIs and rank them accordingly. In this context the present study visualizes 50 universities based on NIRF and NAAC scores. A more significant analysis by means of designing prominent clusters of HEIs by applying unsupervised learning has been presented. In this division, NIRF ranking and NAAC scores of 50 universities are considered.

Keywords: NIRF, NAAC, Machine Learning, Clustering, Unsupervised Learning

Introduction

Artificial Intelligence (AI) tools are speeding up different educational process and making them even more effective. The prime use of AI and Machine Learning is through historical data to predict future events. Present communication aimed to analyse NIRF ranking

International Journal of Trend in Scientific Research and Development (IJTSRD)
Conference Issue | March 2019 Available Online: www.ijtsrd.com e-ISSN: 2456 - 6470

Fostering Innovation, Integration and Inclusion Through
Interdisciplinary Practices in Management

Assessment of Noise Level during Ganesh Festival in Residential Zone of Kolhapur City

C. P. Sathe, A. M. Kadam, K. D. Ahire

Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research, University Road, Kolhapur, Maharashtra, India

Organised By:
Management Department, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra

How to cite this paper: *C. P. Sathe | A. M. Kadam | K. D. Ahire "Assessment of Noise Level During Ganesh Festival in Residential Zone of Kolhapur City" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Special Issue | Fostering Innovation, Integration and Inclusion Through Interdisciplinary Practices in Management, March 2019, pp.126-128, URL: https://www.ijtsrd.com/papers/ijtsrd23082.pdf*

IJTSRD23082

ABSTRACT
The present work deals with the study of noise level during Ganesh festival in residential zone of Kolhapur city. In recent time city is facing noise pollution problems during festival due to increased population, use of high volume systems & modernized man-made human activities. The present work is being carried out at the Department of Environment Management, Chhatrapati Shahu Institute of Business Education & Research Kolhapur. Rajarampuri residential area is selected for monitoring of noise level during Ganesh festival. The noise level has monitored with the help of sound level meter SL-100 Leutron in decibel unit (dB) and directly equivalent sound level is measured (Leq). The increasing noise level is compared to the limits prescribed by the Central Pollution Control Board (CPCB).

KEYWORDS: *City, Residential Zone, Sound Level Meter*

I. INTRODUCTION

The word "Noise" has derived from a Latin word "Nausea" meaning injury or hurt. Noise is unwanted sound. The sound is a form of energy. According to Harvall "Noise is an unwanted sound which increases fatigue and under some industrial conditions it causes deafness". The environment effect of noise depends not only on total energy but on sound's pitch or frequency and its time pattern. The apparent noise that is perceived by human ear depends on both the frequency and intensity of sound. The intensity of the sound is measured in decibels (d - deci meaning 10, B Bell after the name of scientist Alfred Grahm Bell).Technically, a decibel (dB) is the amount of sound pressure that equals to 0.0002microbars (energy of about -15 Watts).

Sound is measured in terms of sound pressure or sound intensity that is the quantum of sound energy which flows through unit area of the medium in unit time. It is measured in decibel (dB). (VijendraM. 2006)

The impact of noise generated during these festivals by various activities like bursting crackers, sound systems music systems etc., making negative impact in the environment. (Patel .N. L and P. P. Bhave 2014)

Rane, P, *et. al* (2012) the noise level recorded at 22 sites in Mumbai which were divided into 4zones based on location. The noise level ranged from 60 dB (A) to 120 dB (A) at day time and 68 dB (A) to 100.5 dB (A) at night time. Highest recorded reading was at Mahim station {100.5 dB (A)} on Diwali night. The noise level was compared with prescribed CPCB standards. The study conducted by Hunashal, R. B., and Patil, Y. B. in 2011 clearly reveals the alarming condition of noise pollution in Kolhapur city. Various noise level indices and noise level based on national criteria are studied determining the mitigation measures against noise pollution.

II. Need of the Study:

The changing environment as a result of industrialization, urbanization, increasing population, transportation and communication system has taken its toll by increasing the noise pollution. Noise pollution can be distinguished from other types of pollution due to its source and diffusion characteristics, which can adversely affect public health and environmental quality in an urban environment. Noise pollution, in recent years has drawn interest of the researcher worldwide due to its physiological, psychological, and chronic effect on human beings (Tripathi et.al.2006). Noise effects include impacts on mental and physical health as well as interference with indices of human comfort and emotions such as effect on sleep, conversation, frequency of induced state of annoyance, hearing loss, cardiovascular problems as well as steady mindset to support tasks performance (Singh & Davar 2004). Therefore, assessing the problem and programming actions for controlling its adverse effects have become issues of immediate concern for community. The Noise Pollution Regulation and control Rules, 2000 have also been implemented by government of India in the recent past for the regulation and control of noise producing and generating sources. So there is a need of noise pollution monitoring.

The present ongoing work has been carrying out to study noise level during Ganesh festival in residential zone of Kolhapur city and to find out sources of noise pollution during Ganesh festival in residential zone of Kolhapur city.

III. MATERIAL AND METHOD

The present work deals with the study of noise pollution during Ganesh festival. The noise level monitoring is carried out in Rajarampuri of Kolhapur city, during Ganesh festival. Although rajarampuri is commercial as well as residential zone but this study deals with only residential zone.

The monitoring of noise was carried out at 4th lane, Rajarampuri, Kolhapur. The noise was measured from 8 PM to 9 PM during the Ganesh festival for 10 days. Each day sixty readings are taken in one hour at one minute interval. The noise is monitored with the help of Sound level meter (SL- 100). The noise monitoring is carried out as per protocols given in Maiti, 2003. The sound level meter used for this study directly measured the equivalent sound level (Leq).

Formula to calculate Noise level :-

$$\mathbf{Leq}=\mathbf{10log}\sum_{10i=1}^{n}\left(fi10^{li/10}\right)$$

IV. RESULT

Table 1: Noise Level Reading During Ganesh Festival in Residential Zone of Kolhapur City

Date	Leq (dB)
14/9/2018	93.72
15/9/2018	84.61
16/9/2018	95.48
17/9/2018	76.11
18/09/2018	87.07
19/9/2018	67.06
20/9/2018	65.32
21/9/2018	87.54
22/9/2018	75.79
23/9/2018	93.66

Table2. CPCB Noise Level Limits

Area Code	Area	Day time dB (7am to 10pm)	Night time dB (10pm to 7am)
A	Industrial	75	70
B	Commercial	65	55
C	Residential	55	45
D	Silent	50	40

Table 1 shows the noise level during the Ganesh Festival from 14 to 23 September 2018. During this period the noise level were exceeding the limit which were compared with the noise level standards prescribed by CPCB. As per CPCB norms the noise level for residential zone is 55dB for day time and 45dB for night time. Hence the Leq is more than the norms during day time. The highest reading (95.48 dB) was recorded on 16th September 2019 while another reading are also crossing the normal limits of noise. Dubal, R. S. *et.al* (2017) also noted high level noise pollution in Satara city during ganesh festivals. The maximum noise level observed in this study was due to public visit, DJ systems used and heavy traffic. Their study reported that the noise level observed in the residential and commercial area is near about two time permissible limits stated by WHO and BIS. This study concluded that it is important to control noise pollution at source, along the transmission path and at receivers end by using personal protective equipment. Same type of results reflected when Lad, R. J. *et.al* in 2012 monitored noise at ten locations in Kolhapur city of residential, commercial, industrial and silence zones during diwali festival. Which were found high compared to the prescribed CPCB limits except industrial zone. They also stated that there should be a need of awareness among people and Government officials about prevention of noise pollution.

V. CONCLUSION

This study concluded that noise level is increased during Ganesh festival which is compared with prescribed Central Pollution Control Board standards. In general observation of the study, it is concluded that the Leq has been increased due to the use of various types of music systems, human activities and increase in human population (crowd) during the ganesh festival in Kolhapur City. In general observation of the study, it was noted that the Leq has been increased due to the use of various types of music systems, human activities and increase in human population i.e. crowd during the ganesh festival in Kolhapur City.

VI. REFERENCE

[1] Rane P., Joshi A. N., and Joshi N. C. (2012). Study of Noise Levels in Mumbai on Diwali Festival Day and Night time, *International Journals of Environmental Sciences.* 1(4)349-354.

[2] Hunashal R. B., and Patil Y. B. (2011). Environmental Noise Pollution in Kolhapur City". *An International Quarterly Scientific Journal.* 10 (1) 39-44

[3] Dubal R. S., Kamble, K. J. (2017). Study of Noise Level during Ganesh Festival in and around Satara City, *International Journal of Researches in Bioscience, Agriculture and Technology*. V(1).19-21.

[4] Manglekar S. B., Jadav, A. S. and Raut, P. D. (2012) Study Of Noise Pollution in Kolhapur City, Maharashtra, India *Universal Journal of Environmental Research and Technology.* 2(1).65-69.

[5] Lad R. J. Patil, V. N. and Raut, P. D. (2012) Study of Noise Pollution during Deepawli festival in Kolhapur city of Maharashtra, India *Review of Research.* 1 (V).1-4.

[6] Patel N. L. and Bhave P. P. (2014). Study of Noise Pollution during Deepawali Festival. *International Journal of Innovative Research in Advanced Engineering.* 1(6)1-4.

[7] Vijendra M. (2006)."Environmental Noise Pollution Causes, Evils, Legislation and Control". Deep and Deep Publication Pvt. Ltd.

[8] Basak A. (2009), "Environmental Studies". 1st edition, Dorling Kindersley (India) Pvt., Ltd.

STUDY OF OCCUPATIONAL HEALTH ISSUES: FACED BY BUS DRIVERS

[1]A. R. Kulkarni, [2]K. D. Ahire, [3]S. B. Mole, [4]N. J. Joshi, [5]A. B. Kadam
[1]Professor and Head, [2]Assistant Professor, [3,4,5] M.Sc. (Environment and Safety) Students
[1,2,3,4,5] Department of Environment Management,
[1,2,3,4,5] Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, India

Abstract : Health has always been closely linked with occupation. The working conditions of bus drivers have remained virtually unchanged for over a century in Kolhapur. They exposed to certain health problems by virtue of their occupation. The present study is undertaken about occupational health related problems of bus drivers. The objectives of this cross sectional study to assess the effect of work environment on driving condition using structured interview, structured questionnaires. The most common health symptoms experienced by the bus drivers were fatigue, back pain, and cough and colds. This study underlines the need for an occupational health and safety program for bus drivers in the Kolhapur city.

***Index Terms* - Occupational health and safety, Bus drivers, Diseases, Ergonomy**

I. INTRODUCTION

Occupational health is a multidisciplinary field concerned with the safety, health, and welfare of people at work. The goals of occupational safety and health programs include fostering a safe and healthy work environment. As defined by the World Health Organization (WHO) "occupational health deals with all aspects of health and safety in the workplace and has a strong focus on primary prevention of hazards."Health has been defined as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Occupational health is a multidisciplinary field of healthcare concerned with enabling an individual to undertake their occupation in the way that causes least harm to their health.

As per the Mc Kernon, S. A., on driver point of view bus drivers have more frequent absences from work and of longer duration than workers in other occupations. A large proportion of the work absences are attributable to stress-related disorders such as digestive problems and anxiety. Bus driving interferes with social support in two ways. The job itself is solitary with little chance for face-to-face contact between co-workers. The work schedule disrupts family and social life. They also suggested that how buses are designed and how work is scheduled may account for musculoskeletal problems associated with driving a bus.

McElroy et al., (1993) studied a relationship between career stages, time spent on roads and driver work-related attitudes. This research used career stage and time spent driving on the road as independent variables and bus driver attitudes as dependent variables.

Kompier, M.A.J., (1996). Occupational stress and stress prevention point of view Bus drivers work based on rotating shift which affect their sleep patterns causing fatigue, also fatigue and falling asleep while driving has been identified as one of the major causes of road accidents.

Corkle, J., J. L. Giese, et al. (2001) investigated the effect of traffic calming strategies on driver behavior, traffic flow and speed while driving. Since 1950, the International Labor Organization (ILO) and the World Health Organization (WHO) have shared a common definition of occupational health.

Harwood, D. W. (1990) in Highway research Program, Transportation Research concludes Driver's speeds on the urban streets are mainly influenced by traffic controls, street environments and the interaction of vehicles. Another significant factor that influences the speed is roadway characteristics such as road type, gradient and length of the grade.

Bigelow, P. L. (2010) Research on the health and wellness of commercial truck and bus drivers. He stated that bus drivers must have knowledge and skill of handling the bus driver, the bus route, all regulations, standard and driving procedure and scheduling systems.

Seik, F.T., (1997) suggested that knowledge on how to deal with passenger especially for those with special needs is also important to ensure bus passengers have a good experience with the service

The present work has been done by considering following objectives,

1. To study the occupational health issues of bus drivers.
2. To summaries some of the health and safety issues facing bus drivers and provide some solutions to how these risks can be reduced.

II. RESEARCH METHODOLOGY

A total of 150 respondents (All are male respondents), were randomly selected for the study of effects of work environment on municipal transportation. The present study mainly based on primary data. Primary data are collecting from the bus drivers by taking interviews, structured questionnaires. It examines health problems on a five-point scale in the areas back, neck, shoulder, hand/arm and feet/leg/thigh. Also, it studies the systemic problems with the following: Respiratory system, cardio-vascular system, central nervous system, gastro-intestinal system, eyes, ears, nose and throat (ENT).

2.1 Data Analysis

The study is based on the primary findings. Collected data was analyzed by using Microsoft excels. All this information has been translated into the form of frequency distribution tables.

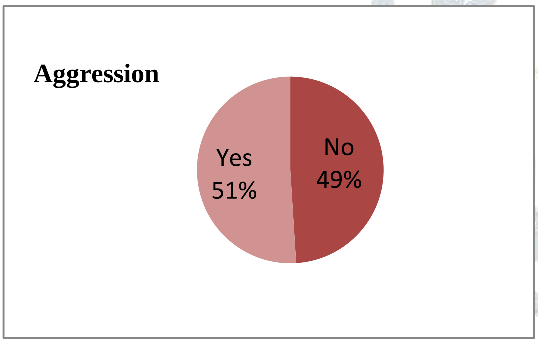
III. RESULTS AND DISCUSSION

This is also an important aspect of the study as a part of their working condition demands long hours of stay away from home; food and rest are required for health. Therefore, their food as well as other habits (pan masala, smoking, tobacco consumption) and their hours for rest after their working hours were also studied.

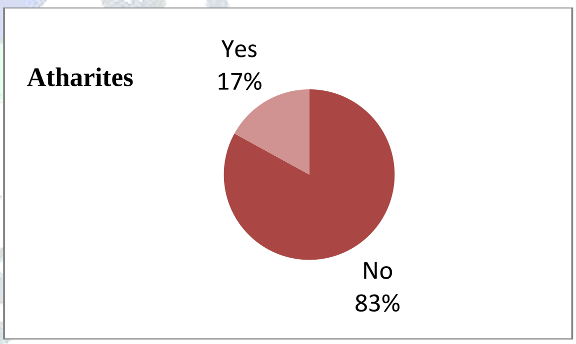
Table 1: Health Problems and Sufferings

Health Problems	Suffering (%)
Aggression	51
Arthritis	17
Fatigue	56
Eye irritation	14
Hearing loss	23
Appetite	20
Anxiety	19
Headache	34
Back pain	72
Pain in Hands	63
Pain in lower limbs	89
Sleeping problem	78

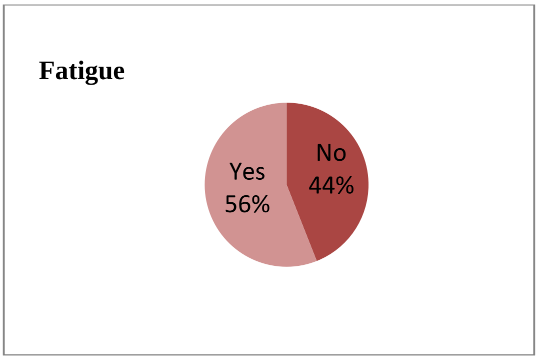
Graph 1: Aggression among respondents



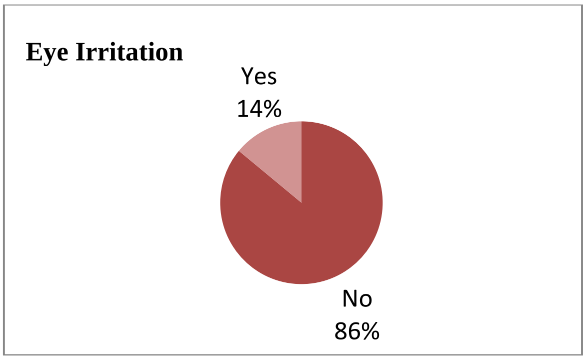
Graph 2: Atharites among respondents



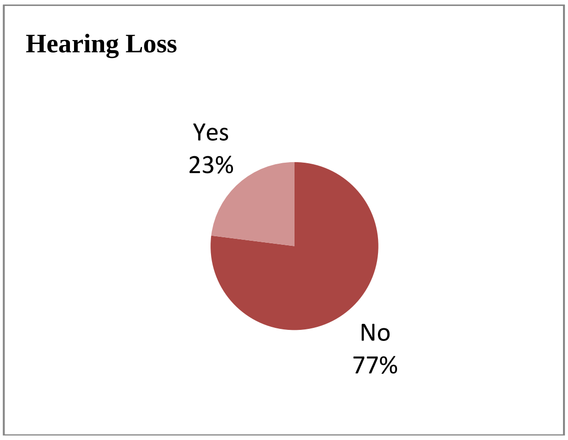
Graph 3: Fatigue among respondents



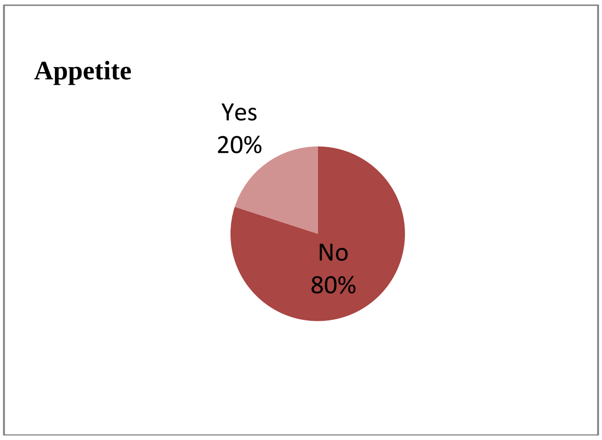
Graph 4: Eye Irritation among respondents



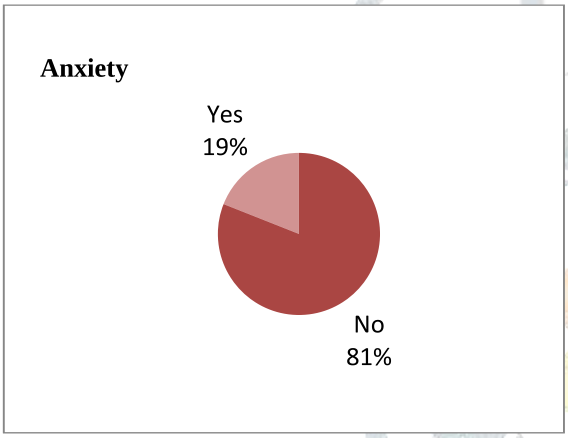
Graph 5: Hearing Loss Irritation among respondents



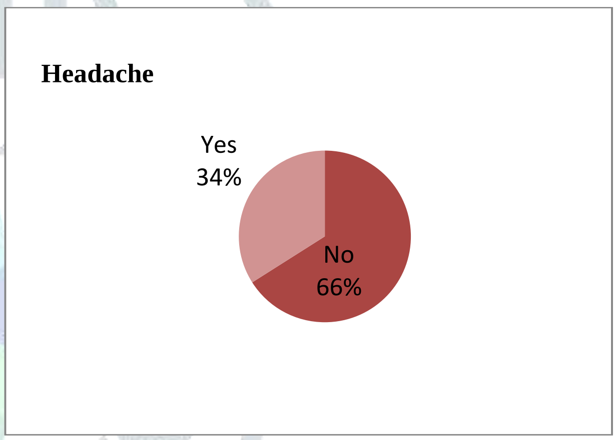
Graph 6: Appetite among respondents



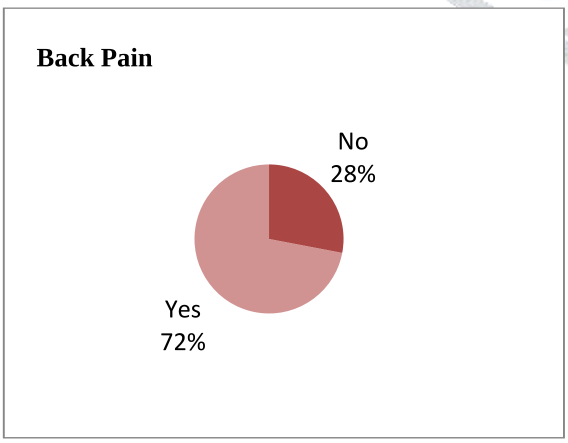
Graph 7: Anxiety among respondents



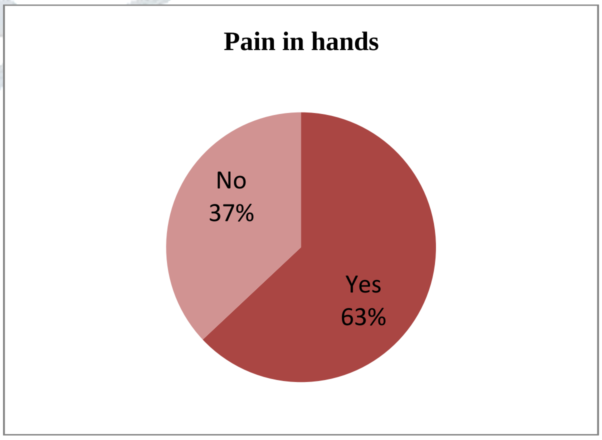
Graph 8: Headache among respondents



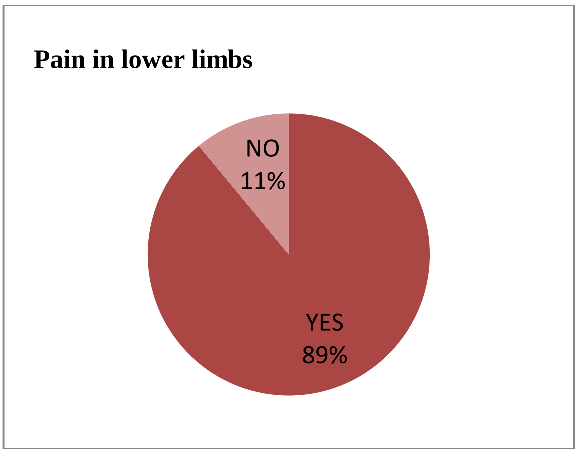
Graph 9: Back Pain among respondents



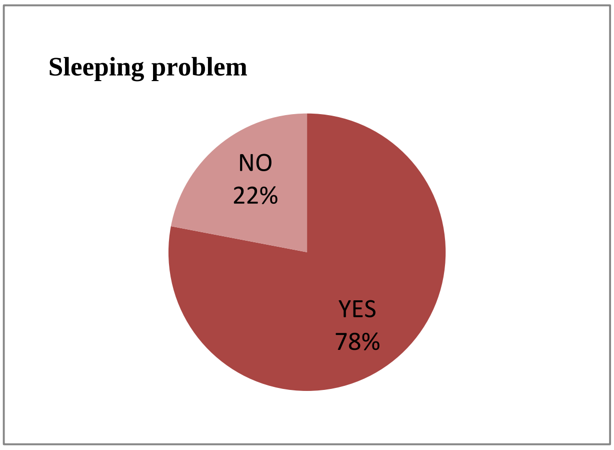
Graph 10: Pain in Hand among respondents



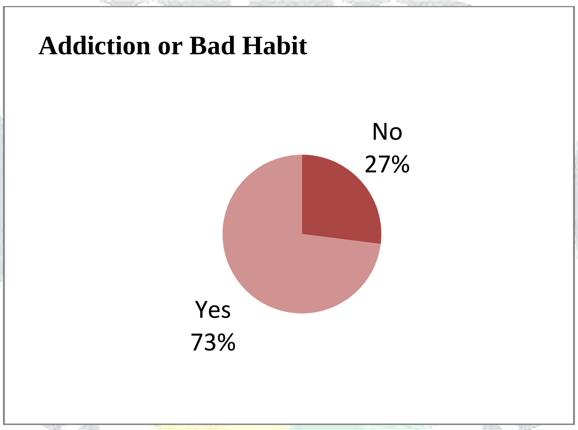
Graph 11: Pain in Lower Limbs among respondents



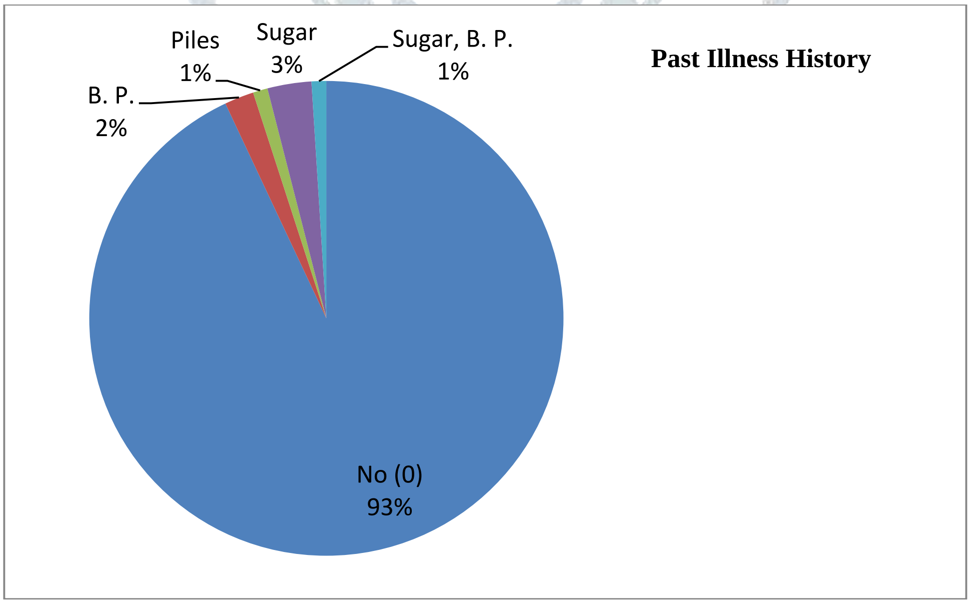
Graph 12: Sleeping problems among respondents



Graph 13: Addiction or Bad Habits among respondents



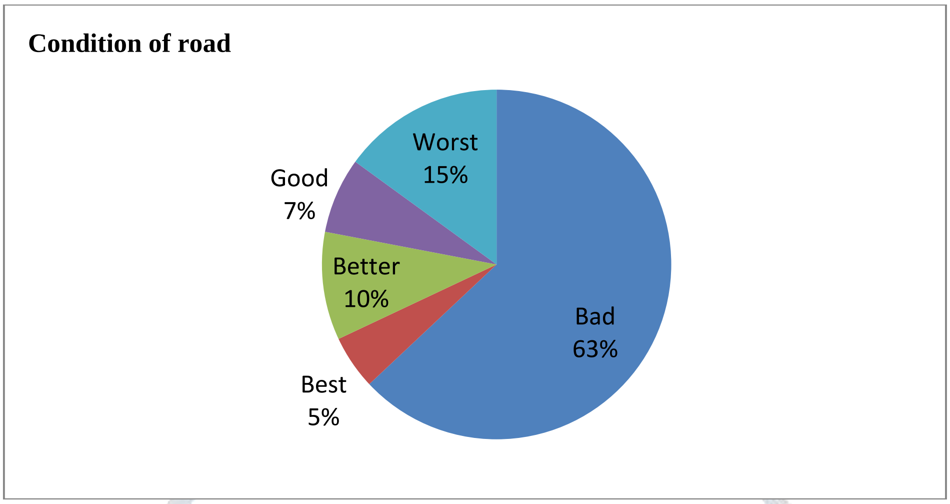
Graph 14: Past Illness History among respondents



Above graphical representation shows the variations between passed histories of illnesses. There are 2% people have Blood Pressure while about 1% people have Piles that indicates the physical internal problem. 3% people have high Sugar problem.

Very less nearby 1% people have Sugar as well as Blood Pressure. Remaining 93% people don't have any kind of physical problem.

Graph 15: Condition of roads according to respondents



According to only 5% respondents, the conditions of roads are best while an about 10% respondent implies roads are in better condition. Nearby 7% respondents said the roads are in good condition. 15% respondents replies the roads are in worst conditions. Maximum (63%) respondents said the roads are very bad for travelling.

3.1 Another Health Problems among the Respondents:

In the view of Mc Kernon, work-related health problems for bus drivers are typically stress-related psychological disorders and associated physical symptoms (especially elevated blood pressure), musculoskeletal problems, cardiovascular disease, stomach and related gastrointestinal problems, and chronic fatigue or burnout.

The main causes are psychosocial stressors. In particular, low control is inherent to the bus driver task, where goal achievement (e.g. arriving on time) is threatened by both competing demands and unpredictable events in the road environment. Physical stressors sleep pressure and work-home conflict also play a major part in health outcomes for the bus driver. Psychosocial, physical and sleep stressors are often present simultaneously, having confounding affects on health outcomes.

The results presented here support further investigation of the need to account for health as a potential factor in safety performance, as a precursor to longitudinal studies into the effects of work stressors on health, sleep, and safety behavior. Fatigue, stress and health have mostly been considered as separate factors in relation to both driver health and driver safety, despite the fact that these factors are strongly and dynamically interactive. Likewise, while psychosocial pressures are often cited in relation to health outcomes, sleep undoubtedly plays a role in the effects of these stressors.

It is important to prevent acute fatigue with the benefits of alert driving. It can be achieved thought communications campaigns to educate drivers, build social norms and billboards/signs to remind drivers to stay alert and proactively manage fatigue.

The drivers faced main problems on/ due to:

1) On Traffic Signals:

In Kolhapur there are 22 functional signals and 30 one-way routes in city, the majority of Kolhapur's main roads seem to be witnessing heavy traffic jams in the rush hours, making it difficult for commuters to reach their destination on time.

The intensity of traffic jams increases on Mondays, with a maximum number of commuters out on the roads on the first day of the week.

Commuters and traffic policemen deployed on the roads say that the traffic jams are not just due to the heavy rush and narrow city roads, but also due to haphazard parking and people flouting traffic rules.

Traffic signals are especially common at Tararani Chowk, Dabholkar Corner Chowk, Dassara Chowk and Uma Talkies Chowk. Station Road starting from Tararani Chowk to CPR Chowk and Bhausinghji Road from Bhawani Mandap to CPR Chowk are two main arterial roads in the city that witness heavy traffic jams during the rush hour.

Bhausingji road too, always remains crowded, with parking on both sides of the road resulting in a considerable reduction of the road width. Besides auto-rickshaw stops, haphazard parking of motorcycles and four-wheelers are a major problem on this stretch, resulting in traffic congestion.

2) Bad Road Condition:

A road is a thoroughfare, route, or way on land between two places that has been paved or otherwise improved to allow travel by foot or some form of conveyance, including a motor vehicle, cart, bicycle etc.

While driver errors such as speeding and distracted driving are among the leading causes of automobile accidents in Kolhapur, dangerous road conditions are also a significant contributor. Dangerous road conditions may be the result of natural events, such as tropical rains and flooding, that make driving unsafe.

IV. Conclusions

By considering above results, present study come to the end with following conclusions with respect to occupational health issues faced by bus drivers.

The present study based on perception of the health problems as encountered by the respondents (drivers) and medical inference may be needed. But however, that the problems suffered by the bus drivers may be attributed to the nature of work they are exposed to and the associated life-style which is an outcome of their occupation.

Research supports a number of actions to reduce work hazards, which include reduction of traffic congestion, reduction of fatigue and interference with personal life (improving work schedules) improving ergonomic design of buses (seat design, steering wheel design, etc.) and a little more comfortable space for movement for the conductors inside the bus.

1. Occupational stress has an aversive affect on individuals and organizations. Stress leads to physical and mental ill-health. Bus driving is a classic example of high-strain occupation.
2. Stress in bus drivers leads to absenteeism, substance abuse, decreased productivity, and increased accident rates. Stress detection will help in taking measures for stress reduction.
3. Thus, this study was planned to assess occupational health problems in) bus drivers.
4. As per the graph 1 to 12 we are conclude that, Our study provides empirical evidence on key questions in the debates around whether or not such schemes are worth investment, and their effects on outcomes such as active travel, injury rates, social inclusion and sustainability.
5. The qualitative data suggested a number of benefits from increased access to transport for young people, including increased ability to be independently mobile, increased control over their travel, and fostering.

These are difficult to quantify, but confidence, independence and a sense of belonging make an important contribution to young people's well-being.

References

[1] Bigelow, P. L. 2010. Research on the health and wellness of commercial truck and bus drivers. Health Education Journal, 74(3): 271-285.

[2] Evans, G. & Carrere, S. 1991. Traffic congestion, perceived control and psycho physiological stress among urban bus drivers, Journal of Applied Psychology, 76(5): 658.

[3] Gobel, M., Springer, J. & Scherff, J. 1998. Stress and strain of short haul bus drivers: Psychophysiology as a design oriented method for analysis, Ergonomics, 41(5): 563–80.

[4] McElroy, J. C. Rodriguez, J. M. Griffin, G. C. Morrow, P. C. Wilson, M. C. 1993. Career stage, time spent on the road and truckload driver attitudes, UGPTI Staff Paper No. 113: 1-16.

[5] Mc Kernon, S. 2008. A literature reviews on driver fatigue among drivers in the general public. NZ Transport Agency research report 342: 18-54.

[6] Rebecca J Lancaster and Rachel L Ward Entec UK Ltd. 2002. , The contribution of individual factors to driving behavior: Implications for managing work-related road safety, Development Department Research Programmer search Findings No.144 Management of Work-related Road Safety.

[7] Seik, F.T. 1997. An effective demand management instrument in urban transport: The Area Licensing Scheme in Singapore. Cities 14 (3):155-164.

Research Guru
Online Journal of Multidisciplinary Subjects (ISSN : 2349-266X)
UGC Approved Journal No. 63726
Impact Factor:3.021 website: www.researchguru.net
Volume-12, Issue-1, June-2018

STUDY ON AWARENESS AND PRACTICES ABOUT ORGANIC FARMING AMONG THE FARMERS

A. R. Kulkarni
(Professor and Head)
K. D. Ahire
(Assistant Professor)
Department of Environment Management
Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, India

Abstract

The present work carried out at Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research with examines the application of organic farming among the farmers. It also focused on the attitude of the farmers towards the organic farming. The data were collected from the 130 respondents from Sangli district, Maharashtra. This study was carried out by self structured questionnaire. The findings indicate that there is less awareness about the organic farming between the farmers. Whereas the moreover farmers are found to be used to with the usage of chemical fertilizers & pesticides for the agricultural practices.

Keywords: Organic farming, Fertilizers, Agricultural practices, Pesticides, Insecticides

I. Introduction

Organic materials such as farm yard manure, biogas, slurry, composts, straw or other crop residues, biofertilizers, green manures and cover crop can substitute for inorganic fertilizers to maintain the environmental quality. In addition, the organic farmers can also use seaweeds and fish manures and some permitted fertilizers like basic slag and rock phosphate. The conservation of natural enemies of pests is important for minimizing the use of chemical pesticides and for avoiding multiplication of insecticides – resistant pests. Botanical pesticides such as those derived from neem could be used. Selective microbial pesticides offer particular promise, of which strains of Bacillus thuringiensis is an example.

D. Rigby & D. Caceres (2018) reported that sustainability is considered in relation to organic farming a sector growing rapidly in many countries.

In the view of Fan Fan, Christian Bugge, Hendrickson & Johan Porter (Feb 2018), Agro-ecosystem cover almost 40% of the terrestrial surface on Earth, & have been considered as one of the most significant ecological experiments with a potential to both contribute to & migrate global Ecosystem Services loss.

Jay Squalli, Gray Adamkiewicz (2018) reported that organic farming practices focused on agro-ecological health have long been centered on the idea that such approaches reduce resource intensity, improve soil health, reduce environmental burdens & improve crop quality.

The use of organic manures will increase the organic matter content and water holding capacity of the soil. Non-chemical weed control measures – Compared to conventional farmers, the organic farmers use more of mechanical cultivation of row crops to reduce the weed menace. No herbicides are applied as they lead to environmental pollution. Biological pest and disease management – The control of insect pests and pathogens is one of the most challenging jobs tropical and sub-tropical agriculture. Here again non-chemical, biological pest management is encouraged.

Sandra Godded & Johan Ekroos (April 2018) reported that organic farming can beneficial farmland birds in heterogeneous landscape, particularly during winter, probably due to increased food availability.

Limpkin. N (April 2018) suggested that the principles of organic farming are considered under the living soil, crop nutrition, management of manures, slurry & organic residues, rotation design for organic system, weed management, pest & discus control & livestock husbandry. Organic farming is considered as an alternative to conventional farming, in order to minimize external inputs & maximize the productivity profitability of the farming system.(G. K. Veeresh, 2006).

Sustainable agriculture is an approach to farming that integrates environmental considerations, economic consideration & socio-cultural considerations in agricultural practices. (Ravikant S. Wawge 2008).

According to H. D. Kumar (2006) in organic agriculture a risk assessment approach has very often been rejected in view of the fear that the knowledge of anticipating the possible interrelationships of ecosystem is limited.

The present study were carried out by considering following objectives

1. To collect the information about the organic farming among the farmer.
2. To create awareness about the organic farming in farmers.

II. Methodology

Data Collection Method:-

The primary data were collected through surveys & Questionnaire regarding to the awareness about the organic farming among the farmers. For this study the one hundred and thirty respondents were selected random from Sangli district. The information was collected based on the farm, productivity of farm, benefits to the farmers from the field etc. The self structured questionnaire was prepared to collect the information from the respondents.

III. RESULT AND DISCUSSION

The collected data was arranged in the tubular form and the frequency was written in the form of Pi chart.

3.1 Information about Domestic Animals

Sr. No	Option	No. of Respondent	Percentage
A	Yes	102	78%
B	No	28	22%
Total		130	100%

Table 1 Information about domestic animals

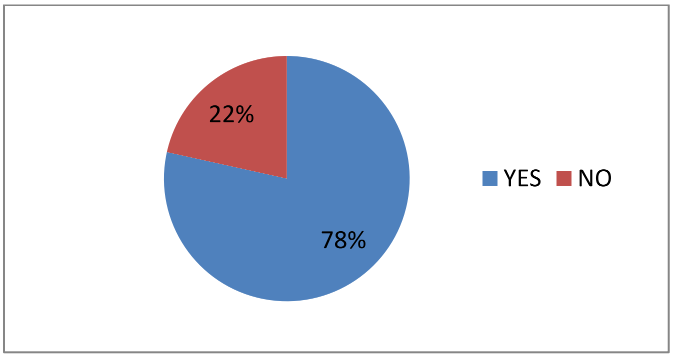


Fig.1 Information about domestic animals

From the given chart it was found that only 22% of respondents say that no Domestic animals at their home, while maximum (78%) respondents reported that they have have domestic animals at their home.

3.2 Fertilizers used by farmers

Sr. No	Option	No. of Respondents	Percentage
A	Chemical	82	28%
B	Organic	12	9%
c	Both	36	63%
Total		130	100%

Table 2 fertilizers used by farmers

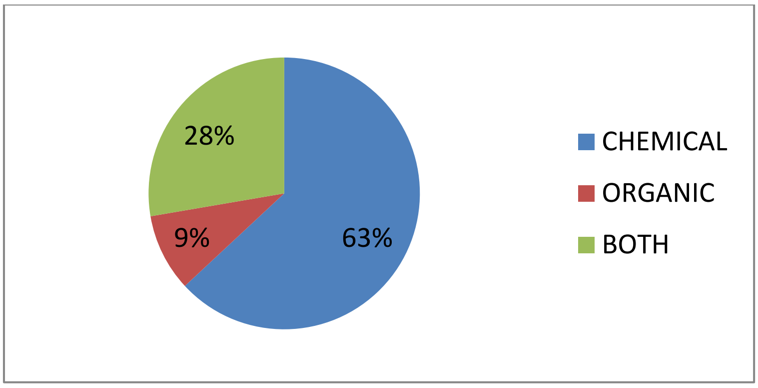


Fig. 2 fertilizers used by farmers

About (63%) respondents were using chemical fertilizers, 9% and 28% were using organic and organic plus chemical fertilizers respectively.

3.3 Daily use of fertilizers

Sr. No	Option	No. of Respondents	Percentage
A	Chemical	12	91%
B	Organic	118	9%
Total		130	100%

Table 3 Daily uses of fertilizers

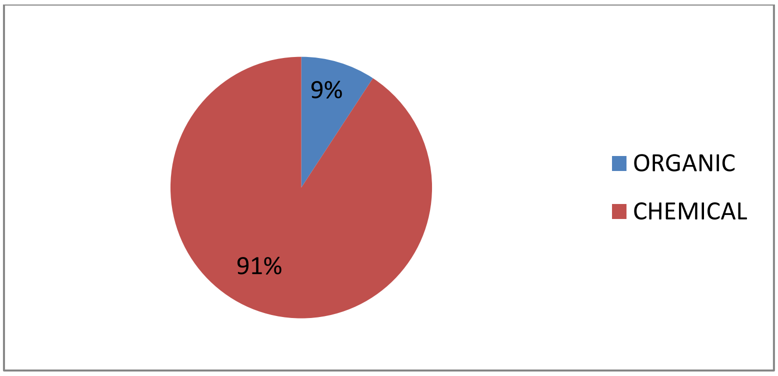


Fig. 3 Daily use of fertilizers

According to 9% of respondents they does not used chemical fertilizers in daily agricultural practices, while 91% respondents used chemical fertilizers in daily agriculture.

3.4 Compost is more beneficial than chemical fertilizers

Sr. No	Option	No. of Respondent	Percentage
A	Yes	122	94%
B	No	8	6 %
Total		130	100%

Table 4 Compost are more beneficial than chemical fertilizers

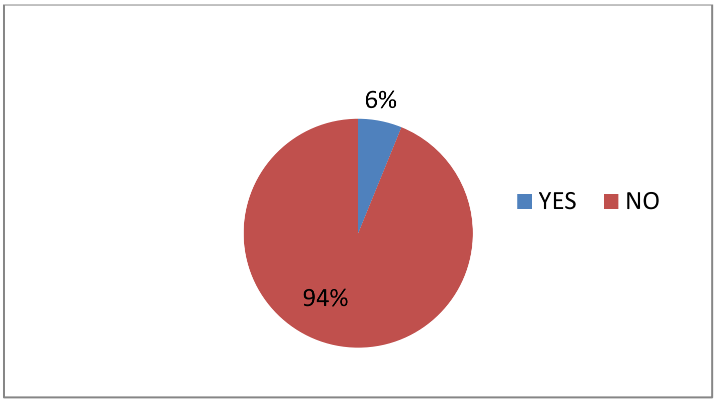


Fig. 4 Compost is more beneficial than chemical fertilizers

Only 6% of respondents replied in the favour of compost as more beneficial as compare to chemical fertilizers, while maximum (94%) of respondents were with chemical fertilizers are more beneficial than organic.

3.5 Information of harmful effects of chemical fertilizers

Sr. No	Option	No. of Respondent	Percentage
A	Yes	111	85%
B	No	19	15 %
Total		130	100%

Table 5 Information harmful effects of chemical fertilizers

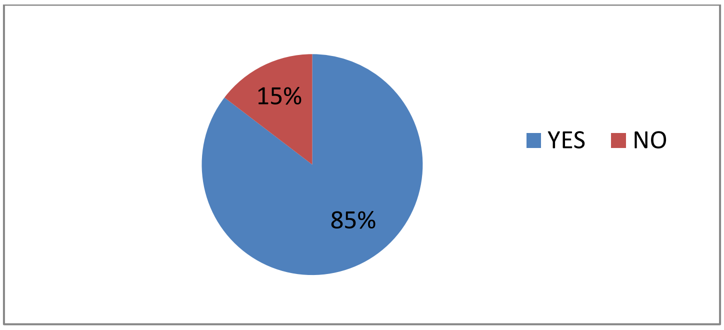


Fig. 5 Information harmful effects of chemical fertilizers

From the given chart it was found that 15% of respondents said that they don't know harmful effects of chemical fertilizers and 85% of respondents said about harmful effects of chemical fertilizers.

3.6 Soil testing

Sr. No	Option	No. of Respondent	Percentage
A	Yes	54	42%
B	No	76	58 %
Total		130	100%

Table 6 Soil testing

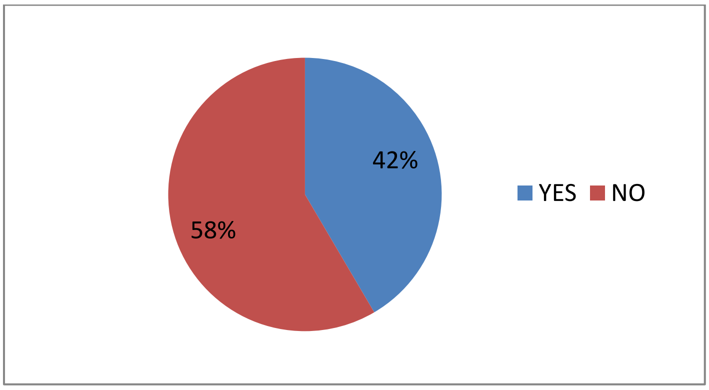


Fig. 6 Soil testing done

It was found that nearby 42% of farmers regularly done soil testing in their farm, another hand about 58% of farmers' dose not ever done soil testing in their farm.

3.7 Requirement of fertilizers as per need of soil

Sr. No	Option	No. of Respondent	Percentage
A	Yes	68	55%
B	No	56	45%
Total		130	100%

Table 7 Requirement of fertilizers as per need of soil

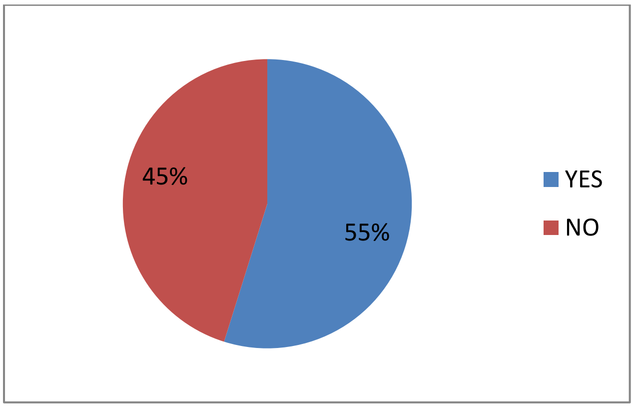


Fig.7 Requirement of fertilizers as per need of soil

From the given chart it was found that 55% of respondents applied fertilizers as per need of soil, as well as about 45% of respondents do not apply fertilizers as per need of soil.

3.8 Difference between the agriculture goods from your farm & the Farmer practicing organic farming

Sr. No	Option	No. of Respondent	Percentage
A	Yes	130	100%
B	No	0	0%
Total		130	100%

Table 8 difference between the agriculture goods from your farm & the Farmer practicing organic farming

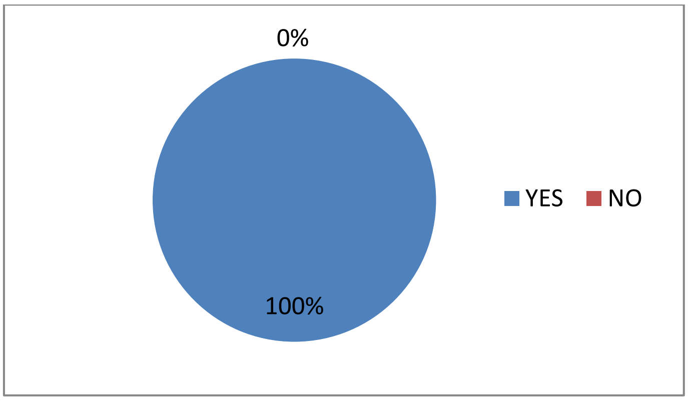


Fig. 8 Difference between the agriculture goods from your farm & the Farmer practicing organic farming

From above result it was cleared that all (100%) farmers agreed about difference between the agriculture goods from their own farm & the farmer producing goods through organic farming

3.9 Good Quality Products

Sr. No	Option	No. of Respondent	Percentage
A	Organic	62	48%
B	Chemical	68	52%
Total		130	100%

Table 9 good in quality products

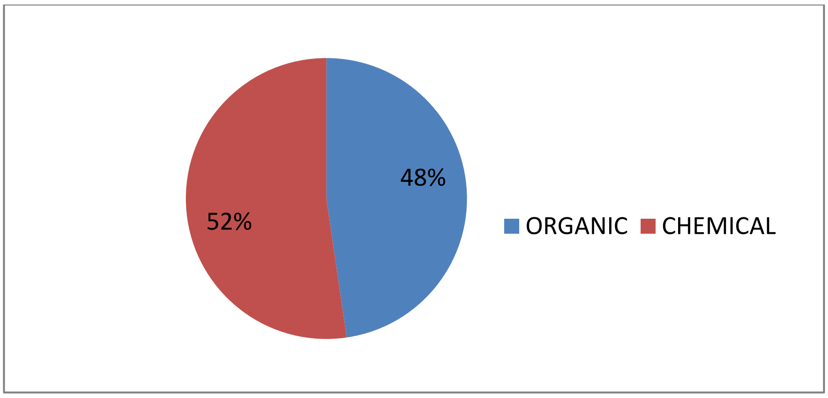


Fig. 9 Good quality products

About 48% of respondents say that organic products are good in quality, 52% of respondents say that chemical products are good in quality.

3.10 Interest organic farming

Sr. No	Option	No. of Respondent	Percentage
A	Yes	86	66%
B	No	44	34%
Total		130	100%

Table 10 Interest organic farming

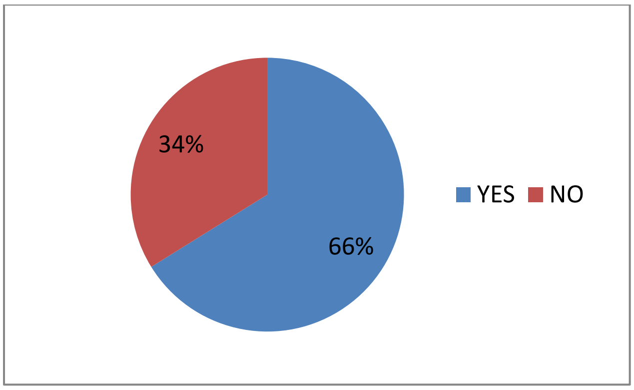


Fig. 10 Interest in organic farming

Maximum farmers (66%) were interested for practicing organic farming.

3.11 Awareness about government schemes for organic farming

Sr. No	Option	No. of Respondent	Percentage
A	Yes	23	18%
B	No	107	82%
Total		130	100%

Table 11 Awareness about government schemes for organic farming

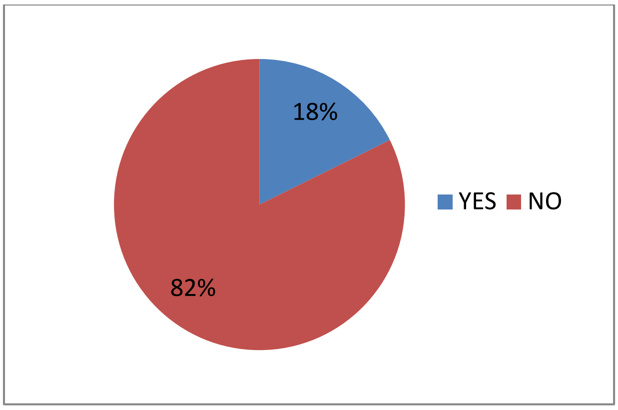


Fig. 11 Awareness about government schemes for organic farming

Awareness regarding financial help from government for organic farming found less among the farmers; it was found that, only 18% of respondents knew about government schemes for organic farming.

3.12 Benefits of organic products to the health

Sr. No	Option	No. of Respondent	Percentage
A	Organic	95	73%
B	Chemical	35	27%
Total		130	100%

Table 12 beneficial to health

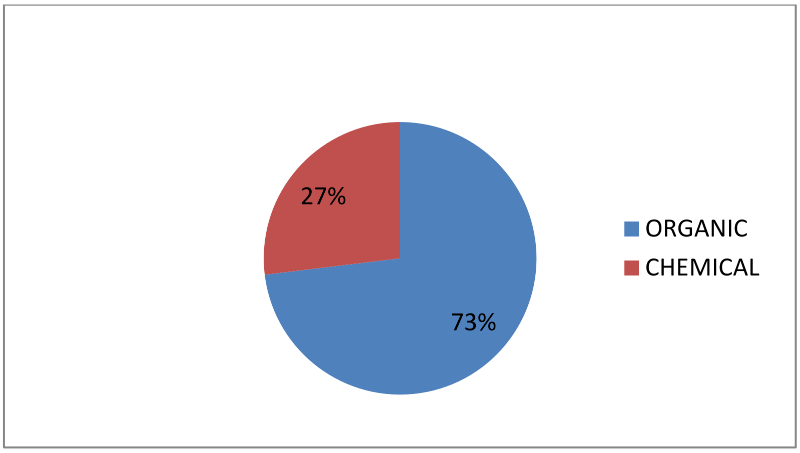


Fig. 12 Benefits of organic products to the health

With respect to above figure it was cleared that great number (73%) of respondents were aware about benefits of organic products to the health.

3.13 Information regarding yield

Sr. No	Option	No. of Respondent	Percentage
A	Organic	33	25%
B	Chemical	97	75%
Total		130	100%

Table 13 Information regarding yield

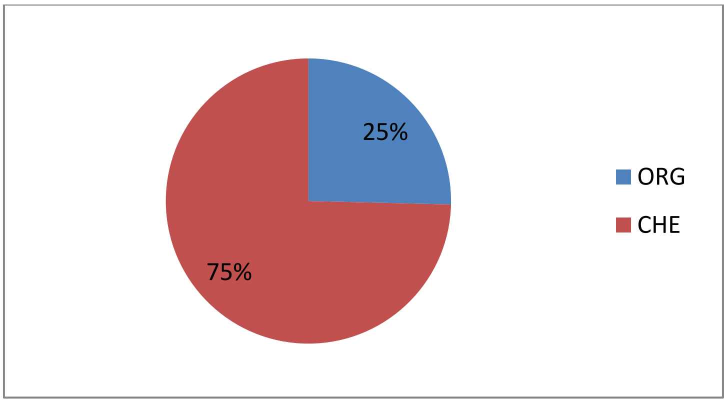


Fig. 13 Information regarding yield

According to 75% of respondents Chemical farming will give more yields, while only 25% of respondents said that organic farming gets more yield.

Measure problems faced by farmers in organic farming

- Lack of knowledge about organic tools and practices.
- Requirement for more labor input than conventional farm.
- Problems regarding the availability of organic, bio fertilizers.

IV. CONCLUSION

The main objective of the present study was to understand the awareness about organic farming among the farmers. After considering the results, self observation and interaction with farmers it is concluded that the awareness about organic farming among the farmers is very less, while use of chemical fertilizers is comparatively more. The lacks of knowledge about harmful effects of chemical fertilizers were also found during present study. The awareness about organic farming among the farmers in Sangli district has been done through this study.

VIII REFERANCES

1. Chandraekan, B. Annadurai, K. Somasundaram, E. 2010. A Textbook of Agronomy published by New Age, International (P) Limited publishers.
2. Dharma, A. K. 1996. Organic farming for sustainable agriculture, Agro Botanical Publishers (India), pp. 130.
3. Diya, M. 2012. Organic nutrients management practices for sustainable aerobic rice Production, M.Sc. Agri. Thesis,Univ. Agric.Sci., Bangalore, Karnataka, India

4. Duraisami, V.P. and Mani, A. K. 2001. Effect of inorganic, organic and bio nitrogen sources on availability and uptake of micronutrients, under maize (Zea mays L.) in an Inceptisol, Curr. Res. 30: 52-55.
5. Ganapathi., M. A, Shankar and Gajanana, G. N. 2008. Effect of Long term use of chemical fertilizers and organic manure on soil fertility and sustainable productivity of finger millet in an alfisols of dryland, Environ. and Ecol., 26 (2A):872-876.
6. Kumar, A. K. 2001. "Indian agricultural issue prospects", first edition, published by Sarup & Sons. Pp.06.
7. Organic farming on bird diversity in North-West Spain. Agriculture, Ecosystems and Environment. 257: 60-67.
8. Veeresh, G. K. 2006, Organic farming", Fourth edition published by foundation book Pvt. Ltd. pp– 152.

STUDY OF AWARENESS ABOUT IRRIGATION SYSTEM AMONG THE FARMERS

A. R. Kulkarni
Professor and Head
Department of Environment Management
Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, India

Abstract : ***The present study was carried out at Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur with the focused on understanding the irrigation system practiced by farmers in Kolhapur and Solapur district, present study also tried to cover the views of farmers regarding the importance of water and irrigation in agricultural activities. Total two hundred respondents were selected randomly from Kolhapur and Solapur district. Present study indicates that, many farmers are lacking the awareness about proper irrigation in agriculture while few active farmers also think and adopted water budgeting which play very important role in proper irrigation.***

Index Terms - Irrigation, Farmers, Agricultural Activities, Water.

I. INTRODUCTION

Irrigation is essentially the artificial application of water to overcome deficiencies in rainfall for growing crops (Cantor, 1967). Irrigation is a basic determinant of agriculture because its inadequacies are the most powerful constraints on the increase of agricultural production. In traditional agriculture, irrigation was recognized for its protective role of insurance against the vagaries of rainfall & drought. But now, adoption of high yielding varieties, chemical fertilization & multiple cropping highly used controlled irrigation for increasing productivity.

Irrigation systems are often designed to maximize efficiencies & minimize labour & capital requirements. There are three broad classes of irrigation system: 1. Pressurized distribution 2. Gravity flow distribution 3. Drainage flow distribution. Water is nature's free gift to the human race. (W.K. Berry 2016). Devendra S. (2013) concluded that, the novel approach to design irrigation system is the use of plant water stress analysis. While Hitendra (2009) mentioned the acoustic method has been used to measure water content of soil on the fact that travel time of sound wave is different in dry & wet soil. C. Choudhari (2011) observed that, the traditional method that is used for irrigation, such as overhead sprinkler and flood type is not that much efficient. As well as in Irrigation system soil parameters such as pH, humidity, moisture and temperature are measured for getting high yield. (Sonali S. Gainwar and Dinesh V. 2015).

To make irrigation system simpler, the complexities involved in irrigation are tackled with automation system said by R. Subhalakshmi in 2016.

II. RESEARCH METHODOLOGY

2.1 Location of Sampling and Sampling Method:

Study Area
Study area for this project is Solapur and Kolhapur. The study was carried out in these two districts.

2.2 Location of Sampling:

1) Solapur
2) Kolhapur

2.3 Methods of Sampling:

Survey Method is used for collection of data from selected farmers.
1) Primary data: - This project, primary data were selected from two hundred respondents. With the help of questionnaire primary data will be collect from the farmers.
2) Secondary Data: - Secondary data were collected from previous reports on irrigation projects, websites etc.

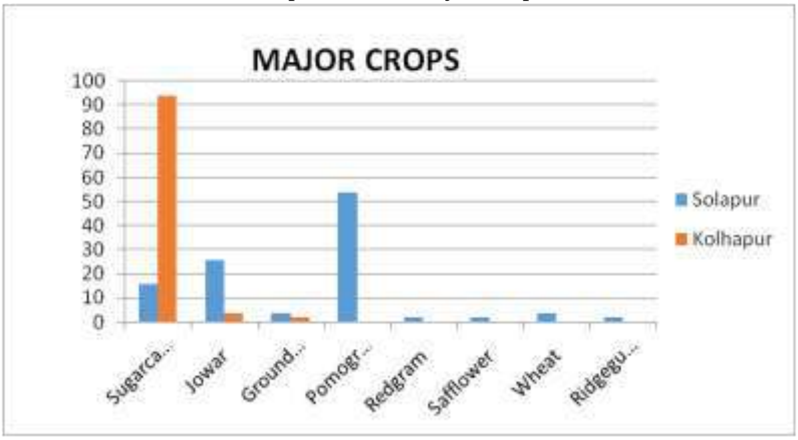
III. RESULTS AND DISCUSSION

This section shows the graphical representation of collected data. In presented all graphs, the values represented on Y axis are in parentage.

3.1 Major Crops:

Different crops are produced in selected areas. In Solapur region farmers have taken following major crops i.e. Sugarcane (16%), Jowar (26%), Groundnut (4%), Pomegranate (54%), Red gram (2%), Safflower (2%), Wheat (4%), Ridge guard (2%) where as in Kolhapur the farmer prefer Sugarcane (94%), Jowar (4%), Groungnut (2%) as major crops.

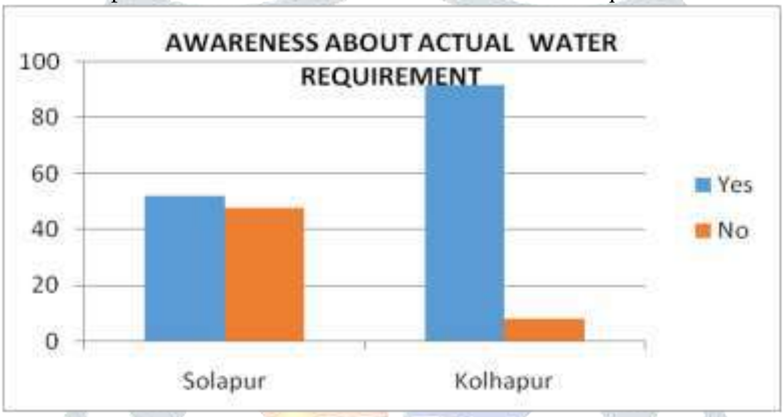
Graph No-3.1: Major Crops



3.2 Awareness about Actual Water Requirement:

About 52% and 92% farmers had knowledge about actual requirement of water to crop while 48% and 8% did not have knowledge about actual requirement of water to crop from Solapur and Kolhapur respectively.

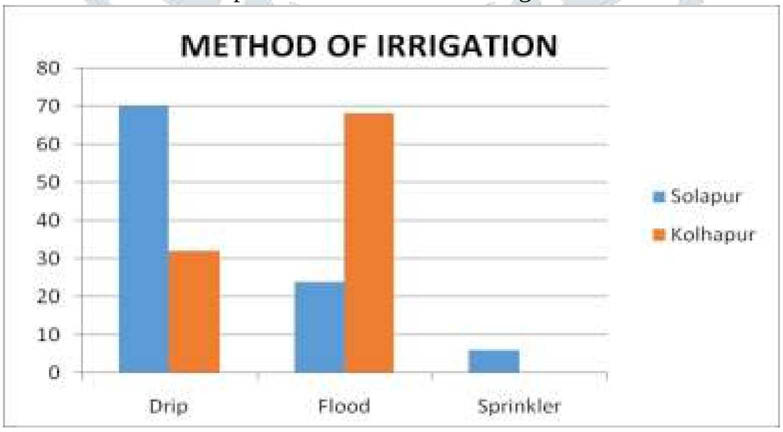
Graph No-3.2: Awareness about Actual Water Requirement



3.3 Methods of Irrigation:

Methods of irrigation used among the respondents were found in different proportions. In Solapur region maximum (70%) farmers used drip irrigation system, remaining flood (24%), and sprinkler (6%), from Kolhapur drip and flood were 32% and 68% respectively.

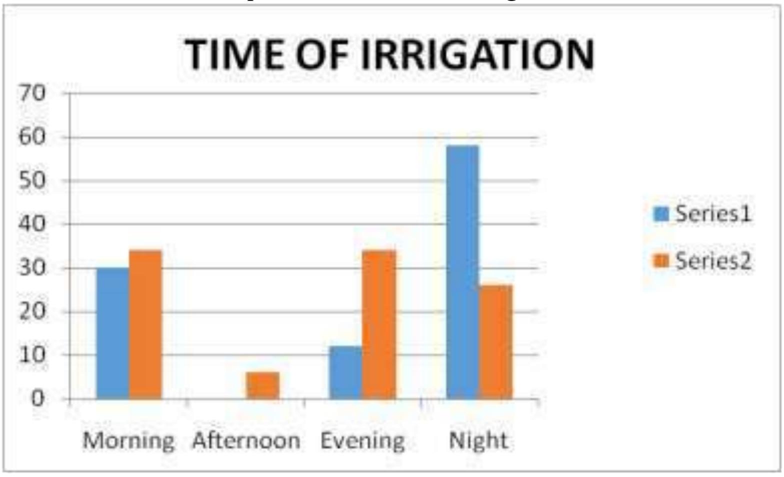
Graph No-3.3: Methods of Irrigation



3.4 Time of Irrigation:

The respondents from studied areas prefer time for providing irrigation to crops at different times according to their convenience. In Solapur the farmers prefer to irrigate at morning is 30%, night (58%), evening (12%), while in Kolhapur 34% farmers prefer to irrigate at morning, 6% at afternoon, 34% at evening and at night was 26%.

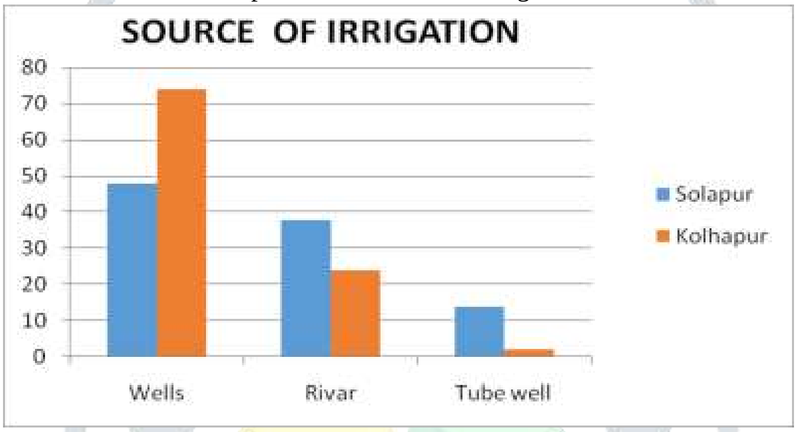
Graph No-3.4: Times of Irrigation



3.5 Source of Irrigation:

Sources of irrigation distribution in Solapur were wells (48%), river (38%), tube well (14%) and Kolhapur were wells (74%), river (24%) and tube well (2 %) respectively.

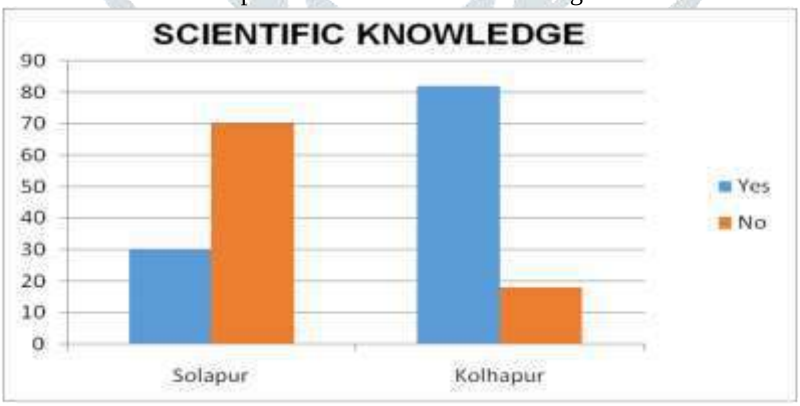
Graph No-3.5: Source of Irrigation



3.6 Scientific Knowledge:

There are about 30% and 82% respondents have scientific knowledge about irrigation in Solapur and Kolhapur respectively.

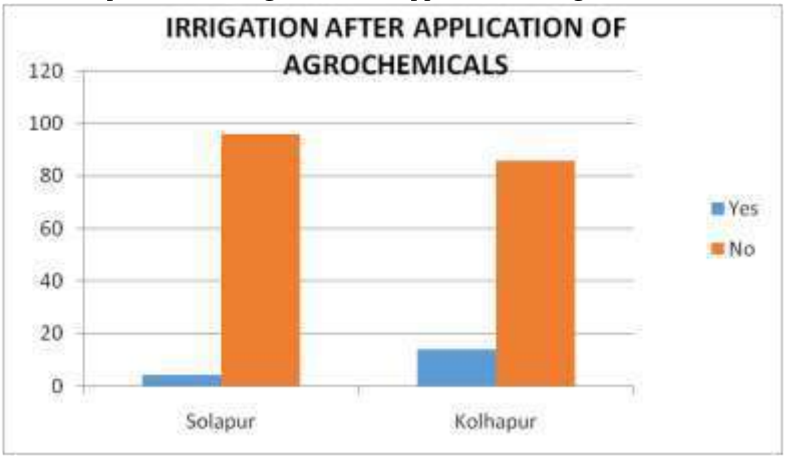
Graph No-3.6: Scientific Knowledge



3.7 Irrigation after Application of Agrochemicals:

Only 4% respondents in Solapur region were used to give irrigation after application of agrochemicals while near about 96% respondents does not give irrigation after application of agrochemicals where as in Kolhapur district it was 14% and 86% respectively.

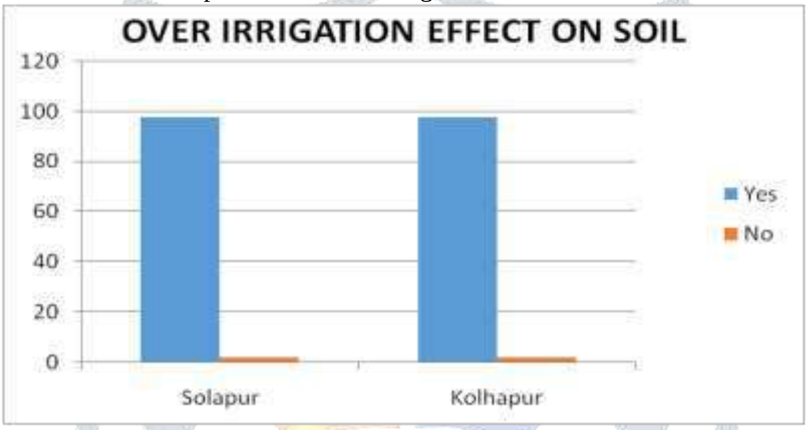
Graph No-3.7: Irrigation after Application of Agrochemicals



3.8 Over Irrigation Effect on Soil:

About 98% respondents from both Solapur and Kolhapur think that over irrigation affects the quality of soil and crop.

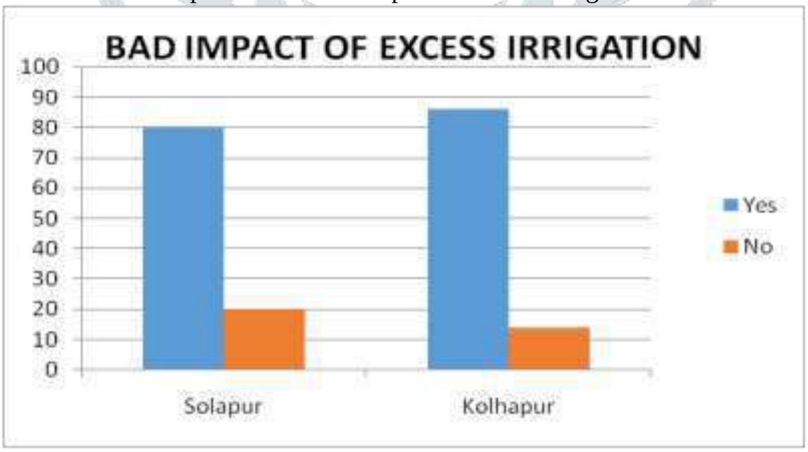
Graph No-3.8: Over Irrigation Effect on Soil



3.9 Bad Impact of Excess Irrigation:

The awareness about the bad impacts of excess irrigation on environment among the respondents from Solapur and Kolhapur were 80% and 86%, whereas 20% and 14% farmers does not aware in studied regions respectively.

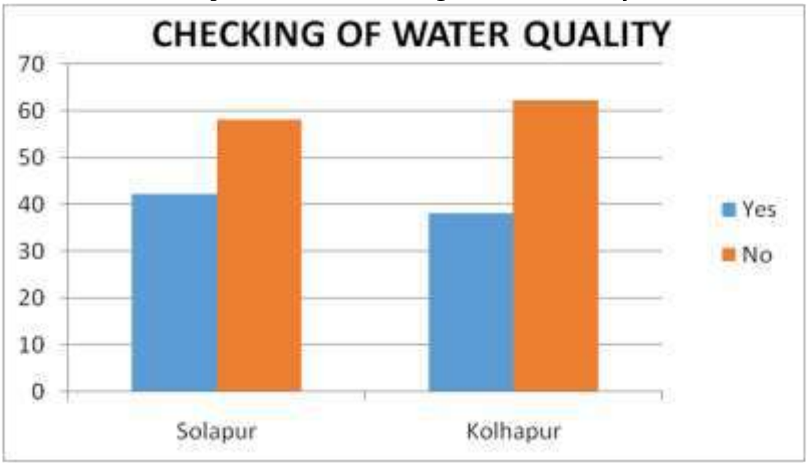
Graph No-3.9: Bad Impact of Excess Irrigation



3.10 Checking of Water Quality:

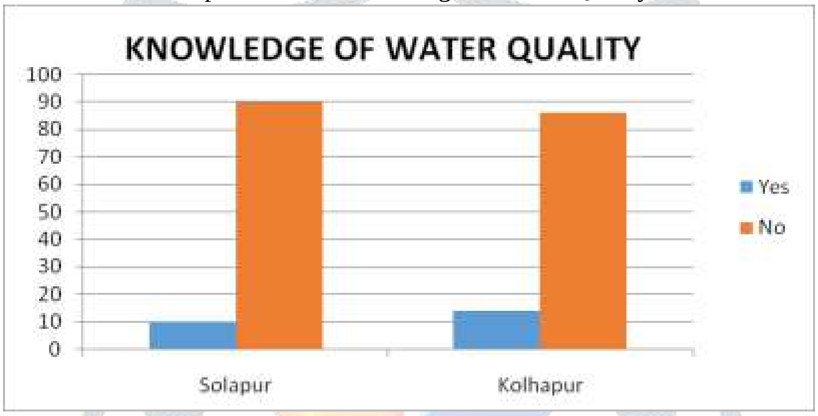
Among the respondents both from Solapur and Kolhapur, 42% and 38% feels that checking of water quality is essential for irrigation while remaining 58% and 62% from Solapur and Kolhapur respectively does not feels about it.

Graph No-3.10: Checking of Water Quality



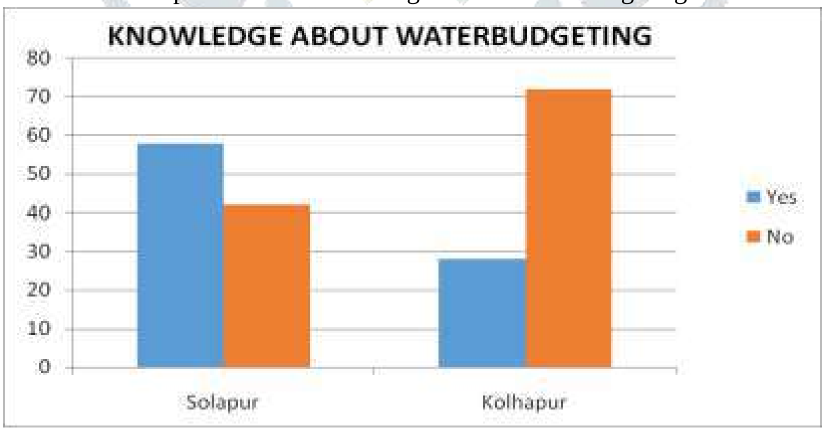
3.11 Knowledge of Water Quality:
Only 10% respondents from Solapur and 14% respondents from Kolhapur knew about quality of water used for irrigation.

Graph No-3.11: Knowledge of Water Quality



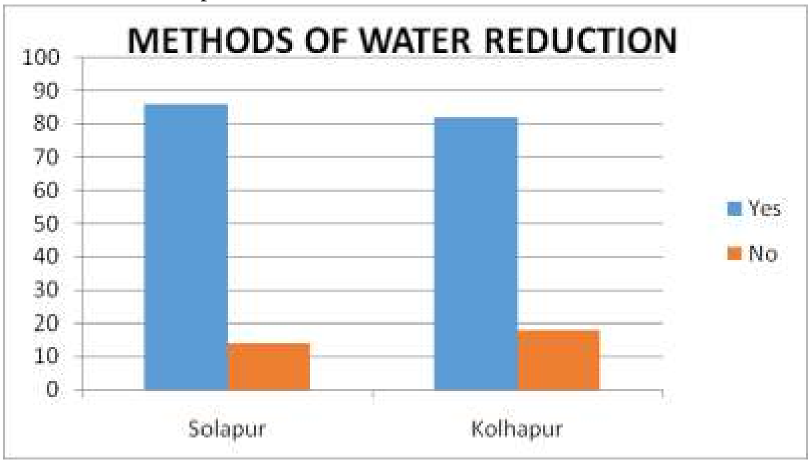
3.12 Knowledge about Water Budgeting:
The knowledge about water budgeting among the respondents from Solapur and Kolhapur were about 58% and 28% but the farmers from Kolhapur are less aware about water budgeting as compared to farmers in Solapur.

Graph No-3.12: Knowledge about Water Budgeting



3.13 Methods of Water Reduction:
Maximum (86%) respondents from Solapur and 82% respondents from Kolhapur district applied methods of reducing irrigation water.

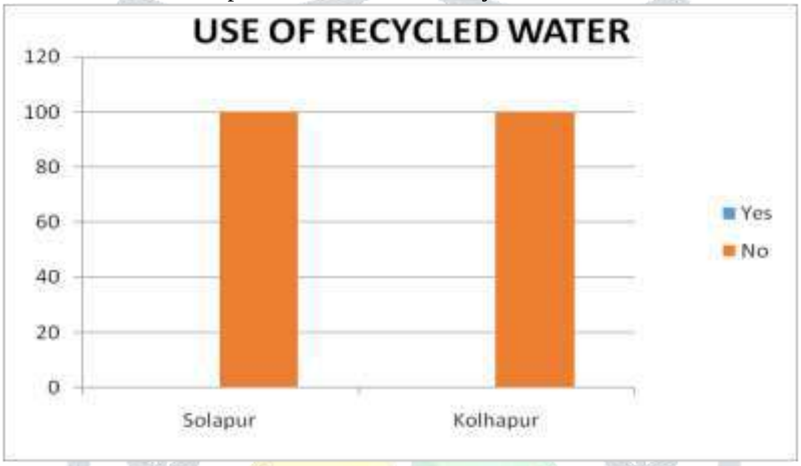
Graph No-3.13: Methods of Water Reduction



3.14 Use of Recycled Water:

In present study it was found that not a single respondent from the respondents used recycled water for irrigation in both Solapur and Kolhapur districts.

Graph No-3.14: Use of Recycled Water



IV. CONCLUSIONS

The data was collected from the Kolhapur and Solapur districts of Maharashtra regarding irrigation practices. From this data, it was observed that major crops in these two districts are Sugarcane, Jawar, Groundnut, Pomegranate, Red Gram, Wheat etc. Many farmers did not have knowledge about actual water requirement of crops. The data from two districts were compared and it was observed that farmers from Solapur district were more aware about water budgeting than farmers from Kolhapur. Use of flood irrigation is more in the field of sugarcane in Kolhapur region. The farmers have faced problems in systematic irrigation like improper supply of electricity, breaking of pipelines, blocking of drip and failure of system. The crops grown into two districts vary from each other according to availability of water for irrigation. With the help of this data it is concluded that farmers of Solapur are more careful about irrigation as compared to Kolhapur.

REFERENCES

[1] Awati J.S., Patil V.S. 2012. Automatic Irrigation Control by using wireless sensor networks. Journal of Exclusive Management Science.1(6):1-7.

[2] Baronti, P., Pillai, P., Chook, V.W.C.; Chessa, S.; Gotta, A.; Hu, Y.F. 2017. Wireless sensor networks: A survey on the state of the art and the 802.15.4 and ZigBee standards. Computer Communications 30: 1655–1695.

[3] Chandra, A & Sudhir, C. 2010. A Study of Kolhapur Lift Irrigation Co-operatives. MTS Reports, Institute of Rural Capital Management.

[4] Lakshata Bakade and Riyaj Kaz I. 2015. Review on Automated Irrigation System by using Wire-less Sensor Network. International Journal of Science Technology & Engineering.1 (10): 214-218.

[5] Mahir Dursun & Semih Ozden. 2011. Drip Irrigation Automation Supported by Soil Moisture Sensors. Academic Journals. 6 (7): 1573-1582.

[6] Mitchell. William P. 1976. Irrigation Farming in the Andes: Evolutionary Implications. New York St. Martins press.

[7] Ruiz-Garcia, L.; Barreiro, P.; Robla, J.I. 2008. Performance of ZigBee-based wireless sensor nodes forreal-time monitoring of fruit logistics. J. Food. Eng. 87: 405-415.

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION

Impact Factor - 3.452 ISSN - 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

Multidisciplinary International E-research Journal

PEER REFREED & INDEXED JOURNAL

April 2018

Special Issue - LVIII

विश्वविद्यालय अनुदान आयोग
University Grants Commission
quality higher education for all

Home About Us Organization Commission Universities Colleges Publications

UGC Approved List of Journals

You searched for **research journey**

Total Journals : 2

Show 25 entries Search

View	Sl.No.	Journal No	Title	Publisher	ISSN	E-ISSN
View	1	40705	Research Journey International E Research Journal	Swatidhan Pub. Yevla		23487143
View	2	44117	Research Journey	Swatidhan International Publication		23487143

Showing 1 to 2 of 2 entries

Previous 1 Next

Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

This Journal is indexed in :

- University Grants Commission (UGC) List No. 40705 & 44117
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- Universal Impact Factor (UIF)
- International Impact Factor Services (IIFS)
- Indian Citation Index (ICI)
- Dictionary of Research Journal Index (DRJI)

For Details Visit To : www.researchjourney.net

SWATIDHAN PUBLICATIONS

ISSN : 2348-7143
April 2018

INDEX

Our Editors have reviewed paper with experts' committee, and they have checked the papers on their level best to stop furtive literature. Except it, the respective authors of the papers are responsible for originality of the papers and intensive thoughts in the papers.

- Executive Editor-

Published by -

© **Mrs. Swati Dhanraj Sonawane, Director, Swatidhan International Publication, Nashik**
Email : swatidhanrajs@gmail.com **Website :** www.researchjourney.net **Mobile :** 9665398258

'RESEARCH JOURNEY' *International Multidisciplinary E- Research Journal* | ISSN : 2348-7143
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 58 : April 2018
UGC Approved No. 40705 & 44117

Factors Influencing Women's Decision to Work : A Service Sector Wise Analysis of Kolhapur

Mrs. Revati R. Patil
Assistant Professor,
CSIBER Kolhapur

Abstract :

There is dynamic interplay of familial, cultural, personal and labour market conditions which influence a woman in unique ways in her decision to remain a fulltime home maker, or to combine home maker and economic roles. The significant factors which inspire women to work are the inadequate income of the principal earner which force women to work and supplement income, mishaps such as incapacity of breadwinner, death of the breadwinner, and a woman's desire for economic independence for securing higher standard of living. Also the desire to the part of the women to give expression to their own talents and skill. The present study tries to highlight factors influencing women in selected service units in kolhapur.

Keywords : women, service units, motivation to work participation, women role, women employement.

Introduction:

In the semi urban cities likeKolhapur women with educational skills seeks employment or remain homemaker is mainly influenced by awareness among women about required educational skills in the organisations, having strong mind-set that only one income is inadequate for comfortable living, shifting of family type from joint to nuclear andrelatively ease of women's employment in nuclear family. Further,changing attitude towards women employment resulting in increasing percentage of Women's Decision to Work. It is viewed that as women are ready to shoulder domestic responsibilities they are perceived positively. As they denied the reactions would be vice versa.

Earlier(two,three decades back) women were seeking a job when she is forced by situations like support family income or work decision as a main bread earner of the family. She is not desired to attach too much importance to her performance to her work role and make serious attempts to excel at it. Her success as a woman would be judged by her performance as a mother and wife.Family member still expecting her performance in the traditionalrole to which she has been socialized.

Thus, family up to some extent creates hurdles in woman's career advancement. The demands of home and family render it impossible for married women to compete with Male colleagues who are not burdened with the daily routine of homeworking.

Objectives:

1. To understand role of working women in familial, organizational and social scenario.
2. To review service sector wise women's work participation.

Research Methodology:

Sampling:

Women Employees: Out of the women employed in the service unit selected for the propose of drawing the sample, only those who satisfied the above mentioned perquisites were selected to from the group, of which, randomly college teacher- non teaching staff-, Traditional course teacher-, Professional course teachers, office workers from Top level, Middle level, Lower Level, Medical doctors, nurses, Lab Asst., Technical employees, professionals were selected from the final sample of 709 working women. The exact population of service firms in select area and the number of women employees working in select service firms is not available the population is considered to be infinite and following formula has been used to calculate the sample size i.e.

n=(Zs/e)2

Where n = sample size

Z = value of z at 5% level of significant i.e. 1.96

S = standard deviation assumed from normal distribution i.e. 0.66

e = assured error i.e. 5%

Using above formula sample size is calculated to be 669.360 rounded off to 670. This size is equally divided into nine service organization sectors. Hence, per service organization section sample size comes to 75. Since in per service organization sector samples are to be selected form public and private sector so the sample size again divided and it comes to 37.5 rounded off to 38. Hence, 38 samples minimum from public and private sector undertakings each are taken from each service organization sector using convenient sampling method.

Table no.1.1 Sample selection

Sr. No.	Particulars	Total Population	No. of Sample Selected
1	Women Employees	Infinite Population	709
2	Total No. of Samples Selected		709

(Source: Field Work)

Samples approached for this study are more than actually used for data analysis. While pruning outliers the extreme samples are deleted and the sample size has brought to minimum 38 samples per organizational constitution i.e. public and private sector per service organizational sector i.e. nine sectors taken for study. The proposed sample size in the research design709 samples.

Data Analysis and Interpretation:

There are number of reasons due to which women employees started working for instance gross economic necessity, insufficient income, to have independent, liking for a particular job, supplementing husbands income, individual status, fulfilment of their own personal needs or ego satisfaction, achievement, recognition and self-justification etc. It relates up to extent the above elements sector wise influencing on women from various selected service units.

Table No. 1 Women Employees Workforce Participation

Sr. No.	**Particulars**	**N**	**Mean**	**Std. Deviation**	**Variance**
A	**Finance**				
1	Husbands Education	78	2.525	1.053	1.110
2	Husband's Salary	78	**3.589**	1.753	3.076

3	Husband's Professional Status	76	1.828	0.640	0.410
4	Husband's Employment Status	76	2.289	0.511	0.262
5	Family Life Cycle Stage	76	3.276	1.161	1.349
6	Valid N (list wise)	76			
H	**Healthcare**				
1	Husbands Education	83	2.144	1.260	1.589
2	Husband's Salary	83	3.000	1.343	1.805
3	Husband's Professional Status	83	2.024	0.517	0.268
4	Husband's Employment Status	83	2.253	0.489	0.240
5	Family Life Cycle Stage	83	**3.048**	1.058	1.120
6	Valid N (list wise)	83			
I	**Consultancy**				
1	Husbands Education	76	2.065	0.821	.676
2	Husband's Salary	76	**3.394**	1.286	1.655
3	Husband's Professional Status	76	1.894	0.505	.255
4	Husband's Employment Status	76	2.131	0.377	.142
5	Family Life Cycle Stage	76	3.263	0.984	.970
6	Valid N (list wise)	76			

(Source: Field Work)

Table No.1 shows that the factors **affecting** women employees workforce participation considering five related variables i.e. husband's education, husband's salary, husband's professional status, husband's employment status and family life cycle stage. The result shows that the mean scored in all service sectors is ***highest1.28 to 2.16 for second variable is husband's salary. The Standard Deviation value lies between "0.142 to 4.68". The results are much closed from related opinions.*** The Mean score has immediate followed by first and fifth variable i.e. husband education and family life cycle stage which may affect on selected sample respondents.

The researcher has interpreted that the various aspects in case of workforce participation has directly or indirectly influences on QWL of sample respondents in various service sectors. After reviewing all the nine service sectors, researcher has **firstly** found that husbands salary having great influence on sample respondents' workforce participation. **Secondly,** husband's education and thirdly, Family Life Cycle Stage has also influences on sample respondent's workforce participation. It seems that salary, education of husband extents sample respondents workforce participation also family life cycles have prominent influence on sample respondents workforce participation. the above mentioned factors plays dominating role in standard of living, familial satisfaction and economic conditions of the respondents family .It is resulted in **happiness** at domestic end and peaceful mind at work. The healthy and satisfied family background converts into better performance at workplace and better QWL.

Concluding Observations:

A number of contributing factors directly lead to women employees workforce participation with husbands education salary, husbands professional status, husbands

ISSN : 2348-7143
April 2018

employment status and family life cycle stage. **It is found that husband salary was directly related to inspiring women to work in about all the selected services** units. However it is reported that family life cycle stages influencing women to work in healthcare. Due to unpredictable working hours sample respondents in health care services considered family life cycle stages before entering in the work. Duty shifts, emergencies were the routine practices at healthcare obviously respondents were managing their work as per family life cycle stages.Further, it has been observed that husband's education does not matter in women's decision to work especially in insurance and telecom services because many women in both the services were working on the **compassionateground**.

References:

1. G. Balchandar, N. P. (2013). Quality of Work Life. The Power of Insurance Company: Impact of Personal Factors on the QWL of the Officers. *Management and Marketing* , 123-133.
2. Kolhapur, D. S. (2013). *District Socio-economic Analysis.* Kolhapur: Government of Maharashtra, Planning Commission, Economic and Statistical Department.
3. Mclean, H. A. (1982). *There is a Better Way to Manage*. Retrieved March 23, 2014, from www.AMA.com.
4. P.K., R. M. (2013, Nov). *Job Satisfaction and Quality of Work Life: Impact on Industrial Relations in Textile Units in Kannur District, Kerala PhD Thesis*. Retrieved April 2nd, 2014, from Shodhganga: www.inflibnet.in
5. Pillai, G. C. (1997). *Advancing Women Managers: A Business Imparative, The Hindu Speaks on Management.* Kasturi and Sons Ltd. pp. 258-265.
6. R.M., J. (2007). Quality of Work Life of Women Workforce: Role of Trade Unions. *Indian Journal of Industrial Repations* , 355-382.
7. T.S. Nanjundeshwara Swammy, S. D. (Aug 2013). Reviews of Literature on Quality of Work Life. *International Journal for Quality Research* , 201-214.
8. Y., B. (2009). Workspace Environment and Its Impact on Employee Performance. *AJBMR* , 1-8.

Aarhat Publication & Aarhat Journal's

AARHAT MULTIDISCIPLINARY INTERNATIONAL EDUCATION RESEARCH JOURNAL

Peer Reviewed Multidisciplinary Research Journal
ISSN- 2278-5655

Online and Print Journal

Impact Factor: 5.18

UGC Approved Journal No 48178, 48818

Vol VII

Special Issues No X

Chief Editor

Dr.D.N.Valvi

Aarhat Multidisciplinary International Education Research Journal (AMIERJ)
A Peer Reviewed Multidisciplinary Journal UGC Approved Journal No 48178, 48818
Impact Factor 5.18 ISSN 2278-5655

A MULTIDIMENSIONAL IMPLICATIONS OF CSR PRACTICES IN INDIA: A LITERATURE REVIEW

Revati R. Patil

(Asst. Professor,

CSIBER, Kolhapur)

Abstract:

This paper presents a roadmap of corporate social responsibility (CSR). It discusses the scholar's views on CSR and highlights the practices that have adopted or are currently adopting in India. Results showed that CSR implications in India are progressively managing.There is no general definition of CSR; however, various concepts are connoted into it. An initial conceptual framework for CSR is drawn reflecting the current practices and prospects for disciplinary strategies. Such framework can be used in organizing and streamlining CSR elements.

Key Words: *corporate social responsibility, CSR practices and CSR initiatives.*

Introduction:

With the passage of the Companies Act, 2013 the mandate for corporate social responsibility (CSR) has been formally introduced to the dashboard of the Boards of Indian companies. The industry has responded positively to the reform measure undertaken by the government with a wide interest across the public and private sector, Indian and multinational companies. The practice of CSR is not new to companies in India. However, what this Act does is bring more companies into the fold. Also, it is likely that the total CSR spends will increase. What is clear to many companies is that if this increased spending is to achieve results on the ground – which is the intent of the Act – then it needs to be done strategically, systematically and thoughtfully.

(**Rakesh Bharti Mittal** Chairman, CII's Development Initiative Council and Vice Chairman and Managing Director, Bharti Enterprises)

On this context, the Multidimensional Literature Review On CSR Practices in India has to be taken in the present research article by the author. The roots of CSR lie in Philanthropic activities (such as donations, charity, relief work, etc.) of corporations, globally, the concept of CSR has evolved and now encompasses all related concepts such as triple bottom line, corporate citizenship, philanthropy, strategic philanthropy, shared value, corporate sustainability and business responsibility. Philanthropy and CSR is not a novel concept for Indian companies, however a few organizations are likely to struggle.

The role of civil society in fuelling this change is bound to be extremely important. With the new corporate resources in their tool bag much will depend on their ability to innovate and adapt. (**Harpal Singh** Mentor and Chairman Emeritus,Fortis Healthcare Limited).

Thus both the scholarly views expects strategic, systematic and thoughtful intervention of civil society with innovative and adaptable approach towards CSR.

MEANING AND DEFINITION OF CSR:

The EC defines CSR as "the responsibility of enterprises for their impacts on society". To completely meet their social responsibility, enterprises "should have in place a process to integrate social, environmental, ethical human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders"

The WBCSD defines CSR as "the continuing commitment by business to contribute to economic development while improving the quality of life of the workforce and their families as well as of the community and society at large."

According to the UNIDO, "Corporate social responsibility is a management concept whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders. CSR is generally understood as being the way through which a company achieves a balance of economic, environmental and social imperatives.

CSR is generally understood as being the way through which a company achieves a balance of economic, environmental and social imperatives (Triple-Bottom-Line Approach), while at the same time addressing the expectations of shareholders and stakeholders.

In this sense it is important to draw a distinction between CSR, which can be a strategic business management concept, and charity, sponsorships or philanthropy. Even though the latter can also make a valuable contribution to poverty reduction, will directly enhance the reputation of a company and strengthen its brand, the concept of CSR clearly goes beyond that."

From the above discussion on various definitions, we can understand that: The CSR approach is holistic and integrated with the core business strategy for addressing social and environmental impacts of businesses. CSR needs to address the well-being of all stakeholders and not just the company's shareholders. Philanthropic activities are only a part of CSR, which otherwise constitutes a much larger set of activities entailing strategic business benefits.

SCOPE AND OVERVIEW OF THE PAPER:

The purpose of this paper is to explore how the scholars views on CSR and highlights the practices that have adopted or are currently adopting in India. This paper is structured as follows. The first section discusses brief view of CSR in India. The second section outlines the Visuals Of CSR In India and In the third section, Literature Review demonstrate how CSR implications are going at various strolls of life with different perspective.

BIRD'S EYE VIEW OF CSR IN INDIA:

CSR in India has traditionally been seen as a philanthropic activity. And in keeping with the Indian tradition, it was an activity that was performed but not deliberated. As a result, there is limited documentation on specific activities related to this concept. However, what was clearly evident that much of this had a national character encapsulated within it, whether it was endowing institutions to actively participating in India's freedom movement, and embedded in the idea of trusteeship.

As some observers have pointed out, the practice of CSR in India still remains within the philanthropic space, but has moved from institutional building (educational, research and cultural) to community development through various projects. Also, with global influences and with communities becoming more active and demanding, there appears to be a discernible trend, that while CSR remains largely restricted to community development, it is getting more strategic in nature (that is, getting linked with business) than philanthropic, and a large number of companies are reporting the activities they are undertaking in this space in their official websites, annual reports, sustainability reports and even publishing CSR reports.

The Companies Act, 2013 has introduced the idea of CSR to the forefront and through its disclose-or-explain mandate, is promoting greater transparency and disclosure. Schedule VII of the Act, which lists out the CSR activities, suggests communities to be the focal point. On the other hand, by discussing a company's relationship to its stakeholders and integrating CSR into its core operations, the draft rules suggest that CSR needs to go beyond communities and beyond the concept of philanthropy. It will be interesting to observe the ways in which this will translate into action at the ground level, and how the understanding of CSR is set to undergo a change.

VISUALS OF CSR IN INDIA:

Today business environment becomes increasingly complex and stakeholders gradually and prominently expressing about their expectations, good CSR practices can only bring in greater benefits, some of which are as follows:

Communities provide the license to operate: Apart from internal influencing elements such as values and ethos, some external elements that influence corporate behavior includes government recommended laws and regulations, investors and customers. In India many companies have started realizing that the 'license to operate' is no longer given by governments alone, but communities that are benefited by a company's business operations. Thus. CSR practices that meets the aspirations of these communities not only provides them with the license to operate. but also to maintain the license, thereby improving image in the eyes of the government.

Attracting and retaining employees: Several human resource studies today have assessed a company's ability to attract, retain and motivate employees with their CSR awareness. Interventions that encourage and enable employees to participate are shown to increase employee morale and a sense of belonging to the company.

Communities as suppliers: There are certain innovative CSR initiatives emerging. wherein companies have invested in enhancing community livelihood by incorporating them into their supply chain. This has benefitted communities and increased their income levels. while providing these companies with an additional and secure supply chain.

Communities as suppliers: There are certain innovative CSR initiatives emerging. wherein companies have invested in enhancing community livelihood by incorporating them into their supply chain. This has benefitted communities and increased their income levels. while providing these companies with an additional and secure supply chain.

LITERATURE REVIEW:

After considering the above discussed contents of CSR practices the author insights in heterogeneous aspects linked with the CSR. Literature is available in the specific context of 'CSR' therefore deserves a brief review. It would be relevant to mention here some pillars of the notable works as a part of the background to the present study as follows:

1. **Corporate Social Responsibility (CSR) From An Ancient Indian Perspective Balakrishnan Muniapan and Mohan Dass** in this paper, have made an attempt to explore the philosophy of Corporate social responsibility (CSR) from an ancient Indian perspective. A review of literature in CSR shows that there are thousands of articles which have been written by several academics on this subject from numerous perspectives. but limited articles written about CSR from the philosophical. historical and from the ancient perspectives. As a result. this article not only fills the gap in the literature, but also provides insights on CSR philosophy from the ancient Indian perspective. In the Indian context, the origin of CSR can be traced from the Vedic literatures such as the Valmiki Ramayana, the Mahabharata (includes the Bhagavad-Gita) and the Puranas. These literatures were written more than 5,000 years ago in Sanskrit language. However. in this paper the authors will explore CSR philosophy from Kautilya's Arthasastra. which was also written in Sanskrit in the 4th century BC. This paper is based on hermeneutics, a qualitative

research methodology which involves study, understanding and interpretation of ancient or classical text. By using the above methodology, the authors reveal some ancient lessons on CSR, which can provide guidance to corporate leaders today. In a nutshell, the Kautilya's Arthasastra provides an inside-out approach to CSR, which is development of the individual leader's self conscience, contrary to the western approach that takes an outside-in perspective. The leaders and the role they play in corporations are crucial in ensuring transparency, good conduct and governance towards the ultimate aim of achieving CSR.

2. **Significance CSR Holds For Indian Companies**

Under this heading report prepared by SSJ Solutions has been reviewed which includes.

i. The Emergence of CSR

The strategic imperative for Corporate Social Responsibility (CSR) continues to build as both the social need and the business case for corporate giving grow over time. From the early beginnings in the 1950's with the proposal that corporations should focus on more than just profit, CSR has developed into an integrated approach of social involvement. The initial attempts at philanthropy in the form of charitable donations for the sake of positive publicity have become programs that reach to the core business of corporations and involve all levels of employees. Ratan Tata, former chairman of the Tata Group has signed up to a new global experiment christened Plan B, which seeks to infuse businesses with a new DNA that puts people and planet alongside profits. The prevalent Plan A in which companies relentlessly pursue profits to the detriment of the other two - according to its members - is no longer acceptable for 'future incentives' it was about time to initiate new dialogues and adopt multi-stakeholder approaches to maximize returns even for the people and planet. It was also decided that the leaders would work towards fostering values at the workplace and help develop leaders driven by a moral compass.

ii. Law on CSR

In the new Indian Companies Bill, the section mandating CSR spending by large companies came as a surprise to many CEOs and philanthropists. Under this new Bill, guidelines state that companies have to spend 2% of net profits on CSR activities. It is not the spending that is mandatory but the reporting on how much was spent on CSR that has been made compulsory. The aim is to protect the interests of employees and small investors while encouraging firms to undertake social welfare voluntarily.

iii. Rationale

1. To achieve a balance among its economic, social, and environmental responsibilities.
2. An effective approach to CSR can open up new opportunities, and increasingly contribute to the corporates' ability to attract passionate and committed workforces.
3. To build the relationship with business in the community and with Local Authorities.

iv. Driving forces for CSR:

Creating a synergy of ethics, a cohesive society and a sustainable global economy where markets, labor and communities are able to function well together. It is believed that there is growing consciousness among corporates, and general sense of belonging to community and society. Companies considered active participation in the community to be fundamental driver of CSR. The demonstration by a corporation that it takes into account its complete impact on society and the environment as well as its economic influence. CSR is looked up as an important aspect of image building and goodwill which is one of the ways smart companies benefit from sustainability.

v. How Are The CSR Programs Implemented?

"It is not necessary to have a CSR department for functioning for CSR, we have our forums and NGO's responsible for implementing CSR activities." CEO, Software Company **12%** Internal to organization Part of HR By top management/CEO CSR department 15% External to organization Both NGO Company's foundation.

vi. CSR Funding Analyses

"Proper auditing of all the CSR initiatives is required to ensure that funds are not being misused and the funds are utilized to support the beneficiaries". CMD, Travel and Tourism Corporation

vii. CSR Maturity Model

CSR vision and strategy clarifies with maturity. Most successful organizations implemented CSR planning in stages. CSR Performance measures are integrated for both business and society. Stakeholder engagement and communication becomes more effective with maturity. CSR practices become more focused, frequent, and flexible. CSR value creation and integration increases with maturity. KRA's are established for better CSR implementation. Major CSR initiatives found in Health Care and Environment Friendly Practices. Thus the study concludes with insights in significance CSR holds for Indian companies, provide a clear picture of present CSR initiatives undertaken by the companies and its contribution to Indian society. Explored various changes or innovations Indian companies have brought up in their CSR initiatives. With Companies Bill passed on mandate CSR spending help to have an insight of the company's investment in CSR initiatives.

3. **CSR and its Relationships with Stakeholders for the Common Good**

a. This undertakes the report prepared by **Jana Foundation on Modern CSR** - A shift from profit maximization to Profit optimization and Shareholders to Stakeholders. The report focuses on

Business Perspective

Focuses on the importance of 'reputation capital' for capturing and sustaining markets. CSR is nothing but a new business strategy to reduce investment risk and maximise profits by taking all the stakeholders into confidence.

Eco - Social Perspective

Recognises the fact that social and environmental stability and sustainability are two major prerequisites for sustainability of the market in the long run. CSR is both a value and a strategy for ensuring sustainability of a business.

Right - Based Perspective

Focuses on the fact that consumers, employees, stakeholders and affected communities have a right to know about corporations and their businesses. It stresses accountability, transparency, and social and environmental investment as major aspects of CSR.

The report further hightlights on spiritual dimensions of CSRsuch as,

Kautilya On CSR: Kautilya emphasized ethical practices and principles while conducting business.

CSR & Hinduism: Merchants belonging to the Hindu religion gave alms, got temples and night shelters made for poor. Hindus followed Dharmada where the manufacturer or seller charged a specific amount from the purchaser which was used for charity.

CSR & Islam: Islam had a law called Zakaat which ruled that a portion of one's earning must be shared with the poor in the form of donation.

CSR & Sikhism: Similar to Islam's zakat, Sikhs followed what they called daashaant

In this context the following comment is more supportive. Meeting the legal requirement and adhering to public and society norms will motivate companies to undertake CSR initiatives and fulfill its social obligations.

"CSR is the pre-requisite of the very existence of business today".

Executive – **HR, Pan India Banking and Insurance Company**

b. **Nilesh Vitthal Limbore And Ajit Ashokrao Chandgude in their case study**

"A Review of the Current Scenario of Corporate Social Responsibility in It Business Sector with the Special Reference to Infosys. "with the objectives of to study the corporate social responsibility to current scenarios in IT business sector, to study the case of corporate social responsibility to current scenarios in Infosys and to study the benefits of corporate social responsibility to current businesses in India tried to have insight in all the CSR bottom-line approach.

The study further concentrates on CSR in Infosys such as In1996, Infosys created the Infosys Foundation in the state of Karnataka, operating in the areas of health care, social rehabilitation and rural uplift, education, arts and culture. Since then, this foundation has spread to the Indian states of Tamil Nadu, Andhra Pradesh, Maharashtra, Kerala, Orissa and Punjab. The Infosys Foundation is headed by Mrs. Sudha Murthy, wife of Chairman Narayana Murthy. Since 2004, Infosys has embarked on a series of initiatives to consolidate and formalize its academic relationships worldwide under the umbrella of a program called AcE – Academic Entente. Through case study writing, participation in academic conferences and university events, research collaborations, hosting study trips to Infosys Development Centers and running the In Step Global Internship Program. the company communicates with important stakeholders in the academia.

From the above discussion on the CSR practices of Infosys researcher conclude that from ancient days to this global world CSR is passing through various dimensions. This concept is having deep roots in India. From old days to this globalization, Indian cooperators are aware about their social responsibility, because media culture is based on pure holistic approach and this is the main reason of success of Indian economy and business world. Also the Infosys are plays very vital role in corporate social responsibility in current Indian scenario. The management team at Infosys continues to set examples in the area of corporate citizenship and has involved itself vigorously in key national bodies. Infosys has enormously large activate group to done corporate social responsibility in India.

CONCLUSION:

In today's world it is no longer just acceptable that a corporation does well by doing good. It is expected Companies are subjected to new levels of transparency, whether in terms of demands for greater disclosure and corporate governance. On this backdrop certain questions have raised which certainly helps to have inclusive CSR practices.

- Does Public plus Private partnership on CSR is expected now ?

  Yes, the government has set out specific guidelines on how *CSR activities* should be handled. These stipulate that the *CSR activities need* to be implemented by a *CSR* committee that includes independent directors. This committee will be responsible for preparing a detailed plan on *CSR activities*, finding right NGO partner to project the idea its impact on society and alignment of CSR with social development is needed.

- CSR practices with credit worthy NGO's is required? It ensures Corporate-*NGO* partnerships in *CSR activities*: why and how?.

  Because creating a *CSR* department may entail significant costs, such as increased headcount, overhead, and administrative expense, many companies may choose to implement their *CSR activities* through *NGOs*, such as the existing societies, trusts, or foundations that the New Act contemplates. It is found that 50%-60% funds are used in development processes. Further it is observed that 60%-70% placements have done through CSR. Hence it is necessity to check credibility of NGO's.

- Does extent of Youth intervention in CSR is significant?

  Yes, among others. Companies prioritized sport-based efforts towards children and *youth*. In practice, *CSR* through sport is done via partnerships and sponsorship. Concrete ways for implementation such as planning facilities and organizing a *youth* academy were found. Surprisingly, majority of the companies are only concentrated on Feel good factor of CSR. Instead maximum participation of youth through field visits and study tours is possible also alignment of educational institutions with creditworthy NGO's is needed.

- As a corporate what are the challenges in engaging CSR?

  Here we can apply TATA Trust's employee engagement policy. As a trust is working independently, they are focusing on employee has to be shifted in CSR volunteers around 50% to 60% employees becomes volunteers and Trust made it habit for them then such habit converted into CSR culture. It requires clear basis of CSR. Monetary assessment, impact assessment and need assessment is significant. Further required minimum three years action plan with Institute, Corporate, NGO and Government alignment.

- Does CSR is Patch Up Value?

  Such type of criticism on CSR are obvious but it's easy for companies to talk *up* their commitment to *corporate social responsibility* (*CSR*) during the good times, until they hit rough *patches*. "The real test is how companies live *up* to those *values*. How they integrate them into their business and how they stay true to them". For the better results companies have to develop confidence building mechanism among themselves.

BIBLIOGRAPHY:

Philip Kotler, Nancy Lee, Corporate Social Responsibility: Doing the Most Good for Your Company and Your Cause, Wiley, 2005.

William B. Werther, Jr., David Chandler, Strategic Corporate Social Responsibility: Stakeholders in a Global Environment, Sage Publications, Inc, 2006.

Steven K. May, George Cheney, Juliet Roper, The Debate over Corporate Social Responsibility, Oxford University Press, 2007.

Jacqueline Cramer, Fred Bergmans, Learning about Corporate Social Responsibility: The Dutch Experience, IOS Press, 2003.

Andrew Crane, Abagail McWilliams, Dirk Matten, Jeremy Moon, Donald S. Siegel, The Oxford Handbook of Corporate Social Responsibility, Oxford Handbooks, 2008.

Handbook on Corporate Social Responsibility in India (www.pwc.in)

Balakrishnan Muniapan, Mohan Dass International Journal of Indian Culture and Business Management, Volume 1, Issue 4 DOI: 10.1504/IJICBM.2008.018622 **Corporate** Social Responsibility: a philosophical approach from an ancient Indian perspective

Research on Corporate Social Responsibility in India July, 2013 SSJ Solutions .

Evolution of CSR in India, Jana Foundation, Modern CSR - A shift from profit maximization to Profit optimization and Shareholders to Stakeholders.

Impact of Corporate Social Responsibility on the Financial and Non Financial Performance of Select BSE Listed Companies.

Nilesh Vitthal Limbore And Ajit Ashokrao Chandgude "A Review Of The Current Scenario Of Corporate Social Responsibility In It Business Sector With The Special Reference To Infosys." Volume 2, Issue. 9, March. 2013 Golden Research Thoughts ISSN:-2231-5063

WEBLEOGRAPHY:

http://knowledge.wharton.upenn.edu/india/article.cfm?articleid=4636

http://www.tkf.org.in/corporate-social-responsibility-in-india.php

http://timesfoundation.indiatimes.com/articleshow/4662536.cms

http://www.junoconsulting.com.au/articles/Making_Sense_of_Corporate_Social_Responsibility_Part_II

http://ec.europa.eu/enterprise/policies/sustainable-business/corporate-social-responsibility/index_en.htm

International Journal of Current Advanced Research
ISSN: O: 2319-6475, ISSN: P: 2319-6505, Impact Factor: SJIF: 5.995
Available Online at www.journalijcar.org
Volume 7; Issue 1(B); January 2018; Page No. 8789-8792
DOI: http://dx.doi.org/10.24327/ijcar.2018.8792.1429

Research Article

INTELLECTUAL PROPERTY REGIME AND INDIA AS A KNOWLEDGE ECONOMY

Vishakha Apte*

MBA Department, Chatrapati Shahu Institute of Business Education and Research, Kolhapur

ARTICLE INFO

Article History:
Received 17th October, 2017
Received in revised form 21st November, 2017
Accepted 05th December, 2017
Published online 28th January, 2018

Key words:

Knowledge, knowledge economy, intellectual property, GDP, knowledge capital, physical and natural resources.

ABSTRACT

It is often said that India is moving towards knowledge economy. There are various definitions of knowledge economy but one thing is sure that the next era will continue to be a knowledge era and the economic prosperity of a country or a firm will be closely linked with its knowledge capital stock. There are various ways of describing a knowledge economy like number of knowledge workers, knowledge sectors, knowledge industries and so on. But one thing is sure that the stock of knowledge cannot be definitely measured and yet it's widely accepted measurement yardstick is Intellectual property and patents filed by a country or a firm.

As noted by WalterW. Powell and Kaisa Snellman, "We define the knowledge economy as production and services based on knowledge-intensive activities that contribute to an accelerated pace of technical and scientific advance, as well as rapid obsolescence. The key component of a knowledge economy is a greater reliance on intellectual capabilities than on physical inputs or natural resources."

This paper examines the Indian capabilities and efforts towards creating the knowledge capital through filing and getting patents, trademarks, or intellectual property rights, industrial designs etc. If India is moving towards the knowledge economy then its place as compared to that of other countries in the world also matters. Not only the advanced and developed economies but also the emerging economies with similar GDP and growth rates are moving towards knowledge economy, then we have to examine the relative speed and position of India in this regard.

INTRODUCTION

Indian economy is one of most promising economy in the world. In 2014 the Asian Development Report predicted that India can become a Knowledge Economy. As the report says, " India, with its youthful population and thriving information and communication technology (ICT) industry, can become a leading knowledge-driven economy as long as regulatory, education, and infrastructure barriers are overcome," ADB said in its report 'Innovative Asia: Advancing the Knowledge-Based Economy' published in September, 2014. The Report also has thrown light on the measures and description of knowledge economy. As per the report, 'A knowledge-based economy describes an economy that uses information resources-technologies, skills, and processes-to achieve and accelerate economic growth potential. This report adopts the following definition which combines World Bank and OECD descriptions: A knowledge-based economy is one that has an economic incentive and institutional regime that stimulates the acquisition, creation, dissemination, and use of knowledge and information to improve its growth and welfare, as well as effective systems of education and skills, information and communication technology (ICT), research and development (R&D), and innovation. Further the World Bank has developed a Knowledge Index and calculated on the basis of the four pillars such as Economic incentive and institutional regime, Education and skills of population, Innovation and technological adoption system, Information and communication technology infrastructure. Each of the four pillars has Rationale and indicators. As mentioned in the report they are given below.

KAM (Knowledge Assessment Methodology)-Basic Scorecard Variables

Performance

Average annual GDP growth (%)
Human Development Index

Economic incentive and institutional regime

Tariff and nontariff barriers
Regulatory quality Rule of law Education and human resources Adult literacy rate (% age 15 and above)
Secondary enrollment Tertiary enrollment

*Corresponding author: **Vishakha Apte**
MBA Department, Chatrapati Shahu Institute of Business Education and Research, Kolhapur

Innovation system

Researchers in R & D, per million populations
Patent applications granted by the USPTO, per million populations
Scientific and technical journal articles, per million populations

Information infrastructure

Telephones per 1,000 persons (telephone mainlines + mobile phones)

Computers per 1,000 persons
Internet users per 10,000 persons

Note: The World Bank developed the Knowledge Economy Index (KEI), an indicator of the knowledge economy based on these four pillars and uses that index to benchmark economies. Source: World Bank Knowledge Assessment Methodology and Knowledge Economy Index.

This indicates that while calculating knowledge index of various countries innovation and R&D has been given important place. Hence it will be appropriate to make use of the IPR and Patents to determine Indian economy's journey towards attainment of the status of a Knowledge Economy.

Objectives: The main objective of this paper is to discuss the essentials of Knowledge Economy and India's efforts and results in knowledge economy journey. The important element of knowledge based society is the Intellectual capital or intellectual property that the people in the country create. The objective is to examine the relative position of India in this regard. It is determined via the number of patents files and granted, industrial design applications and design registrations and Trademarks registrations.

Literature Reviewed: The starting point of this paper was the Asian Development Bank's (ADB) report on the 'Innovative Asia: Advancing The Knowledge-Based Economy' *The Next Policy Agenda,* published in 2014.

The literature reviewed is mainly for three purposes. One is for definition of knowledge economy, for studying the determinants of knowledge economy used by various scholars for various objectives. Second literature is reviewed for determining whether, Intellectual Property Rights, patents, trademarks can be used as an indicator knowledge capital and knowledge economy determinant and then determine the condition of Indian economy in this regard. Innovation and its role in economic development is already accepted in economic literature, but here the efforts are to assess the knowledge economy position of our country by making use of IPR and related statistics.

Though Knowledge Economy has been considered as a result of latent variables and its determinants are unobservable a study has been conducted by Frank G. van Oort · Johan H. L. Oud, Otto Raspe, entitled, 'The urban knowledge economy and employment growth: a spatial structural equation modeling approach' published online in March, 2009. They have come to the conclusion after their study of three latent variables i.e. R&D-intensity, innovativeness and 'density of knowledge workers, that the latent variables of 'density of knowledge workers' and 'innovativeness' have significant positive and strong impacts on employment growth.

The economic development has been a continuous process of change. All over the world the countries and economic agents try to bring out positive results from this change. Innovations and Research are the foundations of these changes, and the change agents try to get maximum returns from these innovations. As note by David J. Teece in Capturing Value from Knowledge Assets' published by California Management Review Vol 40, No. 3 SPRING 1998. WalterW. Powell and Kaisa Snellman, have also noted that there is a transition from emphasis on use of natural resources to use of knowledge resources. To quote, 'We document this transition with patent data that show marked growth in the stocks of knowledge, and show that this expansion is tied to the development of new industries, such as information and computer technology and biotechnology. The literature on the knowledge economy focuses heavily on knowledge production, however, and attends less to knowledge dissemination and impact.' (Annu. Rev. Sociol. 2004.) Further they have measured the acceleration in knowledge production. The paper quotes that, 'A challenge for social science has been to find metrics to gauge the extent to which society has become more dependent on knowledge production. Although there is wide recognition of the importance of knowledge and intangible capital in fostering economic growth and social change, devising useful measures of these assets has been difficult. One focus has been on stocks of knowledge-human, organizational, and intellectual capital, while another focus has been on activities-R&D efforts, investments in information and communication technology and in education and training, and organizational reforms. Patents have become a widely used indicator of intellectual capital (Grindley & Teece 1997) and economically valuable knowledge (Pakes & Griliches 1980, Griliches 1990).

Taking up the same line forward, in this paper the condition of India in the Knowledge Economy is measured in terms of patents applied, patents granted, industrial designs, trademarks etc.

METHODOLOGY

The World Intellectual Property Organization publishes data of almost all the countries with respect to various aspects such as Patent applications, Patents granted, industrial designs, Trademarks etc. which has been used and it is compared against the GDP of the country. The GDP data published by IMF in their world economic outlook is used here. This paper attempts to examine the ranking of various countries in terms of its GDP and as against its ranking terms of Patents granted. The main purpose here is to examine whether the countries with higher GDP are creating more knowledge capital as compared to low GDP countries? Whether it is essential for a country to create more knowledge wealth in order to become developed and High Income Group country? The data for this purpose is presented below:

Table 1:

TOP 12 Countries In The World In Their Gdp Ranking: 2017 and 2016 ranks

Sr. No	Name of the country	GDP Nominal (billions of $) 2017	Rank	GDP Nominal (billions of $) 2016	Rank
1	United states of America	19,417.144	1	18,561.93	1
2	China	11,795.297	2	11,391.62	2
3	Japan	4,841.221	3	4,730.30	3
4	Germany	3,423.287	4	3,494.90	4

	UK	2,496,757	5	2,640.89	5
6	India	2,454,458	6	2,250.99	7
7	France	2,420,440	7	2,488.28	6
8	Brazil	2,140,940	8	1,766.60	9
9	Italy	1,807,425	9	1,852.90	8
10	Canada	1,600,265	10	1,532.34	16
11	Russia	1,560,706	11	1,267.75	12
12	Korea	1,498,074	12	1,404.38	11

Source: International Monetary Fund World Economic Outlook April 2017 http://www.imf.org/en/Publications/WEO/Issues/2017/09/19/world-economic-outlook-october-2017

As compared to 2016 India and Brazil's rank shows an upward projection in 2017. Same is with Russia while USA and China have retained their positions in GDP. Now if we assume that the resulting rise in the GDP is due to the rising patents received by the companies and individuals of the country then we have to take a look at the following data.

Table 2

Patent applications for the top 10 offices

Office	Patent applications		
	2014	**2015**	**Growth (%) 2014-15**
China	928,177	1,101,864	18.7
United States of America	578,802	589,410	1.8
Japan	325,989	318,721	-2.2
Republic of Korea	210,292	213,694	1.6
European Patent Office	152,662	160,028	4.8
Germany	65,965	66,893	1.4
India	42,854	45,658	6.5
Russian Federation	40,308	45,517	12.9
Canada	35,481	36,964	4.2
Brazil	30,342	30,219	-0.4

Note: Application numbers are a sum of direct filings and PCT national phase entries received by offices

Source: WIPO Statistics Database, October 2016

Table 3 Total applications and growth in applications

Applications worldwide	Year		
	2014	**2015**	**Growth (%) 2014-15**
Patent	2,680,900	2,888,800	7.8
Utility model	948,900	1,205,300	27
Trademark	7,426,867	8,445,300	13.7
Industrial design**	1,137,500	1,144,800	0.6

Table 4 Total patent applications

Office	Patent applications	
	2014	**Share of world total (%)**
China	1,101,864	38.1
United States of America	589,410	20.4
Japan	318,721	11.0
Republic of Korea	213,694	7.4
European Patent Office	160,028	5.5
Others	505,083	17.5
World total	**2,888,800**	

Note: Application numbers are a sum of direct filings and PCT national phase entries received by offices (where applicable)

Source: WIPO Statistics Database, October 2015.

Table 5 Share in IP filing activity by Region (Data for year 2015)

a)

Patents

Geographical region	Applications	Share of total (%)
Africa	14,800	0.5
Asia	1,786,800	61.9
Europe	360,000	12.5
Latin America &Caribbean	65,600	2.3
North America	626,400	21.7

b)

Trademarks

Geographical region	Applications	Share of total (%)
Africa	233,200	[illegible]
Asia	4,669,800	[illegible]
Europe	2,041,400	[illegible]
Latin America & the Caribbean	654,900	7.8
North America	422,400	[illegible]

c)

Utility models

Geographical region	Applications	Share of total (%)
Africa	240	0.02
Asia	1,152,600	95.6
Europe	46,400	3.8
Latin America & the Caribbean	4,230	0.4

d)

Industrial designs**

Geographical region	Applications	Share of total (%)
Africa	16,300	1.4
Asia	778,100	68.0
Europe	281,000	24.5
Latin America & the Caribbean	15,000	1.3
North America	46,000	4.0
Oceania	8,400	0.7

**refers to design count – the total number of designs contained in industrial design applications.

Source: for all the above tables WIPO Statistics Database, October 2015

Table No. 5 has four components hence it is divided into four separate small tables. That is patents, trademarks, utility models and industrial designs. These four are the main assets of knowledge capital and hence shows that maximum capital will be created in Asia.

India in the World Economy

If we look at the position of India in this regard we find that India has constantly shown a rising trend since last 14 years in areas of Patents, Trademarks, and Industrial designs.

Table 6 India's IP Filings (Resident + Abroad, Including Regional) and Economy)

Year	Patent	Trademark	Industrial Design	GDP (Constant 2011 US$)
2002	4,164	90,751	2,613	2858.92
2003	5,370	79,488	3,034	3083.65
2004	6,728	67,504	3,465	3327.96
2005	8,028	77,908	3,867	3636.96
2006	9,434	93,736	4,078	3971.88
2007	10,529	125,078	4,759	4363.38
2008	11,546	128,122	4,949	4533.16
2009	11,939	143,626	4,610	4917.56
2010	14,869	181,621	5,030	5422.1
2011	15,896	186,783	6,472	5782.04
2012	18,202	188,154	5,900	6097.53
2013	20,908	196,262	6,101	6486.92
2014	22,445	218,725	7,401	6973.78
2015	23,946	270,333	8,245	7532.38
2016	25,795	284,286	7,600	8067.71

Source: World Intellectual Property Organisation.

Intellectual property of India as a percentage of Asia 2015 data

Sr No	Type of Intellectual Property	Asia	India	%age
1	Patent Applications	1786800	45658	2.55
2	Trademark Applications	4669800	274810	5.88
3	Utility Model applications	1152600	-	-
4	Industrial design applications	778100	10290	1.32

Calculated on the basis of two separate tables on regional patterns and India's data

DISCUSSION

India because of its size is among the top 10/12 Economics of the world in terms of the GDP. Its rank in terms of patents filed is even better than some developed countries like Japan. Germany, Korea.

- The earlier literature shows that, in measurement of knowledge economy, Innovation is an important criterion. Patents and Intellectual property is the indication of innovation systems of the country. Hence we can say that India is on the path of knowledge capital creation. The knowledge regime has created challenges for many of the stable economies of the world. At the same time it has also created opportunities for many countries of the world. When Europe and America are lagging behind in growth rate of new patents applications, china has gone much ahead of everybody else.
- Table no1 and Table no2 clearly show that China and United states have maintained their positions as knowledge economy because of the total number of patents applied from these two countries. China has definitely created more knowledge capital than any other country of the world. Overall picture of the world shows that Asia Region is ahead of rest of the world and India enjoys a dominant position in Asian subcontinent.
- Table No.6 clearly highlights the rise in India's growth in patents is more but in number India has more trademarks than patents. Industrial designs also reflect the innovations in the field of engineering and technology where India has not done a remarkable performance as compared to other areas.
- If we are comparing India and China as world's future growth centers India is much behind china in terms of its intellectual capital and the rate or such capital formation. In fact the world will see China taking over USA in knowledge capital in near future. India is said to have growth potential in service sector.
- If more and more knowledge workers are found in service sector especially in Information Technology and computer software field then we should see more patents to be filed in those sectors. Though accurate measurement of knowledge economy is still difficult, it is clearly established that intellectual property like patents, trademarks, industrial designs are playing important role in the growth of GDP as well as in international trade, when the countries are getting rewards of their stock of knowledge capital then we have to examine our country's own position in this regard.

CONCLUSION

India has to nurture and encourage the innovation culture and also develop the systems where by this intellectual property not only results in actual production and exports but also earnings out of the patents and royalties sold to other countries' manufacturers. The Universities and the Educational Institutions are traditionally known as the knowledge centers of a county but in India the research that takes place in academics does not lead to innovations; it remains only for the academic purpose. The knowledge economy of India has created knowledge workers its time to create knowledge capital. While Asia has always been number one for all types of IP applications India's share in it is very less. The majority of Asia region is from China followed by Japan, India, Korea. India has a long way to go before it becomes a Knowledge Economy but the process as certainly began.

References

1. Walter W. Powell and Kaisa Snellman, 'The Knowledge Economy' Annual Reviews Sociol. 2004.
2. David J. Teece, 'Capturing Value from Knowledge Assets' by CALIFORNIA MANAGEMENT REVIEW VOL 40, NO, 3 SPRING 1998
3. Yuanyuan Chen, Anandhi Bharadwaj, Khim-Yong Goh, 'An Empirical Analysis of Intellectual Property Rights Sharing In Software Development Outsourcing. MIS Quarterly Vol. 41 No. 1, pp. 131-161/March 2017
4. J. Jaya Murthy, 'Managing innovations and developing Intellectual Property strategie for firms.
5. Deepa Ittimani Tholath, 'Knowledge Dimensions to Monitor Knowledge Growth in Service Sector'. The *IUP Journal of Knowledge Management*, Vol. XI, No. 3, 2013
6. Nowshade Kabir, 'knoeledge entrepreneurship in emerging economies' Newcastle University Business School, UK
7. Apte Vishakha, 'Management Education in Knowledge economy', Innovative Management Solutions For Competitive Advantage. Excel Publishers, New Delhi.

Websites

8. IMF for world economic outlook http://www.imf.org/en/Publications/WEO/Issues/2017/09/19/world-economic-outlook-october-2017
9. World Intellectual property organization. http://www.wipo.int/portal/en/index.html

Reports

10. OECD Report on Knowledge economy. https://www.oecd.org/sti/sci-tech/1913021.pdf
11. Gunnar Eliasson,' Role of knowledge in economic growth.' http://www.oecd.org/innovation/research/1825633.pdf
12. Asian Development Report by Asia Development Bank Spet 2014.

****

ISSN: Online: 2319-6475: ISSN: Print: 2319-6505

Impact Factor 2016: 5.995 Computed by SIIF

INTERNATIONAL JOURNAL OF CURRENT ADVANCED RESEARCH

Certificate For Publication

Is hereby honouring this certificate to

Vishakha Apte

In recognition of the publication of the Article entitled

INTELLECTUAL PROPERTY REGIME AND INDIA AS A KNOWLEDGE ECONOMY

Published in International Journal of Current Advanced Research

(Vol. 7, Issue, 1(B), pp. 8789-8792, January, 2018)

Signature: ____________

Managing Editor

Date: 28/01/2018

www.journalijcar.org
Email: journalijcar@gmail.com

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION

Impact Factor – 3.452

ISSN – 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

Multidisciplinary International E-research Journal

PEER REFREED & INDEXED JOURNAL

April 2018

Special Issue - LIVI

विश्वविद्यालय अनुदान आयोग
University Grants Commission
quality higher education for all

Home About Us Organization Commission Universities Colleges Publications

UGC Approved List of Journals

You searched for **research journey**

Total Journals : 2

|| Home ||

Show 25 entries Search:

View	Sl.No.	Journal No	Title	Publisher	ISSN	E-ISSN
View	1	40705	Research Journey International E Research Journal	Swatidhan Pub. Yevla		23487143
View	2	44117	Research Journey	Swatidhan International Publication		23487143

Showing 1 to 2 of 2 entries Previous 1 Next

Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

This Journal is indexed in :

- University Grants Commission (UGC) List No. 40705 & 44117
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- Universal Impact Factor (UIF)
- International Impact Factor Services (IIFS)
- Indian Citation Index (ICI)
- Dictionary of Research Journal Index (DRJI)

RESEARCH JOURNEY
MULTIDISCIPLINARY ONLINE RESEARCH JOURNAL

For Details Visit To : www.researchjourney.net

SWATIDHAN PUBLICATIONS

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) –0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

Exploratory Study on Factors Influencing Selection of Supermarket in Kolhapur City

Rohit Ravindra Landge
Asst. Professor,
Chhatrapati Shahu Institute of Business
Education and Research, Kolhapur.

Dr. Praveen P. Chavan
Asst. Professor,
Chhatrapati Shahu Institute of Business
Education and Research, Kolhapur.

Abstract:

Indian organised retailing is under changeover today through bringing a lot of changes in the formats of retailing to catering the needs of the customers. The customers enjoy the privilege of shopping the goods and services required by them in a variety of formats. The consumer behaviour is mostly influencing on various dimensions like product, price, facilities, promotion, convenience, services and physical appearance. The present study explores the factors influencing the selection of supermarket through using exploratory factor analysis in Kolhapur city. The empirical evidence of 154 customers reveals that product variety, product access, promotion, location; value-added facilities, price, refreshment facilities and reactive time.

Keywords: Consumer Behaviour, Retailing, Supermarket.

Introduction:

The Indian retail industry has emerged as one of the most dynamic and fast-growing industries due to the entry of several new players in the recent times along with rising income levels, growing aspirations, favorable demographics and easy credit availability. It constitutes over 10% of the country's Gross Domestic Product (GDP) and around 8% of the employment and is valued at USD 672 billion. Globally, India is a fifth-largest global destination in the retail space and is growing at a rate of 12% per annum (CARE Ratings, 2017).

Consumerism is increasing in India moving it to the fourth largest economy in respect to the purchasing power with USA, Japan, and China leading in order. Marketers predict customer needs, interpret them into products and pull the customers towards the products by manipulating the 4 Ps of marketing mix they are a product, price, place, and promotion. However, over the time, maintaining long-term relationships with customers emerged as an all-important mission for companies. There is an increase in competition among types of modern stores, grocery stores, supermarkets, discount stores, department stores, catalog showrooms; they are competing for the same customers. (Kotler & Keller, 2006). Therefore, the supermarket owners need to have not only the marketing strategies to give them an advantage over the competitors but also need to develop these in a manner that the uniqueness can be maintained. (THƯƠNG, February 2016.) The size and share of Indian hypermarket is expected to increase in the coming years, given the strong macroeconomic performance, favorable consumption pattern due to growing personal disposable income, rapid development of Tier II and III cities, availability of quality retail space

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION

Impact Factor - 3.452 ISSN - 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

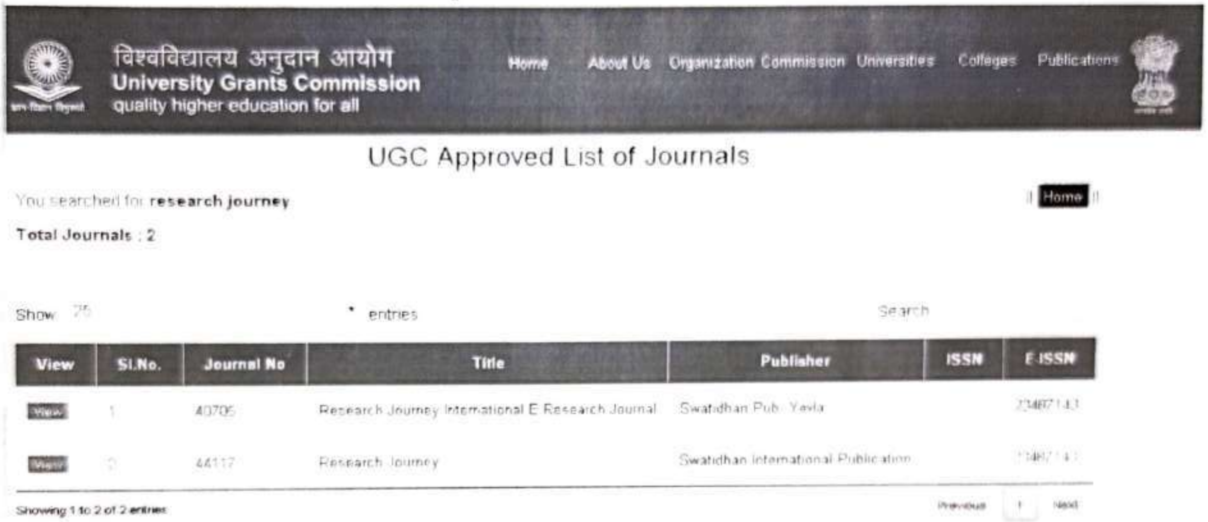
RESEARCH JOURNEY

Multidisciplinary International E-research Journal

PEER REFREED & INDEXED JOURNAL

April 2018

Special Issue - LVIII



Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

This Journal is indexed in :

- University Grants Commission (UGC) List No. 40705 & 44117
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- Universal Impact Factor (UIF)
- International Impact Factor Services (IIFS)
- Indian Citation Index (ICI)
- Dictionary of Research Journal Index (DRJI)

RESEARCH JOURNEY

For Details Visit To : www.researchjourney.net

SWATIDHAN PUBLICATIONS

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 58 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

A Study on Consumer Perception and Behaviour Towards online Buying

Renuka Turambekar
Asst. Professor,
Chhatrapati Shahu Institute of Business
Education and Research, Kolhapur.

Rohit Landge,
Asst. Professor,
Chhatrapati Shahu Institute of Business
Education and Research, Kolhapur.

Abstract:

With the increasing usage of digital media by consumers, more companies are using digital marketing to reach their target markets. The purpose of this study is to examine various reasons because of that people will attract for online buying of the product. This paper reports on a study that was undertaken to assess consumer awareness and use, of product review websites. Factors included the impact of e-opinion leadership, consumer susceptibility to informational influence, and gender on awareness and use of these websites. Participants completed a survey that solicited information on awareness of product review websites, extent of usage, as well as demographic information. Results indicated that young and self incoming people are more involved in online shopping the frequency of online purchase is also high & the mist important reason to buy a product on line is product variety & Price effective.

Keywords: consumer awareness, susceptibility, demographic, perceptions.

Introduction:

Indian consumers as a whole spend about 55% of the total consumption expenditure on food items. Consumers decide whether, what, when, from whom, where and how much to buy. They can avail various mediums to buy the products. Attitude toward online shopping and goal to shop online are not only affected by ease of use, usefulness, and enjoyment, but also by other factors like consumer individuality, situational factors, product distinctiveness, previous online shopping understanding and faith in online shopping.(1) Four major categories of determinants: perceived technology, perceived risk, company competency, and trust propensity made the online initial trust.(2) Internet is changing the way consumers shop and buy goods and services and has rapidly evolved into a global phenomenon. Many companies have started using the Internet with the aim of cutting marketing costs, thereby reducing the price of their products and services in order to stay ahead in highly competitive markets. Companies also use the Internet to convey, communicate and disseminate information, to sell the product, to take feedback and also to conduct satisfaction surveys with customers.(3) As in the case of traditional marketing in the past, most of the recent research and debate is focused on the identification and analysis of factors that one way or another can influence or even shape the online consumer's behavior; a good deal of research effort is focused on modeling the online buying and Decision-making process.(4)

Impact Factor – 3.452 ISSN – 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

Multidisciplinary International E-research Journal

PEER REFREED & INDEXED JOURNAL

April 2018

Special Issue - LIVI

विश्वविद्यालय अनुदान आयोग
University Grants Commission
quality higher education for all

Home About Us Organization Commission Universities Colleges Publications

UGC Approved List of Journals

You searched for **research journey**

|| Home ||

Total Journals : 2

Show 25 entries Search:

View	Sl.No.	Journal No	Title	Publisher	ISSN	E-ISSN
View	1	40705	Research Journey International E Research Journal	Swatidhan Pub. Yevla		23487143
View	2	44117	Research Journey	Swatidhan International Publication		23487143

Showing 1 to 2 of 2 entries Previous 1 Next

Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

This Journal is indexed in :
- University Grants Commission (UGC) List No. 40705 & 44117
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- Universal Impact Factor (UIF)
- International Impact Factor Services (IIFS)
- Indian Citation Index (ICI)
- Dictionary of Research Journal Index (DRJI)

RESEARCH JOURNEY
MULTIDISCIPLINARY ONLINE RESEARCH JOURNAL

For Details Visit To : www.researchjourney.net

SWATIDHAN PUBLICATIONS

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 56 : UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

INDEX

Our Editors have reviewed paper with experts' committee, and they have checked the papers on their level best to stop furtive literature. Except it, the respective authors of the papers are responsible for originality of the papers and intensive thoughts in the papers.

- Executive Editor-

Published by -

© Mrs. Swati Dhanraj Sonawane, Director, Swatidhan International Publication, Nashik

Email : swatidhanrajs@gmail.com **Website :** www.researchjourney.net **Mobile :** 9665398258

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) –0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

Overview of Green Supply Chain Management

Rohit Landge
Asst. Professor,
Chhatrapati Shahu Institute of Business Education & Research,
Kolhapur-416001

Viraj V. Jadhav
Asst. Professor,
Chhatrapati Shahu Institute of Business Education & Research,
Kolhapur-416001

Abstract:

The current pressure of global competition demanding faster, reliable, flexible and cheaper products is prompting organizations to adopt new strategies and improve their operations so that organizations need to maintain its competitiveness, and Supply Chain (SC) is currently the most reliable approach to achieve their goals. The green supply chain management (GSCM) is a commanding way to differentiate an organization from its competitors and it can greatly influence the plan success. With increased awareness to corporate responsibility and the requirement to meet the terms with environmental policy, green supply chain management (GSCM) is becoming increasingly important for Indian manufacturers. Organizations that have adopted GSCM practices with a focus on distribution activities have successfully improved their business and environmental performance on many levels. The growing importance of GSCM is motivated mainly by the mounting deterioration of the environment. One of the critical aspects to green supply chains is to improve both economic and environmental performance concurrently throughout the chains by creating long term buyer–supplier relationships. Major activities of the green supply chain management; namely Green Purchasing, Green Product Design, Green Material Management, Green Manufacturing Process, Green Distribution and Marketing, Reverse logistics are being covered throughout the paper.

Keywords: Green supply chain management (GSCM), Supply Chain (SC), Green Product Design, Green Material Management, Green Manufacturing Process, Green Distribution and Marketing.

1. Introduction:

In today's competitive world, it is very essential for organizations to continuously and consistently thrive for retaining their market share. Supply Chain comprises of the stream of products and services from the main manufacturer to the final end customer or customer. A supply chain has several components which can be as follows:

a. Raw materials manufacturers
b. Raw material supplier
c. Component and intermediate manufacturers
d. Final product manufacturers
e. Wholesalers and distributors
f. Retailers

A Supply Chain is well linked by transportation and storage activities and is integrated through information, planning and other integration activities. In this era of globalization, many large enterprises are moving away from their in-house vertically integrated structures to a crisp and composed Supply Chain Management. An organization in a supply chain focuses on activities

197 ~~222~~

'RESEARCH JOURNEY' *International E- Research Journal*
Impact Factor - (SJIF) – 6.261, (CIF) - 3.452(2015), (GIF)–0.676 (2013)
Special Issue 114 (A)- Recent Trends in Research
UGC Approved Journal
ISSN : 2348-7143
January-2019

Awareness and Steps to Improve Emotional Intelligence : An Analysis

Dr C. S. Kale
Asst. Professor
CSIBER Kolhapur
Pooja Kabadge
Research Scholar

Concept of Emotional Intelligence:

Emotional Intelligence is a term coined by two researchers: Peter Salovey and John Mayer which later gained popularity in the year 1995 in a book called "Emotional Intelligence" written by the author, psychologist and science journalist Daniel Goleman.

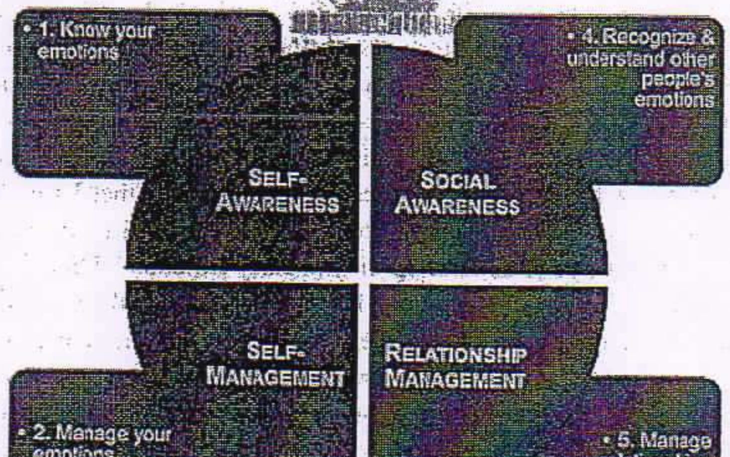
According to Daniel Goleman, "Emotional Intelligence is the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in us and in our relationships". He defined it as "Understanding one's own feelings, empathy, for the feelings of others and the regulation of emotion in a way that enhances living".

Emotional intelligence has various elements which help to reduce stress for individuals and organizations, by decreasing conflict, improving relationships, understanding and increasing stability, continuity and harmony

Domains of emotional intelligence :

Goleman identified the five domains of EI which are represented in four quadrants: two represent personal competence and two represent social competence.

Figure 1.1



Personal Competence:

This area of competence is concerned with three of the five domains Goleman referred to and is split into two quadrants: self-awareness and self-management.

- **The first quadrant deals with Self-awareness, Self-assessment and Self-confidence.**

'RESEARCH JOURNEY' International E-Research Journal
Impact Factor - (SJIF) – 6.261, (CIF) - 3.452(2015), (GIF)–0.676 (2013)
Special Issue 183 (A)- Multidisciplinary Issue
UGC Approved Journal

ISSN : 2348-7143
April-2019

A Review of Literature on Problems and Prospects of Tourism in India.

Mr. Hemant S. Mahadik
M. Phil. Student.
CSIBER, Kolhapur.
Mob. No. 9404924525
E-mail : hemantxce135@gmail.com

Dr. C. S. Kale
Asst. Professor.
CSIBER. Kolhapur.

Introduction

Tourism industry plays a key role in total economic growth of the country. Essentially. tourism helps in industrial growth and acquiring foreign exchange reserves. For a developing country like India which is on the path of modern economic growth through structured transformation of the economy. the value added effect of tourism is increasing. Moreover. India's tourism has witnessed reasonable growth in recent years, paying rich dividends to both consumers and producers. In this industry. there is now an almost assured channel of financial flow to the country. With its forward and backward linkages with a host of sectors like transport. education. health. hospitality. banking etc. India is all set to reap full potential of this sector. Hence. the efforts are made by the government under various five year plans. Tourism development has always been an integral part of the country's five year plans. The ministry of tourism has also played an important role in the development 06 the industry. by initiating advertising campaigns such as the incredible India campaign which promoted Indian culture and tourist attractions in a memorable way. The Indian Tourism Industry has helped growth in other sectors as diverse as horticulture, agriculture, handicrafts, construction and even poutry. India's governmental bodies have also made a significant impact on tourism by helping that each and every state of India have a corporation to administer and support issues related to tourism. Essentially. review of literature provides the guidelines from the past researchers and gives foundation to the theoretical framework for the present investigation. Moreover. the review of the past literature makes the researcher to get some understanding into the methods and procedures to be followed. Therefore, in this paper an attempt has been made by the researchers to review the past and present studies relating to this topic which are as follows.

The study Jayasheela and Hans V. Basil (2007) Stated that the increased spending by tourists generated substantial income for both public and private sectors. It expanded the tourism industry and increased higher rate than merchandise export. The employment. taxes and investment from manufacturing and transport services. banking. basic infrastructure are all enhancing tourism's potential and performance.

The study by Reheem A et.al (2001) study observed that tourisms economic benefits are in overages by the industry for various reasons. Business community. government and the public have recognized these benefits giving the industry greater respect.

The study Hans V. Basil (2015) on the topic entitled "Tourism in India Innovation and Development. Stated that Tourism Uniqueness should be clearly understand India's Preparedness for new challenges can be tested by growth coupled with quality changes tested by growth coupled with quality changes Tourist's safety and eco balance must receive priority in Tourism

'RESEARCH JOURNEY' *International E- Research Journal* | ISSN : 2348-7143
Impact Factor - (SJIF) – 6.261, (CIF) - 3.452(2015), (GIF)–0.676 (2013)
Special Issue 114 (A)- Recent Trends in Research | January-2019
UGC Approved Journal

Role of Women Entrepreneurship in Foundry and Hotel Industry in Kolhapur

Dr. C. S. Kale
Assistant Professor
CSIBER, Kolhapur

Mrs.Renuka . S.Turambekar
Research Scholar

Abstract :

Despite all the social hurdles, Indian women stand tall from the rest of the crowd and are applauded for their achievements in their respective field. The transformation of social fabric of the Indian society, in terms of increased educational status of women and varied aspirations for better living, necessitated a change in the life style of Indian women.

These women leaders are assertive, persuasive and willing to take risks. They managed to survive and succeed in this cut throat competition with their hard work, diligence and perseverance.

Women entrepreneurship must be molded properly with entrepreneurial traits and skills to meet the changes in trends, and challenges of global markets.

We always viewed that a smart woman can pick up a job any day, but if she becomes an entrepreneur she can provide a livelihood to 10 more women at least..!!

The unexplored talents of young women can be identified, trained and used for various types of industries to increase the productivity in the industrial and Service sector as well as the entire economy.

Key Words : Women entrepreneurship, transformation, persuasive, diligence and perseverance.

Introduction:

" There is no Chance for the welfare of the world unless the condition of women is improved ."----- **Swami Vivekanand.**

Today's business in a developing country like India is built around human capital is one of the valuable factors .Women empowerment is now widely recognised as a crucial step towards balanced development in any economy. And it is very much needed for a sustainable development. Investment in women can bring a tremendous change in the growth of the economy. Globalization and Liberalization encouraged women to come forward to become an entrepreneur and start new industries. Women across regions have started showing interest to be economically independent.A role of modern women is not confined to the traditional role of mother and house wife it is undergoing changes. She has begin to think of herself as an independent person, she is aware of her own identity, potentials and decision making capabilities. Interested women with creative and innovative ideas are coming forward to start the small and medium sized enterprises. A women entrepreneur is a person who is an enterprising individual with an eye for opportunities and an uncanny vision and having tremendous perseverance and above all a person who is willing to take risk .The need arises to study more women entrepreneurs as they are the important untapped source of economic growth and they create new jobs for themselves and others, having the ability to provide different solutions to

AAYUSHI INTERNATIONAL INTERDISCIPLINARY RESEARCH JOURNAL 148
(Peer Reviewed and Indexed Journal)
Special Issue No : 49 Impact Factor : 5.707 ISSN - 2349-638x

International Conference
On
"Advanced and Innovative Practices in Commerce & Management, Science & Technology, Humanities, Languages and Their Role in Achieving the Exponential Growth"

Date : 16th February 2019

Organised by

Shri Narayanrao Babasaheb Education Society's

SHRI VENKATESH MAHAVIDYALAYA, ICHALKARANJI

In collaboration with

SHIVAJI UNIVERSITY COMMERCE AND MANAGEMENT TEACHERS ASSOCIATION (SUCOMATA)

and

BVDU's INSTITUTE OF MANAGEMENT AND ENTREPRENEURSHIP DEVELOPMENT, (IMED) Pune

Web : www.venkateshcollege.com

INDEX

International Interdisciplinary Research Journal (AIIRJ) Special Issue: 49 ISSN 2349 -638x

CUSTOMER OPINION OF RETAIL SERVICES IN SELECTED CITIES

Dr. C. S. Dalvi
Associate Professor, CSIBER, Kolhapur

1) Introduction

Retail market In India is estimated to grow by 60% to reach US$ 1.1 trillion by 2020, factors considering rising income & lifestyle changes by the middle class and increasing connectivity through the internet. The growth of the overall retail market is 12% per annum. Organised trade would expand twice as fast at 20% per annum and traditional trade at 10%. The e-commerce market in India is a fast-growing market in the world. The primary cause is growing no. of internet users. E-commerce sales in 2017 were $39 billion. By 2026, Sales through the internet is expected to cross $ 200 billion by 2026. Estimated shoppers to the tune of 530 million by 2025, reliable telecom networks growth in India, customers can cope up with changing technology. Jio mobile service provider is an accelerating factor for internet usage in India in the last three years. Luxury retail market of India is expected to grow the US $ 30 billion by the end of 2018 from the US $ 23.8 billion in 2017. (2, IBEF 2018).Retail shop industry is an upcoming industry in India. The growth of the retail industry is because of changes in lifestyles, tastes and preferences of the customers. Some other factors like changes in awareness about brand & various services offered are responsible for the growth of the retail sector. Indian customers' expectations are increasing day-by-day than ever before. The middle class is growing in new India, and hence they demand a quality product and looking for a change. They are in a transition state of lifestyle. As a result, the customers are shifting from traditional shops to organised retail shops. They not only afford to spend money but also have a strong desire for uplifting their lifestyle.The article discusses about the various services provided by the retail stores in the selected cities, i.e. Kolhapur, Satara, Solapur and Sangli. The services such as billing procedure, customer care, help desk, grievance only are considered in the present article.

2) Objectives of Study

1) To understand the Indian market of the organised retail industry.

2) To study the various service aspects of Organised retail stores in selected cities of western Maharashtra.

3) To asses customer attitude and opinion about organised retail stores in selected cities.

6. Research Methodology of the Study

3) Collection of Data

Primary data was collected from the shoppers of the organised retail stores from Kolhapur, Solapur, Satara and Sangli cities. They were contacted at the retail stores and information was sought from them. One thousand customers of the retail stores were contacted at different times. 1000 customers were contacted by using stratified disproportionate sampling method.

4) Data Analysis and Interpretation

Table No. 4.1: Provision of Hassle Free Complaint Handling

City	Kolhapur		Solapur		Satara		Sangli		Total	
Opinion	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Strongly agree	13	5.2	45	18	69	27.6	45	18	172	17.2
Agree	89	35.6	108	43.2	59	23.6	126	50.4	382	38.2
Undecided	125	50	83	33.2	112	44.8	68	27.2	388	38.8
Disagree	23	9.2	10	4	7	2.8	8	3.2	48	4.8

Pimpri Chinchwad Education Trust's

S. B. PATIL INSTITUTE OF MANAGEMENT

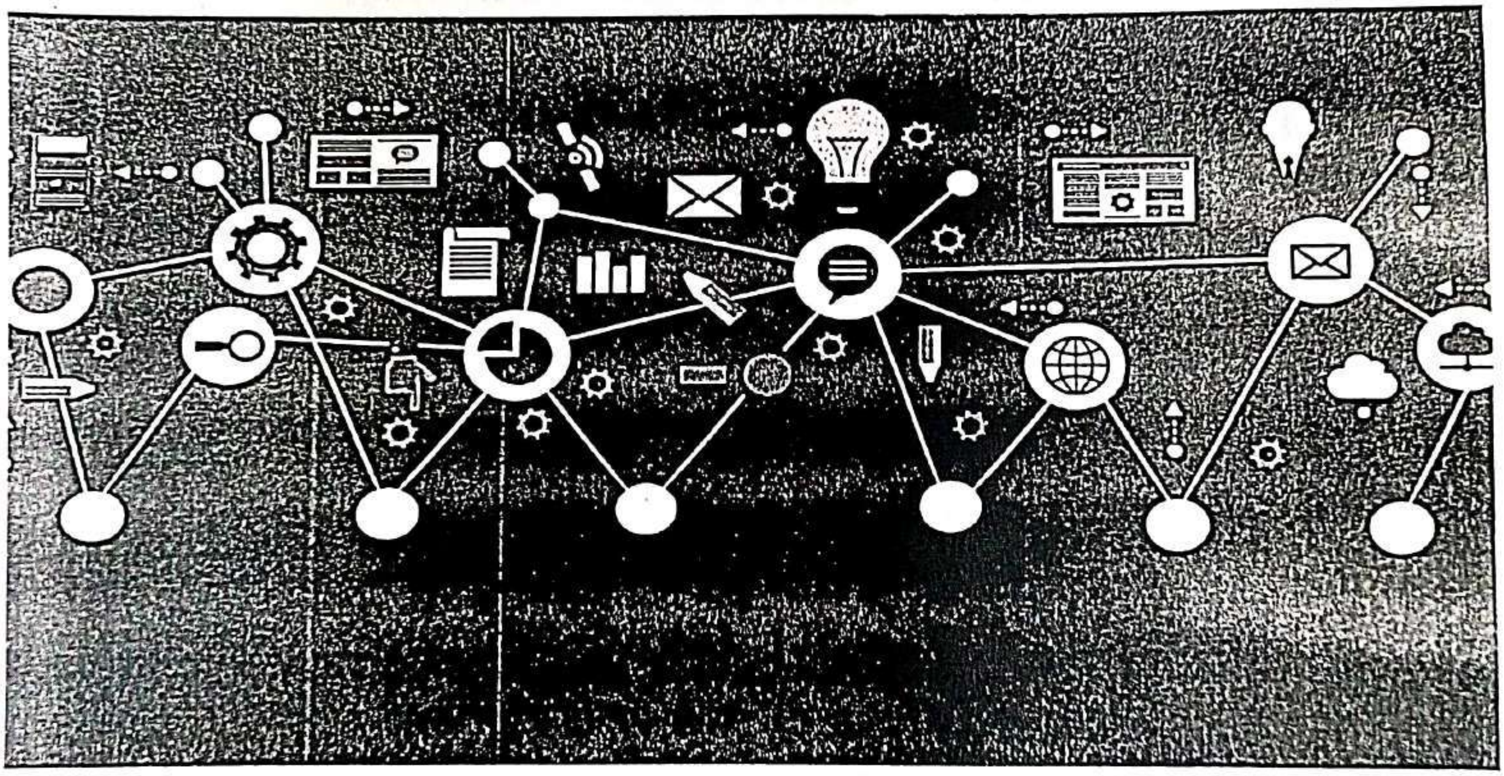
Seventh National Conference

On

"MANAGING RESOURCE THROUGH CREATIVITY FOR GENERATING OPPORTUNITIES IN 21ST CENTURY"

CONFERENCE PROCEEDINGS

18th and 19th January 2019



In association with

SAVITRIBAI PHULE PUNE UNIVERSITY

Under QIP Programme

Chairman	Chief Convener	Convener
Seventh National Conference	Seventh National Conference	Seventh National Conference
Dr. Daniel Penkar	Dr. Hansraj Thorat	Dr. Kirti Dharwadkar
Director, SBPIM		

SERVICE MEASUREMENT AT RETAIL STORES IN SELECTED CITIES

Dr. C. S. Dalvi
Associate Professor, CSIBER, Kolhapur
Email: drcsdalvi@siberindia.edu.in

(Sponsored Minor Research Project of ICSSR, New Delhi)

ABSTRACT

Retail Industry India is expected to grow at 10 per cent a Compound Annual Growth Rate (CAGR) of to $ 1.6 trillion by 2026 from $ 641 billion in 2016. Overall retail market of consumer is likely grow at the rate of 12 per cent per annum, retail though organized retail industry may grow at the rate of 20 per cent per annum as compared to the traditional retail or unorganized retail market which is likely to grow at the rate of 10 per cent.

Lifestyle in India is changing and the concept of 'value for money' is picking up local companies and local-foreign joint ventures are expected to more advantageously position than the purely foreign ones. Up and coming modern retail channels such as hypermarkets, supermarkets, convenience stores and discounters were unable to make a significant mark in grocery retailers' value due to a limited geographical spread in consumer reach. Department stores within mixed retailers were the forerunner in growth, being boosted by the introduction of lifestyle concept stores. The average Indian deserves consumption of good quality of products at prices he can afford. In a developing country like India, a major chunk of a consumer's expenditure is on retail products.

Keywords: *Retailing, modern retails, service, FDI, Unorganized retail, Customer. Facility*

1. Introduction

The term 'retailing' refers to any activity that involves a sale to an individual customer. Currently, Retailing is the buzzword in Indian Industry. The Indian retail industry has emerged as one of the most dynamic and fast-paced industries due to the entry of several new players. It accounts for over 10 per cent of the country's Gross Domestic Product (GDP) and around 8 per cent of the employment. India is the world's fifth-largest global destination in the retail space. Retail Industry in India is expected to grow at 10 per cent a Compound Annual Growth Rate (CAGR) of to $ 1.6 trillion by 2026 from $ 641 billion in 2016. Overall retail market of consumer is likely to grow at the rate of 12 per cent per annum, even though organized retail industry may grow at the rate of 20 per cent per annum as compared to the traditional retail or unorganised retail market which is likely to grow at the rate of 10 per cent. (India Brand Equity Foundation, 2018)

India's Business to Business (B2B) e-commerce market is expected to reach US$ 700 billion by 2020.India has replaced China as the most promising markets for retail expansion, supported by expanding economy, coupled with booming consumption rates, urbanizing population and growing middle class. India is expected to become the world's fastest growing e-commerce market, driven by robust investment in the sector and rapid increase in the number of internet users. Various agencies have high expectations about growth of Indian e-commerce markets. Indian e-commerce sales are expected to reach US$ 120 billion by 2020 from US$ 30 billion in FY2016. Further, India's e-commerce market is expected to reach US$ 220 billion in terms of gross merchandise value (GMV) and 530 million shoppers by 2025, led by faster speeds on reliable telecom networks, faster adoption of online services and better variety as well as convenience. The size of modern retail in India is expected to double to Rs 171,800 crore (US$ 25.7 billion) from Rs 87,100 crore (US$ 13 billion) in three years driven by Omni-channel retail. (India Brand Equity Foundation, 2018)

Lifestyle in India is changing and the concept of 'value for money' is picking up local companies and local-foreign joint ventures are expected to more advantageously position than the purely foreign ones. Up and coming modern retail channels such as hypermarkets, supermarkets, convenience stores and discounters were unable to make a significant mark in grocery retailers' value due to a limited geographical spread in consumer reach. Department stores within mixed retailers were the forerunner in growth, being boosted by the introduction of lifestyle concept stores.

2. Objectives of Study

1. To study opinion about organized retail stores in selected cities in western Maharashtra.
2. To know customer satisfaction level about the services provided by the retail stores.
3. To put forth sugg...

...national Journal of Trend in Scientific Research and Development (IJTSRD)
... March 2019 Available Online: www.ijtsrd.com e-ISSN: 2456 - 6470
Fostering Innovation, Integration and Inclusion Through Interdisciplinary Practices in Management

4G Wave of Mobile Services in India

Ms. Mamata Alias[1], Aishwarya Rammrao Desai[1], Dr. C. S. Dalvi[2]

[1]M. Phil. Research Scholar, [2]Associate Professor
[1,2]Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra, India

Organised By:
Management Department, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra

How to cite this paper: Ms. Mamata Alias | Aishwarya Rammrao Desai | Dr. C. S. Dalvi "4G Wave of Mobile Services in India" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Special Issue | Fostering Innovation, Integration and Inclusion Through Interdisciplinary Practices in Management, March 2019, pp.145-148, URL: https://www.ijtsrd.com/papers/ijtsrd23087.pdf

IJTSRD23087

ABSTRACT
Telecommunication industry is one of the most rising industry which evolved at faster rate in last 10-15 years. Recently, India is the world's second largest telecommunication market and still growing. Mobile economy in India is increasing very fast and will add significantly to India's GDP. 4G technology is originated through 1G, 2G as well as 3G technology. 4G technology is the indicator of brisk growth of wireless communication technologies. The growth of 4G technology generates new services which are useful for the customers for various purposes like internet accessing with high data rate, global roaming, videos anywhere, any time and at any place with full grown support for all other multimedia. 4G technology is a very encouraging generation of wireless communication that will change the people life to wireless world in coming days.

This paper deals with the current scenario of 4G mobile services. There are various competitors in the telecommunication market such as Bharati Airtel, Vodafone, Idea Cellular, Reliance Jio and BSNL. The current scenario of 4G mobile services which includes current market share of different companies, different schemes and offers provided to their customers in terms of mobile data, pricing, call rates, the growth of the companies and their marketing strategies. It also throws light on competitive edge over other service providers. Entry of reliance jio has made great turbulence in the telecommunication market by providing schemes like free internet, free calling, 4G network provide a serious threat to other competitor.

Due to this, Reliance Jio is preferable choice for all the customers. Other service providers are facing challenges and find difficulty to cope up with the new game in the communication market. Reliance Jio marketing strategies have captured the more market share as compared to other competitors. It is very difficult for others to survive in the market. The other competitors are trying to survive in the market by changing their marketing strategies, satisfy their customers demand and retain their customers and refrain to switch to Reliance Jio or any other competitor.

KEYWORDS: *4G, Internet, Data, Talk-time, SMS, calling, Volte*

I. INTRODUCTION

Mobile communication systems regenerated the way people communicate, joining together communications and movability. Wireless connectivity is almost everywhere as well as getting highly cheap even for people who are in the bottom of the pyramid. Capable and compact wireless technologies have not only rised but also evolved in order to fulfill the expectations of businesses as well as end users. The ability to communicate with people on the move has derived vigorously and was accepted by the people throughout the world. The number of mobile subscribers has increased excessively during the last decade. More than one million new subscribers per day have been added globally.

In the mid of 1980's the initial wireless telephone technology is referred to as 'First Generation' and it supports only voice services. The second generation is not only totally digital but also supports additional services like SMS (Short Message Services).The third generation of mobile technology came into picture acquire higher data rate and supports services such as mobile T.V., video calls, etc. The rapid growth of the wireless technology as well as internet created a new wireless communication channel named as 4G or forth generation technology with characteristics as interactive multimedia, personalized services, high definition mobile tv interactive games and high speed broadband internet.

International Journal of Trend in Scientific Research and Development (IJTSRD)
March 2019 Available Online: www.ijtsrd.com e-ISSN: 2456 - 6470

154

Fostering Innovation, Integration and Inclusion Through Interdisciplinary Practices in Management

A Study on Retailing in India: Growth and Challenges

Supriya Udaykumar Mogale[1], Dr. C. S. Dalvi[2]

[2]Associate Professor

[1,2]Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra, India

Organised By:
Management Department, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra

How to cite this paper: Supriya Udaykumar Mogale | Dr. C. S. Dalvi "A Study on Retailing in India: Growth and Challenges" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Special Issue | Fostering Innovation, Integration and Inclusion Through Interdisciplinary Practices in Management, March 2019, pp.95-97, URL: https://www.ijtsrd.com/papers/ijtsrd23073.pdf

IJTSRD23073

ABSTRACT
Retailing in India has several outstanding achievements as well as impressive growth during last few decades. Indian retail market is one of the top five retail markets in the world by economic value and also it is considered as one of the fastest growing retail markets in the world. Retailing in India is the most important pillar of its economy and accounts of about 10% of its GDP. Indian retail industry is classified into organized and unorganized sectors. There is a rapid development of retailing which leads to shifting of customers from unorganized to organized sectors and it is mainly because of changing behavior and preferences of consumers. This changing behavior of consumers is due to increased income and changed life styles. Now the customer is very much aware about the product and services. He is becoming very specific and conscious about getting services by the retailers. His expectations are increasing day-by-day. Customers want everything under one roof i.e. shopping, food and entertainment and hence retailing in India is developing very fast. This is paper fully based on secondary data. This paper provides information about role of organized and unorganized sectors in India. It also includes various formats of retailing, current scenario, growth and challenges of retail industry and the future prospects of retailing in India.

INTRODUCTION

The Indian Retail Industry is the fifth largest in the world and it is one of the fastest growing sectors in India. Retailing in India has several outstanding achievements as well as impressive growth during last few decades and it is one of the pillars of its economy. This is only because of rising income, changing life styles by middle class, and increasing digital connectivity. Each of the retail companies has their own unique strategies and offering in order to sustain and grow the business. Development of mega malls in India is also one of the most important aspects to the booming retail sector. No. of big players are entering in this field and competing to survive in the market but it is not very easy to stand in the competition and so only few managed to survive and taste the success.

The main reason behind this is a Customer. He is the king of the market. Customers are now very much aware about getting some products, brands or services provided by the companies. He is becoming more specific and conscious about getting proper services and his expectations are increasing day-by-day. Hence it is very much important to identify their actual expectations. There must be a gap between services provided by the company and actual expectations of the customers. That gap is to be identified and retailers have to minimize that gap. This will lead to increase the level of satisfaction of the customers.

Objectives

- To understand the concept of retailing in India
- To study the growth trends of Indian retail sector
- To identify the challenges faced by Indian Retail Industry

Research Methodology

This paper is based on secondary data

Indian Retail Sector: Current scenario

Indian Retail Sector is experiencing exponential growth with retail development taking not only in major cities and metros but also in tier II and tier III cities. There are various factors affect the growth in the retail market like changing demographic profile, increasing income, urbanization and changing tastes and preferences of the consumers. According to AT Kearney (2017), Global Retail Development Index (GRDI), India is at top position and got first rank among 3 developing countries in Retail Sector. Indian Retail is the fastest growing market in the world only because of its economic growth with 1.2 billion people. It accounts of abo

720 Degree Performance Appraisal Systems

Aishwarya M. Patil[1], Dr. C. S. Dalvi[2]

[1]Student, M.Phil., [2]Associate Professor

[1,2]Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra, India

Organised By:
Management Department, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra

How to cite this paper: Aishwarya M. Patil | Dr. C. S. Dalvi "720 Degree Performance Appraisal Systems" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Special Issue | Fostering Innovation, Integration and Inclusion Through Interdisciplinary Practices in Management, March 2019, pp.4-8, URL: https://www.ijtsrd.com/papers/ijtsrd23048.pdf

IJTSRD23048

ABSTRACT

Human resource (HR), the most important asset in any organization and its significance to any company is very well known accordingly. The picture in present scenario tells us that the overall performance of the company depends on its ability to observe the performance of its members. The specific measure on which an organization's performance depend, by using the same measure we can improve and optimize the employee's performance. The performance appraisal system plays very important role in human resource framework. This concept has stated in 20th century. It is the process of obtaining, analyzing and recording information about an employee to evaluate and improve their performance. This appraisal system has started from 90 degree to the 720 degree till date. Before the 720 degree appraisal system, the companies are using 360 degree system. But in modern management, the 720 degree appraisal system is about to work efficiently. It is an integrated method where the employee's performance is evaluated from 360 degree (Management, Colleagues, Self and Customers) and timely feedback is given. The performance is evaluated against the set targets. Therefore, we can state 720 degree appraisal as twice 360 degree appraisal. As the name suggests, the 720 degree performance appraisal is one of the recently introduced concept and the evaluation of the performance from all the aspects and gives timely feedback. In this paper, we are going to analyze and study the 720 degree performance appraisal system on various aspects.

1. INTRODUCTION

Performance appraisal conjointly call worker appraisal could be an methodology by which the job performance of an employee is evaluated in terms of quality, quantity, price and time. It is part of career development. Performance appraisals are regular reviews of employee performance within organizations. Any performance appraisal processes in following manner. Review the performance, judging the gap between actual and desired performance, strengthen the relationship and communication between superior – subordinates and management – employees, diagnose the strengths and weaknesses of the people therefore on determine the coaching and development wants of the longer term, provide feedback to the employees regarding their past performance and provide clarity of the expectations.

Any organization firstly thinks about its goals and aims at the effective solutions to achieve these goals. Therefore, in order to do this, an organization must monitor or measure performance review on the basis of pre-determined standards and timely recognition of the accomplishments that motivates the worker to perform higher on a daily basis. While 360 degree performance appraisal can be a far framed performance appraisal system observe in several organizations, recently in the modern management, 720 degree performance appraisal system is also gaining popularity. In 720 degree system, we provide a feedback after the original 360 degree appraisal.

The 720 degree analysis is rising as attainable different appraisal technique. Organizations are slowly however steadily realizing the requirement for this new system which is better than the existing 360 degree evaluation especially in terms of the focus of the evaluation and the involvement of the evaluators in the process. Now, recently Cadbury introduces '720-degree' feedback. This study is targeting the requirement and significance of 720 degree Performance appraisal within the fashionable business

Exploratory Study on Factors Influencing Selection of Supermarket in Kolhapur City

Article · April 2018

1 author:

Pravin P Chavan
CSIBER Kolhapur

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) –0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

Exploratory Study on Factors Influencing Selection of Supermarket in Kolhapur City

Rohit Ravindra Landge
Asst. Professor,
Chhatrapati Shahu Institute of Business
Education and Research, Kolhapur.

Dr. Praveen P. Chavan
Asst. Professor,
Chhatrapati Shahu Institute of Business
Education and Research, Kolhapur.

Abstract:

Indian organised retailing is under changeover today through bringing a lot of changes in the formats of retailing to catering the needs of the customers. The customers enjoy the privilege of shopping the goods and services required by them in a variety of formats. The consumer behaviour is mostly influencing on various dimensions like product, price, facilities, promotion, convenience, services and physical appearance. The present study explores the factors influencing the selection of supermarket through using exploratory factor analysis in Kolhapur city. The empirical evidence of 154 customers reveals that product variety, product access, promotion, location; value-added facilities, price, refreshment facilities and reactive time.

Keywords: Consumer Behaviour, Retailing, Supermarket.

Introduction:

The Indian retail industry has emerged as one of the most dynamic and fast-growing industries due to the entry of several new players in the recent times along with rising income levels, growing aspirations, favorable demographics and easy credit availability. It constitutes over 10% of the country's Gross Domestic Product (GDP) and around 8% of the employment and is valued at USD 672 billion. Globally, India is a fifth-largest global destination in the retail space and is growing at a rate of 12% per annum (CARE Ratings, 2017).

Consumerism is increasing in India moving it to the fourth largest economy in respect to the purchasing power with USA, Japan, and China leading in order. Marketers predict customer needs, interpret them into products and pull the customers towards the products by manipulating the 4 Ps of marketing mix they are a product, price, place, and promotion. However, over the time, maintaining long-term relationships with customers emerged as an all-important mission for companies. There is an increase in competition among types of modern stores, grocery stores, supermarkets, discount stores, department stores, catalog showrooms; they are competing for the same customers. (Kotler & Keller, 2006). Therefore, the supermarket owners need to have not only the marketing strategies to give them an advantage over the competitors but also need to develop these in a manner that the uniqueness can be maintained. (THƯƠNG, February 2016.) The size and share of Indian hypermarket is expected to increase in the coming years, given the strong macroeconomic performance, favorable consumption pattern due to growing personal disposable income, rapid development of Tier II and III cities, availability of quality retail space

ISSN : 2348-7143
April 2018

and recent entry of big industrial houses into retailing with focus on large store formats. This led to the development of super-supermarket or modern supermarket or Hypermarket. (Tabeck, June- 2014).

The Indian retail industry has emerged as one of the most dynamic and fast-paced industries due to the entry of several new players. The Indian retail trading has received Foreign Direct Investment (FDI) equity inflows totaling US$1.09 billion during April 2000–September 2017, according to the Department of Industrial Policies and Promotion (DIPP) (IBEF, 2018). The industry has exposed to intense competition. Entry of foreign players and Indian entrepreneurial has intensified the competition in the Industry. The customers have multiple options to select the supermarket to satisfy their needs. It has become immensely important to unfold the factors influencing the selection of a supermarket.

Objectives of The Study:

1. To Study the important factors in the selection of Supermarket.
2. To suggest, improve sales and functions in the departmental stores based on results.

Literature Review:

1. **(Tabeck, 2014)**The study conducted to understand the important factors for influencing purchase behaviour at Big Bazaar. The factor analysis result reveals that there are eleven factors that influence purchasing behavior at Big Bazaar. The factors are Product oriented, Affordability and Availability, Convenience, Easiness, Contract terms, Quality Products, Secure Information, Innovative Offers After sale service, Different Price ranges and Security and discounts. The research findings confirm that major reasons for customers purchasing in hypermarkets are, firstly, these are the one-stop shopping solutions for the needs and secondly, availability of product range.
2. **(Gomathi, Kishore, & Deepika, 2013)** The purpose of this paper is to find out consumer attitude towards Departmental stores a form of organized retail outlet in Erode city. The study found that customer satisfaction is independent to occupation and there is no relationship between perception for customer service and number of family members. Whereas satisfaction level of offers/Discounts is influenced by gender. The study conclude that customers are satisfied with the contributors made by departmental stores and they are interested in recommending it to other prospective customers.
3. **(Fatima & Rasheed, 2012)** the study is to identify the factors that affect the shoppers' loyalty towards shopping malls. Further the objective the study has tested a relationship between consumer loyalty factors and shopping malls performance. The study has found three attributes those are relevant to the shopping malls. They are Environment, Image and Convenience of shopping malls. All the three factors positively affect the consumer behavior or loyalty regarding shopping malls. And also influence the performance of the mall if any attribute is lacking in the mall. All the three factors positively affect the consumer behavior or loyalty regarding shopping malls.
4. **(Batra, 2014)**Indian Retail Market is going through a transition phase. With retail environment getting modernized and customers gradually shifting from the culture of shopping at small neighborhood Kirana stores to large hypermarkets. The share of organized retail in total retail market in India is growing at an impressive rate. The aim of the study was to identify the factors affecting consumer preference related to shopping at

ISSN : 2348-7143
April 2018

organized retail store. The study shows six major factors that the consumers prefer to enter the retail stores. The factors are Availability and variety Products Ambience, Service, Pricing, Quality and Promotions. The study has concluded that understanding changing in consumer preferences attracting customers, persuade them to make purchase and satisfy them to earn loyalty has become big challenge at front of retailers.

5. **(Wel, Hussin, Asiah, & Nor, 2012.)** Malaysian retail market has seen interesting growth of new types of retail outlets such as the hypermarkets and specialty stores in the last 15 years. The study focuses on the household-level shopping behavior across retail formats in Malasia. Factor analysis result reveals that seven factors play important role in retail selection decision by the consumer those factors are Store Personnel and Physical Characteristics of the Store; Advertising by the Store; Store Convenience & Merchandise Selection; Convenience of Reaching the Store; Friends and Store; Product Variety & Quality; Services Offered by Store. The study has concluded customer shows polygamous loyalty as they purchase from hypermarket as well as various other retail formats.
6. **(Ariyanayagam & Ragel, 2014)** This study provided an in-depth look into the purpose of shopping, level of shopping enjoyment, level of leisure shopping, and demographic factor influences in retail environment. Customers feel that shopping is one of their favorite leisure activities. Enjoyment is a major component for leisure shoppers. the major factors affecting leisure shopping with reference to recreational facilities, location of store, shopping behavior, store loyalty, product attributes, services, brand value, perceived values and price. the growth of online shopping has also generated considerable interest
7. **(C.R.Mathuravalli,June2013)** In his Ph.D. research have Investigated the Consumer Preferences Towards Store Brands Purchase In Madurai District, his research mainly focuses on identify the consumers' perception and various parameters that influences consumer's purchase decisions the store choice behaviour towards stores, store brands and store loyalty in the Madurai district. He identifies that value for money, wide range of promotional offers and extensive varieties of products are the important store choice attributes. He also found that there is positive association exists in store image, consumer satisfaction and store loyalty but not with store brands in Madurai.
8. **(Wornchanok Chaiyasoonthorn And Watanyoo Suksa-Ngiam, December 2011)** in their research study "Factors Influencing Store Patronage: A Study of Modern Retailers in Bangkok Thailand" aiming on investigating what factors affect Thai customers purchasing goods and services from such types of retail stores in Bangkok, Thailand. He founds through study that factors correlated with purchase of goods and services from modern retail stores were distance from home, distance from workplace, purchase intention, customer satisfaction, perceived service quality, personal income, and household income. Also conclude that to create a predicting equation only three factors: distance from workplace, purchase intention, and personal income could be used.

Research Methodology:

Data Collection:

The study is exploratory in its nature. It intends to explore the factors the factors influencing the selection of supermarket. To achieve the stated objective primary data was

ISSN : 2348-7143
April 2018

collected through self-designed structured questionnaire. The questionnaire comprises of scales to assess the factors they consider while the selection of a supermarket. To unfold the important factors customer consider while the select supermarket, list of items were identified and customers were requested to grade the items at five-point category scale, where 1 represents highly unimportant and 5 highly important.

Sampling Design and Sample Size:

The study is conducted at D-Mart, Big Bazaar, Star Bazaar and Lucky Bazaar at Kolhapur city. Total customers visiting these supermarkets are the population under the study. The population under study is infinite in its nature. The customer visited these supermarkets and willing to fill up the questionnaire is the sample unit under the study. Hence sampling method for the study was convenience sampling. Customers were requested to fill-up the questionnaire once they availed the services at these supermarkets and their payments session is over, so as to get the customer's response entire experience at the outlet. Total 289 respondents have filled the questionnaire and it is the sample size of the study.

Data Analysis:

For analysis MS office Excel and SPSS 20.0 was used. To understand the factors the factors influencing the selection of supermarket principle component analysis was run on the scale prepared to understand the factors influencing the selection of supermarket.

Statistical Tools:

1. To measure the sampling adequacy & relationship among variables KMO and Bartlett's Test were conducted.
2. To analyze the data factor analysis were done to identify the important factors.

Data Analysis and Interpretation:

The objective of this research was to identify the factors influencing the selection of Supermarket. Factor analysis was used to on the scale prepared to identify the factors in selecting of a supermarket. Factor analysis is a data reduction statistical technique that allows simplifying the correlation relationships between numbers of variables. In order to establish the strength of the factor analysis solution, it is essential to check the validity of the data. It is done with the Kaiser-Meyer-Olkin (KMO) and Bartlett's Test. The Kaiser Meyer Olkin test is to be used for measuring sampling adequacy. The KMO statistic varies between 0 and 1. For the application of factor analysis, the value of KMO statistics should be greater than 0.5. The KMO statistics compare the magnitude of observed correlation coefficients with the magnitudes of partial correlation coefficients. A small value of KMO shows that correlation between variables cannot be explained by another variable.

Bartlett's test is used to show the relationship between variables. It also tests that the correlation matrix is an identity matrix. An identity matrix is a matrix in which all of the diagonal elements are 1 and all off-diagonal elements are 0. The correlation matrix is not an identity matrix. It checks the hypothesis that the correlation matrix of variables is insignificant.

Table No.1: Factor Analysis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.790
Bartlett's Test of Sphericity	**Approx. Chi-Square**	1582.514
	df	253
	Sig.	.000

Here from table No. 1, it is identified that the KMO statistics is0.790, it is well above 0.5. It indicates that factor analysis could be used for the given set of data. Further, Bartlett's test of Sphericity testing for the significance of the correlation matrix of the variables indicates that the correlation coefficient matrix is significant as indicated by the p-value corresponding to the chi-square statistics. The p-value is 0.000, which is less than 0.05, the assumed level of significance, indicating the rejection of the hypothesis that the correlation matrix of the variable is insignificant. It indicates that factor analysis could be used for the given set of data. Both the above test indicates that data is suitable for conducting factor analysis.

The above table shows all the factors extractable from the analysis along with their Eigenvalues, the percent of variance attributable to each factor, and the cumulative variance of the factor and the previous factors. To choose the criteria of Eigenvalues over 1 is used. From the above table, it is identified that there were eight factors with Eigen values greater than1.

Table No.2: Factor Loading for Influencing Factors

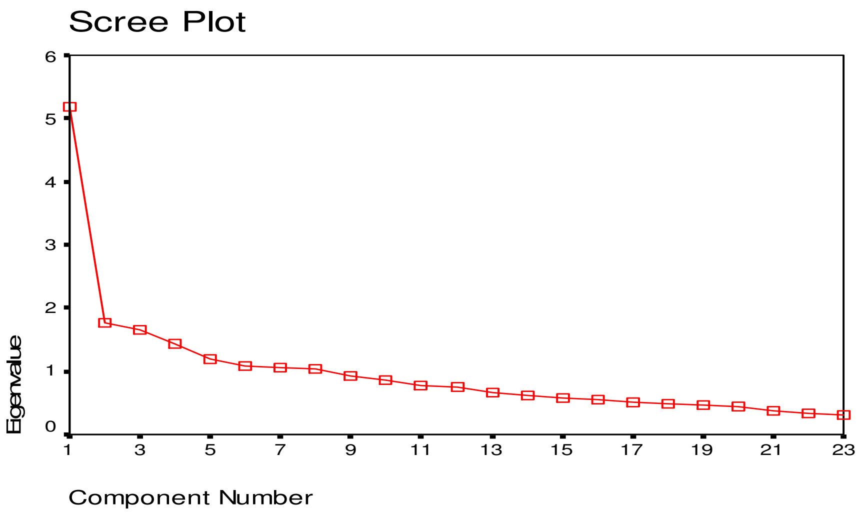
Total Variance Explained									
	Initial Eigenvalues			Extraction Sums of			Rotation Sums of Squared		
Compo-nent	Total	% of Varian	Cumulative %	Total	% of Varianc	Cumulative %	Total	% of Varian	Cumulative %
1	5.191	22.571	22.571	5.191	22.571	22.571	2.35	10.216	10.216
2	1.758	7.645	30.216	1.758	7.645	30.216	2.043	8.884	19.099
3	1.644	7.147	37.363	1.644	7.147	37.363	1.846	8.028	27.127
4	1.427	6.202	43.565	1.427	6.202	43.565	1.797	7.811	34.938
5	1.193	5.187	48.752	1.193	5.187	48.752	1.772	7.706	42.644
6	1.088	4.729	53.481	1.088	4.729	53.481	1.685	7.328	49.971
7	1.058	4.6	58.081	1.058	4.6	58.081	1.46	6.346	56.318
8	1.043	4.534	62.615	1.043	4.534	62.615	1.448	6.297	62.615
9	0.919	3.994	66.609						
10	0.855	3.716	70.325						
11	0.763	3.316	73.641						
12	0.743	3.229	76.87						
13	0.654	2.842	79.712						
14	0.624	2.715	82.427						
15	0.576	2.502	84.929						
16	0.561	2.44	87.369						
17	0.517	2.246	89.615						
18	0.475	2.066	91.68						
19	0.465	2.022	93.703						
20	0.433	1.881	95.584						
21	0.378	1.643	97.226						
22	0.33	1.436	98.662						
23	0.308	1.338	100						
Extraction Method: Principal Component Analysis.									

Table No.2 shows all the factors extractable from the analysis along with their Eigenvalues, the percent of variance attributable to each factor, and the cumulative variance of the factor and the previous factors. To choose the criteria of Eigenvalues over 1 is used. From the above table, it is identified that there were eight factors with Eigenvalues greater than1.

The Eigenvalues for eight factors are 5.191, 1.758, 1.644, 1.427, 1.193, 1.088, 1.058 & 1.043 respectively. The percentage of the total variance is used as an index to determine how well the total factor solution accounts for what the variables together represent. The index for the present solution accounts 62.61 percent of the total variations for customers post-purchase experience. It is pretty good extraction as it can economize on the number of factors (from twenty three to eight factors). The percentage of variance explained by factor one to eight for selection of supermarket are 22.571, 7.645, 7.147, 6.202, 5.187, 4.729, 4.6 and 4.534.

Scree Graph

Graph No.1



A graph that plots the Eigenvalues against factors is called a screen plot. The below screen plot is useful for determining how many factors to retain. The point of interest is where the curve starts to flatten. It can be seen that curve begins to flatten between factor 8 and factor 9 and also the Eigenvalue for the factor 9 is less than one. So, only 8 factors have been retained which have Eigenvalue greater than one.

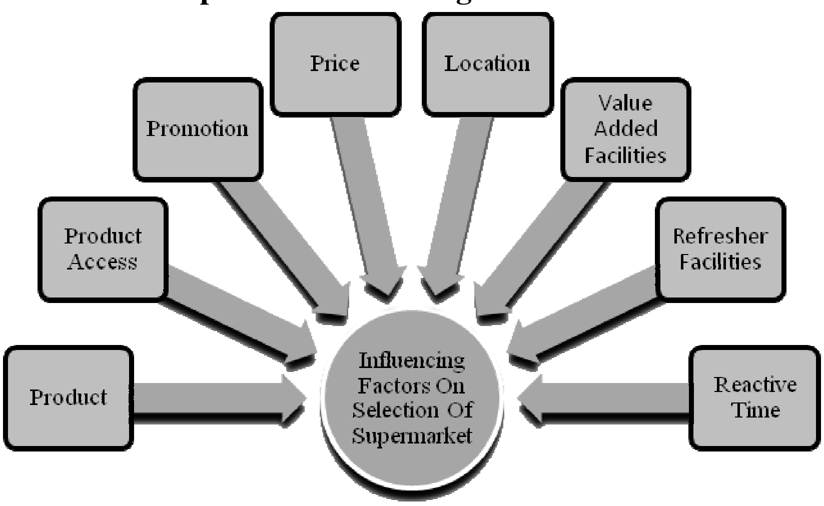
Table No. 3 shows the loadings of the twenty-three variables on eight factors extracted which influence on the selection of supermarket in Kolhapur City. The higher the absolute value of the loading, the more the factor contributes to the variable. Based on the pattern of factor loading, labels were assigned to the factors. So the table & chart reveals that Product Variety, Product Access, Promotion, Location, Value Added Facilities, Price, Refresher Facilities & Reactive Time are a most influencing factor in the selection of supermarket in Kolhapur City.

Table No.3: Rotated Component Matrix:

Sr.No.	Variables	Loaded Score	Factor Name
1	Product with Gifts and Discount Vouchers.	0.4877	**Product**
2	The range of choice in price	0.7278	
3	Variety and range of product	0.7241	

4	Quality of product offered	0.6832	**Variety**
5	Guarantee and warranty of the product	0.6811	**Product Access**
6	Stock availability of the product	0.6411	
7	Visibility of the product	0.7100	
8	Number of Trolleys and baskets	0.5568	
9	Seasonal offers	0.7571	**Promotion**
10	Announcement of offers	0.7318	
11	Information in Leaflets & pamphlets	0.6007	
12	Location of supermarket	0.7544	**Location**
13	Accessibility of supermarket	0.8458	
14	Door Delivery Facility	0.5537	**Value Added Facilities**
15	ATM facility	0.7597	
16	Food court facility	0.6680	
17	Price level	0.7649	**Price**
18	Discount received on M.R.P.	0.7381	
19	Value for money	0.5821	
20	Washrooms Facility	0.7050	**Refreshment Facilities**
21	Hygienic drinking water	0.6054	
22	Parking facility	0.8394	**Reactive Time**
23	Billing time	0.4138	

Graph No.2 Influencing Factors



Discussion:

Eight factors have been extracted. These are the factors influence on selection of supermarket The factors are discussed below:

ISSN : 2348-7143
April 2018

Factor 1: Product Variety

It is the most vital factor which explains 22.571 percent of the variation and this factor has four significant variables such as Variety of Product provided with Gifts and Discount vouchers (0.4877), Range of choice in price (0.7278), Variety and range of product (0.7241) & Quality of product offered (0.6832). This variable mostly influences in the selection of the supermarkets per the respondent's perception.

Factor 2: Product Access

There are four loads to this factor of which influence on selection The variables that fall under this factor are: Guarantee and warranty of product (0.6811), Stock availability of the product (0.6411), Visibility of the product (0.7100), Number of Trolleys and baskets & (0.5568) This factor is extracted as the second most important factor which accounts for 7.645 percent variation.

Factor 3: Promotion:

This is a third important factor in the selection of supermarket, the variables that fall under this factor are Seasonal offers (0.7571), Announcement of offers (0.7318), Information in Leaflets & pamphlets (0.6007) with 6.202 percent of the variation in perception.

Factor 4: Location:

Another important factor as per the respondent's perception is the location of the supermarket there are three items assigned for this factor those are Location of the supermarket (0.7544), Accessibility of supermarket (0.8458) & Door Delivery Facility (0.5537).

Factor 5: Value Added Facilities:

The fifth important factor while the selection of supermarket is all those value-added facilities that supermarket are providing to the customers to make comfortable purchasing in the supermarket the variable under this are Door Delivery Facility (0.5537), ATM facility (0.7597) & Food court facility0.6680

Factor 6: Price:

This is the next important factor, which influences the respondent's perception towards the selection of supermarket with the variables Price level (0.7649), Discount received on M.R.P. (0.7381) & Value for money (0.5821) with 4.729 percent variation.

Factor 7: Refreshment Facilities:

This is another important factor contributing to the selection of supermarket Washrooms Facility (0.7050) & Hygienic drinking water (0.6054) with 4.6 percent variation in perception.

Factor 8: Reactive Time:

The last factor which is extracted by factor analysis which influences on the selection of supermarket is the reactive tile with the variables are billing time(0.4138) & Parking facility (0.8394) with 4.534 percent variation in perception.

Conclusion:

The evolution of the supermarket & hypermarket is has been started with the catering & fulfilling the maximum need of the customer under one roof through this concept is evolved the industry has to upgrade with the change in the dynamism of consumer buying behavior. For that

Supermarket should continuously update & maintain the variety of the products with sufficient stock level with energetic promotional activities, attracts the customer by different offers and implement new techniques to increasing the volume of, accurate product mix will increase the flash sale of the unsealed products & maintaining the facilitates which increase the comfort level Supermarket in Kolhapur will grab the larger amount of market share.

Bibliography:

1. Ariyanayagam, S., & Ragel, V. R. (2014). Leisure Shopping in the Supermarket Setup: A Behavioral Study. The IUP Journal of Marketing Management, 38-48.
2. Batra, A. (2014). Factors Influencing Consumer Purchase Decisions at Organized Retail Stores in New Delhi. INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH & DEVELOPMENT , 249-253.
3. Fatima, H., & Rasheed, M. (2012). Determining the Factors affecting Consumer Loyalty. Journal of Management and Business Studies .
4. Gomathi, ,. R., Kishore, ,. S., & Deepika, R. (2013). A Study on Customer Satisfaction towards Departmental Stores in Erode City. International Journal of Engineering and Management Research , 38-41.
5. Kanyi, N. I. (April 2010). Factors Influencing Consumer Choice Of Supermarkets In Nairobi, Kenya. School Of Business Kenyatta University .
6. Kotler, P., & Keller, K. L. (2006). Marketing Management, 12nd ed. Upper Saddle River: Pearson Education.
7. R.Gomath, S.Kishore, & R.Deepika. (October-2013). A Study on Customer Satisfaction towards Departmental Stores in Erode City. International Journal of Engineering and Management Research, Volume-3, Issue-5 .
8. Tabeck, P. S. (2014). Study on Factors Influencing Purchase Behaviour at Big Bazaar. Journal of Management Sciences and Technology , 10-14.
9. Tabeck, P. S. (June- 2014). Study on Factors Influencing Purchase Behaviour at Big Bazaar. Journal of Management Sciences and Technology 3 .
10. THƯƠNG, N. T. (February 2016.). Factors Influencing Customer Satisfaction Towards Supermarkets In Thai Nguyen City, vol. Iv, issue 2. International Journal Of Economics, Commerce And Management .
11. Wel, C. A., Hussin, S. R., Asiah, N., & Nor, S. M. (2012.). Important Determinant of Consumers' Retail Selection Decision in Malaysia. World Review of Business Research , 164 - 175.

Research Expo International Multidisciplinary Research Journal
ISSN: 2250 - 1630
Volume - 8, Issue - 4, April - 2018
Available Online at http://www.researchjournals.in
Quality Impact Factor: 5.93 (CARS)
U.G.C. Approved International Refereed Research Journal

ASSESSING THE ROLE OF CUSTOMER SATISFACTION IN ATTAINING CUSTOMER LOYALTY: A STUDY OF FAST FOOD RESTAURANT IN KOLHAPUR CITY.

Ritesh Shinde[1], Dr. Pravin Chavan[2], Dr. M. M. Ali[3]

[1]*Post Graduate Student Chh. Shahu Institute of Business , Education & Research, Kolhapur*
[2]*Assistant Professor, Chh. Shahu Institute of Business, Education & Research, Kolhapur.*
(Corresponding Author) pravin.chavan1983@gmail.com
[3]*Director, Chh. Shahu Institute of Business , Education & Research, Kolhapur*

ABSTRACT

Fast food refers the food that sold in a restaurant or store with preheated or precooked ingredients and served to the customer in a packaged form for take-out/take-away. India's growing middle class and their changing food habits offer unprecedented growth opportunities to the quick-service restaurant industry. To reap the benefits of Indian market many global brands have entered the market. In a competitive marketplace, customer satisfaction is seen as a key differentiator and important marketing objectives to be achieved. Customer satisfaction is the customers' evaluation of goods or services in terms of whether that goods or services have met his needs and expectations. Numerous studies show the positive and significant relationship between customer satisfaction and customer loyalty. Besides, there are studies indicating customer satisfaction is only one antecedent of customer loyalty. The present study explores components of customer satisfaction through using exploratory factor analysis at Rolls Mania a fast food service restaurant at Kolhapur City. The empirical evidence of 154 customers reveals that dining experience; accessibility, convenience & affordability and product test are the important components of customer satisfaction. The regression analysis result reveals significant relationship between customer satisfaction and customer loyalty.

KEYWORDS: Fast food restaurant, Customer satisfaction & Customer Loyalty.

INTRODUCTION

Fast food, the term was first defined by Merriam–Webster dictionary in 1951. Fast food refers the food that sold in a restaurant or store with preheated or precooked ingredients and served to the customer in a packaged form for take-out/take-away (Merriam–Webster dictionary). Fast food restaurants are traditionally separated by their ability to serve food via a drive-through (Dube, 2017). Fast food restaurants are also known as quick serve restaurants (QSR) (KPMG India, 2016).

According to the report, global fast food market was valued at over USD 539.63 billion in 2016, is expected to reach above USD 690.80 billion in 2022 and is anticipated to grow at a CAGR of slightly above 4.20 percent between 2017 and 2022 (Zion Market Research, 2017). India is not distanced from growth story of QSR global market. CRISIL, India's largest independent and integrated research house, estimated that Indian QSR Industry accounts for 34 billion dollars in 2012. CRSIL predicted, Indian

Quality Impact Factor : 6.89 (CARS)

U.G.C. Approved International Refereed Monthly Research Journal

Quest
International Multidisciplinary Research Journal

ISSN : 2278 - 4497 http://www.researchjournals.in

Volume – 7, Issue – 2
February – 2018

Published by
Publish World
Anand, Gujarat (India)
http://www.publishworld.org

Contents

Quest International Multidisciplinary Research Journal
ISSN: 2278 - 4497
Volume - 7, Issue - 2, February, 2018
Available Online at http://www.researchjournals.in
Quality Impact Factor: 6.89 (CARS)
U.G.C. Approved International Refereed Research Journal

DIRECT BENEFIT TRANSFER THROUGH AADHAAR: A BOON FOR AAM ADMI

Mr. Krishnat H.Chougale[1], *Dr. M.M.Ali*[2]
[1]*Ph.D. Student, Shivaji University, Kolhapur, Maharashtra (India)*
[2]*Director, CSIBER, Kolhapur, Maharashtra (India)*

ABSTRACT

A landmark phase direct benefit transfer scheme where the subvention amount will go directly into the aadhaar linked bank accounts of the beneficiaries. It is a poverty reduction measure in which government subsidies, pension scheme benefit and other benefits are given directly to the poor in cash rather than in the form of subsidies. The paper contains brief view on the benefits of the schemes which government reach out to identify beneficiaries and can plug leakages. As currently, ration shop owners divert subsidized kerosene to open market and make fast buck. Such Leakages could stop. The scheme will also enhance efficiency of welfare schemes. Implementation of the scheme strategy where money is directly transferred into aadhaar linked bank accounts of beneficiaries. LPG and kerosene subsidies, pension payments, scholarships and employment guarantee scheme payments as well as benefits under other government welfare programs will be made directly to beneficiaries.

KEYWORDS: Aadhaar, Direct Benefit Transfer, UIDAI

INTRODUCTION

The Direct Benefit Transfer (DBT) system was launched in January, 2013 in 20 districts covering scholarship and social security pensions.DBT is an attempt to change the mechanism of transferring subsidies launched by government of India on 1st January 2013. This program aims to transfer subsidies directly to the people through their aadhaar linked bank accounts. It is hoped that crediting subsidies into bank accounts will reduce leakages, delay, etc. The DBT system is an experiment in delivering service to citizens. It provides the guarantee that the funds are received only by the beneficiaries. It also ensures that the funds are withdrawn by the beneficiaries themselves. The amount is dynamic which is proposed and already sanctioned through DBT system.

REVIEW OF LITERATURE

(Thakkar & Vyas, 2015), concluded in research paper published in International Multidisciplinary Research Journal on Direct Cash Benefit Transfer Scheme in India, that the Direct Cash Benefits Transfer policy, introduced in January, sees the poor receiving cash payments directly in their bank accounts for pensions and scholarships. The aim is to stop the vast leakage and siphoning of welfare schemes worth thousands of crores. Eventually, the plan is for all subsidies on fuel, food and fertilizers to be deposited directly in the accounts of beneficiaries, using the Aadhaar scheme, which assigns a unique biometric identity number to every citizen. Only those with a UID and a bank account are able to receive direct cash transfers from the government for their entitlements.

Impact Factor – 3.452 ISSN – 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

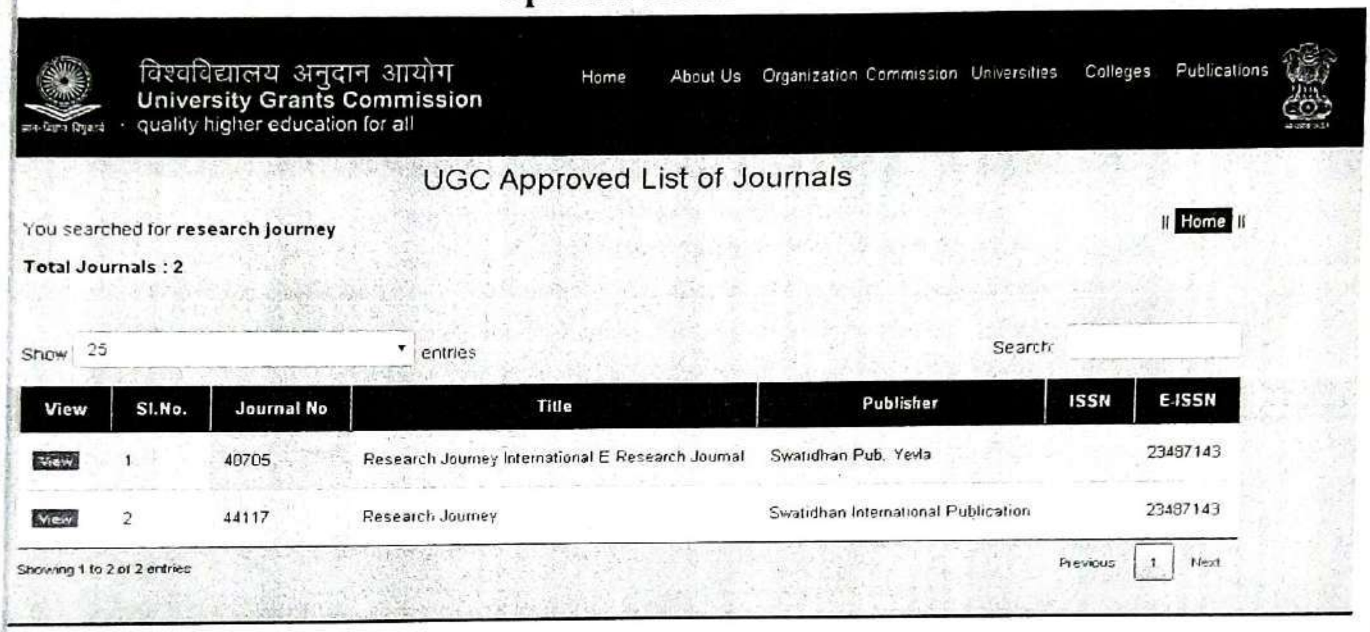
RESEARCH JOURNEY

Multidisciplinary International E-research Journal

PEER REFREED & INDEXED JOURNAL

April 2018

Special Issue - LIVI


विश्वविद्यालय अनुदान आयोग
University Grants Commission
quality higher education for all

Home About Us Organization Commission Universities Colleges Publications

UGC Approved List of Journals

You searched for **research journey**

Total Journals : 2

|| Home ||

Show 25 entries Search:

View	Sl.No.	Journal No	Title	Publisher	ISSN	E-ISSN
View	1	40705	Research Journey International E Research Journal	Swatidhan Pub. Yevla		23487143
View	2	44117	Research Journey	Swatidhan International Publication		23487143

Showing 1 to 2 of 2 entries Previous 1 Next

Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

This Journal is indexed in :
- University Grants Commission (UGC) List No. 40705 & 44117
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- Universal Impact Factor (UIF)
- International Impact Factor Services (IIFS)
- Indian Citation Index (ICI)
- Dictionary of Research Journal Index (DRJI)

For Details Visit To : www.researchjourney.net

SWATIDHAN PUBLICATIONS

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) –0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

INDEX

Our Editors have reviewed paper with experts' committee, and they have checked the papers on their level best to stop furtive literature. Except it, the respective authors of the papers are responsible for originality of the papers and intensive thoughts in the papers.

- Executive Editor-

Published by -

© Mrs. Swati Dhanraj Sonawane, Director, Swatidhan International Publication, Nashik

Email : swatidhanrajs@gmail.com Website : www.researchjourney.net Mobile : 9665398258

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

Environmental Management in Sugar Industries in Kolhapur and Sangli Districts : A Comparative Study

Dr. M. M. Ali
Director
CSIBER, Kolhapur

Dr. G. Haresh
Associate professor
CSIBER, Kolhapur

Introduction :

Global environmental change has become as major issue of concern among academicians, specific regions have thrown up specific problems and they cannot be soloed in a global or universal manner but each solution has to be area specific and problem specific. There has been a tendency among the environment conscious to concentrate mainly on visible environmental Hazards and their impacts. Management Scientists consider invisible impacts, some of which can be measured in physical forms. These include the quantities and qualities of waste water summing into as river, air pollution and noise pollution at the workplace or in the vicinity of a plant. In economic throes, this tends to be described as social costs or externalities of private enterprise.

Sugar industry is one of the largest consumer goods industries in the economic consumer goods industries in India and plays an important role in the economic development of the country. It also forms as strong base for the development of the rural economy through backward and forward linkages. Thus the industry has as great potential for providing employment as well as meeting the demand for sugar in the country. Sugar industry is the largest agro based industry located in rural Indian in Maharashtra there are some cooperative sugar factories sum very successfully. The sugar and private sugar factories are playing a vital role in the development of Maharashtra.

The industrial waste and the contaminated water are being diverted towards the rivers and canals without much further treatment. Therefore, the hazardous material thrown out of these industries is causing air pollution, noise pollution and water pollution. Similar is the case of sugar factories in India. The sugar industry is responsible for more biodiversity loss than any other crop, due to its destruction of habitat to make way for plantations, its intensive use of water for irrigation, its heavy use of agricultural chemicals and the polluted waste water that is routinely discharged in the sugar production process. Keeping the above points in mind the researchers made an attempt to study the topic entitled, Environmental management in sugar industries in Kolhapur and Sangli Districts : A comparative study.

2. Objectives of the Study

The present study the following objectives.

A. To study the process, inputs used and waste generation in the production of white sugar.
B. To study the attitude of the society towards the Environmental Degradation due to growth of sugar Industry in Jodhpur and Sangli Districts.
C. To examine the intensity of the Environment management practices adopted by the sugar industries in the study area.
D. To suggest the remedial measures for efficient functioning of the sugar industry at large.

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

A Review of Literature on Gold Buying Behaviour in India

Vinay Kalyan Kamble
M. Phil. Student,
CSIBER, Kolhapur.

Dr. M. M. Ali
Director, CSIBER, Kolhapur.

Introduction :

Essentially, Consumer behaviour refers to how and why people make the purchase decisions they do. Infect, marketers make efforts to understand this behavior, so they can better formulate appropriate marketing stimulus that will result in reseal sales and brand loyalty. Marketing profession is responsible for the variety of goods on the markets. The skill of evaluating and influencing consumer behavior is foremost in determining which marketing efforts will be used and when. Consumer buying behavior in Jewellery industry can be calculated on the internal parameters such as popularity of the brand, trust in the brand, impact of any occasions such as festivals, Birthday, Marriage, engagement, etc. celebrity Endorsement, promotion, Brand name, Exhibitions, Launch of new collections.

As far as Gold, is concerned, gold, is a unique precious metal with which mankind has had a long and intimate relation. For Indians gold is more tan a precious metal. From time immemorial Indians have considered gold as a symbols of purity, luxury, wealth, status beauty, affection, food fortune etc. unlike any other metal this metal creates strong emotional attachments in people. In India culture, gold is an inseparable element during the occasions of birth and marriage. For same people irrespective of sender possessing gold has even become an obsession. Gold has always been considered as a safer mode of investment, equivalent to liquid cash and as risk collateral. Due to all these the gold market in Indian is the largest in the world in terms of consumption. It has great ornamental value and it is passed down from generation to generation as an ancestral property. Taking into all above factors into consideration gold industry occupies an enviable position in Indian economy. It is useful to understand and identity the consumer behavior and various factors which influence the consumer behavior in gold market. In this paper the authors made and attempt to critically examine the various previous and present studies, which are as follows;

The study by Mathur Asha Rani (2007) identified the fabulous wealth of India for centuries, gold bought to her land both merchants and invaders. Mathur's study is a right of Indian Jewellery in its totality.

The study by Kannan R. and Sarat D. (2008) attempted to identity the key drivers for the demand for the gold, in India during the period 1980-2005 and concluded that demand for gold is significantly influenced by real income and that the other factors such as rate of exchange, rate of Interest, personal tax and the relative price of gold and equally affects the demand.

Anil Suresh (2011) observed that the behavior of Indians towards gold (being more than a status symbol) has changed but still the demand for gold, has not decreased inspire of ever increasing price and also did an comparative study between people's quest for real income, savings and price of gold to decide which factor actually impacts the demand for gold it is conclusions were the demand for gold is a product of savings and peoples quest for real income

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) - 0.676 (2013)
Special Issue 56 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

A Review of Literature on Employee Health and Safety Measures in Textile Industry of India

Pallavi P. Koravi
M. Phil. Student,
CSIBER, Kolhapur.

Dr. M. M. Ali
Director, CSIBER, Kolhapur.

Introduction

Health and safety is an area concerned with protecting the health, safety and welfare of people engaged in work or employment. Basically, health is associated to the physical conditions of both mind and body of all people at the work place including the workers, contractors and visitors and their protection from harm in the form of injury and disease. In the case of safety it is related to the physical condition at the worksite and applies to all state where the risk of harm and damage has been removed or reduced to as tolerable level.

The textile industry consists of number of units engaged in spinning, weaving, dyeing, printing, furnishing and a number of other process that are required to convert fibre into finished fabric or garment. There are many health and safety issues associated with the textile industry. The major health and safety issues in the textile industry can e stated as follows:

1) Exposure to cotton dust
2) Exposure to chemicals
3) Exposure to noise
4) Ergonomic issues

1) Exposure to cotton dust

All the workers engaged in the processing and spinning of cotton are exposed to significant amounts of cotton dust. Moreover, they are also exposed to particles of pesticides and particles leads to respiratory disorders among the textile workers. The total disease of by signoras, commonly known as brown lung is caused among people working in the textile industry on account of excessive exposure to cotton dust.

2) Exposure to chemicals

Workers engaged in textile industry are also exposed to a number of chemicals, especially those engaged in the activities of dying, printing and furnishing.

3) Exposure to noise

High levels of noise have been observed in the textile industry, particularly those in developing countries, in the long run, exposure to high noise levels has been to damage the eardrum and cause hearing loss. Some other problems like fatigue, absenteeism, anxiety have also been noted on account f continuous exposure to noise.

4) Ergonomic issues

Ergonomic issues have been observed in the majority of units engaged in textile – related activities in India's most of these units have a working environment that is unsafe and

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION

Impact Factor - 3.452 ISSN - 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

Multidisciplinary International E-research Journal

PEER REFREED & INDEXED JOURNAL

April 2018

Special Issue - LVIII

विश्वविद्यालय अनुदान आयोग
University Grants Commission
quality higher education for all

Home About Us Organization Commission Universities Colleges Publications

UGC Approved List of Journals

You searched for **research journey** || Home ||

Total Journals : 2

Show 25 entries Search:

View	Sl.No.	Journal No	Title	Publisher	ISSN	E-ISSN
View	1	40705	Research Journey International E Research Journal	Swatidhan Pub. Yevla		23487143
View	2	44117	Research Journey	Swatidhan International Publication		23487143

Showing 1 to 2 of 2 entries Previous 1 Next

Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

This Journal is indexed in :
- University Grants Commission (UGC) List No. 40705 & 44117
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- Universal Impact Factor (UIF)
- International Impact Factor Services (IIFS)
- Indian Citation Index (ICI)
- Dictionary of Research Journal Index (DRJI)

RESEARCH JOURNEY

For Details Visit To : www.researchjourney.net

SWATIDHAN PUBLICATIONS

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 58 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

INDEX

Our Editors have reviewed paper with experts' committee, and they have checked the papers on their level best to stop furtive literature. Except it, the respective authors of the papers are responsible for originality of the papers and intensive thoughts in the papers.

- Executive Editor-

Published by -

© Mrs. Swati Dhanraj Sonawane, Director, Swatidhan International Publication, Nashik

Email : swatidhanrajs@gmail.com Website : www.researchjourney.net Mobile : 9665398258

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 58 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

Microfinance and its Impact on Women Empowerment in India: A Review

Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur.

Dr. M.M. Ali
Director
CSIBER, Kolhapur.

Introduction

Through the world women workers contribute to the growth, development and sustainable livelihoods of their families and communities. In fact, microfinance helps empower women from poor households to make this contribution. Moreover, Microfinance which is the provision of financial services to the poor in a sustainable manner utilize credit, savings and other products such as micro insurance to help families take advantage of income generating activities and better cope with risk. Especially, women benefit from microfinance as many as microfinance institutions which target female clients. Microfinance services basically lead to women's empowerment by positively influencing women's decision making power and enhancing their overall socio-economic status. Microfinance services are growing rapidly over a period of time thought the world. Apart from this, microfinance has the potential to make a significant contribution to gender equality and promote sustainable livelihoods and better working conditions for women.

Women's empowerment through microfinance is key for promoting International Labour Organizations (ILO's) agenda. By increasing women's access to financial services, microfinance ultimately contributes to KLO core values of greater gender equality and non-discrimination. In this paper an attempt has been made by the author to examine various studies critically and these studies are as follows.

The study by HUNT J. and NALINI K. (2002) reveals that equity and efficiency arguments for targeting credit to women remain powerful, the whole family is more likely to benefit from credit targeted to women, where they control income, than when it is targeted to men. The findings indicate that only a minority of women receiving credit from poverty oriented microfinance programmes are controlling their loans. Moreover, individual factors which appear to increase the likelihood of a woman controlling her loan and the income generated from it are absence of husband (due to health) or long- term migration and use of the loan for a traditional female activity, particularly where the woman is able to market her goods from home one of key factors which constrain women in Bangladesh and India from taking control of loan and profit is lack of access to the market for the purchase of inputs and for the sale of goods, particularly for non-traditional income generating business activities.

NATHALIE H. (2005) observed that decision making pattern has not been uniform for different areas of decision making. In face, women gain a higher stake in matters directly related to loan use, but they are not able to translate this into a more substantial involvement in other domains of house hold decision making.

The study by KAMAL GUPTS, AND P. P. YESUDIAN (2006) reveals that women's education level has emerged as the improved predictor for all dimensions of women

'RESEARCH JOURNEY' *International Multidisciplinary E- Research Journal* | ISSN : 2348-7143
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 58 : April 2018
UGC Approved No. 40705 & 44117

Educational Exhibition: The Effect of Sponsorship and Various Promotional Activities on Visitors': Brand Recall, Attitude and Purchase Intention

Mr. Prashant .G. Kale
PhD Scholar,
Shivaji University, Kolhapur.
Dr. M.M.Ali,
Director,
CSIBER, Kolhapur.

Abstract

The number of Educational institutes sponsoring educational exhibitions has increased from last past decade. Yet, for many educational institutes it is unclear how the effectiveness of theeducational exhibition sponsorship is should be evaluated. Evaluation based on the number of visitors will not be appropriate measure.Good media coverage isvery essential but not sufficient. The appropriate measure of evaluating the educational sponsorships are higher brand recall, positive attitude change, higher level of purchase intension toward the sponsors. These factors are an appropriate measure for evaluating educational exhibition sponsorship. The main purpose of this study is to analyze the effectiveness of educational exhibition sponsorship on the visitors brand recall, attitude and purchase intention toward the sponsors.

Key Words - Educational exhibition sponsorship, Brand Recall, Attitude toward sponsors, purchase intention toward the sponsors.

Introduction

Now day's Indian educational market is more customer (student) driven market. In customer driven market, service provider should clearly understand a need, want of customer/ prospect. For understanding customer expectation, need, want and demand, Educational Institutes need to interact with customer/prospect. Sponsoring educational exhibition is the best way to interacting with your potential customer/prospect. A unique specialty of the educational exhibition as compared to other IMCactivities (advertising, public relation) is that educational exhibition offers opportunities for personal interaction with target segment (students & their parents) and understand their needs, wants and demands.

Sponsorship can offered marketers the opportunities for addressing new target audience, for building their brands, and for enhancing their corporate image. (Ferkins and Garland, 2006). Qualitative research finding clearly substantiate the proposition that sponsorship's ability to generate positive consumer brand attitude can be powerful and lasting. (Meenaghan 1999). Educational exhibition sponsorship is still a new IMC activity for many educational institutes and they are unclear about how the effect of sponsorship activities and their relation to other communication mix should be measured.

The purpose of this study is to examine outcomes associated with the educational exhibition sponsorship. It investigates 1) Brand recall of the title sponsor, co-sponsor. 2) How experience with the sponsor's services during the exhibition influences visitors' brand attitude and brand purchase intensiontoward sponsors. 3) Impact of IMC activities on the sponsor's brand recall, brand attitude and brand purchase intension.

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) - 3.009, (GIF) -0.676 (2013)
Special Issue 58 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

Organizational Learning: A Strategic Tool for Sustainable Development

Bhakti Bhadra
M.Phil Research Scholar
Chhatrapati Shahu Institute of Business Education and Research, Kolhapur

Dr. M. M Ali
Director
Chhatrapati Shahu Institute of Business Education and Research, Kolhapur

Introduction:

During the last four decades, the concept of learning has become a dominant concept in theory and research about organizations. In fact, the notion of the learning organization has become increasingly accepted as an organizational development or change strategy in business and industry. Concepts of organizational learning are no longer peripheral in organizational theory but have entered core domains such as strategic planning and change (Mintzberg, 1994) as well as production management and innovation.

In today's competitive environment, only a learning organization will survive. Its abilities to learn, create, modify and utilize knowledge faster than its rivals -and quicker than the environmental changes- will provide tomorrow's corporation a competitive edge that is sustainable forever. Indeed, since the core competence of any organization is nothing but the individual and collective learning of its entire people, corporation of the coming age must be built around people. A learning organization is understood as the one that has developed the capacity to adapt and change.

"Learning organizations are characterized by total employee involvement in a process of collaboratively conducted, collectively accountable change directed towards shared values or principles. -Watkins & Marsick "

The definition of continuous learning in the Learning Policy captures the core of the idea: **Continuous learning** — a lifelong process of training, development, and learning. Once individuals work in an environment where these three activities are present, and actively participate in each, lifelong learning becomes a reality.

Learning Culture:

The term is important to the present discussion because the drive to build a learning organization is often seen as a sustained transformation of the learning culture within an organization. In this respect, building a learning organization goes deep. Individuals, groups, and the organization as a whole must question current beliefs and come to see themselves in a new way if the learning culture is to be transformed. In addition to the individuals within it, an organization is a set of programs, processes, systems, structures, relationships, and beliefs, and practices.

Organizational Learning:

Organizations create the conditions for organizational learning when they implement processes, practices and programs that allow a culture of learning to be built and maintained. Organizational learning is an attribute of the organization and its culture, not simply of the

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION

Impact Factor – 3.452 ISSN – 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

Multidisciplinary International E-research Journal

PEER REFREED & INDEXED JOURNAL

April 2018

Special Issue - LVIII

View	Sl.No.	Journal No	Title	Publisher	ISSN	E-ISSN
View	1	40705	Research Journey International E Research Journal	Swatidhan Pub. Yevla		23487143
View	2	44117	Research Journey	Swatidhan International Publication		23487143

Showing 1 to 2 of 2 entries Previous 1 Next

Guest Editor
Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur,
Dist. Kolhapur (MS) India.

Chief Editor
Dr. Dhanraj T. Dhangar
Deptt. Marathi,
MGV's Arts & Commerce College,
Yeola, Nashik (MS) India.

This Journal is indexed in :

- University Grants Commission (UGC) List No. 40705 & 44117
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- Universal Impact Factor (UIF)
- International Impact Factor Services (IIFS)
- Indian Citation Index (ICI)
- Dictionary of Research Journal Index (DRJI)

For Details Visit To : www.researchjourney.net

SWATIDHAN PUBLICATIONS

Impact Factor – 3.452 **ISSN – 2348-7143**

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

Multidisciplinary International E-Research Journal

PEER REFREED & INDEXED JOURNAL

April-2018

SPECIAL ISSUE-LVIII

SWATIDHAN INTERNATIONAL PUBLICATIONS
For Details Visit To : **www.researchjourney.net**

 Price : Rs. 250/-

Our Editors have reviewed paper with experts' committee, and they have checked the papers on their level best to stop furtive literature. Except it, the respective authors of the papers are responsible for originality of the papers and intensive thoughts in the papers.

- Executive Editor-

Published by -

© **Mrs. Swati Dhanraj Sonawane, Director, Swatidhan International Publication, Nashik**

Email : swatidhanrajs@gmail.com **Website :** www.researchjourney.net **Mobile :** 9665398258

ISSN : 2348-7143
April 2018

From the Guest Editor's Desk.....

I am very happy to place before you the Research Journey-Multidisciplinary International E- research Journal.

In fact, we are enjoying the growth and excellent response from researchers of different areas of commerce, management, economics and computer studies.

The present issue contains sixteen articles. Among the highlights Dr. G.Haresh and Dr.M.M.Ali dealt in their article on the topic entitled "Microfinance and its impact on women empowerment in India". Usha bubane and Dr. R.V.Kulkarni focused on Role of Data Base Management System, R.M.Huddar and M.B.Patil also focused on Computer related topics. Remaining authors critically examined various topics of commerce and Management. I strongly believe that the articles contributed by esteemed academicians and research scholars for this issue would be immensely readable and useful to academicians, researchers and policy makers.

Dr. G. Haresh
Associate professor of Economics
Chh. Shahu Institute of Business education and research, Kolhapur.
Guest Editors

INDEX

Our Editors have reviewed paper with experts' committee, and they have checked the papers on their level best to stop furtive literature. Except it, the respective authors of the papers are responsible for originality of the papers and intensive thoughts in the papers.

- Executive Editor-

Published by -

© Mrs. Swati Dhanraj Sonawane, Director, Swatidhan International Publication, Nashik

Email : swatidhanrajs@gmail.com **Website :** www.researchjourney.net **Mobile :** 9665398258

Microfinance and its Impact on Women Empowerment in India: A Review

Dr. G. Haresh
Associate Professor,
CSIBER, Kolhapur.

Dr. M.M. Ali
Director
CSIBER, Kolhapur.

Introduction

Through the world women workers contribute to the growth, development and sustainable livelihoods of their families and communities. In fact, microfinance helps empower women from poor households to make this contribution. Moreover, Microfinance which is the provision of financial services to the poor in a sustainable manner utilize credit, savings and other products such as micro insurance to help families take advantage of income generating activities and better cope with risk. Especially, women benefit from microfinance as many as microfinance institutions which target female clients. Microfinance services basically lead to women's empowerment by positively influencing women's decision making power and enhancing their overall socio-economic status. Microfinance services are growing rapidly over a period of time thought the world. Apart from this, microfinance has the potential to make a significant contribution to gender equality and promote sustainable livelihoods and better working conditions for women.

Women's empowerment through microfinance is key for promoting International Labour Organizations (ILO's) agenda. By increasing women's access to financial services, microfinance ultimately contributes to KLO core values of greater gender equality and non-discrimination. In this paper an attempt has been made by the author to examine various studies critically and these studies are as follows.

The study by HUNT J. and NALINI K. (2002) reveals that equity and efficiency arguments for targeting credit to women remain powerful, the whole family is more likely to benefit from credit targeted to women, where they control income, than when it is targeted to men. The findings indicate that only a minority of women receiving credit from poverty oriented microfinance programmes are controlling their loans. Moreover, individual factors which appear to increase the likelihood of a woman controlling her loan and the income generated from it are absence of husband (due to health) or long- term migration and use of the loan for a traditional female activity, particularly where the woman is able to market her goods from home one of key factors which constrain women in Bangladesh and India from taking control of loan and profit is lack of access to the market for the purchase of inputs and for the sale of goods, particularly for non-traditional income generating business activities.

NATHALIE H. (2005) observed that decision making pattern has not been uniform for different areas of decision making. In face, women gain a higher stake in matters directly related to loan use, but they are not able to translate this into a more substantial involvement in other domains of house hold decision making.

The study by KAMAL GUPTS, AND P. P. YESUDIAN (2006) reveals that women's education level has emerged as the improved predictor for all dimensions of women

ISSN : 2348-7143
April 2018

empowerment where as media and age have emerged as the important predictor for some dimensions of women empowerment.

BASU J. P. (2006) examined how women tend to invest in safer investment projects, that can be linked to her desire to raise her bargaining position, through her study at West Bengal. The findings of the study revealed that empowerment depends on the choice of investment project and the choice of safe project which lead to more empowerment of women.

The study by R. B. SWAIN (2006) observed that, Apart from Social empowerment, the SHG households also demonstrated greater awareness and participation in local politics. However, the impact is not feflected in certain key decisions.

D. K. PANDA (2009) studied the impact of participation in microfinance in three states of India. The study concluded that there is a positive impact of self help group based microfinance intervention in the income, asset position, savings, employment, literacy and consumption and migration reduction.

The study by LAKSHMI R. and VADIVALAGAN G. (2010) revealed that the SHG's have greater impact on both economic and social aspects of the beneficiaries. The study showed that the main reason for joining SHG was not merely get credit but it was an empowerment process. After joining SHG the women were economically and socially empowered.

SARA NAREEN (2011) examined women empowerment by using five indicators namely, Child health, Education, Selection of spouse of children, Purchase of basic goods and Decision about of use of loan. The results revealed that, women empowerment considerably influenced by age, education of husband, father inherited assets, marital status, number of sons alive. The study concluded that the microfinance is a major explanatory variable in this study, it had some positive role in empowerment but not as much as it was expected.

Conclusion:

The above mentioned studies critically examined the relationship between microfinance and women empowerment in India. The paper highlights that there is a positive impact of microfinance on empowering women.

References:

1. BASU J. P. (2006) Microfinance and Women Empowerment: An empirical Study with Reference West Bengal, http://www.igidr.ac.in
2. HUNT J. and NALINI K. (2002) Reflections on Microfinance and Women's empowerment, Development Bulletin PP. 71-75.
3. NATHALIE H. (2005), The Impact of Microfinance on Decision Making Agency: Evidence from South India, Development and Change, 36 (1) PP 75-102.
4. D. K. PANDA (2009) Assessing the Impact of Participation in Women Self-help Group based Microfinance, Non Experimental evidence from Rural housel\hold in India. International Journal of Rural Management 5 (2) PP 197-215.
5. LAKSHMI R. and VADIVALAGAN G. (2010) Impact of Self Help Groups of Empowerment of Women: A Study in Dharmapuri District Tamilnadu, PP 43-52.
6. SARA NAREEN (2011) Role of Microfinance in empowerment of Female Population Bahawalpur District 2011, International Conference on Economics and Finance Research IPEDR Vol. 4, PP 318-324.
7. R. B. SWAIN (2006) Microfinance and Women Empowerment Evidence from SHG / BLP in India. SIDA pp. 1-25.

A Study on Consumer Perception and Behaviour Towards online Buying

Renuka Turambekar
Asst. Professor,
Chhatrapati Shahu Institute of Business
Education and Research, Kolhapur.

Rohit Landge,
Asst. Professor,
Chhatrapati Shahu Institute of Business
Education and Research, Kolhapur.

Abstract:

With the increasing usage of digital media by consumers, more companies are using digital marketing to reach their target markets. The purpose of this study is to examine various reasons because of that people will attract for online buying of the product. This paper reports on a study that was undertaken to assess consumer awareness and use, of product review websites. Factors included the impact of e-opinion leadership, consumer susceptibility to informational influence, and gender on awareness and use of these websites. Participants completed a survey that solicited information on awareness of product review websites, extent of usage, as well as demographic information. Results indicated that young and self incoming people are more involved in online shopping the frequency of online purchase is also high & the mist important reason to buy a product on line is product variety & Price effective.

Keywords: consumer awareness, susceptibility, demographic, perceptions.

Introduction:

Indian consumers as a whole spend about 55% of the total consumption expenditure on food items. Consumers decide whether, what, when, from whom, where and how much to buy. They can avail various mediums to buy the products. Attitude toward online shopping and goal to shop online are not only affected by ease of use, usefulness, and enjoyment, but also by other factors like consumer individuality, situational factors, product distinctiveness, previous online shopping understanding and faith in online shopping.(1) Four major categories of determinants: perceived technology, perceived risk, company competency, and trust propensity made the online initial trust.(2) Internet is changing the way consumers shop and buy goods and services and has rapidly evolved into a global phenomenon. Many companies have started using the Internet with the aim of cutting marketing costs, thereby reducing the price of their products and services in order to stay ahead in highly competitive markets. Companies also use the Internet to convey, communicate and disseminate information, to sell the product, to take feedback and also to conduct satisfaction surveys with customers.(3) As in the case of traditional marketing in the past, most of the recent research and debate is focused on the identification and analysis of factors that one way or another can influence or even shape the online consumer's behavior; a good deal of research effort is focused on modeling the online buying and Decision-making process.(4)

ISSN : 2348-7143
April 2018

Literature Review:

Rekha Dahiya & Gayatri 2017, have studied The effect of digital marketing communication on product categories like books, music, fashion accessories, clothing, banking and online gaming etc. has been well researched by the researchers; but automobile industry despite being one of the largest digital spenders has faced dearth of academic studies especially in India. thier study aims to understand the effect of digital marketing communication on consumer buying decision process in Indian passenger car market. 'Website' was the most used digital channel of communication while buying a car followed by 'social networking sites' and 'smartphones' The results of the study confirmed that digital marketing communication is capable of even triggering need recognition in high involvement product category

Thomas Martin 2017,Key study reveals that domains of digital marketing channels specifically e-mail marketing, social media marketing, and search engine marketing to understand how they can contribute to growth for organizations in the sharing economy. A detailed conceptual model of the decision spectrum necessary to coordinate digital marketing channels is presented and a special case is made for the role branded-mobile applications play in this context In particular, branded-mobile applications leverage three embedded components to overcome common deterrents for participating in the sharing economy: trust, utility, and user experience.

Dana E. Harrison & Joseph F. Hair **2017**, have studies Technology transforming industries, challenging traditional marketing channels, and providing digital avenues for dynamic growth. The popularity of digital platforms has disrupted traditional distribution channels, increased reach of social networks, and changed the way people interact. thier research examines how advanced technology is enabling direct sellers to create and maintain relationships. It investigates the multidimensional aspect of technology use and advances the proposition that it acts as a strategic success factor for customer relationship performance specifically within the peer-guided marketplace of direct selling.

Nina Koiso-Kanttila 2010, studied about digital products and concluded that digital products are increasingly part of the commercial landscape. Technology-facilitated environments in general have received considerable attention in the literature on marketing. This article reviews the existing knowledge base on digital products and the differences these products suggest for marketing activities. It first positions digital content in relation to other offerings, then further analyzes the marketing implications with an adjusted marketing mix framework.

Katherine Taken Smith 2011, have studied & examine various marketing strategies that are commonly used in digital media and ascertain which ones are preferred by Millennials and are effective in influencing behavior. Millennials have been identified as a driving force behind online shopping. Graphics are highly effective in grabbing their attention. Millennials will repeatedly visit a website that has competitive prices and good shipping rates. If given an incentive, such as a discount or reward, Millennials will write an online product review.

ISSN : 2348-7143
April 2018

Research Methodology:
For this study the researcher have selected descriptive type of Research

Methods of Data Collection:

Both primary and secondary data are collected for the present study. **Primary Data** collection was done through the questionnaire method from the respondents. The questionnaire was given to the respondents and they were asked to fill them up. Necessary help was rendered whenever they found it difficult to answer. **Secondary Data** Secondary Data refers to information gathered by someone other than the researcher conducting the current study. In this study, Secondary data were collected from company website, books, journals and internet.

Sample Design:

All the items under consideration in any field of inquiry constitute a "Universe" or "Population". The researcher must decide the way of selecting a sample or what is popularly known as the sample design. A sample design is a definite plan determined before any data are actually collected for obtaining a sample from a given population. **Sample Size** A Sample of 160 people was chosen for this study. **Sampling Technique** In this study, simple random sampling method was adopted for selecting the respondents.

Statistical Tools:

Descriptive analysis of the data was done through SPSS with frequency & percentage.

Data Analysis & Interpretation:

Researcher collected primary data through structured questionnaire. The data was then entered manually in IBM SPSS (Statistical Package for Social Science) Version 20 and then rechecked for any missing values, duplications or errors followed by further processing and testing of hypothesis by applying appropriate statistical tests.
The primary objective of this researcher is to find the customer awareness & behaviours towards the digital marketing. Here 10 different questions were asked to the respondents on different types which cover the awareness of digital marketing, use of internet & reasons for use of digital shopping.

Demographic Analysis:

This of the analysis contains general information about the respondents and helps to understand the demographics of the respondents who took the survey. The questions aim to find out respondents Gender, Age, Occupation, Monthly Income and Education. Of the respondents in the Kolhapur City.

Table No. 1: Demographic analysis

Sr. No.	Factor	Option	No. of Respondent	Percentage
1	**Gender**	**Male**	115	71.9
		Female	45	28.1
2	**Age**	**10 - 20**	90	56.3
		20- 30	30	18.8
		30- 40	19	11.9
		Above 40	21	13.1
3	**Occupation**	**Student**	58	36.3
		Self Employed	42	26.3

ISSN : 2348-7143
April 2018

		Job	21	13.1
		House wife	27	16.9
		Retiree	12	7.5
4	**Monthly Income**	**16000 - 15000**	55	34.4
		15000 – 20000	41	25.6
		20000 – 25000	8	5.0
		Above 25000	24	15.0
		Dependent	32	20.0
5	**Education**	**HSC**	59	36.9
		Under Graduate	48	30.0
		Graduate	24	15.0
		Post Graduate	29	18.1

The above table reveals that as compares to the female's mare are involved in the shopping of the online products, as there is a trend of online shopping so study reveals that most of the respondents are in the range of 10 to 30 years very less numbers in the age range above 40 years, According to the occupation of the respondent's majority of the respondents are come in the category of student & self employed because of availability of the money from self income & supported by the family. According to the income level of the respondent people come in income range of 20000 Rs. They are mostly involve in the online purchasing of the products, according to the education level of the respondents majority of the respondents are having education with HSC & Under graduate in the online purchasing of the products.

Awareness & Uses of Online Buying:

This of the analysis contains analysis about the about the respondents awareness level, uses level of online sites & their behavior while purchasing products through online sites. The questions includes like uses, frequency of shopping, type of product reasons to purchase through online.

Table No. 2: Awareness & Uses of Digital Marketing

Sr. No.	Factor	Option	No. of Respondent	Percentage
1	**Use of Online Site for work**	**Always**	47	29.4
		Many times	51	31.9
		Some times	28	17.5
		Rare	18	11.3
		Very less	16	10.0
2	**Frequency of Uses of Internet for information Search for shopping**	**Daily**	53	33.1
		Twice in a week	60	37.5
		Twice in 15 Days	21	13.1
		Twice in Month	26	16.3
3	**Frequency of Purchase of Online product**	**Once in a week**	10	6.3
		One in a 15 days	57	35.6
		Once in a month	44	27.5

ISSN : 2348-7143
April 2018

		Once in two month	49	30.6
4	**Type of Product**	**Clothing**	65	40.6
		Accessories	64	40.0
		Electronics	14	8.8
		Food	17	10.6
5	**Most Important Reason for online Purchase**	**Variety of products**	67	41.9
		Price effective	43	26.9
		Convenient	19	11.9
		Product visibility	21	13.1

The above table reveals that almost 60 % respondents from the study use the internet & online site for their work purpose, as per the frequency of uses of internet for information search for shopping almost more than 60 % respondents uses the internet daily or twice in a week for the shopping purpose, more than 60 % respondents were purchase online products once in a month or once in a 15 days, as per the type of product purchase more than 80 % respondents purchase clothing & accessories from online sites, most important reason for going online shopping is variety & price effectiveness of the products.

Findings:

From the exploratory study the following findings have been revels from the analysis

1. It is found that as compares to the female's mare are involved in the shopping of the online products, as there is a trend of online shopping so study reveals that most of the respondents are in the range of 10 to 30 years very less numbers in the age range above 40 years, According to the occupation of the respondent's majority of the respondents are come in the category of student & self employed because of availability of the money from self income & supported by the family, According to the income level of the respondent people come in income range of 20000 Rs. They are mostly involve in the online purchasing of the products, according to the education level of the respondents majority of the respondents are having education with HSC & Under graduate in the online purchasing of the products.
2. Study also finds that almost 60 % respondents from the study use the internet & online site for their work purpose.
3. It is also per the frequency of uses of internet for information search for shopping almost more than 60 % respondent's uses the internet daily or twice in a week for the shopping purpose.
4. It is found that more than 60 % respondents were purchase online products once in a month or once in a 15 days
5. According to type of product more than 80 % respondents purchase clothing & accessories from online sites,
6. Most important finding of the study is reason for going online shopping is variety & price effectiveness of the products.

Suggestion:

Based upon the above findings following suggestion has been given to the digital shipping sites

1. Create innovative web pages to attract the young customer group.
2. As majority of customer is not much financial strength more offers should make to grab total market share.
3. As majority respondents were daily users of the internet so they can do online advertising of others product on their websites.
4. As clothing & accessories is the frequently purchased product so they should have a sufficient stock of all those products.
5. Main reason for going online shopping is variety & price so they can come up with the new products & attractive pricing.

Conclusion:

The consumer's perception on online shopping varies from person to another and the perception is limited to a certain extent with the availability of the proper connectivity and the exposure to the online shopping has to be improved to make the customer satisfied. The perception of the consumer also has similarities and difference based on their personal characteristics usage based on their needs and demand. Online shopping is the process of buying goods and services from merchants who sell on the Internet. Since the emergence of the World Wide Web, merchants have sought to sell their products to people who surf the Internet. Shoppers can visit web stores from the comfort of their homes and shop as they sit in front of the computer Now a day, online shopping has become popular among people, they have become techno savvy and feel very comfortable in using internet.

References:

1. Ankur Kumar Rastogi ,A Study Of Indian Online Consumers & Their Buying Behaviour . International Research Journal , July 2010 Issn- 0975-3486 Rni: Rajbil 2009/30097 Vol I *Issue 10
2. The Impact Of Internet User Shopping Patterns And Demographics On Consumer Mobile Buying Behaviour, Journal Of Electronic Commerce Research, Vol. 6, No.3, 2005
3. Kanupriya , Dr. Rita, Anupreet kaur **Vol**ume 1, Issue 1, (January-June 2016), A Study Of Behaviour Of Consumer Towards Online Shopping, Orbit-Biz-Dictum.
4. Jenyo Gabriel K & Soyoye Kolapo M (September 2015), Online Marketing And Consumer Purchase Behaviour: A Study Of Nigerian Firms, British Journal Of Marketing Studies, Vol.3, No.7, Pp.1-14.
5. Rekha Dahiya & Gayatri, (29 Sept 2017) A Research Paper On Digital Marketing Communication And Consumer Buying Decision Process: An Empirical Study In The Indian Passenger Car Market, A Journal Of Global Marketing.
6. Thomas Martin Key , (volume 24,2017), Domains of Digital Marketing Channels in the Sharing Economy, The Journal of Marketing Channels , The Sharing Economy : Opportunities and challenges of marketing Channels and supply chain , pg 27-38
7. Dana E. Harrison & Joseph F. Hair, Published online: (11 Aug 2017), The Use of Technology in Direct-Selling Marketing Channels: Digital Avenues for Dynamic Growth, Journal of Marketing Channels , Volume 24,2017, Pages 39-50
8. Nina Koiso-Kanttila , Published online: 09 Aug 2010 Digital Content Marketing: A Literature Synthesis, Journal of Marketing Management , Volume 20 , Pages 45-65
9. Katherine Taken Smith , Published online: (30 Sep 2011) Digital marketing strategies that Millennials find appealing, motivating, or just annoying. Journal of Strategic Marketing , Pages 489-499

Role of Computer Networks in Management Campus : A Review

Mr. M. B. Patil
Department of Computer Studies
Chatrapati Shahu Institute of Business
Education and Research
Kolhapur, India

Dr.R.V.Kulkarni
Prof and Head,
Department of Computer Studies
Chatrapati Shahu Institute of Business
Education and Research
Kolhapur, India

Abstract :

In today's digital era Computer Networking is playing major role in Campus. A Campus Network is an important part campus life and Network security is essential for campus. Structured network plays an important role addressing security issues. In this paper authors have reviewed many research papers on campus networking. The main function is to link the proposed research with the current state of relevant knowledge

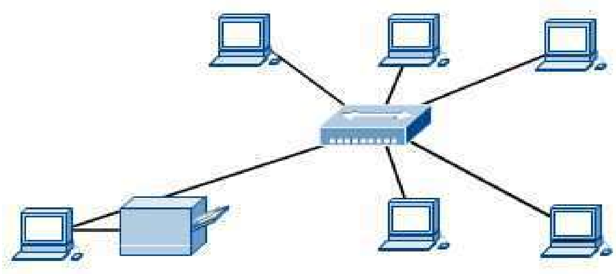
Setting up LAN has become affordable even by the medium sized organization. Automation has a dual advantage, on one hand it is helpful in reducing the time required towards LAN management and on the other hand it improves throughput by making accurate information available at fingertip.

Keywords : Desktops, Servers,Topology,Network, DHCP

Introduction :

Computer network connects two or more autonomous computers. The computers can be geographically located anywhere.

Basic Hardware Components
• Network Interface Card (NIC)
• Hub
• Switch
• Router
• Cable



- Network in small geographical Area (Room, Building or a Campus) is called LAN (Local Area Network)
- Network in a City is call MAN (Metropolitan Area Network)
- Network spread geographically (Country or across Globe) is called WAN (Wide Area Network)

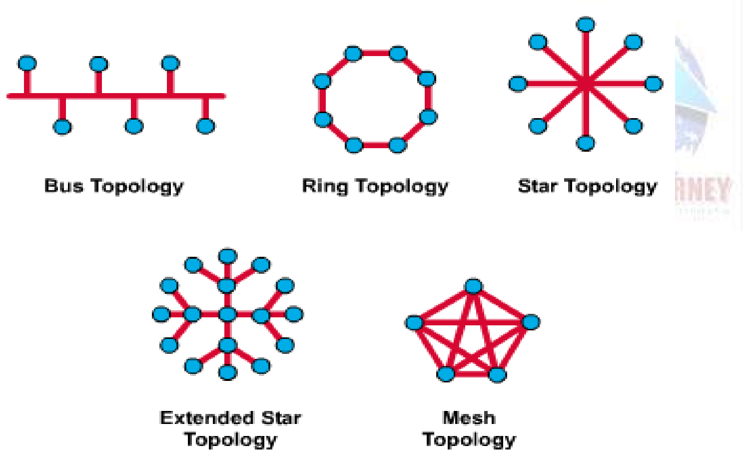
Advantages of Network :

- **Resource Sharing**
  - Hardware (computing resources, disks, printers)
  - Software (application software)
- **Information Sharing**
  - Easy accessibility from anywhere (files, databases)
  - Search Capability (WWW)
- **Communication**
  - Email
  - Message broadcast
- **Remote computing**
- **Distributed processing (GRID Computing)**

Disadvantages of Network :

- Cost of Network
- Skilled Manpower

The network topology defines the way in which computers, printers, and other devices are connected. A network topology describes the layout of the wire and devices as well as the paths used by data transmissions



About firewall

A firewall is a security guard placed at the point of entry between a private network and the outside Internet such that all incoming and outgoing packets have to pass through it. The function of a firewall is to examine every incoming or outgoing packet and decide whether to accept or discard it. This function is conventionally specified by a sequence of rules, where rules often conflict. To resolve conflicts, the decision for each packet is the decision of the first rule that the packet matches. The current practice of designing a firewall directly as a sequence of rules suffers from three types of major problems:

(1) the consistency problem, which means that it is difficult to order the rules correctly;

(2) the completeness problem, which means that it is difficult to ensure thorough consideration for all types of traffic;

(3) the compactness problem, which means that it is difficult to keep the number of rules small (because some rules may be redundant and some rules may be combined into one rule). To achieve consistency, completeness, and compactness, we propose a new method called structured firewall

Benefits of Implementing Cyberoam UTM Device:

1. **Multiple Internet** Lines Aggregation & Bandwidth Management
2. Customized usage of different Internet Lines & support for **3G/4G as a backup**
3. **Strong Firewall feature** – Implementation of security Rules as per requirement
4. **Intrusion Prevention System** – Blocks unwanted inbound traffic & hackers
5. **Web Filtering & Content filtering** – Unwanted sites category can be blocked & also block sites on Keywords benefitting proper Internet Bandwidth Usage
6. **Application Control** – Games, Social Sites, Instant messaging etc can be blocked or can be allowed/blocked for a scheduled time frame
7. **Gateway** Antivirus, Anti spam, Antispyware for gateway level security
8. **User level security** with Capative Login Screen
9. **DMZ facility of UTM** - Mail Servers, Web Servers & Web Applications can be accessed from inside & outside the campus with a single IP.

DHCP is nothing but Dynamic Host Configuration Protocol. It will assigns IP addresses dynamically. We can define an IP address pool for the clients, so that we could keep track of the whole network without running from machine to machine changing configurations when there is any IP conflicts. It will provide quick, automatic and central management for the distribution of IP addresses in a network

DHCP which dynamically sets the IP addresses and gets tuned to the users requirements. The different computer labs from the VLAN i.e Virtual Lansare configured and assigned the IP with MAC Binding as per the requirements at the institute. Only the admin has the privileges to interact with the DHCP server.

International Journal of Advanced Engineering & Application, Jan 2011 Issue

Security Problems in Campus Network and Its Solutions

1 LalitaKumari, 2 SwapanDebbarma, 3 RadheyShyam

1,2Department of Computer Science, NIT Agartala, India

3National Informatics Centre, India Authors Lalita et al have worked on Security Problems in Campus Network and Its Solutions This work focused on current security status of the campus network, analyze security threat to campus network describe the strategies to maintenance of network security, so as to maintain an effective as well as robust network system.

They have introduce various current network information security problem and its solutions

- This paper viewpoint from
    - access control,
    - data sharing management,
    - content filtering,
    - data encryption,
    - user management,

  permissions distribution, log auditing, and several other security issues.

ISSN: 2321-7782, Volume 1, Issue 2, July 2013
International Journal of Advance Research in Computer Science and Management Studies
Research Paper

Network Structure or Topology

KartikPandya, Lecturer in Sikkim Manipal University (S.M.U) India

In this paper the author has studied the different types of the topologies like Bus Topology, Ring Topology, Star Topology, Mesh Topology and Tree Topology.

In this paper the author have considered above five topology uses and its merits and demerits that helps to know that which structure or topology is best for which organization or business. Finally the author has find out the fact that all topologies are alternate options for business like that Bus Topology is use full for small network but its some demerits so its alternate option is Star Topology. So finally, the author is saying that all topologies have some extra and different feature are available from other topology and that features are making it special from other topology.

International Journal of Emerging Technology and Advanced Engineering Website: www.ijetae.com (ISSN 2250-2459, ISO 9001:2008 Certified Journal, Volume 5, Issue 7, July 2015)

Design and Implementation of a Secure Campus Network

Mohammed Nadir Bin Ali1, Mohamed Hossain2, Md. Masud Parvez3 *1,2,3Daffodil International University* Security has been a pivotal issue in the design and deployment of an enterprise network. A Campus network is an important part of campus life and network security is essential for a campus.Campus network faces challenges to address core issues of security which are governed by network architecture.Secured network protects an institution from security attacks associated with network.

In this project, a tested and secure network design is proposed based on the practical requirements and this proposed network infrastructure is realizable with adaptable infrastructure.

International Journal of Engineering Research & Technology (IJERT) Vol. 2 Issue 8, August – 2013 IJERTIJERT ISSN: 2278-0181

Structured Network Design and Implementation for a
Small Office, Home Office and Colleges

Offor, Kennedy J. 1, Obi, Patrick I.1, Nwadike Kenny T 2 and Okonkwo I. I.1.

Department of Electrical/Electronic Engineering, Anambra State University, Uli, Nigeria Project Manager, SocketWorks Ltd., Bauchi State, Nigeria Offor, Kennedy J. et al have suggested various alternatives for design and imlpementation of n/ws

In this paper they have suggested

The main goal of structured systems analysis is to represent users' needs, which unfortunately often are ignored or misrepresented.

To make the project manageable by dividing it into modules that can be more easily maintained and changed.

The paper outlined the steps involved in structure network design and deployment for a small office home office need. It presented the steps of a structured network design and demonstrated practical implementation of the steps using a real life case study.

The researchers have used Cisco Packet Tracer™ software and WireShark protocol analyser. They encountered a problem that is issue of unavailability of power at the site for configuration of the devices. However, UPS systems were used to overcome this issue since the devices are not high power devices and a laptop was used to configure and test the resultant configuration in place of the desktop computers.

International Arab Journal of e-Technology, Vol. 1, No. 2, June 2009

Design and Implementation of a Network Security Model for Cooperative Network

Salah Alabady

Computer Engineering Department, University of Mosul, Iraq

This paper deals with

Technology weaknesses

Configuration weaknesses

Security policy weaknesses

the security weakness in router and firewall configuration system and risks when connected to the Internet. the tips and recommendations to achieve a best security and to protect the network from vulnerabilities, threats, and attacks by applying the security configurations on router and firewall. one can use this suggested security policy as a checklist to use in evaluating whether a unit is adhering to best practices in computer security and data confidentiality. the firewall provides additional access control over connections and network traffic and perform user authentication. Using a firewall and a router together can offer better security than either one alone. A poor router filtering configuration can reduce the overall security of a network, expose internal network components to scans and attacks.

Survivable LANs for distributed control systems.

JE Cooling

In this paper author discusses the need for, and methods of achieving, survivability in distributed control system networks. It is applicable to areas such as avionics, marine systems and industrial plants. Basic survival strategies are discussed in the context of specific network topologies, with emphasis on system design aspects. The strengths and weaknesses of the various approaches are discussed, together with the requirements and constraints of practical systems. Based on these, a general template for a survivable LAN is defined, accompanied by a set of recommendations for implementing specific survivability features.

Development of Practical Computer Networking Laboratory

DavoudArasteh

Department of Electronic Engineering Technology Southern University, Baton Rouge, LA 70813

In 2004 Electronic Engineering Technology Department at Southern University decided to develop computer networking and wireless technology laboratory. The driving force was the need for hands-on experience. This is an essential component for a high-quality education in computing and networking technology. We believe creating a technology environment will motivate students to develop a better understanding of theoretical concepts. Hence, these laboratory activities aim to prepare students in computer networking class for the challenges of participating in an exponentially growing technology.. The general course framework in networking does not provide direct access to networking equipment and software. This networking lab tries to meet the demand for creating lab-oriented courses in networking by offering an extended set of lab exercises from planning, design, implementation, and testing to software and hardware configuration processes.

In this paper the researcher described the experiences accumulated in teaching a senior level course in computer networking laboratory. To relate the relatively abstract level of networking concepts to real world practices, we developed a dynamic lab-oriented approach, which provides practical experiences in networking hardware, device configuration, testing and troubleshooting. Also we take advantage of OPNET simulator In addition, whenever packet manipulation is required network protocol analyzer like Ethereal software is used to capture network packets for monitoring and detection. We are in the process of extending these laboratory activities to network security and data protection course materials. A bonus that comes from this type of practical teaching is that lab sessions were very enjoyable for students. It had substantial positive impact on the overall performance of students, which were reflected on their level of involvement in lab assignments and active attendance in lab sessions as well as class discussions.

Monitoring local area network using remote method invocation.
Harsh Mittal b) Manoj Jain
In this research paper, researchers have undertaken a project that aims to secure the network or a LAN by implementing a software which enables to carry out operations which are capable of monitoring entire network , the administrator can manage remotely viewing remote desktop ,passing messages to remote system and is also able to shut down the system by performing remote aborting operations . This software is purely developed in JAVA RMI (Remote Method Invocation). This project intends to provide the maximum details about the network to the administrator on their screen without knowing them their users. The administrator can view the static image of client's desktop and then he/she could sends warning message to the user to stop that operation immediately. Even then if client does not stop the administrator has the facility to abort the system remotely or restart the system whatever necessary he thinks. This is a complete front end project build in JAVA RMI used to provide the authority to the administrator to stop any illegal process and enable him to monitor entire LAN and the work carried on connecting nodes.

Network Monitoring for the LAN and WAN.
Les Cottrell and Connie Logg, SLAC
This article explains monitoring is required for improving service - proactively id & reduce bottlenecks, tune and optimize systems, improve QOS, optimize investments - id under/over utilized resources, and balance workloads this is collectively called as performance tuning. Monitoring enable getting out of crisis mode, id probes & start diagnosis/fixing before end user notices, increase reliability/availability, allow user to accomplish work more effectively and maximize productivity, is called as trouble shutting. Understand performance trends for planning.

International Journal of Research In Science & Engineering e-ISSN: 2394-8299
Volume: 1 Special Issue: 1 p-ISSN: 2394-8280

Network Security: Attacks & Component

Harshad J.Tawari1, Jagruti S. Wankhade2

This paper presents recent trends and practices in security to handle the rising risks and threats in thearea of Network security. in today's digital era the various attacking tools is available in internet for snfinning and spoofing. This paper proposes a security tools that will help to end user to secure their system more conveniently.

Network security refers to any activities designed to protect your network. The network administrator plays andimportant role here he continuously checks the error in network his responsibility is to secure network. Network security. Network security is involved in organizations, enterprises, and other types of institutions. The most common and simple way to secure our network resource is assigning a unique name or password. The system administrator implements the security policy, network software and hardware and he restricts the unauthorized access. The role of layers in networking plays a huge role for security various protocol has been developed for those layers.

In this paper we explored and analyzed the various challenges of threats and attacks in networks in this recent era,various network sniffing, snooping tools for capturing the network data and log data for analysis and learning,various network component is set for protected our network various big firewall is set in institution campusTools that can be freely downloaded from the Internet enable even novice hackers to perpetrate MITM attacks thatcause significant loss to victims. Existing Web security mechanisms, such as server corticated and SSL, in theory protect users from such attacks. Various Security Components are used to protect our Network from outsider or insider attack.

World Applied Programming, Vol (1), No (4), October 2011. 278-287
ISSN: 2222-2510 ©2011 WAP journal. www.waprogramming.com

A Study on Index Based Analysis of Users of Internet TrafficSharingIn Computer Networking

DiwakarShuklaSharadGangele* andKapilVerma Sanjay Thakur

Internet is a basic tool of information technology. Cyber crime refers to all unlawful activities that involve a computer and a network. The computer may have been used in the commission of a crime or it may be the target. The objective of such crime is to exploit the internet for criminal purposes. It may threaten a nation's security and even its financial health. There are also problems of breach of privacy policy if confidential

information is lost or intercepted. In order to overcome such security and privacy related issues of internet it is required to strengthen the security rules and the internet traffic distribution. This line of thought will help us in minimizing such malicious incidents. Working on the same line of improvisation, indexing techniques has been developed. It combines a variety of factors into single value which helps in predicting the internet user's behavior. This paper takes into account the set-up of two internet service provider's environment and on that indices of different categories are defined. This paper presents index based analysis for cyber criminal in computer networking. Simulation methodology is performed to support the mathematical finding. . This conclusion recommends the operators to reduce their blocking conditions for better quality of services.

1. A Detailed Study on Wireless LAN Technologies."

a) Vijay Chandramouli

This research paper explains the evolution of network from early radio and telephone to current devices such as mobile Phones and laptops. Accessing the global network has become the most essential and indispensable as a part of our lifestyle. Wireless communication is an ever-developing field, and the future holds many possibilities in this area. One expectation for the future in this field is that, the devices can be developed to support communication with higher data rates and more security. Research in this area suggests that a dominant means of supporting such communication capabilities will be through the use of Wireless LANs. As the deployment of Wireless LAN increases well around the globe, it is increasingly important for us to understand different technologies and select the most appropriate one. Also this paper provides a detailed study of the available wireless LAN technologies and the concerned issues. This is followed by a discussion on evaluating and suggesting a feasible standard for future.

IMPACT: International Journal of Research in Engineering & Technology (ISSN(E): 2321-8843; ISSN(P): 2347-4599 Vol. 3, Issue 5, May 2015, 23-30 © Impact Journals

Wi-Fi Security: A Literature Review Of Security In Wireless Network
Ruchir Bhatnagar &Vineet Kumar Birla

Research Scholar & Department of CSE &Mewar University, Chittorgarh, Rajasthan, India

As we know wireless networks have broadcast nature so there are different security issues in the wireless communication. The security conventions intended for the wired systems can't be extrapolated to wireless systems. Hackers and intruders can make utilization of the loopholes of the wireless communication.

In this paper we will mull overthe different remote security dangers to wireless systems and conventions at present accessible like Wired Equivalent Privacy (WEP), Wi-Fi Protected Access (WPA) and Wi-Fi Protected Access 2 (WPA2). WPA2 is more hearty security convention as compared with WPA on the grounds that it utilizes the Advanced Encryption Standard (AES) encryption. There are few issues in WPA2 like it is helpless against brute force attack and MIC bits could be utilized by programmer to compare it with the decoded content. So in this paper we will concentrate on different sorts of wireless security dangers.

In the research work it is observed that many organizations are currently deploying wireless networks typically to use IEEE 802.11b protocols, but technology used is not secure and still highly susceptible to active attacks and passive intrusions.

Research Issues in Wireless Networks.

Raj Kumar Singh and Dr. A. K. Jain

This research paper focuses on wireless technology. The arrival of wireless technology has reduced the human efforts for accessing data at various locations by replacing wired infrastructure with wireless infrastructure and also providing access to devices having mobility. Since wireless devices need to be small and bandwidth constrained, some of the key challenges

ISSN : 2348-7143
April 2018

in wireless networks are signal fading, mobility, data rate enhancements, minimizing size and cost, user security and Quality of service (QoS). Also this paper is intended to provide the reader with an overview of the Research Issues and Challenges in wireless networks.

Design and Implementation of A Network Security Management System

Zhiyong Shan1, Bin Liao2 1 School of Information, Renmin University of China, 2 School of Electric and Electronic Engineering, North China Electric Power University

In recent years, the emerged network worms and attacks have distributive characteristic, which can spread globally in a very short time. Security management crossing network to co-defense network-wide attacks and improve efficiency of security administration is urgently needed. This paper proposes a hierarchical distributed network security management system (HD-NSMS), which can centrally manage security across networks. First describes the system in macrostructure and microstructure; then discusses three key problems when building HD-NSMS: device model, alert mechanism and emergency response mechanism; at last, describes the implementation of HD-NSMS.

The paper is valuable for implementing NSMS in that it derives from a practical network security management system (NSMS).

We promote architecture of HD-NSMS, and discuss three key problems in building HD-NSMS, which are device model, alert mechanism and emergency response. We describe the architecture from macrostructure and microstructure. Macrostructure has two kinds which both have advantages and dis advantages, one is ISMN and ESMN combined architecture; another is ISMN and ESMN separated architecture. Microstructure is divided into five layers: user interface, function logic, device logic, common communication and device interface.

Wireless LAN Technology: Current State and Future Trends.

a) ZahedIqbal

In this paper, a comprehensive overview of the current state and future trends of Wireless Local Area Network (WLAN) has been presented. This document studies and compares two most competing commercially potential WLAN technologies, namely IEEE 802.11 and ETSI HiperLAN. The study also addresses the challenges of their co existence and conveniences towards global standards. experiments are needed to adjust model capacity and identify an optimal way of blending older and recent data attempting.

Research on Next Generation Dynamic Host Configuration Protocol and Security of Application

Ziqian Xiao, Jingyou Chen &Chaobo Yang
Department of Software Engineering, Hainan Software Profession Institute

In this paper, the author studies on next generation of Dynamic Host Configuration Protocol (DHCPv6), expounds theprinciple of DHCPv6 and its message exchange process. And also point out that the security issues may exist, henceseveral strategies have been put forward to improve the safety of message exchange, as well as the security of network.

The author discusses DHCPv6 as being independent of its interaction with Neighbor Discovery in this paper.

With the Internet's rapid development and expansion, IP address is about to face the depletion of resources. The next generation of IP Protocol (Ipv6) is ripe in theory. Although there are many problems in transition, we will eventually enter the world of IPv6. In IPv6 networks, the number of fixed nodes will become mobile. How to quickly and easily allow network nodes to connect to the Internet is a major issue we are facing. The current DHCPv4 resolved auto-configuration of network nodes, however, in the IPv6 network DHCPv6 will play as the protagonist, which will become indispensable to the future of network members, DHCPv6 is developed from the DHCPv4, more simple and more powerful. Unavoidably, some security issues existed.

In the above paragraphs, we have discussed the definition of DHCPv6, and its principle and process for the information exchange. And some feasible strategies to ensure the next generation Ipv6 network DHCP services in security applications have also been given, which is based on the experiences of current Ipv4 network.

2. Wireless LAN Security : IEEE 802.11g & VPN

a) Abu TahaZamani b) Javed Ahmad

In this paper researcher begins by introducing the concept of WLAN(wirelessLAN). The introductory section gives brief information on the WLAN components and its architecture. In order to examine the WLAN security threats, researchers have looked at Denial of Service, Spoofing, and Eavesdropping. The researchers then focus on how Wired Equivalent Privacy (WEP) works, which is the IEEE 802.11b/WiFi standard encryption for wireless networking. The discussion of WEP continues by examining its weaknesses, which result in it being much less secured than what was originally intended. Their research also covers the new standards to improve the security of WLAN such as the IEEE 802.1x standard, which comprises of three separated sections: Point-to-Point Protocol (PPP), Extensible Authentication Protocol (EAP) and 802.1x itself. The 802.1x is actually included in 802.11i, a newly proposed standard for key distribution and encryption that play a big role in improving the overall security capabilities of current and future WLAN networks. The 802.11i standard provides two improved encryption algorithms to replace WEP, which are Temporal Key Integrity Protocol (TKIP) and CBC-MAC Protocol (CCMP). Finally the paper have also lists down several products that will assist users to protect their wireless networks from attacks, with concluding remarks on highlighted issues and solutions.

IJCSNS International Journal of Computer Science and Network Security, VOL.9 No.1, January

Network Security System

Muhammad AwaisShibli†, ††, JeffyMwakalinga†, and SeadMuftic†

†Department of Computer and System Science DSV, The Royal Institute of Technology (KTH)

Most of the current security systems do not provide adequate level of protection against ever-increasing threats. The main reason for their failure is the use of point solutions to protect hosts and reactive approach against intrusions. We studied human immune system, which survives under dynamic changing conditions and provides protection against biological viruses and bacteria. By taking immune system as an analogy, we propose an end-to-end network security system using mobile agents. Oursolution not only overcomes limitations of traditional security solutions, but also enhances overall security by providing protection at each stage of the attack timeline. It functions inproactive and also reactive manner and has ability to learn and improve its strategies, equivalent to what human immune system does against viruses and bacteria.

ISSN : 2348-7143
April 2018

This paper has presented network security system that applies features from the immune system to secure systems. The system has features that help an information security system learn to adapt to dynamic environments.

This system uses secure mobile agents to protect systems and networks. These mobile agents are generated and tested using the negative and clonally selection algorithms. The secure mobile agents that pass these tests are allowed to perform the vulnerability analysis, intrusion detection.

Network Utilization: the Flow View.

AvinatanHassidim , Danny Raz, Michal Segalov, Ariel Shaqed

In this paper researchers have introduced a novel way to look at the network utilization. Unlike traditional approaches that consider the average link utilization, the researcher have taken the flow perspective and considered the network utilization in terms of the growth potential of the flows in the network. Building and operating a large backbone network can take months or even years, and it requires a substantial investment. Therefore, there is an economical drive to increase the utilization of network resources (links, switches, etc.) in order to improve the cost efficiency of the network. At the same time, the utilization of network components has a direct impact on the performance of the network and its resilience to failure, and thus operational considerations are a critical aspect of the decision regarding the desired network load and utilization. However, the actual utilization of the network resources is not easy to predict or control. It depends on many parameters like the traffic demand and the routing scheme (or Traffic Engineering if deployed), and it varies over time and space. As a result it is very difficult to actually define real network utilization and to understand the reasons for this utilization.

Conclusion:

It is observed that Researchers have given major thrust on role, Networking Topologies, LAN, Security threats, Wireless Networks etc. None of the authors have made a discussionregarding DHCP with MAC binding & role of Structured Network in Educational Institutes belonging toWestern Maharashtra.

References :

- www.more.net | University of Missouri Copyright ©2008 MOREnet and The Curators of the University of Missouri
- http://www.cisco.com/public/support/tac/documentation.html
- http://home.iitk.ac.in/~navi/sidbinetworkcourse
- https://study.com/academy/lesson/what-is-a-computer-network-types-definition-quiz.htm
- https://en.wikipedia.org/wiki/Computer_network
- https://www.geeksforgeeks.org/computer-network-tutorials/
- https://www.tutorialspoint.com/computer_fundamentals/computer_networking.htm
- intronetworks.cs.luc.edu/current/ComputerNetworks.pdf
- https://en.wikipedia.org/wiki/Dynamic_Host_Configuration_Protocol
- https://en.wikipedia.org/wiki/MAC_address
- https://kb.netgear.com/1005/How-to-find-a-MAC-address
- https://www.cisco.com › Products & Services › Security › Firewalls

'RESEARCH JOURNEY' *International Multidisciplinary E- Research Journal*
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) –0.676 (2013)
Special Issue 58 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

Role of Self Help Group in Women Empowerment in Kolhapur

Ms. S. D. More
Asst. Professor
Dept. of MBA
KIT's Institute of Management Education & Research,
Gokul Shirgaon.+91-9767222004
more_seema91@ymail.com

Abstract:-

Empowerment in the context of women's development is a way of defining, challenging and overcoming barriers in a woman's life through which she increases her ability to shape her life and environment. It is an active, multidimensional process which should enable women to realize their full identity and power in all spheres of life. The rural poor with the assistance from NGOs and various microfinance institutions have demonstrated their potential for self-help group to secure economic and financial strength. Policy implications and program attributes are to be framed to achieve better results in reducing poverty and empowering women. The participation of women in Self Help Groups (SHGs) made a significant impact on their empowerment both in social and economical aspects

The Microfinance movement was started with the objective of empowering women. The Self help groups have played a very crucial role in the delivery of microcredit in India. They have emerged as support groups in enhancing women's ability in facing all kinds of problems in their domestic environment. Besides the availability of microcredit to these members from banks and microfinance institutions brings about a change in their household welfare and makes a significant impact on their socio economic status and their empowerment.

Introduction

As we know that women in our country have a respectable place in the society. But after six decades of independence, the situation of women's very severe in the rural and backward areas . Even when women constitute around fifty percent of the total human resources in our economy . Yet women are the more poor and under privileged than men as they are subject to many socio-economic and cultural constraints. Women development activities must be given importance to eradicate poverty, increase the economic growth and for better standard of living. Self Help Group (SHGs) is small credit cooperatives, usually all poor and all women.

In India Self Help Groups or SHGs represent a unique approach to financial intermediation. The approach combines access to low cost financial service with a process of self management and development for the women who are SHGs members SHGs are formed and supported usually by NGOs (Non-Government Organizations) and government agencies. Therefore for holistic empowerment of the women to happen –social, economical and political aspects impacting a women's life must coverage effectively.

The concept of Self Help Groups serves to underline the principle "for the people, by the people and of the people". The Self Help Groups scheme was introduced in Tamil Nadu in 1989.The activism within the women movement has influenced the government to frame policies and plan for the betterment of the country. The empowerment of women through Self Help Groups (SHGs) would lead to benefits not only to the individual women, but also for the family

ISSN : 2348-7143
April 2018

and community as a whole through collective action for development. Self Help Groups have linkages with NGOs (Non-Government Organizations) and banks to get finance for development. In turn it will promote the economy of the country by its contribution to rural economy. Self Help Groups are small voluntary associations of rural people, preferably women folk from the same socio-economic background. They come together for the purpose of solving the common problems through self-help and mutual help in the Self Help Groups.

Through regular contributions from all group members, the group builds a common fund. Members may take out a loan from the fund, and pay it back at a collectively accepted interest rate. SHGs make decisions on a consensus method, and leadership is rotated periodically. This form of credit has many benefits. These loans are often used to purchase inputs for income generation. SHGs-Bank Linkage Programmers is emerging as a cost effective mechanism for providing financial services to the "Unreached Poor" which has been successful not only in meeting financial needs of the rural poor women but also strengthen collective self help capacities of the poor ,leading to their empowerment. Rapid progress in SHG formation has now turned into an empowerment movement among women across the country.

Aim Of The Study

The purpose of this study is to explore the micro credit management, and the impact of micro-credit on emancipating urban and rural women involved in SHGs. Micro-credit as a vehicle for the empowerment of poor women in urban and rural areas of India has only been minimally researched. The Constitution not only grants equality to women, but also empowers the State to adopt measures to improve the status of women. However, there Electronic copy available at still exists a wide gap between the goals enunciated in the constitution, legislation, policies, plans, programmes and related mechanisms, and the situational reality of women in India.

Statementofthe Problem

Micro enterprises are important sources of income and employment for a significant proportion of the rural poor. In fact, this sub-sector is perceived to be an essential part of survival strategy of poor households. The relationship between micro enterprises and poverty reduction is coming up for serious consideration among the policy makers and development program implementers.

During the planning area several efforts were made by the Government of India to increase the role of women and to improve the status of women. Self-Help Groups (SHGs) are increasingly becoming very important method of organizing women to take action and transform their situation. The strength of Self Help Groups is based upon the fact that the people who are facing problems are likely to be the most committed to solve them.

The empowerment of women is one of the central issues in the process of development of countries all over the world. Involvement in Self Help Groups has enabled women to gain greater control over resources like material possession, intellectual resources like knowledge, information, ideas and decision making in home, community, society and nation. Thus empowerment means moving from a position of enforced powerlessness to one of the power. There are various indicators that define women empowerment. These indicators are Mobility, Autonomy, Decision Making, ownership of Household assets, Freedom from domination in the family, Political and Legal awareness, Participation in social and development activities,

ISSN : 2348-7143
April 2018

contribution to family expenditure, Exposure to information media, Participation in development programmer. This state of affairs raises the following questions:

1. To what extent the selected women members of SHGs are empowered?
2. What are the factors influencing women empowerment?
3. To what extent SHGs have played their role in women empowerment?
4. What are the reasons to joining Self Help Group?
5. What are the levels of satisfaction regarding Self Help Groups?
6. What are the problems faced by the members in Self Help Groups?

Objectives Ofthe Study

The objectives of the present study are proposed the following objectives.

1. To find out the benefits through Self Help Group.
2. To analyses the income, expenditure and savings pattern of the Self Help Groups members.
3. To study the level of satisfaction of members in Self Help Group.
4. To find out the problems faced by the members in Self Help Groups.
5. To find out the change in economic condition of SHG members

Research Methodology

The data for the study was collected from the sample of 50 selected women working in self help groups situated near by industrial area In Kolhapur. Use of structured questionnaire was made to collect this data. With the help of statistical tools the data was analysed and empirical conclusions were found from the study.

Analysis And Interpretation

Sr. No.	**Reasons**	**No. of Respondents**	**Percentage(%)**
1	To Repay Old Debts	0	0
2	To Maintain House Expenditures	0	0
3	To Promote Savings	45	90
4	To Raise Status in the Society	0	0
5	To promote income Generated activities	0	0
6	To Get Loan	5	10
	Total	**50**	**100%**

1. **Reason for Joining SHGs.**

   Interpretation:-

   From the above data it is clear that most of the women i.e 90% join the SHGs to promote savings and 10% of women join the SHGs to get loan.

2. **Age Group of Members of SHGs.**

Sr. No.	Age Group	No. of Respondents	Percentage (%)
1.	Less than 20	5	10
2.	20-30	35	70
3.	30-40	0	0
4.	40-50	5	10
5.	50-60	5	10
6.	Above 60	0	0
	Total	50	100%

Interpretation:-

From the above data it is clear that 70% of the women are from the 20-30 age group, 10% of the women are from less than 20 and 50-60 age group.

3. **Monthly Income of the Members Before Joining SHGs.**

Sr. No.	Monthly Income Rs.	No. of Respondents	Percentage (%)
1.	Less than 1000	25	**50**
2.	1000-2000	**10**	**20**
3.	2000-3000	**8**	**16**
4.	3000-5000	**0**	**0**
5.	5000-7000	**0**	**0**
6.	Above 7000	**0**	**0**
7.	Non-earning members	**2**	**4**
	Total	**50**	**100%**

Interpretation:-

From the above data it is clear that 50% of the women's monthly income are less than 1000.

4. **Monthly Income of the Members After Joining SHGs.**

Sr. No.	Monthly Income Rs.	No. of Respondents	Percentage (%)
1.	Less than 1000	**5**	**10**
2.	1000-2000	**10**	**20**
3.	2000-3000	**25**	**50**
4.	3000-5000	**0**	**0**
5.	5000-7000	**0**	**0**

ISSN : 2348-7143
April 2018

6.	Above 7000	**0**	**0**
7.	Non-earning members	**10**	**20**
	Total	**50**	**100%**

Interpretation:-

From the above data it is said that 50% of women's are earning more money after joining the SHGs.

5. **Types of Loans in the SHGs.**

Sr. No.	Types of the Loan	No. of Respondents	Percentage (%)
1.	Business Loan	35	70
2.	Marriage Loan	0	0
3.	Repay the old Loan	5	10
4.	Medical Loan	5	10
5.	House repairing Loan	5	10
6.	Cattle Loan	0	0
	Total	50	100%

Interpretation:-

From the above table it is clear that 70% of the women are taking business loan , 10% of the women are taking repay the old loan, medical loan and house repairing loan.

8. Amount of Loan Availed by the members Through SHG.

Sr. No.	Availed Loan Amount Rs.	No. of Respondents	Percentage (%)
1.	Less than 5,000	0	0
2.	5,000 to 10,000	15	30
3.	10,000 to 15,000	5	10
4.	15,000 to 20,000	20	40
5.	Above 20,000	10	20
	Total	50	100%

Interpretation:-

From the above table it is clear that 40% of the amount of loan availed is 15000 to 20000.

9. Repayment of Loan by SHGs' Members.

Sr. No.	Repayment of Loan	No. of Respondents	Percentage (%)
1.	Repayment in time	45	90
2.	Repayment in advance	0	0

3.	Repayment not in time	5	10
	Total	50	100%

Interpretation:-

From the above data it is said that 90% of the women are repayment their loan in time and 10% of the women are not repaying their loan in time.

10. Tenure of membership in SHGs.

Sr. No.	Tenure of membership	No. of Respondents	Percentage (%)
1.	Below 2 years	**0**	**0**
2.	Between 2-3 years	**0**	**0**
3.	Between 3- 5 years	**45**	**90**
4.	Between 5-7 years	**5**	**10**
5.	Above 7 years	**0**	**0**
	Total	**50**	**100%**

Interpretation:-

It is said that tenure of membership is 90% in SHGs is between 3 – 5 years and 10% between 5 – 7 years.

11. Educational status of the self help group members.

Sr. No.	Reasons	No. of Respondents	Percentage (%)
1.	10^{th}	**30**	**60**
2.	12^{th}	**20**	**40**
3.	**Graduation**	**0**	**0**
4.	**Post-Graduation**	**0**	**0**
	Total	**50**	**100%**

Interpretation:-

From the above data it is clear that 60% of the women have completed their education in 10^{th} and 40% of the have completed their education in 12^{th}.

12. Family status of the self help group members.

Sr. No.	Reasons	No. of Respondents	Percentage (%)
1.	Joint	40	80
2.	Nuclear	10	20
	Total	50	100%

Interpretation:-

It is said that family status of the SHGs members i.e 80% of the wome's belong from the joint family and 20% of the women's belong from nuclear family.

13. Number of Loans Taken by Respondents through SHG.

Sr. No.	Reasons	No. of Respondents	Percentage (%)
1.	One	15	30
2.	Between 2 – 4	35	70
3.	Between 4 – 6	0	0
4.	More than 6	0	0
	Total	50	100%

Interpretation:-

From the above data it is clear that 70% of the respondents have taken loan for 2-4 reasons and 30% of the women have taken loan for the single reason.

14. Do you face any problems while taking loan through self help group?

Sr. No.	Problems while taking loan	No. of Respondents	Percentage (%)
1.	Related Documents	**0**	**0**
2.	Qualifying Related	**0**	**0**
3.	Amount Related	**10**	**20**
4.	Enquiry Related	**5**	**10**
5.	No Problem	**35**	**70**
	Total	**50**	**100%**

Interpretation:-

From the above data it is said that 70% of the women have no problem while taking loan, 20% of women are facing problem related amount and 10% of the women have problem related enquiry.

15. While returning the amount of loan do you face any problem?

Sr. No.	Problems while taking loan	No. of Respondents	Percentage (%)
1.	Not able to return whole amount of loan taken	**0**	**0**
2.	Amount of loan was not return on time	**25**	**50**
3.	Any Other	**25**	**50**
	Total	**50**	**100%**

Interpretation:-

From the above data it is clear that 50% of the women are getting problem of amount of loan was not return on time and other problem.

16. Any other sources of getting loan.

Sr. No.	Problems while taking loan	No. of Respondents	Percentage (%)
1.	Bank	**40**	**80**
2.	Relatives or Friends	**10**	**20**
	Total	**50**	**100%**

Interpretation:-

From the above data it is clear that the other source of getting loan is 80% of the women are getting loan from bank and 20% of the women are taking loan from their relatives or friends.

Conclusion:-

The study was undertaken the women empowerment through SHGs. It is found that the income of the women has been increased after joining the SHGs. So that the monthly household expenditure also has been raised considerable level . The good practice of the women SHGs in the study area is repayment of the loan in time. A few members do not pay in time but this is not affecting the further credit of SHGs. Since the repayment of loan is regular and within the time, we may conclude that the economic activities of SHGs are quite success. In this way SHGs. are very successful to develop women empowerment and rural areas.

ISSN : 2348-7143
April 2018

Role of R and Python in Data Science

Mr. R. M. Huddar
Asst. Professor, CSIBER, Kolhapur

Dr. R.V. Kulkarni
Professor and Head, Dept. of computer studies,
CSIBER, Kolhapur

Abstract *:*

Data is everywhere. In fact the amount of digital data that exists is growing at rapid rate. For businesses to survive in today's competitive world it is required to convert this data into business information. Data science is an umbrella term for techniques used when trying to extract insights and information from data. R and python are two most popular programming languages used as data science tools. In this paper author presented differential view of R and Python programming languages with pros and cons of these languages from point of data analytics.

Keywords— data, information, data science, R, Python, data analytics.

Introduction:

*For a growing number of people, data analysis is a central par*t of their job. Increased data availability, more powerful computing, and an emphasis on analytics-driven decision in business has demanded data science. Data is everywhere. In fact the amount of digital data that exists is growing at a rapid rate. In fact more than 2.7 zettabytes of data exist in today's digital universe, and that is projected to grow to 180 zettabytes in 2025[1]. Facebook the most active of social networks, with over 1.4 billion active monthly users, generates the most amount of social data 4 million posts every minute. Instagram with 300 hundred million monthly users in 2015 having 1,736,111 likes on photos each minute of the day. Twitter users generate 347,222 Tweets each minute. With the world rapidly going digital and various e-commerce sites emerged for customers to purchase their products. There is huge competition between E-commerce companies to attract customers to purchase their products. Day by day customers commerce trend is shifting from traditional commerce to E-commerce with lot of inventions in information technology, companies need to know their products and customers in market. Businesses have to aware about customer's individual buying behaviour and recommend that kind of products to customers to increase their revenue. To do all these things there is need of some analytics tools which will extract generated data, process data and generate meaningful information from this generated data. There is need to apply data analytic techniques like association, classification, clustering, etc. In IT industry there is huge demand for data scientist who posses combined knowledge of statistics, mathematics, programming, problem solving and capturing data. He must have knowledge of different data science tools which provide facility of cleaning and preparing data so that it is easy to apply analytic methods to data and get meaningful information from it. Any data analytic tool has to provide minimal four functionalities[2] a) data extraction – It is process of extracting data from different sources like social sites or e-commerce platforms. B) Data quality – whatever data extracted from data source it may have some bugs in it like inaccurate data, incomplete data. Etc. It has to apply data quality techniques to minimize these kind of errors and prepare data for data analytics. C) Data analytic techniques – It must contain different data analytic algorithms like classification, association, clustering, etc. D) Data visualization – It must provide different data visualization techniques to produce results in visualized way by using different kinds of graphs so that results of analysis can be easily understandable by users. In today's competitive world two most popular data science platforms are R and Python.

R AND PYTHON AS DATA SCIENCE TOOLS

At the start of any machine learning project, one can face an important choice about which language or software should use? R and Python are the two most popular programming languages with rich open source ecosystems used by data analysts and data scientists. Both are free and open source. With the view of Quartz's former data editor, Chris Groskopf, Python is better for data manipulation and repeated tasks, while R is good for ad hoc analysis and exploring datasets. While R's functionality is developed with statisticians in mind. Python is often praised for its programming capability [5]. R and Python are open source languages available for different platforms like windows, Linux, MAC etc. R Both these languages are downloadable for 32 bit and 64 bit versions.

HISTORY OF R AND PYTHON

R is the open source language created by Robert Gentleman and Ross Ihaka in 1995 as an implementation of S programming language [4]. The purpose was to develop a language that focused on delivering a better and more user friendly way to do data analysis, statistics and graphical models. One of the main strengths of R is its huge community that provides support through mailing lists, user contributed documentation and a very active stack overflow group. There is also CRAN, a huge repository of R packages to which users can easily contribute. These packages are a collection of R functions and data that make it easy to immediately get access to the latest techniques and functionalities without needing to develop everything from scratch. R is downloadable from cran.r-project.org. latest release of R is R3.4.3 available for different platforms and on both 32 bit and 64 bit machines.

Python was created by Guido Van Rossem in 1991. Python reached version1.0 in 1994. Currently python programming language development comes in two different flavours Python 2 and Python 3. Python is an interpreted language; it runs on any platform, it supports multiple paradigms including object oriented, imperative, functional programming and procedural styles. Aside from the official CPython distribution available from python.org, other distributions based on Cpython include:

- ActivePython from ActiveState
- Anaconda from Continuum Analytics
- ChinesePython Project: Translation of Python's keywords, internal types and classes into Chinese. Eventually allows a programmer to write Python programs in Chinese.
- Enthought's Canopy
- Win9xPython: Backport of mainline CPython 2.6/2.7 to old versions of Windows 9x/NT.
- IPython and its IPyKit variant
- PocketPython

ISSN : 2348-7143
April 2018

- Portable Python: Run Python from USB device - no installation needed.
- PyIMSL Studio
- PyPy: a Python implementation in Python.
- Python(x,y): Python(x,y) is a scientific-oriented Python Distribution based on Qt, Eclipse and Spyder
- PythonForArmLinux
- PythonLabsPython: an old name for the python.org distribution
- PythonwarePython
- StacklessPython
- Tiny Python (archived link) - not to be confused with tinypy

For to develop python applications different distributions and third party vendors provided different IDEs. Some of Python IDEs are PyCharm, PvDev, Wing IDE, Komodo IDE, Spyder, Python-IDLE, Thonny etc[3].

Comparison between R and Python

1. R is mainly used when the data analysis task requires standalone computing or analysis on individual servers. It's handy for almost any type of data analysis because of the huge number of packages and readily usable tests that often provide you with the necessary tools to get up and running quickly. You can use python when your data analysis tasks need to be integrated with web apps or if statistics code needs to be incorporated into a production database. Being a fully fledged programming language, it's a great tool to implement algorithms for production use.
2. Mathematicians and statisticians tend to prefer R, whereas computer scientists and software engineers tend to favour python.
3. If you are working with data that's been gathered and cleaned for you, and your main focus is the analysis of that data, go with R. If you have to work with dirty or jumbled data from websites, files or other data sources you should start with Python.
4. Python can do some statistics, and is great scripting language to help you link your workflow or pipeline components together. R is a statistical and visualization language which is deep and huge and mathematical.
5. Python is a generic programming language with which you can build things, and R is great statistical platform with which you can analyse and plot things.
6. R builds data analysis functionality by default, whereas python relies on packages. For data analysis functionality python has packages like Numpy and Pandas. However R has inbuilt data analysis functionality.
7. Through packages like Lasagne, Caffe, Keras and Tensorflow creating deep neural networks is straightforward in python.
8. Packages like ggplot2 make plotting easier and more customizable in R than in python.

Following fig. Shows difference between different analytic tools which is referenced from www.kdnuggets.com

ISSN : 2348-7143
April 2018

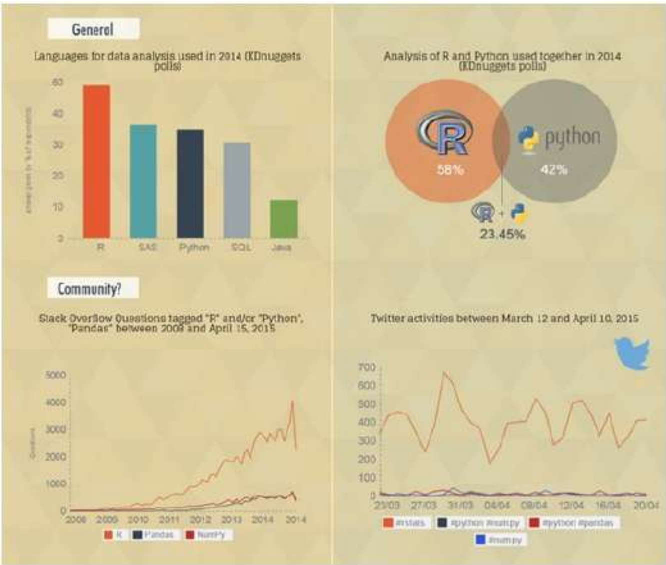


Figure 1 comparision between R and Python

As shown in above fig. among the languages used for data analysis R, SAS and Python are most famous. It also shows that about 23.45% of data analysis field is shared by R and Python languages.

CONCLUSIONS :

R and python both are the two most popular programming languages used by data analyst and data scientists. Both are free and open source. Mostly R is used for statistical analysis and python is used as general purpose programming language

REFERENCES :

1. Avantika Monnappa, Data Science vs. Big Data vs. Data Analytics article,www.simplilearn.com
2. Ihaka, R. and Gentleman, R., 1996. R: a language for data analysis and graphics. *Journal of computational and graphical statistics*, 5(3), pp.299-314.
3. Pedregosa, F., Varoquaux, G., Gramfort, A., Michel, V., Thirion, B., Grisel, O., Blondel, M., Prettenhofer, P., Weiss, R., Dubourg, V. and Vanderplas, J., 2011. Scikit-learn: Machine learning in Python. *The Journal of Machine Learning Research*, 12, pp.2825-2830..
4. Nasridinov, A. and Park, Y.H., 2013, September. Visual Analytics for Big Data Using R. In Cloud and Green Computing (CGC), 2013 Third International Conference on (pp. 564-565). IEEE.
5. Sanner, M.F., 1999. Python: a programming language for software integration and development. *J Mol Graph Model*, 17(1), pp.57-61.
6. Bezanson, J., Karpinski, S., Shah, V.B. and Edelman, A., 2012. Julia: A fast dynamic language for technical computing. *arXiv preprint arXiv:1209.5145*. www.kdnuggets.com

'RESEARCH JOURNEY' *International Multidisciplinary E- Research Journal*
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) –0.676 (2013)
Special Issue 58 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

Educational Exhibition: The Effect of Sponsorship and Various Promotional Activities on Visitors': Brand Recall, Attitude and Purchase Intention

Mr. Prashant .G. Kale
PhD Scholar,
Shivaji University, Kolhapur.
Dr. M.M.Ali,
Director,
CSIBER, Kolhapur.

Abstract

The number of Educational institutes sponsoring educational exhibitions has increased from last past decade. Yet, for many educational institutes it is unclear how the effectiveness of theeducational exhibition sponsorship is should be evaluated. Evaluation based on the number of visitors will not be appropriate measure.Good media coverage isvery essential but not sufficient. The appropriate measure of evaluating the educational sponsorships are higher brand recall, positive attitude change, higher level of purchase intension toward the sponsors. These factors are an appropriate measure for evaluating educational exhibition sponsorship. The main purpose of this study is to analyze the effectiveness of educational exhibition sponsorship on the visitors brand recall, attitude and purchase intention toward the sponsors.

Key Words - Educational exhibition sponsorship, Brand Recall, Attitude toward sponsors, purchase intention toward the sponsors.

Introduction

Now day's Indian educational market is more customer (student) driven market. In customer driven market, service provider should clearly understand a need, want of customer/ prospect. For understanding customer expectation, need, want and demand, Educational Institutes need to interact with customer/prospect. Sponsoring educational exhibition is the best way to interacting with your potential customer/prospect. A unique specialty of the educational exhibition as compared to other IMCactivities (advertising, public relation) is that educational exhibition offers opportunities for personal interaction with target segment (students & their parents) and understand their needs, wants and demands.

Sponsorship can offered marketers the opportunities for addressing new target audience, for building their brands, and for enhancing their corporate image. (Ferkins and Garland, 2006). Qualitative research finding clearly substantiate the proposition that sponsorship's ability to generate positive consumer brand attitude can be powerful and lasting. (Meenaghan 1999). Educational exhibition sponsorship is still a new IMC activity for many educational institutes and they are unclear about how the effect of sponsorship activities and their relation to other communication mix should be measured.

The purpose of this study is to examine outcomes associated with the educational exhibition sponsorship. It investigates 1) Brand recall of the title sponsor, co-sponsor. 2) How experience with the sponsor's services during the exhibition influences visitors' brand attitude and brand purchase intensiontoward sponsors. 3) Impact of IMC activities on the sponsor's brand recall, brand attitude and brand purchase intension.

Educational Exhibition

The study examines outcomes associated with an educational exhibition sponsorship of a three day commercial event. Exhibition organized at Sangli district in 2011.The exhibition attracted more than 7500 visitors during three days. This number was identified using entry registermaintain by the organizer. Educational organizer is the well known print media group in western Maharashtra. Ninety four educational institutes were participated in Exhibition from four districts namely Sangli, Kolhapur, Satara, Pune. 71 engineering-diploma colleges, 3 medical colleges, 4 primary-secondary school, 3 coaching classes for public service, 7entrance coaching institutes, 6 computer institutes were participated in Exhibition.

During the exhibition, a variety of PR activities were organized by organizer such as seminar, panel discussion, student-parents interaction with educational institutes. The Visitors were able to interact with the institutes' representatives at each stall. Those who visited a particular stall, they can enter their name in registration notebook of the institute. Educational institutes werecollected students information for a marketing purpose such as telemarketing, email marketing.

Organizer promoted exhibition though his own in-house newspaper andalso displayed two big hoarding at prime location in city. Researchers' found that during the promotional activities, organizer maximally focused on the event name and organizer name. As compared to the event name and organizer name, a very little importance had given to the title sponsor and the co-sponsor name in promotion campaigns by organizer.

The title sponsor for the exhibition is a coaching institute for IIT, NIIT entrance exam. The co-sponsor for the exhibition is an educational institute which running engineering, diploma, MBA courses and International School. At the exhibition, the title sponsor's name and logo, courses information was displayed through a signal banner (flex) 6x3feet. At the same time, the Co-sponsor's name and logo, courses information was promoted through two digital screens (size 3*6) and four digital banners at the exhibition.

Conceptual frame work

Exhibition: -

An Exhibition is a place where corporate/ organization exhibit product(s) or services. It is a place to make presentation, show your products, obtain leads and follow up on the leads. In some consumer exhibition, the exhibitors also sell the product(s)/ services, which they exhibit.

Sponsorship:-

"an investment in cash or kind, in an activity, person or event, in return for access to the exploitable commercial potential associated with that activity, person or event by the investor (sponsor)" (Meenaghan, 1991)

Event sponsorship is now recognized as being a partnership arrangement there is a two-way exchange of value and communication between a sponsoring firm and a sponsored entity. Such arrangements are usually no longer agreements of goodwill, but economic agreements, backed by legal contracts, definitions of property rights and a focus on returns on investment (Meenaghan, 1998).

Top of the mind brand recall: -

This is the first brand mentioned spontaneously by respondent. This measure is useful while evaluating if the dominant sponsors of an event is also dominant in the public memory (Anne1992, 121-148). According to Anne there is a correlation between the first name mentioned and the main sponsor of the event (if the sponsor is important then the sponsor will named more easily by the respondent).

Unaided brand recall: -

This measure indicates the degree of presence in the mind of the respondent to the brand (Anne 1992, 121-148). This is the percentage of people able to spontaneously name the brand without help (cue). It is the brands that the respondent has in mind and when he is questioned he can mention these brands without any cue.

Aided brand recall:-

The aided recall is a marketing technique testing the 'memorability' of a brand. This indicator measures the recognition that allows observing the "traces" left by the sponsor in the respondent's mind (Anne 1992). This is the percentage of people who mention the brand in a list that includes the brand name/logo.

Brand Attitude: -

The strength of positive or negative relevance that a customer experiences with regard to a particular brand. In other words, how much does the customer like/dislike a brand, and how convinced is the customer that this perception about the brand is correct? Opinion of consumers toward a product determined through market research. The brand attitude will tell what people think about a product or service, whether the product answers a consumer need, and just how much the product is wanted by the consumer. Knowledge of brand attitude is very helpful in planning an advertising campaign.

Brand Purchase Intension: -

It is a plan to purchase a particular branded goods or service in the future. Consumer purchase intension is considered as a subjective inclination toward a product and it can be important index to predict consumer behavior (Fishbein and Ajzen 1975)

Research Methodology

This research was conducted using the survey research method. The population was all visitors who visited the exhibition. The survey had been carried out at the exhibition place. The convenience random samplingmethod is used. Three enumerators had collected the information from the visitors at the exit door of the exhibition. Researchers used an experimental hypothesis testing design for this study.

The researchers had collected 100 as sample size for the study. 7500 visitors (population)had visited the exhibition during the period of exhibition. For identifying exact sample size researchers used sample size notation

$SS = Z^2*p*q*N/e^2*(N-1) + Z^2*p*q$

at 5% significance level and 10% confident level.

The brand recall measured with the help of top of the mind, unaidedbrand recall and aided brand recall. The brand attitude and brand purchase intension toward sponsors was measured with a Liker 5-point scales from 5 to 1 to present strongly agree, agreeno opinion, disagree, and strongly disagree.

As suggested by Churchill (1979) to check the internal consistency of items, coefficient alpha was calculated. According to Nunnally (1978), the value of 0.7 or above is taken as acceptable measure. These scales for Title Sponsor's brand attitude and brand purchase intension for the four items is 0.7276. These scales for Co-Sponsor's brand attitude and brand purchase intension for the four items is 0.7965.

In the light of the objectives framed for the study, the following (H0) null hypothesis has been set for the testing:-

1. The demographic profile* of the visitors and the capacity of brand recall** are independent.
2. The reason of visit (For Whom) and the capacity of brand recall** are independent.
3. The awareness through media and the capacity of brand recall** are independent.

Demographic Profile* refers to age, education, occupation and gender

Brand recall** refers to 1) Unaided Brand Recall of Event Name, 2) Aided Brand Recall of Event Name, 3) Unaided Brand Recall of Organizer Name, 4)Aided Brand Recall of Organizer Name, 5) Unaided Brand Recall of Title Sponsor, 6) Aided Brand Recall of Title Sponsor, 7) Unaided Brand Recall of Co-Sponsor, 8) Aided Brand Recall of Co-Sponsor, 9) Unaided Brand Recall of Title Sponsor's Courses, 10) Aided Brand Recall of Title Sponsor's Courses, 11) Unaided Brand Recall of Co-Sponsor's Courses, 12) Aided Brand Recall of Co-Sponsor's Courses.

Total 72 hypotheses statement has been tested with the help of Pearson's chi-square test and Fisher's Exact Test thorough SPSS (Version16).

Result and Discussion

Table No. 1

Demographic Characteristics of the visitors

Demographic Characteristics	Valid Percentage
Age	
15-20 year	52
21-30 year	28
31- 58 year	20
Education	
10th, 11th and 12th Std	41
Conventional (B.Sc., B.Com. B.A.)	30
Professional(B.E., M.E., M.B.A., MBBS)	29
Occupation	
Student	66
Non-Student	44
Gender	
Male	70
Female	30

(Source: - Survey Data)

The target customer's age group for the education is 15-20 age groups. Educational exhibition is successful to attract a maximum target customer which is 52% of the total visitors. The visitors who are appearing or just completing the school education (10th) or junior college education (11th and 12th) is 41%, which is most desirable prospect for higher education. 80% of participant institutes including Title Sponsor and Co-Sponsors offered higher educational courses such as engineering, diploma, medical and management (MBA). 66% visitors are students. It shows that large numbers of students are conscious and serious about their future education and career. 70% visitors are male which show that higher education enrollment is dominating by the male students.

Table No. 2

Reason of Visit (For Whom)

Reason of Visit (For Whom)	Valid Percentage
Further Education for Self	60
Further Education for Son/Daughter	15
Further Education for Sister/Brother	12
Further Education for Relative	7
Not any specific reason	6

(Source: - Survey Data)

60% students are conscious about their own education and they are collecting information about their further education. They want to verify scope of particular education on their own parameters. They want to write their destiny on their own responsibility and ability. Still 27% student's career decision has been taken by their parent or elder sibling.

Table No. 3

Reason of Visit (Searching for which education)

Searching for future Education for Prospect	Valid Percentage
School level Education or Short term Courses	12
Conventional Education	12
Engineering Education	51
Professional Education	4
Medical Education	3
Civil Services Coaching	9
No any specific reason	9

(Source: - Survey Data)

More than half of visitors are willing to pursue an engineering education for self or sibling, which shows that engineering is most prestige's and valuable education in a society. A conventional education has four times less demand as compared to an engineering education.

Table No. 4

How did you hear about the Exhibition?

Source of Information	Valid Percent
Hoarding	10
Correct Newspaper	49
Dummy Newspaper 1	1
Dummy Newspaper 2	5
Mouth Publicity	29

ISSN : 2348-7143
April 2018

(Source: - Survey Data)

Near about the fifty percent of visitors are aware through newspaper. Correct newspaper group was the official organizer of the educational exhibition. It shows that 59 percent (Newspaper and Hoarding) of the awareness is done by the organizers campaign activities. The organizer played a key role to increase a footfall at exhibition.

Table No. 5

Top of the Mind Recall

Tell any five institutes names which are participated in this exhibition.

Ranking	INSTITUTE NAME	1st Recall	2nd Recall	3rd Recall	4th Recall	5th Recall	Total Recall
1	XYZ	13	11	11	7	1	43
2	Co-sponsor	11	8	5	8	3	35
19	Title sponsor	4	0	0	1	0	5

(Source: - Survey Data)

XYZ College is one of the reputed engineering colleges in the western Maharashtra. XYZ College of Engineering was stood first with higher recall score 43. It was surprising to note that Co-sponsor top of the mind brand recall was very higher than the Title Sponsor's recall. The simple reason behind this is the Co-sponsor had displayed number of banners and two digital screens at exhibition place. Co-sponsor did a lot of advertising campaign through OOH and a print media. Other hand, Title Sponsor had displayed only one simple banner (flex).

Table No. 6

Number of Participating Institutes Recall by Visitors(without any cue)

Number of Recall	Valid Percentage	Cumulative Percentage
All Five Recall	35	35
Four Recall	22	57
Three Recall	24	81
Two Recall	9	90
One Recall	3	93
None	7	100

(Source: - Survey Data)

More than the fifty percent visitors were able to recall up to four institutes names. 80% of visitor's age is less than 30 years. Hence, we can say that good recall is the result of lesser age of the visitors.

Table No. 7

Unaided Brand Recall

Unaided Brand Recall	Valid Percentage
Event Name	53
Organizer Name	25
Title Sponsor Name	05
Co-Sponsor Name	10

(Source: - Survey Data)

ISSN : 2348-7143
April 2018

More than fifty percent visitors recalled the exhibition name and one forth percent visitor recallorganizer name without any cue.Title sponsor and Co-sponsor recall are very less as compare to the event and organizer name recall. Why this happen? Because during print media campaign the exhibition name had given highest preference then the organizer name had given second preference. If we see print advertisement then we found that event name, organizer name wasdisplayed at the middle portion of the newspaper and the title sponsor, co-sponsor name was displayed at the left-lower portion of the newspaper.

Table No. 8

Aided Brand Recall of All Six Aspects

Aided Brand Recall	Valid Percentage
Event Name	80
Organizer Name	84
Title Sponsor Name	20
Co-Sponsor Name	40

(Source: - Survey Data)

We see, the reason of higher recall of the event name and the organizer as compared to the title and co-sponsor recall. It was surprising to note that many visitors have misunderstood; they assumed co-sponsor as the title sponsor. Co-sponsor brand recall was double than the title sponsor brand recalled becausethe co-sponsor had displayed number of banners and two digital screens at exhibition place and the title sponsor had displayed only one banner /flex.

Table No. 9

Descriptive Statistics

Following Statement measured on the 5 point Likert's Scale	N	Mean	Percentage	Mean N=100	Percentage
Attitude toward title sponsor counseling for admission	48	3.63	72.6	1.74	34.8
Attitude toward co- sponsor counseling for admission	79	3.62	72.4	2.86	57.2
Attitude toward title sponsor career guidance	48	3.69	73.8	1.77	35.4
Attitude toward co- sponsor career guidance	79	3.76	75.2	2.97	59.4
Change in overall attitude for title sponsor	52	3.75	75	1.95	39
Change in overall attitude for co- sponsor	84	3.83	76.6	3.22	64.4
change in purchase intension toward title sponsor	52	3.58	71.6	1.90	38
change in purchase intension co- sponsor	84	3.58	71.6	1.90	38
Change in overall attitude toward organizer	100	4.23	84.6	4.23	84.6

Out of 100 visitors 52 and 21 visitors didn't visit the title and co-sponsor stalls respectively and also they are not able to recall their (sponsors) name.Hence, only 48 and 79 visitors had given opinion about the title and co-sponsor counseling for admission as well as career guidance respectively. 4 and 5 visitors who didn't visit the sponsors' stall however they observed information displayed at the title and co-sponsor stalls respectively. Hence 52 and 84 visitors had given opinion about overall attitude and purchase intension toward the title and co-sponsor respectively.

ISSN : 2348-7143
April 2018

When we considered only valid cases then attitude and purchase intension of both sponsors were same. Valid cases means considered only those visitors who visited the sponsors stall.Hence we can say that effectiveness of the counseling of both the sponsor was same.
When we considered all cases (all visitors, n=100) then attitude and purchase intension of the Co-sponsor was very much favorable than the title Sponsor. Hence we can say that higher brand recall is helpful for more positive brand attitude and higher purchase intension.

Table No. 9
Testing of Hypotheses

Brand Recall	Age of Visitor	Education of Visitor	Occupation of Visitor	Gender of Visitor	Reason of Visit(For Whom)	Awareness through Media among visitor
Unaided brand recall of Event Name	0.231*	0.503*	0.092*	0.965*	0.724*	0.003**
Aided brand recall of Event Name	0.288**	0.721*	0.799*	0.329*	0.934**	0.008**
Unaided brand recall of Organizer Name	0.864*	0.135*	0.465*	0.801*	0.846**	0.538**
Aided brand recall of Organizer Name	0.253**	0.393**	0.42*	1**	1**	0.002**
Unaided brand recall of Title Sponsor Name	0.592**	0.717**	0.687**	1**	0.532**	0.068**
Aided brand recall of Title Sponsor Name	0.007*	0.086*	0.523*	0.5*	0.211**	0.299**
Unaided brand recall of Co- Sponsor Name	0.043**	0.508**	0.485**	0.446**	1**	0.03**
Aided brand recall of Co-Sponsor Name	0.008*	0.698*	0.538*	1*	0.831**	0.588**
Unaided brand recall of Title Sponsor's courses	0.264**	0.475**	0.737**	1**	0.904**	0.151**
Aided brand recall of Title Sponsor's courses	0.061*	0.869*	0.103*	0.937*	0.337**	0.02**
Unaided brand recall of Co- Sponsor's courses	0.915*	0.963*	0.803*	0.21*	0.678*	0.185**
Aided brand recall of Co-Sponsor 's courses	0.483*	0.136*	0.299*	0.18*	0.512**	0.488**

(*Person's Chi-Square Test at 5% significance level, ** Fisher's Exact Test at 5% significance level, If P< 0.05 accept alterative hypothesis and if P> 0.05 accept null hypothesis)

ISSN : 2348-7143
April 2018

In this study, researchers have experienced a problem during hypotheses testing. If more than 20% cells have frequency less than 5 then the chi-square test may produce misleading results then a more appropriate form of analysis (when presented with a 2*2 contingency table) is to use R.A Fisher Exact test. However with the help of SPSS version 16, we can analysis n*n contingency table.

1. The age of the visitors and the capacity of aided brand recall of title sponsor are dependent.
2. The age of the visitors and the capacity of unaided brand recall of co-sponsor are dependent.
3. The age of the visitors and the capacity of aided brand recall of co-sponsor are dependent.
4. The awareness through media and capacity of unaided brand recall of event name among the visitors are dependent.
5. The awareness through media and capacity of aided brand recall of event name among the visitors are dependent.
6. The awareness through media and capacity of aided brand recall of organizer name among the visitors are dependent.
7. The awareness through media and capacity of unaided brand recall of co sponsor among the visitors are dependent.
8. The awareness through media and capacity of aided brand recall of title sponsor's courses among the visitors are dependent.

Remaining all alternative hypothesesis rejected.

Conclusion and Suggestion

The study finds that brand recall are positively related with number of time expose brand name and logo though various media platforms (Table no. 7, 8)

First top of the mind brand recall institute is well reputed educational institutes in western Maharashtra from last 70 years. Hence we can say that top of the mind brand recall and consumer based brand equity have strong positive correlation (Table No.5)

Only Sponsoring exhibition is not provide any guarantee of the higher brand recall, positive brand attitude and more purchase intension toward sponsor brand. Along with sponsorship amount, there is need of additional investment on advertising, PR program. Additional investment on IMC is improving sponsor brand recall, positive attitude and more purchase intension among visitors. (Table No. 5, 7, 8, 9) this study does not identify an optimal level of additional investment on IMC activates but it indicates that "more is better than less". This finding is the same as finding of Thompson, B., Quester P., (2001).

This study demonstrates that brand recall is very vital for positive attitude change and more purchase intension. However only higher brand recall is not sufficient for more purchase intension. The favorable attitude toward the admission counseling, career guidance has increased the probability of purchase intension. (Table No. 9)

This study indicates that the education, occupations, gender of visitors are and the capacity of the brand recall is totally independent. (Table No.10)

This study suggests that educational exhibition sponsors should pay much attention on mass media coverage. Sponsors should calculate the centimeters/column they gained though sponsorship. Sponsors should compare the size of self brand name, logo with the size of organizer/other sponsors brand name and logo publishedthrough various print media. Title sponsor and Co-sponsor should take care about self brand name appears in the main title of an article or advertisement. This will help to increase unaided brand recall of the sponsor. (Table No. 7)

Only sponsoring exhibition is not sufficient for achieving marketing objectives of the institute. Hence this study suggests that additional investment on various marketing activities is essential. In additional campaign, Sponsor should focus on hoarding and digital banner advertisement at exhibition place. This will help to increase aided brand recall of the sponsor. (Table No 8)

The relationship between age and sponsors' brand recall are significant. The study suggests that educational exhibition sponsors and organizer should design promotional activities on the basis of the age of target visitors. (Table No. 10)

The awareness through media and brand recall are significant. Hence the educational exhibition sponsors and organizers ought to promote its brand through various tools of effective marketing communication, such as, print media, banners and hoarding. (Table No. 10)

References

1. Aaker, D.A. (1991), managing brand equity: Capitalizing on the value of a brand name. New York: Free Press.
2. Chi, H., Yeh, H., Yang, T.,(2009) The impact of brand awareness on consumer purchase intension: the mediating effect of perceived quality and brand loyalty, The Journal of International Management Studies, 4 (1), 135-144
3. Cornwell, B.., Maignan, I., (1998). An International Review of Sponsorship Research. Journal of Advertising, 27(1), 1-21
4. Crompton, J., (2004) Conceptualization and alternate operationalizations of the measurement of sponsorship effectiveness in Sport, Journal of Leisure Studies, 23(3), 267-268
5. Deighton, J., Henderson, C.M., Neslin , S.A. (1994) The effect of advertising on brand switching and repeat purchasing. Journal of Marketing Research, 16, 28-43
6. Ferkin, L., Garland, R.,(2006). Sport sponsorship in S,Leberman, C. Collins and L. Trenberth, (Eds) Sport business management in New Zeland (2nd Ed), Sydeney : Thomson Publishing ans Dunmore Press, 2005.-pp.257-297
7. Garland, R., Charbonneau, J., Macpherson, T.,(2008) Measuring sport sponsorship effectiveness: links to existing behavior, Innovative Marketing, 4(1), 46-51
8. Gwinner, K.P., Eaton, J.P. (1999), Building brand image trough event sponsorship: The role of image transfer. Journal of Advertising 29(4), 47-57
9. Hoyer, W.D., Brown, S.P.(1990). Effect of brand awareness on choice for a common repeat-purchase product. Journal of Consumer Research, 17(2), 141-148
10. Kale. P.G., Ali, M.M., (2012) Educational exhibition sponsorship: Relation between demographic profile of visitors and the sponsors' brand recall, Golden Research Thought.
11. Keller, K.L.,(1993). Conceptualizing, measuring and managing customer based brand equity. Journal of Marketing, 57(1),1-22
12. Lardinoit, T, Derbaix. C.,(2001). Sponsorship and recall of sponsor, Psychology and Marketing, Vol,18(2), 167-190
13. Meenagham, T., (1991), The role of sponsorship in the Marketing Communication Mix," International Journal of Advertising 17(1), 3-28.

14. Meenagham, T., (2001) Understanding sponsorship effect. Psychology and Marketing 18 (2) 95-122.
15. Meenaghan., T., Shipley, D., (1991) Media effect in commercial sponsorship. European Journal of Marketing, 3(3/4), 328-347
16. Percy, L., Rossiter, J.R. (1992). A model of brand awareness and brand attitude strategies. Psychology and Marketing,9, 263-274
17. Senath, J., Finney, R., Grace, A., (2005) An IMC approach to event marketing: The effect of sponsorship and experience on consumer attitude, Journal of Adverting Research , 373-381.
18. Thompson, B., Quuester, P., (2001) Evaluating sponsorship effectiveness: the Adelaid Festival of the Arts, Visionary Marketing for the 21st Century: Facing the Challenge, 1263-1268.

'RESEARCH JOURNEY' *International Multidisciplinary E- Research Journal*
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) –0.676 (2013)
Special Issue 58 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

Demonetization: An Historical Perspective

Sunil V. Mohite
Assistant Professor
CSIBER, Kolhapur

Abstract :

The present study mainly focuses on the variations in the value of stock of money in circulation in India over the period of time. What was demonetized on November 8, 2016 was more than 85 per cent of the currency in circulation. On March 31, 2016, out of INR 16.6 trillion cash in circulation, the value of INR500 and INR 1,000 notes in circulation was INR 14.2 trillion. On November 8, 2016, this value of INR 500 and INR 1,000 notes in circulation may have grown to an estimated INR15.4 trillion With so much of the currency demonetized, a cash shortage is not surprising. as it was often used for money laundering and organized crime Given "risks associated with large value cash transactions and high-value notes" There are many instances across the world when a country has decided to discontinue with some specific high value currency notes. Indian economy has proved the important role played by the currency notes of lower denomination as well as the currency coins of Rupee fractional too.

Key Words: Demonetization, Stock of money, Value in Circulation, Currency Notes, Coins, Denominations, Remonetization, INR.

Introduction :

The decision of the Government and the Reserve Bank of India (RBI) to withdraw the legal tender status of the pre-existing INR 500 and INR 1,000 currency notes beyond November 8, 2016.The measure, according to the Government, was motivated by the twin objectives of curbing the menace of fake Indian currency notes and for eliminating black money. There are many instances across the world when a country has decided to discontinue with some specific high value currency notes as follows.

1. Canada stopped issuing the Canadian $1,000 notes from September 2010 on the advice of the Solicitor General and the Royal Canadian Mounted Police (RCMP), as it was often used for money laundering and organized crime.xii Given "risks associated with large value cash transactions and high-value notes",
2. Singapore, in July 2014, decided to stop printing the S$10,000 note, one of the world's most valuable bank notes .
3. European Central Bank (ECB), in May 2016, announced that it would stop printing the Euro 500 notes from 2018. In these countries, the banks were advised to return the relevant high denomination notes to the central bank for destruction, but these high value notes continued to be legal tender.

There are two major differences between the stoppage of printing of high value notes in these OECD countries and the recent Indian demonetization.

1. In India, the INR 500 and INR 1,000 notes can be returned to the RBI with proper documentation even after December 30, 2016, but unlike in the countries mentioned above, these old high value notes are no longer legal tenders beyond November 8, 2016.

2. An additional difference is that while the old INR 500 and INR 1,000 have been demonetized, not only will the new INR 500 continue, but a note of even higher denomination than INR 1,000, namely INR 2,000, has been introduced. (Lahiri, 2016)

Objectives of the study :

The present exercise is carried to study and to know the change in the size stock value of money in circulation of the Monetization, Demonetization, and Remonetization. on the total stock of money in circulation not only of the currency notes of higher denominations but the coins and currency notes of lower denominations too. The present study mainly focused on the composition of total stock of money in circulation and the variations in the circulations of money over the period of time. Considering the base year 1964-65.

Periodic Review:Sstock of money in circulation 1960-2016 :

At the beginning of the year 1964-65 total currency in circulation 28.41 billion INR of which currency in the form of cash with the bank was 0.72 billion INR during the period of five years from 1964-65 to 1968-69 the incremental growth observed in the circulation of the money which reached to the tune amount value of 37.94 INR billion of which 1.12 billion was held by bank in the form of cash while 36.82 INR billion was in the hand of public. In the year 1969-70 opening stock of money circulated was INR 41.60 billion of which INR 39.95 billion found to be publicly circulated, and it is observed that INR 11.53 billion were absolutely fuelled in to the economy for five years from 1964-65 to 1969-70. Similarly INR 28.01 billion added in total money in circulation during the period of five years from 1969-70 to 1973-74 which is INR 26.48 billion added in to the stock of money in circulation surprisingly doubled as compared with the previous period of same duration.

The study also shows that the currency held by bank is insignificant to the total money in circulation in the country furthermore only fractional growth is seen in the cash held by bank, While significant growth found in respect to the cash held by public. It is right to say that Currency held by bank increased from 0.72 billion to 1.12 billion at the end of 1968-69 which is only INR 0.40 billion increase in during the period of five years apparently while the currency held by public is much larger than that of bank comprising 36.82 billion increased from INR 27.69 billion with absolute addition of INR 9.13 billion which is eight times more than the currency held by bank for the same period.

The trends continued for all the years up to the year 1977-78 in this year the total curre4ncy in circulation was INR 92.51 billion of which meager amount of INR 5.21 billion was held by bank in the form cash rest INR 86.31 billion was in publicly circulated in comparison with the values of currency held by bank at the beginning of the period 1964-65 from to 1977-78 INR 28.41 to 91.52 the total amount of cash in circulation by adding absolute amount of INR 63.11 billion of which money held by bank raised to INR 5.21 billion from INR 0.72 simultaneously money held by public increased to 86.31 from INR 27.69 billion respectively adding INR 58.62 billion.

Stock of money in the form of coin of small denomination :

During the phase of demonetization of the INR 1000 currency notes in the year 1977-78 the total amount of money circulated in the economy in comprising of the coins of small denomination of 25 paisa & 50 paisa stood together to the tune of to the value of INR 4.69

ISSN : 2348-7143
April 2018

billion where as the value of re 1 coin in circulation stood the value of INR 0..96 billion and minor increase is found in the circulation of the coins of small denominations of 25 Ps and 50Ps respectively. The value of coin 25Ps increased to INR 2.25 billion at the end of year 1981-82 while coin billion. In the Year 1983-84 circulation of coin of 25 PS increased while that of 50PS decreased from 2.12 billion to 1.98 billion of 50Ps decreased from INR 2.72 to 2014 and decreased by INR 0.58 While Re coin circulation increased from 1.54 billion in the year 1981-82 to 3.30 billion .At the end of 1984-85 total coin circulated stood to the value of INR 3.07 billion,2.04 billion,2.37 billion of 25Ps,50PS and Re 1 respectively. Concededly there were no coins of Rs.2,Rs.5 And Rs.10 were circulated during 1974-75 to 1984-85 But Currency notes of the denominations mentioned above with additions of Rs 20,Rs 50And Rs 100 were in circulation.The currency notes of higher denominations such as Rs 500 was totally out of circulation till the end of year 1986-87.

Demonetization , Remonetisation of High Value Currencies

It is pertinent to note that the total amount of the value of currency Notes in circulation of Higher denomination of INR 1000 stood at 0.55 Billion was demonetized w. e. f. 16th January 1978 consequently remained out of circulation till the end of year 1999-2000 and remonetised in the year 2000-01 with the initial stock value in circulation of INR 37.19 billion which is introduced very late by 12 years after the other high denomination currency notes of INR 500, which was introduced in the year 1987-88 with stock value in circulation of INR 1.80 billion. It is interesting to note that the rate of growth of circulation of small coins of fractional amount of 25Ps,50Ps remained constant for the period of 10 years from 1991-92 to 2001-02 but equally Re 1 coin with growth rate of Plus or minus INR 1 Billion is observed for the same.

In the process of demonetization and Remonetisation the higher denomination currency notes of INR 500 introduced in the year 1987-88 with the initial value of INR 1.80 billion which slowly and progressively grown in its value in circulation reached INR 529.47 billion at the end of year 2000-01 by the time Currency note of Higher denomination Remonetised after 22 years of demonetization with the stock value in circulation of INR 37.19 billion. During the period of 5 years from 2001-02 to 2005-06 the total value of currency of higher denominations notes of INR 500 and INR 1000 augmented to INR 1823.32 billion and INR 643.46 Billion of INR 500 & INR 1000 respectively.

The rate of augmentation is as 5.7% and 29 % for INR 1000 and INR 500 currency notes respectively. The trends are more or less continued for the another subsequent period of five years ,meantime the Coin of INR 10 introduced with stock value in circulation of INR 1.49 billion in the year 2009-10 and found increased yearly stood at the value of INR 37.03 billion till the end of 2015-16 by the time stock value of circulation of Currency notes of higher denominations of INR 500 and INR 1000 were INR 7853.75 and 6325.68 billion respectively . During the period of 16 years from 2000-01 to 2015-16 the value of INR 500 Currency Notes increased from mere INR 529.47 billion to 7853.75 billion while the Stock value in circulation of INR 1000 increased from 37.19 to 6325.66 billion for the same period with growth rate of 6.74 % & 0.58% respectively.

Review of Post Demonetization Period : Post Demonetization Conversion of INR 500 and INR 1,000 notes into Currency

(Number in billion)

	INR 500	INR 1000	INR 2000
On November 8, 2016			
i)In circulation	17.28	6.74	--------------
ii)With public 96% of circulation	16.59	6.47	--------------

Post-demonetization			
iii) conservative 85% deposited or converted			
A)converted or deposited in accounts	14.10	5.50	
B) With public in currency	12.98	----------	2.53
iv) Aggressive 80% deposited or coverted			
A) Converted or deposited in accounts	13.27	5.17	-----------
B) With public in currency	12.15	----------	2.37

Conclusion :

It is important to note that the nominal value of cash holding that was demonetized on November 8 was more than the corresponding stock on March 31, 2016. Between March 31, 2015 and March 31, 2016, INR 500 and INR 1,000 notes in circulation grew by 19.7 per cent and 12.7 per cent, respectively. So, on November 8, 2016, it is reasonable to assume that INR 500 and INR 1,000 notes held by the public could have been around INR 8.3 trillion and INR 6.5 trillion, respectively, that is about 10.0 per cent and 6.5 per cent higher than the corresponding figures on March 31, 2016.Of the INR 16.6 trillion currency in circulation on March 31, 2016, as much as INR 7.9 trillion and INR 6.3 trillion were in denominations of INR 500 and INR 1,000, respectively, a total of 85.2 per cent. A part of this INR 14.2 trillion in INR 500 and INR 1,000 notes were held by banks. Given that total currency held by banks at end of March 2016 was INR 0.7 trillion or 3.98 per cent of total currency in circulation, applying the simplistic assumption of the same proportion being valid for INR 500 and INR 1,000 notes held by banks, the value of INR 500 and INR 1,000 notes held by the public are obtained as INR 7.5 trillion and INR 6.1 trillion, respectively. How does this figure tally with the assumptions in Table 1 of only 85 per cent or INR 12.5 trillion, or even worse, only 80 per cent or INR 11.8 trillion, of the old INR 500 and INR 1,000 notes getting deposited or converted by the public?

References :

1. Lahiri, A. K. (2016). Demonetisation,cash Shotage And black Money. NEW DELHI: NIPFP.Banerjee, Sumanta. (2016). Narendra Modi, Bob Dylan and Demonetisation, Economic and Political Weekly,LI(48):21-22 (November26).Boughton, James M. and
2. Elmus R. Wicker. (1979). The Behavior of the Currency-Deposit Ratio during the Great Depression, Journal of Money, Credit and Banking, 11(4): 405-418 (November).

3. Hindu Business Line (2016). Coming soon to your wallet: 2,000 notes, October 21, 2016.
4. Mehta, Pratap Bhanu. (2016). You have been warned, Indian Express, November 17, 2016.
5. Rajakumar, J Dennis and S. L. Shetty. (2016). Demonetisation 1978, the Present and the Aftermath, Economic & Political Weekly, LI (48), 13-17 (November)
6. Websites: https://rbidocs.rbi.org.in/rdocs/
7. https://rbi.org.in/Scripts/NotificationUser
8. https://rbi.org.in/Scripts/BS_PressReleaseDisplay
9. https://rbi.org.in/Scripts/Publications.aspx?publication=Quarterly

Factors Influencing Women's Decision to Work : A Service Sector Wise Analysis of Kolhapur

Mrs. Revati R. Patil
Assistant Professor,
CSIBER Kolhapur

Abstract :

There is dynamic interplay of familial, cultural, personal and labour market conditions which influence a woman in unique ways in her decision to remain a fulltime home maker, or to combine home maker and economic roles. The significant factors which inspire women to work are the inadequate income of the principal earner which force women to work and supplement income, mishaps such as incapacity of breadwinner, death of the breadwinner, and a woman's desire for economic independence for securing higher standard of living. Also the desire to the part of the women to give expression to their own talents and skill. The present study tries to highlight factors influencing women in selected service units in kolhapur .

Keywords : women, service units, motivation to work participation, women role, women employement.

Introduction:

In the semi urban cities likeKolhapur women with educational skills seeks employment or remain homemaker is mainly influenced by awareness among women about required educational skills in the organisations, having strong mind-set that only one income is inadequate for comfortable living, shifting of family type from joint to nuclear andrelatively ease of women's employment in nuclear family. Further,changing attitude towards women employment resulting in increasing percentage of Women's Decision to Work. It is viewed that as women are ready to shoulder domestic responsibilities they are perceived positively. As they denied the reactions would be vice versa.

Earlier(two,three decades back) women were seeking a job when she is forced by situations like support family income or work decision as a main bread earner of the family. She is not desired to attach too much importance to her performance to her work role and make serious attempts to excel at it. Her success as a woman would be judged by her performance as a mother and wife.Family member still expecting her performance in the traditionalrole to which she has been socialized.

Thus, family up to some extent creates hurdles in woman's career advancement. The demands of home and family render it impossible for married women to compete with Male colleagues who are not burdened with the daily routine of homeworking.

Objectives:

1. To understand role of working women in familial, organizational and social scenario.
2. To review service sector wise women's work participation.

Research Methodology:

Sampling:

Women Employees: Out of the women employed in the service unit selected for the propose of drawing the sample, only those who satisfied the above mentioned perquisites were selected to from the group, of which, randomly college teacher- non teaching staff-, Traditional course teacher-, Professional course teachers, office workers from Top level, Middle level, Lower Level, Medical doctors, nurses, Lab Asst., Technical employees, professionals were selected from the final sample of **709** working women. The exact population of service firms in select area and the number of women employees working in select service firms is not available the population is considered to be infinite and following formula has been used to calculate the sample size i.e.

n=(Zs/e)2

Where n = sample size

Z = value of z at 5% level of significant i.e. 1.96

S = standard deviation assumed from normal distribution i.e. 0.66

e = assured error i.e. 5%

Using above formula sample size is calculated to be 669.360 rounded off to 670. This size is equally divided into nine service organization sectors. Hence, per service organization section sample size comes to 75. Since in per service organization sector samples are to be selected form public and private sector so the sample size again divided and it comes to 37.5 rounded off to 38. Hence, 38 samples minimum from public and private sector undertakings each are taken from each service organization sector using convenient sampling method.

Table no.1.1 Sample selection

Sr. No.	Particulars	Total Population	No. of Sample Selected
1	Women Employees	Infinite Population	709
2	Total No. of Samples Selected		709

(Source: Field Work)

Samples approached for this study are more than actually used for data analysis. While pruning outliers the extreme samples are deleted and the sample size has brought to minimum 38 samples per organizational constitution i.e. public and private sector per service organizational sector i.e. nine sectors taken for study. The proposed sample size in the research design709 samples.

Data Analysis and Interpretation:

There are number of reasons due to which women employees started working for instance gross economic necessity, insufficient income, to have independent, liking for a particular job, supplementing husbands income, individual status, fulfilment of their own personal needs or ego satisfaction, achievement, recognition and self-justification etc. It relates up to extent the above elements sector wise influencing on women from various selected service units.

Table No. 1 Women Employees Workforce Participation

Sr. No.	**Particulars**	**N**	**Mean**	**Std. Deviation**	**Variance**
A	**Finance**				
1	Husbands Education	78	2.525	1.053	1.110
2	Husband's Salary	78	**3.589**	1.753	3.076

3	Husband's Professional Status	78	1.948	0.718	.517
4	Husband's Employment Status	78	2.333	0.526	.277
5	Family Life Cycle Stage	78	2.884	1.127	1.272
6	Valid N (list wise)	78			
B	**Education**				
1	Husbands Education	79	1.949	.845	.715
2	Husband's Salary	79	**3.632**	2.167	4.697
3	Husband's Professional Status	79	2.025	0.659	.435
4	Husband's Employment Status	79	2.189	0.600	.361
5	Family Life Cycle Stage	79	2.696	1.113	1.240
6	Valid N (list wise)	79			
C	**Banking**				
1	Husbands Education	76	2.013	1.171	1.373
2	Husband's Salary	76	**3.210**	1.635	2.675
3	Husband's Professional Status	76	2.078	0.510	.260
4	Husband's Employment Status	76	2.250	0.544	.297
5	Family Life Cycle Stage	76	2.802	1.095	1.201
6	Valid N (list wise)	76			
D	**Telecom**				
1	Husbands Education	76	1.736	0.914	.836
2	Husband's Salary	76	**2.868**	1.820	3.316
3	Husband's Professional Status	76	2.184	0.687	.472
4	Husband's Employment Status	76	2.184	0.534	.286
5	Family Life Cycle Stage	76	2.684	1.235	1.526
6	Valid N (list wise)	76			
E	**Insurance**				
1	Husbands Education	85	1.647	0.947	.898
2	Husband's Salary	85	**4.447**	1.802	3.250
3	Husband's Professional Status	85	1.835	0.553	.306
4	Husband's Employment Status	85	2.270	0.564	.319
5	Family Life Cycle Stage	85	3.400	0.990	.981
6	Valid N (list wise)	85			
F	**Postal**				
1	Husbands Education	80	1.975	1.13600	1.291
2	Husband's Salary	80	**3.512**	1.58309	2.506
3	Husband's Professional Status	80	2.050	0.417	0.175
4	Husband's Employment Status	80	2.212	0.441	0.195
5	Family Life Cycle Stage	80	3.262	1.099	1.209
6	Valid N (list wise)	80			
G	**IT**				
1	Husbands Education	76	1.723	0.644	0.416
2	Husband's Salary	76	**4.092**	1.775	3.151

3	Husband's Professional Status	76	1.828	0.640	0.410
4	Husband's Employment Status	76	2.289	0.511	0.262
5	Family Life Cycle Stage	76	3.276	1.161	1.349
6	Valid N (list wise)	76			
H	**Healthcare**				
1	Husbands Education	83	2.144	1.260	1.589
2	Husband's Salary	83	3.000	1.343	1.805
3	Husband's Professional Status	83	2.024	0.517	0.268
4	Husband's Employment Status	83	2.253	0.489	0.240
5	Family Life Cycle Stage	83	**3.048**	1.058	1.120
6	Valid N (list wise)	83			
I	**Consultancy**				
1	Husbands Education	76	2.065	0.821	.676
2	Husband's Salary	76	**3.394**	1.286	1.655
3	Husband's Professional Status	76	1.894	0.505	.255
4	Husband's Employment Status	76	2.131	0.377	.142
5	Family Life Cycle Stage	76	3.263	0.984	.970
6	Valid N (list wise)	76			

(Source: Field Work)

Table No.1 shows that the factors affecting women employees workforce participation considering five related variables i.e. husband's education, husband's salary, husband's professional status, husband's employment status and family life cycle stage. The result shows that the mean scored in all service sectors is ***highest1.28 to 2.16 for second variable is husband's salary. The Standard Deviation value lies between "0.142 to 4.68". The results are much closed from related opinions.*** The Mean score has immediate followed by first and fifth variable i.e. husband education and family life cycle stage which may affect on selected sample respondents.

The researcher has interpreted that the various aspects in case of workforce participation has directly or indirectly influences on QWL of sample respondents in various service sectors. After reviewing all the nine service sectors, researcher has **firstly** found that husbands salary having great influence on sample respondents' workforce participation. **Secondly,** husband's education and thirdly, Family Life Cycle Stage has also influences on sample respondent's workforce participation. It seems that salary, education of husband extents sample respondents workforce participation also family life cycles have prominent influence on sample respondents workforce participation. the above mentioned factors plays dominating role in standard of living, familial satisfaction and economic conditions of the respondents family .It is resulted in happiness at domestic end and peaceful mind at work. The healthy and satisfied family background converts into better performance at workplace and better QWL.

Concluding Observations:

A number of contributing factors directly lead to women employees workforce participation with husbands education salary, husbands professional status, husbands

ISSN : 2348-7143
April 2018

employment status and family life cycle stage. **It is found that husband salary was directly related to inspiring women to work in about all the selected services** units. However it is reported that family life cycle stages influencing women to work in healthcare. Due to unpredictable working hours sample respondents in health care services considered family life cycle stages before entering in the work. Duty shifts, emergencies were the routine practices at healthcare obviously respondents were managing their work as per family life cycle stages.Further, it has been observed that husband's education does not matter in women's decision to work especially in insurance and telecom services because many women in both the services were working on the **compassionateground**.

References:

1. G. Balchandar, N. P. (2013). Quality of Work Life. The Power of Insurance Company: Impact of Personal Factors on the QWL of the Officers. *Management and Marketing* , 123-133.
2. Kolhapur, D. S. (2013). *District Socio-economic Analysis.* Kolhapur: Government of Maharashtra, Planning Commission, Economic and Statistical Department.
3. Mclean, H. A. (1982). *There is a Better Way to Manage*. Retrieved March 23, 2014, from www.AMA.com.
4. P.K., R. M. (2013, Nov). *Job Satisfaction and Quality of Work Life: Impact on Industrial Relations in Textile Units in Kannur District, Kerala PhD Thesis*. Retrieved April 2nd, 2014, from Shodhganga: www.inflibnet.in
5. Pillai, G. C. (1997). *Advancing Women Managers: A Business Imparative, The Hindu Speaks on Management.* Kasturi and Sons Ltd. pp. 258-265.
6. R.M., J. (2007). Quality of Work Life of Women Workforce: Role of Trade Unions. *Indian Journal of Industrial Repations* , 355-382.
7. T.S. Nanjundeshwara Swammy, S. D. (Aug 2013). Reviews of Literature on Quality of Work Life. *International Journal for Quality Research* , 201-214.
8. Y., B. (2009). Workspace Environment and Its Impact on Employee Performance. *AJBMR* , 1-8.

ISSN : 2348-7143
April 2018

A Review of Literature on Women Empowerment in India

Supriya B. Kadgaonkar
M. Phil. Student,
CSIBER, Kolhapur.

Dr. C. S. Dalvi
Associate Professor,
CSIBER, Kolhapur.

Introduction :

Broadly speaking, women empowerment refers to ehansing the spiritual, social, political, educational, gender or economic strength of individuals and communities of women. As far as India is concerned, women empowerment is fully dependent on many different factors that include geographical location (rural/urban) educational status, social status (caste and class) and age. Policies on women empowerment exist at the national, state and local (Panchayat) levels in many sectors, including health, education economic opportunities, and gender based violence and political participation. However, there are significant gaps between policy advancements and actual practice at the community level.

Essentially, women empowerment is a process of up liftmen of economic, social and political status of women, the traditionally it is a process of guarding them against of forms of violence. Empowerment of women involves a building up of a society, a political environment, wherein women cave live without the fear of oppression, Exploitation discrimination and the general feeling of prosecution which goes with being a woman in a traditionally male dominated society.

By and large, women constitutes almost fifty percent of the woelds population but India has shown a disproportionate sex ratio whereby female's population has been relatively less than males. With regard to their social status is concerned, they are not treated as equal to men in all the places. In the case of western societies, the women have got equal right and status with men in all walks of life. But, gender discrimination is found in India even today. In this paper an attempt has been made by the authors to review the various studies critically and provide the insights, these studies are as follows.

The study by P. NAYAK and B. MAHANTA (2007) reveals that women of India are relatively disempowered and they enjoy some what lower status than that of men in spite of many efforts undertaken by government. Gender gap exists regarding access to education and employment. Household decision making power and freedom of movement of women vary considerably with their age, education and employment status. It is found that acceptance of unequal gender norms by women are still prevailing in the society. Various constraints in achieving the desired level of empowerment are also identified. Important among them are poverty, social norms and family structure, lack of awareness about legal and constitutional provision etc.

KAVITA SETHURAMAN (2008) in her study The Role of Women Empowerment and Domestic Violence in Child Growth and under nutrition in a Tribal and Rural community in South India, has examined the relationship between women's empowerment and Domestic Violence, maternal nutritional status and the nutritional status and growth over six months in children aged 6 and 24 months in a rural and Tribal Community. This longitudinal observational study undertaken in rural Karnataka. The findings of the study strongly suggest that not only associated with child nutrition and growth, but that undermine nutrition outcomes as young children grow older.

The study by DOEPKE M. and TERTILT M. (2011) focused on "Does female empowerment promote Economic Development? This study is an empirical analysis suggesting that money in the hands of mother benefits children. This study developed a series of non-cooperative family bargaining models to understand what kind of frictions can give rise ot the observed empirical relationship.

The study by DUFLO E. (2011) on the topic entitled Women's Empowerment and Economic Development, agrees that the inter relationships of the empowerment and development are probably too weak to be self sustaining and that continuous policy commitment to equality for its own sake may be needed to bring about equality between men and women. Women empowerment and economic development are closely interrelated. While development itself will bring about women's empowerment empowering women will bring about changes in decision making, which will have a direct impact on development. The study suggest that neither economic development nor women's empowerment is the magic bullet it is sometimes made out to be equality between men and women is only likely to be achieved by continuing policy actions that favour women at the cost of men, possibly for a very long time.

The study by ASLAM MONAZZA (2013) reveals that, education clearly does reduced gender gaps in earning among those who are employed and thus play a vital role in reducing gender inequalities in labour market earnings. In terms of women's social outcomes, education appears to have a more powerful role in Pakistan than in India. Women with even low levels of education appear to be more socially empowered than those with none. Men (and their education) continue to play strong roles in Indian women's lives in certain decisions.

The study by KABEER (2001) status that education enable greater access to formal employment but more specifically it has direct positive effects on other aspects of women's lives. (Such as their political participation attitudes and decision making power.) The results show that formal employment is not the only pathway through which the transformative power of education operates. Another key finding from this study is the powerful role that man play in both women's lives and in shaping their empowerment.

The study by WAGHMODE R. H. and KALYAN J. L. states that, in spite of various measures taken by the government after Independence and even during British rule the women have not been fully empowered.

The study by RAJESWARI M. S. (2015) observed that, the attainment in the field of income, employment and in education front the scenario of women empowerment seems to be comparatively poor. The need of the hour to identify the loopholes or limitations which are observing the realization of empowerment of women and this initiative must be started from the women folk itself as well as more importantly policy initiative taken by the state and society.

Conclusion:

Thus, the above mentioned article studies critically examined the concept of women empowerment in India. The studies observed that the empowerment of women has become one of the most important concerns of 21st century not only at National but also at the International level.

Reference:

1) ASLAM MONAZZA (2013) Empowering Women : Education and the Pathways of Change Back ground paper, UNESCO.
2) DOEPKE M. and TERTILT M. (2011) Women's Liberation what is in it for Men? Quarterly Journal of Economics 124 (4) PP. 1541-1591.
3) DUFLO E. (2011) Women's Empowerment and Economic Development, NBER Working Paper Series No. 17702, Cambridge.
4) KABEER (2001) Reflections on the Measurement of Women's Empowerment : In Discussing Women's Empowerment, Theory and Practice Sida Studies No. 3, Stockholm.
5) KAVITA SETHURAMAN (2008) The Role of Women Empowerment and Domestic Violence in Child Growth and under nutrition in a Tribal and Rural community in South India, United Nations University, WIDER, Research paper No. 2008.
6) P. NAYAK and B. MAHANTA (2007) Women Empowerment in India, www.pnayak.webs.com
7) RAJESWARI M. S. (2015) A Study on Issues and Challenges of Women Empowerment in India, IOSR Journal of Business and Management, Vol. 17, Issue – 4, PP. 13-19.
8) WAGHMODE R. H. and KALYAN J. L. (2014) Women Empowerment in India: Study, Reviews of Literature Vol. 1, Issue – 7, Feb. 2014.

ISSN : 2348-7143
April 2018

Governance System of Family Business: A Case study of Godrej Group

Mr. Sanket V. Ravan
Assistant Professor,
Chhatrapati Shahu Institute of Business Education and Research
(CSIBER), Kolhapur.

Abstract :

This paper studies about family business i.e. a corporation that is entirely owned and managed by members of a single family. Also studies how family business is managed by using good family business governance system for effective control. Good governance in terms of separate family governance structure and business governance structure. This paper studies about family business governance system of Godrej Group a very popular family business in India.

Key Words - Family Governance structure, family council.

I. Introduction

A family business means the business actively owned and or managed by more than one member of the same family. A family business is characterized by commitment of family members, reliability, pride, utilization of family human capital etc. To manage family business effectively is called as family business management. To manage family business we require proper governance system for family as well as business since both are separate entities and their management and control required is separate. In India family business is facing various challenges like succession planning, compensation problem, nepotism, lack of talent in family etc. to solve some of these issues good governance system is required.

II. Review Of Literature

K. Ramachandran (2005) in their paper entitled "Indian Family Businesses: Their survival beyond three generations" studied how families grow their business beyond three generations, in highly competitive environments a six Indian case studies were analyzed have all fourth generation family businesses with diversified portfolios, managed by family members and outside professionals. He conclude that the quality of family leadership reflected in the level of Compassion Orientation nurtured in the families is found to be critical for building Competitive Orientation in the group's business.

R.Vani and etal. (2014) in their paper entitled "Family Business Management in Small and Medium Enterprises at Nellore District" conclude that Many family businesses have non-family members as employees, but, particularly in smaller companies, the top positions may be allocated to family members" Family Business contributes 60-70 percent of GDP of most developed & developing countries. Number of challenges face by Indian family business like Finance and Marketing were major challenges.

This study covers family business governance system used by Godrej group.

III. Objectives of the Study

1) To study business governance system used by Godrej family business.
2) To study family governance system used by Godrej family business.

IV. Research Methodology

For the completion of research paper researcher has used Descriptive research method.It is based on secondary data available in various journal articles, websites, books and magazines. This study is based on earlier research done in this particular aspect.

Data collection:

In this study the data has been collected from secondary sources.

Secondary Data:

Secondary data collected from the Books, Internet, magazines, Journals and different types of research papers etc.

V. Limitations Of The Study

The study was conducted through secondary data sources.

VI. DISCUSSION

Theoretical background-

Definition- Family business has been defined as a business that is owned and managed (i.e, controlled) by one or more family members (handlers ,1989.,Hollander & Elman ,1988).

Family business examples:

Aditya Birla Group , Godrej group, Dabur Group, Wipro, Hero MotoCorp, Ford, Raymond Group, Samsung, Tata Group , Toyota, Wal-Mart, WWE.

Governance in a family business can be thought of in terms of:
a) Structures, such as creating a family learning and development committee;
b) Processes, for example, creating and running ongoing ownership education programs and the annual preparation of a personal development plan; and
c) Policies, for example, an aspect of the family employment policy could be that family member employees are expected to participate in the family learning and development programs.

A well functioning family governance structure will mainly aim at:

- Communicating the family values, mission, and long term vision to all family members.
- Keeping family members (especially those who are not involved in the business) informed about major business accomplishments, challenges, and strategic directions.
- Communicating the rules and decisions that might affect family members' employment, dividends, and other benefits they usually get from the business.
- Establishing formal communication channels that allow family members to share their ideas, aspirations and issues.
- Allowing the family to come together and make any necessary decisions.

The major constituents of a family governance structure are:

• **Family institutions** which can have different forms and purposes, e.g. Family assembly, family council, and other family committees.

• **A family constitution** that clearly states the family vision, mission, values, and policies regulating family members' relationship with the business.

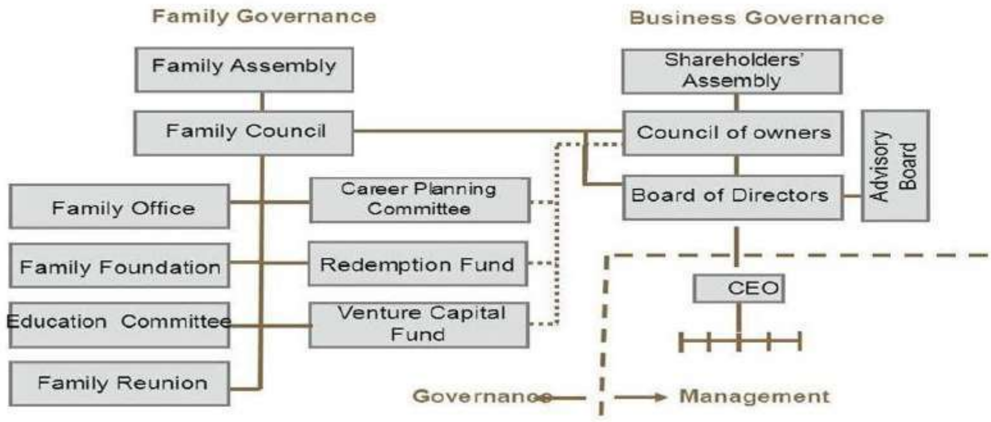


Fig- Governance structure for complex family business enterprise
Source-International Institute for family enterprises http://slideplayer.com/slide/9100923/

Family Governance Institutions-

Family Assembly-

The family assembly is a formal forum for discussion for all family members about issues of business and family. During the founder(s) stage of the business, the family assembly is replaced by a more frequent and informal "Family Meeting". Meeting 1-2 times a year.

Issues handled during family assemblies include:

- Approval of any change in the family values and vision.
- Education of family members about their rights and responsibilities.
- Approval of family employment and compensation policies.
- Election of family council members (if the council exists).
- Election of other family committees' members.
- Other important family matters.

Family Council- "Family Supervisory Board", "Inner Council"

The family council is a governance body that focuses on family matters. It is to the family what the board of directors is to the enterprise. The council is usually established once the family reaches a critical size, i.e. more than 30 members. M**anageable size, i.e. from 5 to 9 members**. These members are usually elected by the family assembly by taking into consideration their qualifications and availability to perform the council's duties, meet from 2 to 6 times per year.

Family council tasks:

- Serve as a vehicle for transparency and for good, timely communication
- Educate family members about the difference between ownership, management, and family membership
- Allow for policy making, e.g., family employment policy, ownership transfers, and other similar Matters
- Problem-solving and conflict resolution

- Providing forum for celebration.

Family Office-

The family office is an investment and administrative centre that is organized and overseen by the family council. Family offices are usually very common within large and wealthy families in business, whose members express a need for getting personal financial, banking, accounting, and other advice, usually populated by professional managers who monitor the investments, tax compliance, insurance, financial planning, and intra-family transactions such as gifts of stocks and estate plans.

Advisory boards-

The advisory board is a group of experienced and respected individuals that many family businesses form when their own boards of directors remain only composed of family members and company senior managers. Practical size for an advisory board is from 3 to 7 members

Board of Directors-

Board size, i.e. 5 to 9 members.

Main tasks assigned to the board of directors include:

- Securing senior management succession.
- Ensuring the availability of financial resources.
- Ensuring the adequacy of the company's internal controls and risk management systems.
- Reporting to the owners and other interested parties.

Make up of Board of director

- Small group—five to nine members
- Majority should be independent
- Outsiders should not be friends of family
- Should not be business's service providers
- No managers other than CEO
- Successors only when succession imminent
- At-large family representation

Family constitution- Family policies and guiding vision and values that regulate members relationship in business.

The family constitution is also referred to as "Family Creed", "Family Protocol", "Statement of Family Principles", "Family Rules and Values", "Family Rules and Regulations", and "Family Strategic Plan". The family constitution is a statement of the principles that outline the family commitment to core values, vision, and mission of the business.

- Family values, mission statement, and vision.

Authority, responsibility, and relationship among the family, the board, and the senior management.

- Policies regarding important family issues such as family members' employment, transfer of shares, CEO succession, etc

Family values: **the key principles underlying culture :**

Family values are the underlying values, beliefs and ambitions of the (individual members of the) family who are involved with the business. They determine how things are done within the family values like respect, honesty, trust, loyalty, good governance etc.

Discussion-

A Case of Godrej Group-

The 120 years old **Godrej Group** is very popular and successful family businesses in India, not only for its economic achievements but also for its continuous focus on achieving excellence in corporate governance. The group was established by lawyer Ardeshir Godrej, who gave up his profession to make locks in 1897. Key group companies include Godrej Consumer Products, chaired by Adi Godrej's daughter Nisaba and Godrej Properties, run by his son Pirojsha.*(v)

Business Governance structure-

- Godrej group appointed 6 independent directors (non family members) on their board. They have involved professional from various areas legal , accounting etc. for effective governance.
- Chairman is Adi Godrej but Vivek Gambhir is MD&CEO of Godrej Consumer Products Ltd. who is non family member.
- In management also they have appointed external professionals for better governance and success.

Composition of Board of Godrej Consumer Products Limited-

Category	No. of Directors as on March 31, 2017	No. of Directors as on date of this Report
i) Non-Independent Directors		
Executive Chairman	1	1
Managing Director	1	1
Executive Director	1	1
Non-Executive Promoter Directors	3	4
Sub Total	6	7
ii) Independent Directors	6	7
Total Strength (i + ii)	12	14

Source- Report on corporate governance 201617 (http://www.godrejcp.com/Resources/uploads/reports/201617/10.ReportonCorporateGovernance201617.pdf)*(ii)

Name of Directors	Date of original appointment	Relationship with other Directors	Category
Adi Godrej #	November 29, 2000	Brother of Nadir Godrej, Father of Tanya Dubash and Nisaba Godrej	Promoter/ Executive Chairman
Jamshyd Godrej	March 1, 2001	None	Promoter/ Non-Executive

Nadir Godrej	November 29, 2000	Brother of Adi Godrej	Promoter/ Non-Executive
Tanya Dubash	May 2, 2011	Daughter of Adi Godrej and Sister of Nisaba Godrej	Promoter/ Non-Executive
Nisaba Godrej #	May 2, 2011	Daughter of Adi Godrej and Sister of Tanya Dubash	Promoter/ Executive
Vivek Gambhir ##	April 30, 2013	None	Managing Director / Executive
Narendra Ambwani	May 2, 2011	None	Non-Executive/ Independent
Bharat Doshi	April 1, 2001	None	Non-Executive/ Independent
Omkar Goswami	June 18, 2008	None	Non-Executive/ Independent
Aman Mehta	April 26, 2006	None	Non-Executive/ Independent
D Shivakumar	April 1, 2009	None	Non-Executive/ Independent
Ireena Vittal	April 30, 2013	None	Non-Executive/ Independent

Committees of the Board- The Company has constituted Audit Committee, Stakeholders' Relationship Committee formed in accordance with Regulation which looks into the investor grievances. The Company has also formed a Nomination & Remuneration Committee in accordance with Section 178 of the Companies Act, 2013, which looks after the appointment, remuneration, and performance evaluation of the Directors. The Company also has a Risk Management Committee in accordance with Regulation 21 of the Listing Regulations.*(ii)

Family Governance structure-

Family Council- Godrej created a family council. All family shareholders above 18 are members. Of the 16 such members, eight have executive roles in the group. The council meets four to six times a year.*(iv)

Family Constitution-

The Godrej family set up its Family Business Board in 2010 and though it has no detailed constitution, it has laid down guiding principles outlining the roles and expectations of family members as well as a governance process.
Godrej has clear set of guiding principles that lays down the norms of stewardship for the family.

Mission and Values of Godrej Group *(i)

Vision

Godrej in Every Home and Work Place

Mission

Enriching Quality of Life Everyday Everywhere

Values

Integrity | Commitment | Team work | Continuous Learning | Environmental Sustainability
Godrej has also set **Code of Conduct** for the Board of Directors and Senior Management.

ISSN : 2348-7143
April 2018

VII. Conclusion :

This study concludes that now a day's managing family business is difficult task. It requires proper governance system to manage business effectively as well as maintain harmony and relationship between family members. So, it is essential that separate family governance system and business governance system a family business must adopt. As in case of Godrej group they got success because of proper governance system for business and family also they have set example for other business by involving more independent outside directors on board for better governance. Also they have good family constitution in terms of vision, mission and values. Indian family businesses are facing certain challenges like succession planning, nepotism, poor governance structure, lack of professional management etc. To overcome these issues if family businesses use proper governance system then family business becomes successful.

References :

Books & Journals:

Carlock, R.S. and Ward, J.L. (2001). Strategic Planning for the Family Business: parallel planning to unify the family and business, New York. Palgrave.

Ernesto J. Poza -Family Business, Third Edition.

Family Business Management (generation to generation) from family business to business family-Prof.(Dr.) Mukesh Bhatia

IFC Family Business Governance Handbook

- Ramachandran, K., Indian Family Businesses: their survival beyond three generations, 35th EISB Conference, Barcelona, 12-14 September 2005.
- R. Vani, M. Chandraiah, C. Prakash "Family Business Management in Small and Medium Enterprises at Nellore District" International Journal of scientific research and management (IJSRM),Volume 2,Issue8,Page 1249-1266 (2014)
- Mohd abass bhat, Javeed Ahmad Shah, Aijaz Ahmad Baba "A Literature Study on Family Business Management from 1990 To 2012" IOSR Journal of Business and Management (IOSR-JBM)e-ISSN: 2278-487X. Volume 7, Issue 6 (Jan. - Feb. 2013), PP 60-77
- Dibyendu Ganguly , Shailesh Menon Priyanka Sangani, "How Indian business families are adapting ideas from Hindu united family structure" ET Bureau|
  Updated: Oct 16, 2015, 05.26 AM IST

Website-

i. http://www.godrejgreenbuilding.com/abt_mission.aspx
ii. http://www.godrejcp.com/Resources/uploads/reports/2016-17/10.ReportonCorporateGovernance201617.pdf
iii. http://isbinsight.isb.edu/corporate-governance-in-the-context-of-family-controlled-businesses/
iv. https://www.businesstoday.in/magazine/features/family-business-godrej-group/story/17235.html
v. https://www.forbes.com/profile/godrej/

ISSN : 2348-7143
April 2018

Organizational Learning: A Strategic Tool for Sustainable Development

Bhakti Bhadra
M.Phil Research Scholar
Chhatrapati Shahu Institute of Business Education and Research, Kolhapur

Dr. M. M Ali
Director
Chhatrapati Shahu Institute of Business Education and Research, Kolhapur

Introduction:

During the last four decades, the concept of learning has become a dominant concept in theory and research about organizations. In fact, the notion of the learning organization has become increasingly accepted as an organizational development or change strategy in business and industry. Concepts of organizational learning are no longer peripheral in organizational theory but have entered core domains such as strategic planning and change (Mintzberg, 1994) as well as production management and innovation.

In today's competitive environment, only a learning organization will survive. Its abilities to learn, create, modify and utilize knowledge faster than its rivals -and quicker than the environmental changes- will provide tomorrow's corporation a competitive edge that is sustainable forever. Indeed, since the core competence of any organization is nothing but the individual and collective learning of its entire people, corporation of the coming age must be built around people. A learning organization is understood as the one that has developed the capacity to adapt and change.

"Learning organizations are characterized by total employee involvement in a process of collaboratively conducted, collectively accountable change directed towards shared values or principles. -Watkins & Marsick "

The definition of continuous learning in the Learning Policy captures the core of the idea: **Continuous learning** — a lifelong process of training, development, and learning. Once individuals work in an environment where these three activities are present, and actively participate in each, lifelong learning becomes a reality.

Learning Culture:

The term is important to the present discussion because the drive to build a learning organization is often seen as a sustained transformation of the learning culture within an organization. In this respect, building a learning organization goes deep. Individuals, groups, and the organization as a whole must question current beliefs and come to see themselves in a new way if the learning culture is to be transformed. In addition to the individuals within it, an organization is a set of programs, processes, systems, structures, relationships, and beliefs, and practices.

Organizational Learning:

Organizations create the conditions for organizational learning when they implement processes, practices and programs that allow a culture of learning to be built and maintained. Organizational learning is an attribute of the organization and its culture, not simply of the individuals inside it. These organizational elements provide a kind of structured world for both individuals and groups, and they can be designed either to enable or to hinder organizational learning. If designed to promote organizational learning, the organization can be said to learn when its uses knowledge to adapt itself to its environment so as to better achieve its purpose.

According to Dodgson (1993), a number of reasons can be suggested why the study of organizational learning is so fashionable:

- **First**, the concept of 'Learning Organization' is gaining currency amongst large organizations as they attempt to develop structures and systems which are more adaptable and responsive to change. This development has been described and influenced by a number of management analyst such as Senge (1990).
- **Second and partly related**, is the profound influence that rapid technology changes are having on organizations. The turbulence engendered by technological change in products, processes and organization increases the uncertainties facing firms and the conflicts within them.
- **Third,** Learning is a dynamic concept and its use in organizational theory emphasizes the continually changing nature of organizations. Furthermore, it is an integrative concept that can unify various levels of analysis: individual, group, corporate, which is particularly helpful in reviewing the cooperative and community nature of organizations.

It is the application of learning theory, that is, the process of learning and the outcome of learning that is essential to any understanding of organizational learning. In organizational terms, organizational learning may be defined as the way organization create, accumulate, store, supplement and organize their knowledge and routines around their activities and cultures for competition .

The following are the core characteristics of each of the subsystems comprising Marquardt's (1996) systems learning organizational model:

Learning subsystem:

Learning takes place at the individual, group, and organizational levels. This subsystem is based on the skills necessary to maximize organizational learning, represented by the six disciplines proposed by Senge (1990).The learning subsystem also refers to several types of learning crucial to the learning organization: (a) adaptive, anticipatory, and generative learning; (b) single loop, double loop, and deuteron learning; and (c) action reflection learning.

Organization subsystem:

This subsystem is considered the organization itself, the place and physical structure in which learning occurs. The organization subsystem has four components: (a) culture (values, beliefs, practices, rituals, and customs), (b) vision (hopes, goals and future direction), (c) strategy (action plans, methodologies, tactics, and steps toward the vision), and (d) structure (departments, levels and configurations).

People subsystem:

This includes groups of individuals that are of value in enabling and potentiating learning in the organization. This subsystem includes: (a) employees, (b) managers/leaders, (c) customers, (d) suppliers and vendors, (e) alliance partners, and (f) community groups.

ISSN : 2348-7143
April 2018

Knowledge subsystem:

This subsystem refers to the direction of the acquired and generated knowledge of the organization, in this respect collection and dissemination of information in the organization occurs through diverse channels and during different time frames.

This subsystem includes: (a) acquisition (collection of outside information),(b) creation (new knowledge), (c) storage (coding and preserving information), (d)transfer and utilization (information movement).

Technology subsystem:

The technology subsystem is the technological network needed to gain access and to exchange information and learning. The subsystem includes: (a) information technology (computer based technology), (b) technology-based learning(multiple audio-visual and computer-based), and (c) "electronic performance support system" (EPSS) (capture, storage and distribution of information)

A number of approaches to defining the construct have emerged. One of them is explained as below:

Systems Thinking: Senge (1990) defines the learning organization as an organization that possesses not only an adaptive capacity but also "generativity"—that is, the ability to create alternative futures.

Learning Perspective: Peddler, Burgoyne, and Boydell (1991) define the learning organization as "an organization that facilitates the learning of all of its members and continuously transforms itself in order to meet its strategic goals". They identified eleven areas through which this occurs: a learning approach to strategy, participative policymaking, informing, formative accounting and control, internal exchange, reward flexibility, enabling structures, boundary workers as environmental scanners, intercompany learning, learning climate, and self-development for everyone.

Strategic Perspective: According to the strategic approach to the learning organization, a learning organization requires an understanding of the strategic internal drivers necessary for building learning capability. Management practices and policies related to this construct in the literature, Goh (1998) contends that learning organizations have five core strategic building blocks:

- Clarity and support for mission and vision
- Shared leadership and involvement
- A culture that encourages experimentation
- The ability to transfer knowledge across organizational boundaries
- Teamwork and cooperation.

Integrative Perspective:

Watkins and Marsick (1993, 1996) provide an integrative model of a learning organization. They originally defined the concept of the learning organization as "one that learns continuously and transforms itself. Learning is a continuous, strategically used process—integrated with and running parallel to work. "This model emphasizes three key components:

(1) systems-level, continuous learning

(2) that is created in order to create and manage knowledge outcomes

ISSN : 2348-7143
April 2018

(3) which lead to improvement in the organization's performance, and ultimately its value, as measured through both financial assets and nonfinancial intellectual capital.

Features of a learning organization:

- Learning is accomplished by the organizational system as a whole.
- Organizational members recognise the importance of on-going organization wide learning.
- Learning is a continuous, strategically used process – integrated with and running parallel to work.
- There is a focus on creativity and generative learning.
- Systems thinking is fundamental
- People have continuous access to information and data resources.
- A corporate climate exists that encourages, rewards, and accelerates individual and group learning
- Workers network inside and outside the organization.
- Change is embraced, and surprises and even failures are viewed as opportunities to learn.
- It is agile and flexible.
- Everyone is driven by a desire for quality and continuous improvement.
- Activities are characterised by aspiration, reflection, and conceptualisation.
- There are well-developed core competencies that serve as a taking-off point for new products and services.
- It possesses the ability to continuously adapt, renew, and revitalise itself in response to the changing environment.

Marquardt has added Dialogue to the five critical organizational learning skills identified by Peter

1. Systems thinking: "A framework for seeing interrelationships rather than linear cause-effect chains, for seeing underlying structures rather than events, for seeing patterns of change rather than snapshots." Changes in one part of the organization can affect other parts with surprising consequences.

2. Mental models: An image or perspective of an event, situation, activity or concept

3. Personal mastery: A special level of proficiency that is committed to continually improve on skills, a discipline of continually clarifying and deepening one's personal vision, energies, and patience.

4. Team learning: The process of aligning and developing the capacity of a team to create the learning and results that its members seek. The team involved must learn to tap the potential of many minds to become more intelligent than one mind.

5. Shared vision: Provides a focus, direction and energy for the members of an organization. And learning is a way of striving to accomplish that vision.

Objectives of the Study

- To identify whether the organization is a learning organization
- To find out the correlation between the elements of OCTAPCE

Research Methodology

The first stage in the research process is the literature review through peer reviewed journals, books, research papers related to learning organization.

ISSN : 2348-7143
April 2018

The research process was further followed by interacting one to one with the employees of the a shipping management organization based in Mumbai

Research Design and Selection of Questionnaire:

In the second stage three survey instruments were used in the research process to find out empirical evidences.

First was to find out the presence or absence of OCTAPACE Culture

- O- Openness
- C- Collaboration
- T- Trust
- A- Authenticity
- P- Proactivity
- A- Autonomy
- C- Confrontation
- E- Experimentation

The above aspects were found by designing a structured questionnaire which had 22 questions based on a Likert scale, and the scale ranged from strongly agree to strongly disagree

Second was to find out the correlation and reliability of the survey

Collection of data:

The data was collected through census survey 50 employees with various age groups, experience and grades from a Shipping Management organization based in Mumbai.

Analysis of data:

The data was analysed using SPSS and MS Excel program.

Openness: Employees feel free to express their ideas & the organization is willing to take risks & experiment with new ideas & new ways of doing things. The degree of openness of the organization is an important factor in determining the nature of various dimensions of HRD being designed. Any development would be a failure if the employees don't open up or are scared in presenting their views or opinion.In this organization the 74% employees feel free to express them self's. This indicates good level of openness.

Confrontation:

Employees face the problems & work jointly with others concerned to find its solution. They face the issues squarely without hiding them or avoiding them for fear of hurting each other.

The level of confrontation is 58% which is average.

Trust: A minimum level of trust may be deemed necessary for the introduction of the performance appraisal system and other elements of HRD. For example Employees department & groups trust each other & can be relied upon to 'do' whatever they say they will.70% employee trust in the systems and the feedback given to them. Also in sharing their issues they trust the management that the problems will be paid attention to.

Authenticity: It is the value underlying trust. It is the willingness of a person to acknowledge the feelings he/she has, and accept him/her as well as others who relate to him/her as persons. 56%

ISSN : 2348-7143
April 2018

of employees feel their work is being appreciated and hold authenticity in the eyes of the organization.

Pro-activity: Employees are action – oriented, willing to take initiative & show a high degree of proactivity. They anticipate issues and act or respond to the needs of the future.

62 % employees feel that there is proactiveness in the organization. That is prior steps are taken where there is a system to measure the current and expected performance gaps of the employees and compares itself to improve and face the competition.

Autonomy: It is the willingness to use power without fear, and helping others to do the same. Employees have some freedom to act independently within the boundaries imposed by their role/job.62% employees feel that autonomy is given to them in the tasks they perform and in selection of particular assignments

Collaboration: Collaboration involves working together and using one another's strength for a common cause. Individuals, instead of solving their problems by themselves, share their concerns with one another and prepare strategies, work out plans of action, and implement them together.77% employees are of the opinion that there is collaboration when it comes to work. Different departments and teams work together for achieving company goals and objectives. Collaboration here also results in productive outcomes from discussions and debates. Employees understand their contribution towards organizations vision.

Experimenting: Experimenting as a value, emphasizes the importance given to innovation and trying out new ways of dealing with problems in the organization.The score is high on experimentation part. This means that the company tries new and innovative ways and value innovative ideas.

Analysis of results and interpretation:

The findings are based on limited sample size to get an authentic result and unbiased findings and are interpreted inform of graphs and charts.

Reliability Analysis for Building Learning Organization in the form of **Cronbach Alpha** was found to be **.836** which indicates a high consistency in the results

Reliability Statistics for EQ-i

Cronbach's Alpha	N of items
.836	22

Correlation Analysis

Correlation Analysis is to study the relationship between the five scales of EQ-i.

Correlation of each factors of OCTAPACE

	Mean	Std. Deviation	N
OPENESS	6.20	1.906	50
CONFRONTATION	2.24	.938	50
TRUST	4.30	1.266	50
AUTHENTICITY	2.32	1.058	50
PRO-ACTIVE	6.42	1.842	50
AUTONOMY	2.42	.859	50
COLLABORATION	6.00	1.917	50
EXPERIMENTATION	3.50	1.147	50

ISSN : 2348-7143
April 2018

		1	2	3	4	5	6	7	8
1		1.00	-.256	.271	.332*	.569*	.496**	.687**	.551**
2			1.00	-.062	.086	.035	-.406*	-.102	.133
3	**Pearson Correlation**			1.00	.079	.260	.257	.412**	.190
4					1.00	.097	.253	.262	.219
5						1.00	.389**	.491**	.507**
6							1.00	.520**	.197
7								1.00	.529**
8									1.00

**Correlation is significant at 0.01 levels (2-tailed).

Correlation Analysis revealed that openness (r = .687) have highest correlation with collaboration that indicates if there is openness in the organization culture it also results in collaboration among the teams and various departments in the organization.

Similarly, confrontation in the organization culture results in a negative correlation with autonomy in the organization (r = -.406). That is if confrontation prevails in the organization the autonomy and freedom of employees reduces in the organization.

Conclusion :

The learning organization cannot happen at any level if learning is not seen for what it is: a strategic factor of organizational success and growth. This requires, at the very least, that people are encouraged to take time to learn and are in fact given ample time to do so.

It also requires that their managers be given the time to guide their learning with the broader organizational purpose in mind. It is of course artificial to set a number of days for learning, five days, let us say, or ten. The ideal after all is to have people learning all of the time – the ideal is continuous, life-long learning.

Leading the transformation to a learning organization requires knowing the strengths and weaknesses of the existing learning culture, since there is no option but to build the new culture on the old. As mentioned, organizational cultures depend on processes, systems, procedures, practices, relationships and beliefs. Transforming such a culture, then, requires taking a systematic approach. There are many parts to the puzzle. It could be argued that the notion of the learning organization provides managers and others with a picture of how things could be within an organization. Along the way, writers like Peter Senge introduce a number of interesting dimensions that could be personally developmental, and that could increase organizational effectiveness – especially where the enterprise is firmly rooted in the 'knowledge economy.

References

- The Ohio State University Extension Annual Report. (1997). Partnership for excellence.
- Tsang, E. W. K. (1997). Organizational learning and the learning organization: A dichotomy between descriptive and prescriptive research. Human Relations 50 (1), 73-89.

- Van Buren, M. E., & Lucadamo, L. (1996). Guide to learning organization assessment instruments. American Society of Training and Development (ASTD).
- Vogt, W. P. (1999). Dictionary of statistics & methodology: A nontechnical guide for thesocial sciences (2nd ed.). Thousand Oaks: SAGE Publications, Inc..
- Wagner, D. B., & Spencer J. L. (1996). The role of surveys in transforming culture:Data, knowledge, and action. In Kraut, A. I. (Eds.), Organizational Surveys: Tools for assessment and change. (pp.67-87). San Francisco: Jossey-Bass.
- Malhorta, Y. (1996). Organizational learning and learning organizations: An overview.URL http://www.brint.com/papers/orglnr.htm Marquardt, M. J. (1996). Building the learning organization: A systems approach to quantum improvement and global success.

ISSN : 2348-7143
April 2018

Affect of Demonetization in Music industry, in Kolhapur city

Sachin H. Jagtap
Assistant Professor
Chh. Shahu Institute of Business Education and Research, Kolhapur

Abstract :

The Kolhapur is the city where artist have found inspiration through ages. The culture of Kolhapur is enthralling and captivating. Different regions of Kolhapur are following their respective traditions by celebrating their festivals by arranging fair. The festivals, the events, the attractions, all reflect the culture of Kolhapur in one way or the other. Most of the fair called "Gram Jatra" arranging the entertainment program called as Kalpathak for the people of villages. There are 17 different kalpathak groups in Kolhapur. Most of the artist earning resource is performing art. But because of demonetization, the number of artists had a great and significant impact on their daily life. In this paper samples of 80 respondents were randomly selected from Kolhapur city. It is found that four variables namely gender, Type of art, occasion, Technology illiteracy have significant association with the impact of demonetization.

Keywords : Demonetization, Fair, Lavani, Traditional art, Folk Music, Kalapathak

Introduction :

In its stricter sense, demonetization is an act of stripping a currency units of its status as a legel tender. On November 8th 2016, our P.M. Mr Narendra Modi addressed the nation and announced the withdrawal of 500 and 1000 denomination notes from circulation. This is not first time the demonetization drive by government of India. India is not the only country who implemented demonetization. Many countries have tried it and some have failed remarkably. As our P.M so one successfully tries to sugarcoated under the benefits of poor people. At the same time he fails to meet the distribution demands. Initially there was heavy deflection. As people who have earned money through illegal means, such as smuggling, corruption , were failed to declare money they might prosecuted by government or income tax department on the legitimacy of their income.

Kolhapur is the place all region tradition followed by reach as well as poor people. So it consists different type of art and culture like , folk dance, traditional dance, Drama, Instrument player, orchestra known as "Kalapathak", various music groups . Most of the artist having the only source of earning is art. They were fulfilling their daily life need through only cash transaction. Most of the dance artist age group is 12 to 22. In Some kalapathak groups, all family members involving in the program. So the total dependencies are based on the live programs onlt. They don't have any other income sources. IN the Kolhapur districts, there are different villages having their one gram deveta and each village is arranging the annual fair of their gram deveta. On the occasion of this fair, people are arranging the programs by inviting the artist and kalapathak. These fairs are started form the month of March to May. The artists were booked in advance before 6 month by offering traditional method in terms of " Pan and suapri" with some advanced amount.

ISSN : 2348-7143
April 2018

Objective of the study

- To identify the impact of demonetization on Artist's daily life.

Research Methodology

Kolhapur District is the study area selected for this research. Primary data is collected through well structured questionnaire and interview technique. Samples of 87 respondents in Kolhapur city have been selected by using random sampling method.. For the purpose of analysis the data were further processed by using statistical tools. The statistical tools are Simple Percentage, Chi-Square Test ,Ranking Method.

Limitations of the Study

The study is restricted to the selected sample of Kolhapur city and hence the result of the study cannot be generalized.

Affect of demonetization on different artists

Announcement of November 2016 demonetization of old 500 and 1000 currency was one of the memorable experience for the people and Indian economy. Especially it was affected on poor people who don't have black money. Government announced that, from 25th November 2016, leave people in shock. This was a shocking news for the artists those who are unaccounted. In Kolhapur, 2 old artists died by standing in bank queue for hours during afternoon period. It was very inconvenience situation for artists because, the payment paid by sponsors in old 500 and 1000 cash. But this currency was useless for them to fulfil their daily needs. These artists were unaware about such situation. Hence cause to very bad situation. The new films were release during this period. The people don't found time to watch the movies in theater which occurs theater empty. The entertainment industry was most affected. In the Kolhapur district there were 23 Kalapthak Groups working from 2 or more generations. Whenever programs has been arranged by gram panchayat and other Mandals, they are fixed by offering Pan and Supari along with some advanced amount. Unless and until the amount is not accepted by the Kalpathak group, that program does not confirmed. This transaction were takes place on casah payment only. But due to demonetization, during the period of April to June which is peak period of gram festival called as "Jatra" , very few villeges turns up twords the kalapathak and orchestra group. Hence, it was tough time for the artists who are totally dependent on the programs. Even during this period, the artists cancelled the planned marriages ceremony due to currency problem. Some of the artists were not admitted in hospital even they were suffered from serious health disorders.

In the kalpathak group, there were few artist which are more demanded by the people, that is Lavani Dancer and Mimicry artist. Dusting the festival period, if the performance of the lavani dancer will be appreciable level , then the audience will offer the prices from 10 rupees to 1000 rupees. But even some programs of the kalapath was arranged in Jatra, due to demonetization problem, lavani dancer didn't get much cash prizes. They said that in demonetization period, the received less than 80% cash prizes. Mimicry artist also having the same type of experience. The delar or proprietor of the Orchestra and Kalapath had very bad experience. As they having the yearly contract with the dancer anad other artist, most of the proprietors paid lakh of ruppes in advanced for the artists. But due to cancellation of program, proprietors didn't get any income. Hence some of the groups are bankrupted. Even the payments are given after the show, artist are not able to deposit in banks because, most of them were unaccounted. Most of them didn't have debit and credit card. Because the education illiteracy, most of them was not completed any bank transactions even they stands whole day in a lane.

Due to Unavailability of sufficient currency, the audience was not gone in theater to watch the movies. Hence it causes that the new release Hindi movies Dongari kar raja, Rock on and Ravan 2 were falls on Box office. Because there were very people books the online tickets by using debit or credit. Hence hardly 10 to 15 audience turn up in the theater, but due to less audience the show canceled. Especially multiplex theaters were badly affected. Because people were mostly busy for settlement of cash for thir daily need. So they didn't get any time for watch the movies in theaters.

In the box office of Marathi and hind film, the people who are non experienced about the direction, they invested their black money. So even they don't have skill of that particular are, they got the opportunity for film making and music direction.

Some Benefits of Demonetization in music industry

As coin has to sides, demonetization also has some benefits in flm industries. The recording studio of Kolhapur city, most of the work done on credit. There were few customers who not clear their payment from last couple of years. But when our Prim minister announced the strategy of demonetization, the bill receivable gets clear immediately. Though Recording studio was vacant, the studio owner got lot of cash from the bill receivables in the form of old currency payment. So they are very happy on the demonetization.

Findings :

- Majority of the artist strongly agreed that the demonetization has strong impact on their daily life
- 67 % of the artists were unaccounted.
- Before demonetization the cancellation program rate of was 4%
- After demonetization, the Program cancellation rate was 97 % during the month march to may 2017
- In the film industry 93 % stand project was cancelled
- In the Marathi film industry, before demonetization, unskilled persons were invested their black money
- Due to demonetization, debtor repaid outstanding to recording artists
- After demonetization 67% of artists opened their banks account and received debit cards
- During Demonization period, for fixed programs no. of audience get reduced
- New release Hindi movies Dongari kar raja and Ravan 2 were falls on Box office

Conclusions :

- During the demonetization period, an entertainment industry was more affected
- Because of demonetization, Skilled persons will have good opportunities.
- Artist are literal about e-cash less transaction
- Entertainment Tax will get collected after demonetization
- Awareness program about new mode of bank transaction should be conducted

References :

1. http://indianexpress.com/article/india/india-news-india/bothsides-of-the-coin-what-top-economists-think-aboutdemonetisation/

2. http://www.economist.com/news/finance-andeconomics/21711035-withdrawing-86-value-cash- http://www.investopedia.com/terms/d/demonetization.asp
3. Ahuja, R. (2007). "Social Problems inIndia" (2nd Ed). Jaipur: Rawat Publications.
4. Nafees. A. Khan, P. T. Chaudhary, "Black Money: Its Impact on the Indian Economy," Tax Reforms inI ndia (Ed.), Srinawas Publications, Jaipur, pp. 150- 155, 2003.
5. Sukanta Sarkar (2010). "The parallel economy in India: Causes, impacts & government initiatives". Economic Journal of Development Issues, Volume 11-12 no.(1-2) p.124-134.
6. Vijay Kumar Singh, (January 2009) "Controlling money laundering in India – problems &
7. perspectives" To be presented at the 11th Annual Conference on Money and Finance in the Indian Economy- At the Indira Gandhi Institute of Development Research
8. CA Lalit Mohan Agarwal(2012), edit. "White Paper on Black Money", Journal of Securities Academy & faculty for e-education, vol.72.
9. Tax Research Team , Demonetisation: Impact on the Economy No. 182 14-Nov-2016 , National Institute of Public Finance and Policy ,New Delhi
10. Demonetization and Its Impact on Employment in India Dr. Pawan Kumar* Assistant Professor, Ramjas College, University of Delhi, Delhi-110007, India

Emerging Trends in Digital Marketing in India

Rupali Avinash Ghorpade
Assistant Professor,
Institute of Technical Education Research & Management,
Akurdi

Renuka Sudhir Turambekar
Asst. Professor,
Chhatrapati Shahu Institute of Business Education and Research,
Kolhapur.

Abstract :

The massive Indian market is changing fast. Internet access is mainstreaming among professionals and the use of mobile is intensifying. The pace of change continues to be rapid with digital channels constantly growing in volume and strength. More people spend more time online in India every year, and the digital tools and sites they use play an ever-growing role in their lives. The most recent digital marketing trends and advances not only prepare you for any changes within your specific market but help to establish a comprehensive marketing strategy - designed to increase visibility and maximize revenue. Smart marketers keep on top of the scale of change and ensure their marketing strategies and touch point's mirror where the consumer is spending their time. These notes give a sense of the scale of change we've seen so far and imply the scale of what is coming. The digital marketing of tomorrow offers advancements in emerging technologies as consumers demand a more integrated experience.

Key words: *Digital Marketing, SEO, E-Commerce, Web portals, Google Adsence.*

Introduction

Digital Marketing is a part of a Digital Economy. India is a fast moving nation towards digital economy and this movement has been accelerated with the demonetization of the Indian Currency in the last quarter of year 2016.With it various government digital payment promotion schemes has been launched. Digital market requires digital promotion and marketing strategies. The telecom sector is also playing an important role in the digitalization movement. Recent launch of reliance telecom Jio with the free & unlimited internet facilities has played a revolutionary roll. The other prominent companies like Airtel, Idea, Vodaphone & BSNL are also offering attractive internet plans. Indian banks are also providing more customer friendly & secure money transaction services. Now Indian consumer is spending more time on social media and internet surfing. Thus the visibility of any product is more through digital medium than traditional marketing techniques. n 2018, you will be assisting your customers in taking even more informed decisions. You'll have to know them in and out and make sure you are educating and entertaining in a way they like. Digital marketing techniques include Content Marketing, Marketing Automation, Ad Words, SEO, Social Media, Email Marketing and Website Design.

The key player's role players and infrastructure providers in Digitization of an Economy are government, banking system, Shopping Portal in India, Internet Service Providers and Software Service Providers.

Meaning :

The use of the internet and other digital media and technology to support modern marketing has given rise to a bewildering range of labels and jargon created by both academics and professionals. It has been called digital marketing, internet marketing, e-marketing and web marketing and these alternative terms have varied through time.

Objective of the study :

1) To study the role of digital marketing on Web.
2) To study the different channel of digital marketing services.
3) To analyze the approach to get more business using digital marketing.
4) To study the growth of digital marketing.

Methods of Data Collection

Methodology of the Study This part of study defines all the process of data collection. When it comes to data collection, there are two methods in general used by researcher to collect data, primary and secondary method. Primary method includes observation method, interview/questionnaire method, and case study method. Secondary method is the method in which already collected data. The present study is based on Secondary data which is collected from the published or Unpublished Sources like Reference book, Journals, Websites etc.

Research Methodology

For this study the Researcher have selected Descriptive type of Research

Literature Review

Digital Marketing is the term most frequently used today, so that is the term we focus on. In simple words we define digital marketing is "Achieving marketing objectives through applying digital technologies and media". So, digital marketing is about utilizing digital technology to achieve marketing objectives. There is no essential need for digital marketing to always be separate from the marketing department as a whole, as the objectives of both are the same. However, for now it remains a useful term because digital marketing requires a certain skill set to utilize the digital technology effectively. As the recent Developing Digital Skills 2015 report showed, many marketers are now spending > 50% of their time on digital marketing activities and two of the three top job roles in marketing are digital, so clearly digital skills are needed for the marketers & managers.

Effective Ways of Digital Marketing

In order to achieve success one supposed to move in the following manner

- Plan - Create a structured plan and roadmap by reviewing your current weaknesses and the opportunities to boost online leads and sales.
- Manage - Review your marketing activities, so that you know where to focus to get the Quick Wins which will make the biggest difference
- Optimize - Learn the best practices and success factors to help you compete to get better results

It is no exaggeration that you live in a digital world and from that perspective it is imperative that your business has an impressive presence in the digital space. In essence, digital marketing is the future of marketing in the world with the added advantages that it is cheaper

ISSN : 2348-7143
April 2018

than traditional marketing and is measurable. Let's lists the different ways you can use the digital medium to popularize and drive conversions for any startup or business.

Search Engine Optimization (SEO)

In layman's terms, Search Engine Optimization or SEO is essentially tweaking your website so that it comes up naturally or organically for search results in Google, Yahoo Bing or any other search engine.

Google updates its algorithms regularly so that only the relevant results come up. From that perspective, many experts say that SEO is dead and the effort is futile. However, the truth is that Google tries to prevent algorithm manipulation and filters sites that don't deserve to be on the top of SERPs (Search Engine Result Pages). So there is no doubt you should invest in SEO work. Your website should address the technicalities related to content and query matching, spidering, indexing, and interpreting non-text content. Remember, it is the most cost-effective marketing strategy that will bring organic traffic to your business.

Search Engine Marketing (SEM)

Search Engine Marketing or SEM is the comprehensive strategy to drive traffic to your business, primarily through paid efforts. Hence it is also called Paid Search Marketing. The universe of SEM is diverse and complicated. Based on your business structure, you may choose PPC (pay- per-click) or CPC (cost-per-click) model, or CPM (cost-per-thousand impressions) model. There are different platforms for SEM. By far, Google AdWords (on Google Network) and Bing Ads (on Yahoo Bing Network) are the most popular.

SEM also includes Display Advertising, Search Retargeting & Site Remarketing, Mobile Marketing and Paid Social Advertising. You may choose a single-point strategy like PPC, or go for a complete SEM strategy, including Display and Retargeting. But whatever you do, make sure your work is managed by experts as wrong planning may make your costs go haywire.

Content Creation

Content can be presented in different formats, including blogs, white papers, e-books, case studies, how-to guides, question and answer articles, forums, news and updates, images, banners, info graphics, podcasts, webinars, videos, or content for micro blogging and social media sites. All recent changes to Google's algorithm - be it Panda, Penguin or Hummingbird - point to the fact that content is the most important metric while filtering search results.

You can be creative and create content on any topic and then skillfully link it indirectly to your business. You may like to read our article on how to include content and market your startup or business free of cost. Also, you need to customize your content for different platforms. For example, the content for mobile phones should be crisp and short. Remember, an effective strategy will engage your readers and leave them interested in more information from you. Good content is shared and is the best way for branding your business.

Social Media Marketing (SMM)

Social Media Marketing or SMM is an offshoot of your SEM efforts. It involves driving traffic to your sites or business through social sites like Face book, Instagram, Twitter, Pinterest, Google+, LinkedIn, etc. As we mentioned above, good content is shared and liked. So create and customize content for different social media platforms. Remember to be prolific and original;

you need to engage with users on a daily basis, at least four to five times a day. Your SMM efforts can be especially helpful for branding and driving sales.

Digital Display Advertising

This again is a subset of your SEM efforts. You may use a variety of display advertising formats to target potential audience - be it text, image, banner, rich-media, interactive or video ads. You can customize your message based on interests, content topics, or the position of the customer in the buying cycle. However, note that Digital Display Advertising is relatively costly. You need experts to drive good ROI for your business.

Retargeting and Remarketing

Essentially, Retargeting or Remarketing is a strategy to target customers who have already visited your website. It is based on cookie technology. Retargeting has emerged as a preferred strategy as you target customers who have already shown interest in your business; and hence the conversion rate is high. You may engage in Retargeting on your site, or on social network or on the mobile. Visualize your strategies based on the customers' buying cycle.

Mobile Marketing

The website, apps and content is being customized for mobile devices. The mobile users are growing day by day and it is the most effective way of marketing.

One thing to keep in mind, though, is that mobile comes first. After all, 90% of Twitter video views and 60% of YouTube views are now from users on mobile devices. The marketing community has seen the writing on the wall---65% of marketers are preparing to increase their budgets for mobile ads to focus more on video within the next few months.

Voice optimized content

With voice search already accounting for 20% of all searches, it's clearly set to grow and expand even more in 2018. New voice devices and technology make it easier for people to simply ask a question and get information from their devices. This allows for a more natural way to interact with machines using a conversational voice. With this in mind, optimization for voice searches is slightly different compared to traditional search.

Video advertising

The demand for video is growing at an incredible rate. In 2017, 90% of user-shared content was video. With the audience viewing more video on a wider range of devices than ever before, for brands to stand out and build meaningful consumer or professional relationships, they must learn how to leverage video-based advertising across a range of channels to grab the attention of their target audience; be it 6 seconds or longer. In 2018 video advertising will prove very fruitful for brands or businesses looking to market their products or services.

Interactive Marketing

Make sure your advertising strategy engages the potential customer in a conversation. According to a survey by ExpoTV.com, 55 percent respondents preferred to have ongoing communications with the companies they buy from; and 89 percent felt more loyal to the companies if they were invited to provide feedback. Use tools like widgets and opt-in features to make your website interactive, solicit feedback and track user behavior. Engage with the customers actively and customize offers based on their preferences and browsing activities.

ISSN : 2348-7143
April 2018

Viral Marketing

Viral Marketing is a strategy where a unique content spreads exponentially online, because the content is appreciated, shared and liked immensely. This is a great way to brand and drive traffic to your website. The content can take any format; all you need is to be creative.

Email Marketing

When you send a commercial message through email to a list of potential customers, the strategy is called Email Marketing. With effective email marketing software, you can maintain email lists that are segregated based on several factors, including customers‟ likes and dislikes, and spending habits. Remember to send personalized emails; this helps to develop trust. However, note that Email Marketing may also be considered as spamming and there are laws against it in some countries.

Affiliate Marketing

Affiliate Marketing is a performance-based marketing program, where you pay publishers who bring you customers. The performance may be based on conversions - promotions, leads or simply sales. You may like to be part of the affiliate programs of different publishers. Essentially, the publishers will give you space in their pages to advertise your business and help you drive conversions; and you will pay them based on the compensation model. You may avail the help from an Affiliate Network, which will give you a large base of publishers, and other benefits like tracking and reporting technology. Affiliate Marketing is especially useful for startups, as it will bring in more traffic to their business through high-traffic sites. In essence, Affiliate Marketing is a win-win situation for both the merchants and publishers. Sites like Amazon, eBay, Link Share and Flip kart run Affiliate Programs. In fact, most online businesses with appreciable traffic have their own affiliate programs.

Digital Media Planning and Buying

When a media agency researches and makes a comprehensive strategy framework, we call it Digital Media Planning. Be it in driving sales or conversions, launching a new brand or promoting an established brand, or changing customer behavior, the media agency plans different platforms and formats to reach the desired audience. It studies reach and frequency of different web-based and mobile applications. The agency works with different partners and buys relevant space and ideas. This is called Media Buying. In essence, Media Buying and Planning entails all the strategies that we have discussed above.

Web Analytics

Perhaps, the most important aspect of your Digital Marketing is Web Analytics. Essentially, Web Analytics helps you to collect, measure, understand, analyze, plan, report and predict the web activities for your business. Web Analytics should not be confused with Web Statistics. As opposed to simple reporting, Web Analytics gives you analyses and different angles to ponder vis-à-vis your business. Some of the important Web Analytics tools are Google Analytics, Spring Metrics, Woopra, Clicky, Mint and Chart beat .It goes without saying that every advertiser should use Web Analytics to understand his business and improve the ROI and conversions.

ISSN : 2348-7143
April 2018

Future of digital marketing in India

Day by day growing Digital Market in India is an evident that the Digitization is taking place with a high speed. E-commerce website are providing all the goods and services through online portals online today. The increasing number of ecommerce websites.

WARC Survey shows that 35% of advertisers would increase their mobile advertising spend by 50% or more by 2020 in India.

Major factors affecting the Digital Marketing

a) **India's literacy** rate is at 74.04%. Kerala is the most literate state in **India**, with 93.91% **literacy**. Six **Indian** states account for about 70% of all **illiterates in India**: Uttar Pradesh, Bihar, Madhya Pradesh, Rajasthan, Andhra Pradesh and West Bengal. Thus increasing literacy positively effecting the digital marketing growth in India.

b) **Cost of advertising:** The cost of advertising is very low. One can have its own website in just Rs.5000 in India. One can promote his product on Google with Google Ad Sense with just Rs.1000 a month.

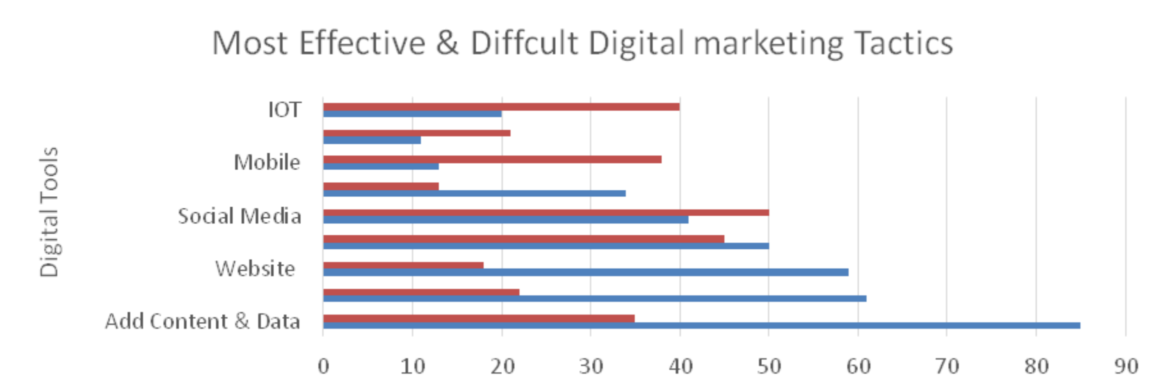
c) **Inherited limitation of Technology:** In India the youth is very adaptable towards technology but still large population is not so friendly with the electronic gadgets.

d) **Unavailability of Infrastructure facilities in India:** The internet connectivity is still not available in Indian rural areas.

e) **Believe in Traditional business practices:** The small businessman having running its business in a small area and quite focused on that area only then he prefers Traditional ways of Promotion as it he finds it is more visible to the people around.

Data Analysis & Interpretation

1) Most effective & Difficult Digital Marketing Tactic



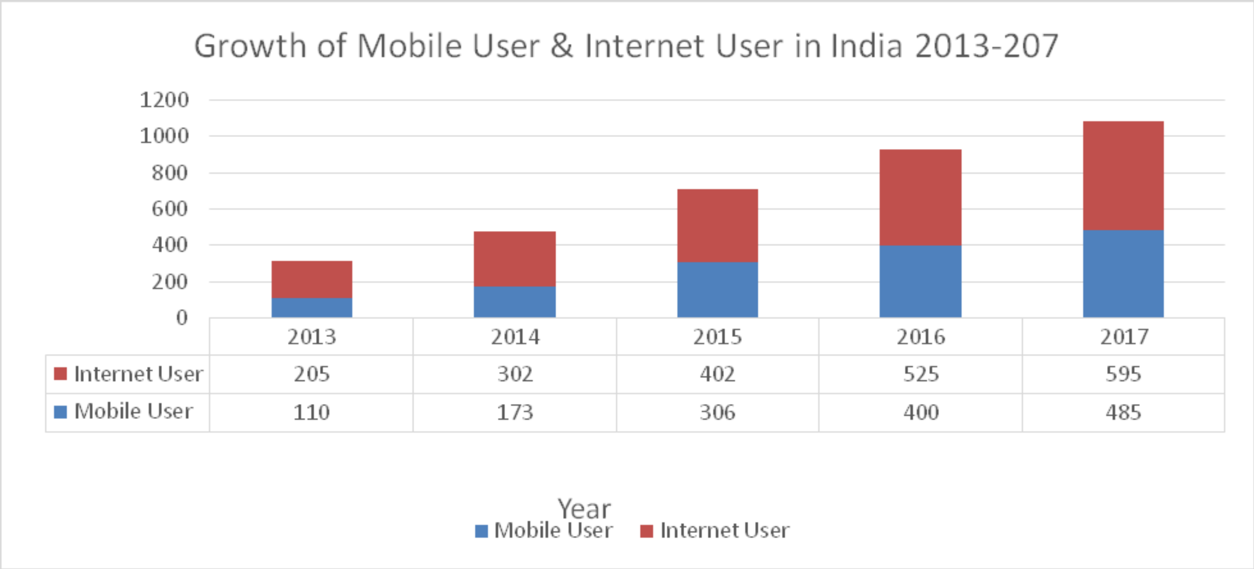
	Add Content & Data	Email	Website	SEO	Social Media	Paid Search	Mobile	Display Add	IOT
Difficult Tactics	35	22	18	45	50	13	38	21	40
Effective Tactics	85	61	59	50	41	34	13	11	20

Difficult Tactics Effective Tactics

The figure above shows that Add Content & Data, Email and Website constitute the most effective tactics and least difficult to execute.

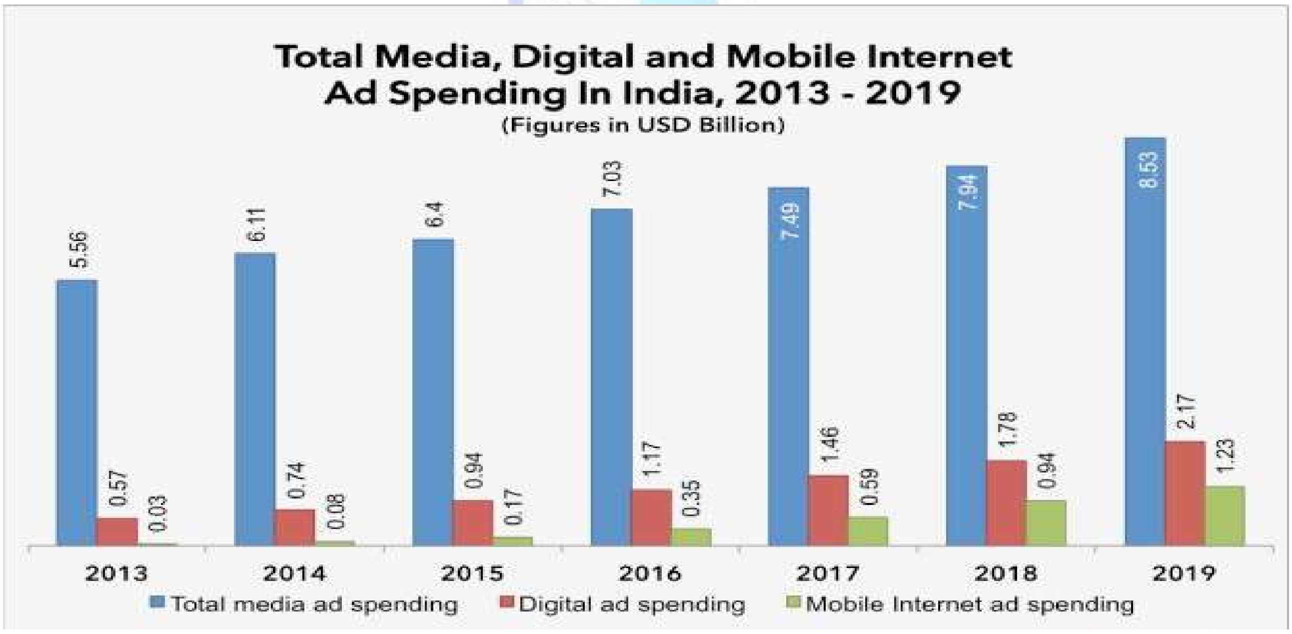
ISSN : 2348-7143
April 2018

2) Growth of Mobile User & Internet User



The figure shown above is showing the growth of the mobile and internet users in India. This shows that Internet users are rising rapidly in India. With this rise the scope of digital marketing is also rising.

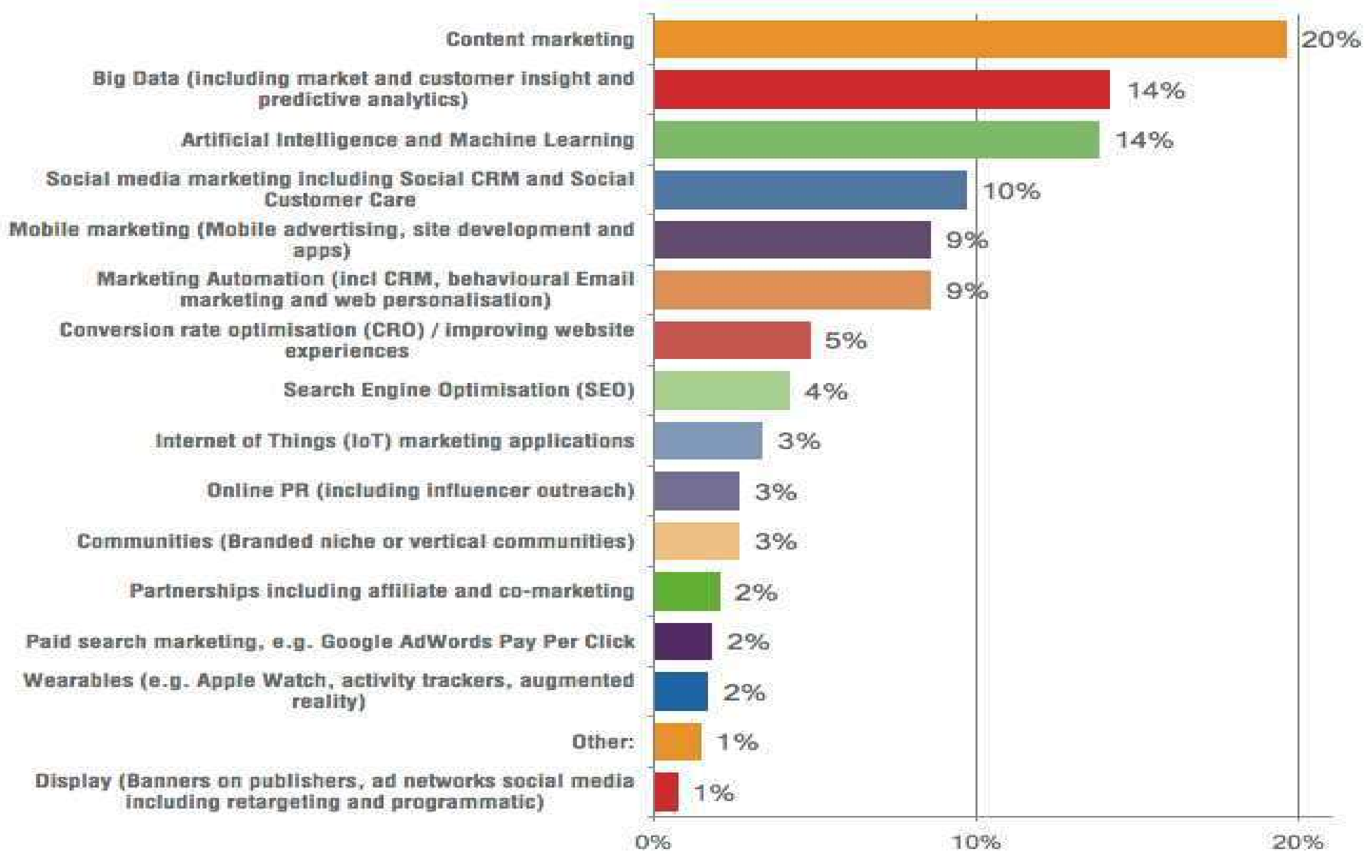
3) Total Media, Digital and Mobile Internet Ad Spending in India (2013-2019)



Between 2013 to 2018 with incredible growth opportunities and secular growth adoption for E-Commerce, Internet Advertising, Social Media, Search, Online Content, and Services relating digital marketing.

ISSN : 2348-7143
April 2018

4) **Marketing Activity makes the largest Impact in 2018**



The figure shown above is showing Content Marketing, Data, Artificial Intelligence have largest impact in 2018 but, Display, and Banner wearables have less impact in 2018

Conclusion :

As we all are experience a radical change in India towards the digitalization. The consumer is looking and searching more on internet to find the best deal form the sellers around India. Digital marketing such as search engine(SEO), search engine marketing (SEM), content marketing, influencer marketing, content automation, e-commerce marketing, campaign marketing, and social media marketing, media optimization-mail direct marketing, display advertising, e–books, optical disks and games, are becoming more and more common in our advancing technology. Today we all are connected through what's app and Face book and the increasing use of social media is creating new opportunities for digital marketers to attract the customers through digital platform. Digital marketing is cost effective and having a great commercial impact on the business.

Bibliography :

1. Pratik Dholakiya (14 April 2015). "3 Digital Marketing Channels That Work for Every Advertiser"
2. Mohammed R., ―Internet Marketing‖ , McGraw Hill, New York, Vol. 4, 2001
3. Devi .C.S and Anita.M (2013) : ―E marketing challenges and opportunities‖ pg. 96 –

105 retrieved from www.ijsrm.in

4. Shanker, Ravi (1998), Marketing on the Net, (Dissertation), Banaras Hindu University, Varanasi, India.
5. Karakaya F., T.E. Charlton., ―Electronic Commerce: Current and Future Practices‖, Managerial Finance,Vol. 27 (7), pp. 42-53, 2001
6. Krishnamurthy, S. & Singh, N. (2005), The International E-Marketing Framework (IEMF):

Web Resources

1. www.egapsawebmarketing.in/growing-future-digital-marketing-india visited on 07th January‟17
2. piyushaggarwal.me/digital-marketing-ppt visited on 08th January‟17
3. yourstory.com/2014/12/digital-marketing-startups visited on 08th January‟17
4. images.dazeinfo.com/wp-content/uploads/2016/02/mobile-internet-users-in-india2016.jpg visited on 08th January‟17

'RESEARCH JOURNEY' International Multidisciplinary E- Research Journal
Impact Factor - (CIF) - 3.452, (SJIF) – 3.009, (GIF) –0.676 (2013)
Special Issue 58 :
UGC Approved No. 40705 & 44117
ISSN : 2348-7143
April 2018

Cultural Bias in Cashless Transactions

Dr. R. P. Joshi
Associate Professor, CSIBER Kolhapur

Abstract:

The historic demonetization and re monetization in the country changed the denomination of currency exchange which was quite casually over assumed till the change announced. The economic, econometric and socio political implications were not completely visualized, anticipated and judgmental variations and controversies not understood, situation switched the whole nation in digital mode of transactions.

Cashless transaction is not that difficult as projected, however the moral implications of this whole episode and faith belief of system which is prior consideration of cultural attitude of society created various biases in the process .Here is the account of those biases complementing and equally complicating the cashless transactions and hence the speed of digital transactions.

Introduction

Cashless transactions are not exactly parallel to the traditional currency exchange system in country, especially in primary sector it was complete cash more situation with publics own faith and belief assumptions and perceptions which are generally based on cultural beliefs of the society.

Culture forms and reforms the social fabric every now and then with certain unsaid assumptions and generalizations.

What is culture?

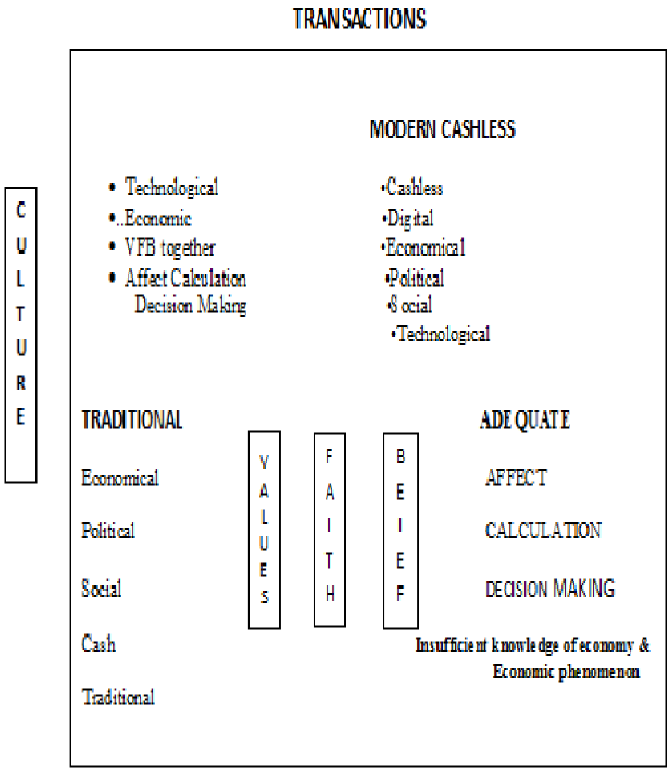
Culture as a term when we refer it carries a big canvass of meanings and perceptions however to limit the meaning of it here in the discussion let us follow the one given below

1. The arts and other manifestations of human intellectual achievement regarded. collectively the ideas, customs, and social behaviour of a particular people or society.
2. As a verb when we refer it means to maintain (tissue cells, bacteria, etc.) in conditions suitable for growth.

With this value premises when we look at the transactions that took place during post declaration of demonetization decisions, we realize that the denomination factor all set in the brains of people at large in 82 % of cash transactions nation lot of confusions and stand still has to be there as it happened. However the political assurance and testaments when put on trial through government machinery like banking and allied supports it led to immense pressure on the interpretation of the decision and meaning of how it can be done.

Here is the element of culture and especially Indian culture that played a vital role in the entire process. The socio political agenda was very simple to erode corruption and curb duplication of currency brought in by ill motif forces in the economic transactions. This had raised to such a level that especially terrorist activity being stronger and stronger supported by fake currency was the basic reason to guide and trigger a political attention in the matter.

ISSN : 2348-7143
April 2018



The culture of India

It refers according to Wikipedia as, Collectively to the thousands of distinct and unique cultures of all religions and communities present in India. India's languages, religions, dance, music, architecture, food, and customs differs from place to place within the country. The Indian culture, often labeled as an amalgamation of several cultures, spans across the Indian subcontinent and has been influenced by a history that is several millenniums old. Many elements of India's diverse cultures, such as Indian religions, Indian philosophy and Indian cuisine, have a profound impact across the world.

This very fact of being the oldest and complex culture further increases the extreme probability of deviation in mental path of denomination fixed in the minds of public.

Further when we cross consider culture with some empirical information we can highlight the mindset of people around who have been using a fixed denomination for daily transactions. Summary of the collective facts are put below

1. India has 29 states with different culture and civilizations and one of the most populated countries in the world.
2. The Indian culture, often labeled as an amalgamation of several various cultures, spans across the Indian subcontinent and has been influenced and shaped by a history that is several thousand years old.
3. Throughout the history of India, Indian culture has been heavily influenced by Dharmic religions.
4. They have been credited with shaping much of Indian philosophy, literature, architecture, art and music.

ISSN : 2348-7143
April 2018

5. Greater India was the historical extent of Indian culture beyond the Indian subcontinent. This particularly concerns the spread of Hinduism, Buddhism, architecture, administration and writing system from India to other parts of Asia through the Silk Road by the travelers and maritime traders during the early centuries of the Common Era.
6. To the west, Greater India overlaps with Greater Persia in the Hindu Kush and Pamir Mountains. Over the centuries, there has been significant fusion of cultures between Buddhists, Hindus, Muslims, Jains, Sikhs and various tribal populations in India.
7. India is the birthplace of Hinduism, Buddhism, Jainism, Sikhism, and other religions. Collectively known as Indian religions.[11] Indian religions are a major form of world religions along with Abrahamic ones.
8. Today, Hinduism and Buddhism are the world's third and fourth-largest religions respectively, with over 2 billion followers altogether, and possibly as many as 2.5 or 2.6 billion followers. Followers of Indian religions – Hindus, Sikhs, Jains and Buddhists make up around 80–82% population of India.
9. India is one of the most religiously and ethnically diverse nations in the world, with some of the most deeply religious societies and cultures. Religion plays a central and definitive role in the life of many of its people.
10. Although India is a secular Hindu-majority country, it has a large Muslim population. Except for Jammu and Kashmir, Punjab, Meghalaya, Manipur, Nagaland, Mizoram and Lakshadweep, Hindus form the predominant population in all 29 states and 7 union territories.
11. Muslims are present throughout India, with large populations in Uttar Pradesh, Bihar, Maharashtra, Kerala, Telangana, West Bengal and Assam; while only Jammu and Kashmir and Lakshadweep have majority Muslim populations. Sikhs and Christians are other significant minorities of India.
12. According to the 2011 census, 79.8% of the population ofIndia practice Hinduism. Islam (14.2%), Christianity (2.3%), Sikhism (1.7%), Buddhism(0.7%) and Jainism (0.4%) are the other major religions followed by the people of India.

Perceptions of Indian culture

India's diversity has inspired many writers to pen their perceptions of the country's culture. These writings paint a complex and often conflicting picture of the culture of India. India is one of the ethnically and religiously diverse countries in the world. The concept of 'Indian culture' is a very complex and complicated matter.

Because,I ndian citizens are divided into various ethnic, religious, caste, linguistic and regional groups. It makes the realities of "Indian's" extremely complicated.

This is why the conception of Indian identity poses certain difficulties and presupposes a series of assumptions about what concisely the expression "Indian" means.

However, despite its vast heterogeneous composition, the creation of some sort of typical or shared Indian culture is the result of some inherent internal forces-
such as a robust Constitution, Universal adult franchise, Flexible federal structure, Secular educational policy etc.
And by certain historical events- such as Indian Independence Movement, Partition,
wars against Pakistan etc.

ISSN : 2348-7143
April 2018

Background discussion Culture & Economics

According to industry consultant Eugene M. Makar, for example, traditional Indian culture is defined by a relatively strict social hierarchy. He also mentions that from an early age, children are reminded of their roles and places in society.

However, a far more powerful division is the traditional Hindu bifurcation into non-polluting and polluting occupations.

Strict social taboos have governed these groups for thousands of years, claims Makar.

According to an interview with C.K. Prahalad by Des D earlove, author of many best selling business books, modern India is a country of very diverse cultures with many languages, religions and traditions. Children begin by coping and learning to accept and assimilate in this diversity.

Prahalad – who was born in India and grew up there – claimed, in the interview, that Indians, like everyone else in the world, want to be treated as unique, as individuals, want to express themselves and seek innovation.

In another report, Nancy Lockwood of Society for Human Resource Management, the world's largest human resources association with members in 140 countries, writes that in the past two decades or so, social change in India is in dramatic contrast to the expectations from traditional Indian culture. Lockwood claims that change is slow, yet the scale of cultural change can be sensed from the fact that of India's 397 million workers, 124 million are now women. The issues in India with women empowerment are similar to those elsewhere in the world.

According to Amartya Sen, the India born Nobel Laureate in Economics, the culture of modern India is a complex blend of its historical traditions, influences from the effects of colonialism over centuries and current Western culture – both collaterally and dialectically.

Eroticist approach:

it concentrates on the wondrous aspects of the culture of India. The focus of this approach of understanding Indian culture is to present the different, the strange and as Hegel put it, "a country that has existed for millennia in the imaginations of the Europeans."

Magisterial approach:

it assumes a sense of superiority and guardianship necessary to deal with India, a country that James Mill's imperialist history thought of as grotesquely primitive culture. While great many British observers did not agree with such views of India, and some non-British ones did, it is an approach that contributes to some confusion about the culture of India.

Curatorial approach:

it attempts to observe, classify and record the diversity of Indian culture in different parts of India. The curators do not look only for the strange, are not weighed by political priorities, and tend to be more free from stereotypes. The curatorial approach, nevertheless, have an inclination to see Indian culture as more special and extraordinarily interesting than it actually may be.

The curatorial approach, one inspired by systematic curiosity for the cultural diversity of India within India, is mostly absent.

David Throsby in his book economics & Culture explores the cultural dimension.

There is apparently so little disagreement among contemporary economists as to the scope and content of their discipline that the introductory chapters of most modern textbooks of economics are virtually identical. The outline of the 'economic problem' always emphasizes scarcity such that the decision facing actors in the economic drama is one of how to allocate limited means among competing ends. Individual consumer have wants to be satisfied, productive enterprises have the technologies to provide the goods and services to satisfy those wants and processes of exchange link the one side of the market with the other.

Much of the economics that is taught to students at universities and colleges throughout the western world nowadays is concerned with the efficiency the processes of production, consumption and exchange, much less is concerned with questions of equity or fairness within the operation of economic systems.

As a result, issues such as that of redistributive justice tend to play a secondary role in the thinking of many younger professional economists, if indeed such issues bother them at all.

In considering these texts as providing a definition of the domain and methods of contemporary economics, we should bear in mind that they mostly reflect the dominant neoclassical paradigm which has held sway in economics for the better part of century and which in the last few decades has been brought to a high level of theoretical and analytical refinement.

This paradigm has provided a comprehensive and coherent framework for representing and analyzing the behavior of individuals, firms and markets, and it has yielded an array of testable hypotheses which have been subject to extensive empirical scrutiny.

Moreover, the range of phenomena which it has embraced has been continually expanding; the model of rational utilitarian decision-making operating within competitive markets has in recent years been applied to an ever-widening array of areas of human behavior, including marriage, crime, religion, family dynamics, divorce, philanthropy, politics and law, as well as production and consumption of the arts.

Yet despite its intellectual imperialism, neoclassical economics is in fact quite restrictive in its assumptions, highly constrained in its mechanics and ultimately limited in its explanatory power. Raymond Williams describes culture as 'one of the two or three most complicated words in the English languages'. Robert Borofsky suggests that attempts to define culture are 'akin to trying to encage the wind' this picturesque metaphor captures the protean nature of culture and emphasizes how hard it is to be precise about what the term means.

The reasons are not difficult to find. 'Culture is a word employed in a variety of senses in everyday use but without a tangible or generally agreed core meaning. At a scholarly level it relates in some way or another to concepts and ideas which occur throughout the humanities and social sciences, but it is often deployed without precise definition and in ways which differ both within and between different disciplines.

Thorsby further classifies Three such Characteristics of culture. They are:

1. That the activities concerned involve some form of creativity in their production.
2. That they are concerned with the generation and communication of symbolic meaning, and
3. That their output embodies, at least potentially, some form of intellectual property.
4. The formal precision of modern economics, with its theoretical abstraction, its mathematical analytics and its reliance on disinterested scientific method in testing hypotheses about how economic systems behave might suggest that economics as a discipline does not have a cultural context, that it operates within a world that is not conditioned by, nor conditional upon, any cultural phenomena. But just as the radical

ISSN : 2348-7143
April 2018

critique of contemporary economics has argued that the sort of economics described above cannot be value-free, so also can it be suggested that economics as an intellectual Endeavour cannot be culture- free.

It is apparent that the many schools of thought that go to make up the full complement of economic science as it has evolved over at least two centuries themselves comprise a series of separate cultures or subcultures, each defined as a set of beliefs and practices which bind the school together. Just as shared values provide the basis for cultural identity of various sorts in the world at large, so also in the restricted domain of the intellectual discourse of economics we can interpret the coalescence of schools of thought, whether they be Marxist, Austrian, Keynesian, Neoclassical, new classical, old institutional, new institutional or whatever, as a cultural process. However, the impact of culture on the thinking of economists goes further, because the cultural values they inherit or learn have a profound and often unacknowledged influence on their perceptions and attitudes.

To argue that cultural considerations affect the way in which economists practice their trade is simply an extension of the well known argument that the ideological standpoint of the observer influences the way he or she perceives the world, and that objectivity in the social sciences generally is impossible since even the choice of which phenomena to study is itself a subjective process.

Furthermore the culture context of economics as a discipline relates not only to the conditioning of its practitioners, but also to the methodology of its discourse. The processes by which economic ideas are generated, discussed, appraised and transmitted have been subject to analysis in terms which draw upon the work of theoreticians in literary and critical analysis. Turning attention to the textual nature of economic knowledge and to the functioning of rhetoric in economic discourse has been seen by economists such as Deirdre McCloskey as opening up new 'conversations' in the philosophy of economics and in the interpretation of the history of economic thought.

Culture as economy: the economic context of culture :

In the same way as economic discourse and the operation of economic systems function within a cultural context, so also is the reverse true. Cultural relationships and processes can also be seen to exist within an economic environment and can themselves be interpreted in economic terms. Both of the conceptualizations of culture defined earlier- the broad anthropological definition and the more specific functional intension of culture- can be considered in this light.

If culture can be thought of as a system of beliefs, values, customs, etc. shared by a group, then cultural interactions among members of the groups can be modeled as transactions or exchanges of symbolic or material goods within an economizing framework. Anthropologists have characterized primitive and not –so –primitive societies in these terms, where ideas of markets, exchange value, currency, price and other such phenomena take on cultural meaning. One specific area of interest has been built around the proposition that all cultures are adapted to, and are explicable through, their material environment. Cultures may differ, but their evolution will be determined not by the ideas that they embody but by their success in dealing with the challenges of the material world in which they are situated. Such 'cultural materialism' has a clear counterpart in economics, especially in the 'old' school of institutional economics where

ISSN : 2348-7143
April 2018

culture underpins all economic activity. Indeed William Jackson sees cultural materialism as providing the means of reintegrating culture into the same material, natural world as economics.

Conclusion :

1. Multilingual, multicultural countries like India should understand the impact parameters connected to happiness index of people before making any change.
2. Values, faith, beliefs of more than 26 different religious & faith definitely matter a lot on people's decision to buy & speed.
3. The Calculative denominator every individual may have in their brains genetically by inherits the cultural values, faiths, beliefs while transacting more than knowledge of economy or economics
4. Cashless transactions & currency denominations are two different issues logged together to solve the problems of economy. Which is actually a measure to curb corruption not economic reforms.
5. Political presentation of the whole demonetization episode did not make any convincing effect on people who suffered due to unavailability o
6. The size of population & economic reforms were not properly considered while planning the estimates of impact
7. Culture plays very important role in economics transactions especially in India.

References :

1. https://www.google.co.in/search?q=culture&spell=1&sa=X&ved=0ahUKEwiDx7mSx8nWAhVFOY8KHbn4BbkQvwUIIigA&biw=1164&bih=812
2. https://en.wikipedia.org/wiki/Culture_of_India
   David Throsby in his book economics & Culture official website of David Thorsby.

ISSN : 2348-7143
April 2018

Business Excellence in Hotel Industries Through Music: An analysis

Sachin H. Jagtap
Assistant Professor
Chh. Shahu Institute of Business Education and Research,
Kolhapur

Abstract :

Music is an universal language. This is the only toll which doesn't have barriers about any religion or country. Foreign countries have done some research work on impact of music on human behavior. But such type of research has not been done in Maharashtra. The purpose of the study is investigating the effect of different music on consumer behavior in hotel during the lunch or dinner. In Kolhapur city, most of the hotels are equipped with the sound system. During the research it is found that people are listing the background music which is played in hotels. Most of them were like the instrumental music rather than the vocal music. The hotel with Bar facility, the western music and gazals are more preferable. The customers are satisfied with the light volume and slow temp music. So the music was found to have significant impact on customers as well as the hotel staff. The majority of customers and staff said that they liked to have background music playing in hotels during the lunch and dinner hours.

Introduction :

Now a days Kolhapur is the main hub for the visitors. There are more than 300 good hotel industries in the Kolhapur city which is giving the hospitality to customers. So there is huge competition in the hotel industries. The hotel industries are driving the different strategies to increase the satisfaction level of customers. The first and foremost objective of hotel industries is, give the best services to the customers in such a way that they can visit again and again and do the mouth publicity. One of the important strategy is play the background music. Most of the hotels are equipped with the music systems. But most of the time they did not know what kind of music should be played at what time. So some times, even the background music has been played, but due to unsuitable music, customer doesn't feel pleasure.

The main responsibility of attendants or waiters is to serve the food, clean a hotel's desks, ask the requirements. In some hotels , room attendants are generally unskilled and low-paid. Dose the background music helps to neglect some mistake done by the waiters? In fact, can music enhance the work performance of the attendants and provide the hotel with a major efficiency benefit in addition to making their employees happier on the job? Dose customers feel pleasure and confirmable because of background music? Whether background music creates the pleasures atmosphere in the hotels? The purpose of this study is to seek the answer to that question and to investigate the influences of music on the consumer behavior and staff of hotel.

Review of Literature

Music in restaurants and retail shops

According to Mr Herrinton and Cpabell study, they observe that the restaurants often play appropriately ethnic music. (like Asian restaurants play bangra music, Pizza houses play Neapolitan love songs, Greek bistros play Zorba's dance, etc.) but given the large range of musical taste in, supermarkets face the challenge of selecting music that not only does not offend but makes a positive contribution to the store's ambience (**Herrinton and Capella (1996))**

Early reports on the influence of music appeared in widely-read magazines, such as Time, Reader's Digest and other popular periodicals .Most of these results were based on questionnaires and interviews and indicated that the majority of workers "like music while they work" (Uhrbrock, 1961). There are several studies indicated that music's positive effect on performance of various tasks in the educational and corporate environment **(Kerr, 1954; Uhrbrock, 1961; Sundstrom, 1986).**

In a restaurant setting, music can be use to affect the behavior of individuals. The presence of any type of music in the waiting area can affect the perceptions of time of those waiting and may make the wait seem more bearable **Sullivan (2002).**

Musical presence, tempo and linking can provide much more cost effective options for managers by reducing perceptions of wait duration **Oakes & North (2008)**

As Nicoloas observed that, when a popular music was played in the campus, clients stayed longer at the stall. A near-significance effect on sales was also observed. By changing the structural component of music like sound level of the music, tempo of the music and tonal quality, its affects the consumer's behavior (**Nicolas Gueguen** (2007)).

Music and Mood

The Proper music can raise your serotonin; boost your nor epinephrine, and dopamine. Also, several studies have proven that music can dynamically show physiological indicators of emotional arousal such as changes in heart rate, respiration, electrodermal activity, body temperature, and blood volume pulse. The right piece of quality music helps to change our brain chemistries and physiological states in a matter of minutes, if not seconds. Some other music studies have focused on music as a stimulus for triggering mood. Music is a powerful means of reducing fatigue and nervous tension, increasing relaxation and boosting levels of arousal or activity and in turn enhancing work performance (Diserens, 1926)

Statement of the Problem

The review of literature revealed that the background music affects on consumer behavior. It is also observed that the different aspects of background music – loud to soft music, fast to slow, vocal, to instrumental, heavy rock to light rock and classical to contemptory urban lays more emphasis on consumer behavior. Therefore this kind of research has the direct effect on marketing activities carried out by different institutions. Hence the study is entitled as " Business Excellence in Hotel Industries Through Music"

Objectives of the Study

In order to study this subject, the researcher has put fourth following objectives:

1. To assess the impact of background music on employees of the sample organizations.
2. To assess the impact of background music on satisfaction of the consumer of the sample organizations.
3. To identify the factors of music which positively affect the consumer in the sample organizations.

ISSN : 2348-7143
April 2018

Methodology of the Study.

Research Design

Exploratory design

To understand the music and its impact

Descriptive Design:

Making a questionnaire to identify the different parameters and to get the more knowledge about those parameters in the hotel industries with respect to impact of background music.

Causal Design :

At the end researcher would use non parametric tests to assess the impact of background music in hotel industries. Particularly the non-parametric tests of proportion such as Z and chi square would be used to verifying the hypotheses.

Collection of Data

In order to achieve the above objectives information will be collected from various sources.

Primary Data –

The researcher gone to the different libraries, searched web sites and organizations to see the kind of the music and the productivity available. By understanding the various variables, researcher developed independent questionnaires for the employees and that for the consumer. The researcher conducted the experiment with the parameters of the pre-determined music. Personal interview of employee and consumer has been conducted with the help of a structured questionnaire designed for employees and the consumer.

Secondary Data -

Secondary data is collected by visiting various libraries books, various banks annual report, related journals, Magazines and Wed Sites will be refereed.

Sampling Design

The researcher wish to carry out study in hotel industries where music system is available. For this the sampling design is 100 customers and 25 employees.

Sampling Method

Stratified Random sampling and Purposive quota sampling method is used for selection of the sample respondents.

Data Analysis and interpretation

The research has been collected the data from 5 different hotels where audio system is aready installed. All customers were listen the played background music. All hotels previously played the music as per their like hood music as per the availability of the audio files. They are not considering the choice of customers. Every day they played the same music and some of the hotels the same music is repeated number of times. The volume of the speakers has been set up as per the speakers location. In some hotels only two big speakers were installed. Hence, the customers are not like occupies the table which is near to speaker. The feel uncomfortable due to high volume. Because of this the mind set has been changed and these customer and not behaving well with the attendants. The customer were asking to reduce the volume of the speakers. At the same time if volume get reduced, the other customers who were setting far away from the speaker, they are not enjoyed the played background music. These customers were started to listen the others talk and they started to make the comments on others. In one of the hotel by request the music system was off during the dinner period. Most of the customers were not satisfied when the background music was absent. They are concentrating on surrounding noises which came from kitchen and customers get disturb. Then researcher observes that after the music system gets on, the customers were neglecting those souring noises and enjoyed the food without complaints. Hence, it has been seen that the background music really sets the tone for the overall atmosphere in the hotels.

By playing the vocal music, the researcher observed that, some customers didn't like vocal music. The slow vocal music is not suitable to convert the customers mood into enjoyable atmosphere. Some customers didn't like the voice of the signer and requesting to change the song. So, it's found that the customers are testing the food along with the great music.

By Playing Instrumental Music, Most of the customers like the soft instrumental music. The customers were satisfied with soft, happy and romantic instrumental music with affordable volume. Bust it 's found that if the same music is repeated gain during the 30 minutes, the customers expression were un satisfactory . So the customers were not like the repetition of the music.

The following graph shows that 73% of the respondents are strongly agreed that, the sort of the music affects on the mood

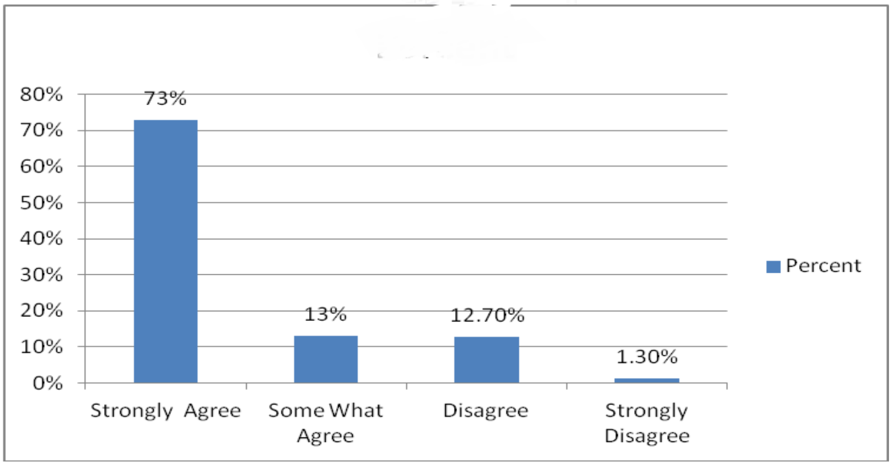


Figure 1 *Source: Primary Data*

Figure 2 indicates that almost all customers are likes when music is playing at the background

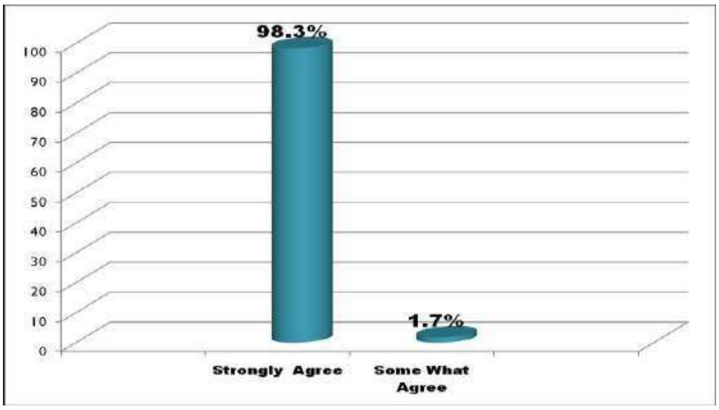


Figure 2 *Source: Primary Data*

ISSN : 2348-7143
April 2018

There are only 47.4% of respondents do not mind staying longer patiently when vocal musing being played where as 86.3% respondent don not mind to staying longer patiently when instrumental music being played . Hence applying z test , z test value is 0.672 which is more than p (0.05). Using Z test for proportion for 95% confidence interval , z value is 5.84 which is more than 1.96. so we reject the null hypothesis. It infer that Among all parameters of the music, the instrumental music being more impact on the consumers satisfaction.

By playing fast temp and loud music 51.1% respondents dose not feel comfortable, but while playing soft and slow tempo music 92% of respondents felt comfortable. Hence by applying z test for proportionality the z value is more than 1.96 and it infer that, the proper background music increases the consumer satisfaction

Findings :

- The music played had drawn the attention of all the customers who had entered the Hotel
- Around 98.3 % customers like the background music during the lunch and diner hours.
- Most of the customers agreed that the music helps to affects the mood.
- Researcher found that the parametric music significantly affects consumer behavior
- The Instrumental Music is more effective than vocal music
- Customer fell relaxed and satisfaction will get increased during the background music
- Majority of the customers strongly agreed that the music played had a positive impact on their mood in the hotels
- The music played had drawn the attention of all the customers who had entered the Hotel
- Customers liked the soothing effect of the music playing in background
- High volume of the background music reduces the stay of customers.
- The distribution channel of speakers lowers the volume and gives better listening to the customers
- Customers are neglecting the noisy sound from the kitchen during the lunch/diner period.
- customers are more likely to consume more food and drink when they hear music they like in a hotel.
- Majority of hotel owners were ill-literal about the type and quality of music .
- Hotel managers are not taking the feedback regarding the played background music. They are playing the music as per their like hood or staff choice.
- Most of the hotels don't have the big play mix .
- Managers were agreed that due to background music the staff work productivity get increased.
- Without music, the customers were not willing to patiently stay longer in the waiting room.
- If music being played, the customers were waiting quietly and patiently.
- There is positive correlation between the background music played and customer satisfaction.
- The like hood of the music is depending upon the type of the customer.

Suggestion :

1. Hotel industries should aware about the customer type and accordingly he must play the music

2. For some hotels, they must use the quality speaker and also quality music.
3. The managers should ask about the background music.
4. If the customer is regular customer, the manager must know about the customer's choice of music.
5. Hotel must shuffle the music played.
6. For particular occasion like chrisms, Idd, Diwali etc. the hotel must have separate data bank of music.
7. According to the strength of customers the volume and tempo of the music need to change.
8. If the whole hotel is book by the customer, the manager must aware about the customer choice and the type of audience and accordingly he must set the background music.
9. Variety of popular music had to be played alternatively
10. Hotel industries must include one question about the background music in the feedback register.
11. According to the time signature, hotel industries should play the music. It will help to reducing the anxiety and depression of the customer and hence cause to increase the customer satisfaction.

References:

1. Amonkar, G. K. (june 2009). *Swrarthamani Ragsidhant.* Pune: Rajahns Prakashan.
2. Express, U. (2015). Journal Of Marketing. *Journal Of Marketing* , 200.
3. Gerg, B. (2009). *Sangeet Apap Tan Ank.* Hatharas: Hatharas Prakashan.
4. Hallam, D. K. (2007). Higher education music students perception of the benefits of participative music making. *Routledge , Vol X No. X*, 1-3.
5. M.S, R. (2000). Consumer Behaviour concepts, Applications and cases. In R. M.S, *Consumer Behaviour concepts, Applications and cases.* BPB.
6. Nordoff, P. &. (1977). *Creative Music Theorphy.* New Yourk: John Day Co.
7. Rauterberg, M. (2004). Positive Effect of entertainment technology of human behaviour. *Building the information society* , 51-58.
8. Shukla, S. (1991). *Thumari Utpatti, Vikas Aur Sheili.* Delhi: Hindi madhyam Karyalaya Nideshalaya.
9. Sinha, S. a. (1998). *Use of SPSS in social research.* New Delhi: BPB Publication.
10. V., S. (1988). *The New People Making.* Palo Alto: CA: Science and behaviour Book.

ISSN : 2348-7143
April 2018

Role of Database Management System in Selected Computerized Organizations in Satara City

Ms. Usha Balaso Bubane.
M. Phill Student
CSIBER, Kolhapur

Dr.R.V. Kulkarni
Prof. & Head, Dept.of Computer Studies
CSIBER, Kolhapur

Abstract:

Data is one of the assets of any type of company. Role of Database Management System (DBMS) to store, access sand analyses various types of data efficiently is therefore very important. DBMS not only can perform various database operations but also important from data security perspective. Particularly for any computerized organization its importance is increasing day by day. The paper focuses on role of database management system in selected computerized organization in Satata district. The papers also talks on the study carried out to compare the performance of different DBMS implemented, problems faced by users and analyze the level of awareness regarding different aspects of DBMS in various sectors.

Keywords: Data, Database management System, Computerized Organization, Satara District

Introduction :

Database management system is the system of computer software that is aimed to provide a managing tool for maintaining the data, through various data models. A DBMS performs several important functions that guarantee the integrity and consistency of the data in the DB such as Data dictionary management, Data storage management, Data transformation and presentation, Security management, multiuser access control, Backup and recovery management and Data integrity management. From organization to organization the structure and behavior of DBMS changes. This study focuses on DBMS and its behavior according to organizational structure. The aim of this analytical study is also to understand the need and uses of DBMS in companies from Satara district. Researcher has also put her efforts to study and analyze the component of computerized DBMS.

Research Methodology

The present study is an exploratory study to identify DBMS structure, behavior and related problems of selected computerized companies and banks from Satara district. Table 1 shows all other details of study

Particular	Details
Type	Analytical study
Sample Size	150 database operator of computerized business organizations from Satara district which include Manufacturing 113 units, Bank 30 units and Retailer 7 units (Table 2)

ISSN : 2348-7143
April 2018

Sampling Technique	Simple random lottery method
Scope	
Geographical	Satara district
Domain	Any computerized business organizations (such as manufacturing, Banking & Financial Institutions, Proprietary Firms and organizations, Public Limited companies and Multi-national units)
Conceptual	To identify DBMS role, structure, behavior and related problems.
Durations	10 Years
Data	
Primary data	Collected through Observations, Interview and Questionnaire
Secondary data	Collected from various sources such as research projects, thesis, reports, books, papers, journals, surveys, articles, various internet sources and web sites etc.

Table 1: Details of Research Methodology

Type of Organization	Total Population	Sample Size	%
Manufacturing	162	113	69.5
Bank	35	30	85
Retailer	7	7	100
Total	**204**	**150**	**73.5**

Table 2: Selection of sample for the Research

Review of Literature :

Researcher has reviewed more than 20 papers not only to analyze research gap but also to get further direction of a research. Inci Sentar, Adnan Erdursun, Deha Caman talks about role of DBMS in IS. Dennis R. McCarthy, Umeshwar Dayal proposed architecture for an active DBMS that supports ECA rules. Dr. Anand K. Tri pathi & Ms. Monika Tripathi in their reserch paper focused on feasibility and applicability of DDBMSs for today's business applications. Joseph M. Hellerstein, Michael Stonebraker and James Hamilton presented an architectural discussion of various DBMS features. Enakrire Tega Rexwhite, Olorunfemi Yemisi Doreen Emmanuel Ogaga Akpovoka investigates the use of databases in information storage and retrieval in some selected banks in Delta state, Nigeria.

Researcher has studied various such research material and found following research gap

- While implementing any DBMS the structure and behavior of organization needs to analyze first.
- It is necessary to study that whether computerized organizations from Satara district perform such analytical study before implementing any DBMS
- Basic and advanced features of any DBMS should make analogous to organization requirement.

To tackle these lacunas, researcher has selected this topic for study.

ISSN : 2348-7143
April 2018

Analysis and Interpretation

Primary data collected and tabulated in SPSS. The data is analyzed and interpreted to draw findings and conclusions. Table 2 shows the count and percentage of database handlers who are the source of primary information with their roles.

Interpretations :

1. Out of total sample collected 20.0% use Access, 15.0% use MySQL, 60.0% use Oracle and 5.0% use other DBMS.
2. 70 % users use DBMS for various business operations but 30 % have only installed and not use it.
3. Out of 150 users 10 % are admin, 5.0% are C.E.O, 10.0% are cashier, 15.0% are clerk, 5.0% are Developer, 10.0% are End User, 10.0% are manager, 5.0% are owner, 5.0% are Salesman, 10.0% are student, 5.0% are supervisor, 5.0% are tester and 5.0% are worker
4. Out of total sample collected 5.0% use DBMS for billing, 10.0% use for data entry, 20.0% use for management, 10.0% use for project, 5.0% use for salary management, 5.0% use for sales, 15.0% use for software, 15.0% use for storage, 5.0% use for testing, 5.0% use for update records
5. 10.0% users found their DBMS design complex, 30.0% found as it is hard, 45 % found as it is simple, 10.0% agree that it has simple layout and only 5 % found that it is user friendly. (Table No 3)

		Frequency	Percent	Valid Percent	Cumulative Percent
	complex	6	30.0	30.0	30.0
	easy	8	40.0	40.0	70.0
	hard	6	30.0	30.0	100.0
	Total	20	100.0	100.0	

Table 3: User perception about DBMS

6. 60 % users strongly agree while 40 % users agree to the fact that DBMS provides good level of security.
7. 60 % users strongly agree while 40 % users agree to the fact that DBMS provides backup facility.
8. 55 % users agree to the fact that DBMS maintains error log while 40 % users disagree to this fact. 5 % users are neutral.

Findings :

1. Most of the users in the organization use Oracle. Access is at second position while few use MySQL.
2. Most of the users use DBMS for various business operations but few users have only installed and not using it.
3. In the computerized organizations DBMS is used for various purposes. Such as for billing, management, developing various software project, salary management, sales

management, software related work. While some are only use for data storage but not perform any operation on that.

4. Most of the user found their simple and user friendly. While few found as it is hard, and complex. The user perception about database simplicity depends upon user role and expert
5. Most of the users agree to the fact that DBMS provides good level of security.
6. Most of the users agree to the fact that DBMS provides backup facility.
7. Most of the users agree to the fact that DBMS maintains error log while some of them disagree to this fact.

Suggestions

1. The structure, nature and working of each organization are different. The DBMS should be selected by considering all these factors
2. Most of the DBMS users don't know all features of installed DBMS. In some of the organizations DBMS is only installed but not used. Hence user should get knowledge of all features and facilities of DBMS. The training programs should be arranged by organizations for DBMS users.
3. Organizations should broaden their scope to use DBMS. Along with its data storage facility, the advanced features such as data analysis and interpretation can be used for effective decision making at managerial level.

Conclusion :

DBMS not only provides data storage but all other essential features required for data handling and thereby making decisions at any firm. The selection of any DBMS should be based on structure, behavior, nature and need of organization. All DBMS users from data entry operator till manager should know and use required features of installed DBMS at organizational level for careful handling of data which will lead to growth of an organization.

References :

1. R. McCarthy, D., & Dayal, U. (2012). Retrieved 6 April 2017, from https://www.researchgate.net/scientific-contributions/2005325505_Dennis_R_McCarthy
2. K. Tripathi, A., & Tripathi, M. (2012). A Framework of Distributed Database Management Systems in the Modern Enterprise and the Uncertainties removal International Journal of Advanced Research in Computer Science and Software Engineering. Ijarcsse.com. Retrieved 4 June 2014, from http://www.ijarcsse.com/index.php/ijarcsse

GIF GLOBAL IMPACT FACTOR

News Updates Due to large number of application please allow us time to update your journal

Get Involved

- Home
- Evaluation Method
- Journal List
- Apply for Evaluation/Free Service
- Journal Search

Recently Added Journals

Research Journey	
ISSN	2348-7143
Country	India
Frequency	Querterly
Year publication	2014-2015
Website	researchjourney.net
Global Impact and Quality Factor	
2014	0.565
2015	0.676

Research Journey

SJIF 2016: Under evaluation

Area: Multidisciplinary

Evaluated version: online

Previous evaluation SJIF
2015: Not indexed
2014: 3.009
2013: Not indexed
2012: Not indexed

The journal is indexed in:

SJIFactor.com - SJIF Scientific Journal Impact Factor

Basic information

Main title	Research Journey
Other title [English]	Research Journey
Abbreviated title	
ISSN	2348-7143 (E)
URL	http://WWW.RESEARCHJOURNEY.NET
Country	India
Journal's character	Scientific
Frequency	Quarterly
License	Free for educational use
Texts availability	Free

Contact Details

Editor-in-chief	Prof. Dhanraj Dhangar
	M.G.V.'S ARTS & COMMERCE COLLEGE, YEOLA, DI
	India
Publisher	MRS. SWATI SONAWANE

COSMOS IMPACT FACTOR

Search Journal | Search

HOME | INDEXED JOURNAL | SUGGEST JOURNAL | REQUEST IF | DOWNLOAD LOGO | REVIEWER PANEL

Category

- INDEXED JOURNAL
- SUGGEST JOURNAL
- JOURNAL IF
- REQUEST FOR IF
- DOWNLOAD LOGO
- CONTACT US

- SAMPLE CERTIFICATE
- SAMPLE EVALUATION SHEET

Journal Detail

Journal Name	RESEARCH JOURNEY
ISSN/EISSN	2348-7143
Country	IN
Frequency	Quarterly
Journal Discipline	General Science
Year of First Publication	2014
Web Site	www.researchjourney.net
Editor	Prof. Dhanraj Dhangar & Prof. Gajanan Wankhede
Indexed	Yes
Email	researchjourney2014@gmail.com
Phone No.	+91 7709752380
Cosmos Impact Factor	2015 : 3.452

Demonetization and Remonetization

Issues and Challenges for Global Business

Editors

Dr. U. M. Deshmukh
Chairman, M.Phil. Programme, CSIBER, Kolhapur

Dr. T. V. G. Sarma
Associate Professor & Head, Dept. of Economics, CSIBER, Kolhapur

Dr. S. D. Bhoite
Associate Professor, Dept. of Computer Studies, CSIBER, Kolhapur

Contents

Demonetization - Impact on Manufacturing Industry

Prof. U. M. Deshmukh
SCIBER, Kolhapur

Mr. S. A. Jadhav
Assistant Professor
BVDUIMK Kolhapur

Introduction

The demonization drive by the Centre has not only caught the average citizen unawares but has also thrown a spanner in immediate demand for automobiles, consumer durables, electronics industry in the country. This impact would obviously be more in the short term, but over long term India economy will revive stronger than ever.

8th November 2016 Prime Minister of India in a 40 minute long speech announced the demonetization of existing notes of Rs 500 and Rs 1000 during a televised address on Tuesday evening. PM announced that the notes of Rs 500 and Rs 1000 "will not be legal tender from midnight tonight" and these will be "just worthless pieces of paper.

It is not exactly a demonization exercise—as it does not dispense with the value of a note—but one that simply replaces the existing notes with new ones, thereby addressing the issues of counterfeit currency and black money. In countries where currency notes are demonetized, the denominations simply disappear from the system. But for simplicity I will continue with the word demonetization in this article.

Reasons for demonization

Published by
Readers Press
83, IInd Floor, Shyam Lal Marg
Darya Ganj, New Delhi - 110002
Email: readerspresspublishing@gmail.com
Website: www.readerspress.in

First Published in 2018

ISBN: 978-93-853814-6-1

Design: Readers Press
Printed and bound in India

'RESEARCH JOURNEY' International E- Research Journal
Impact Factor - (SJIF) – 6.261, (CIF) - 3.452(2015), (GIF)–0.676 (2013)
Special Issue 114 (A)- Recent Trends in Research
UGC Approved Journal
ISSN : 2348-7143
January-2019

Awareness and Steps to Improve Emotional Intelligence : An Analysis

Dr C. S. Kale
Asst. Professor
CSIBER Kolhapur
Pooja Kabadge
Research Scholar

Concept of Emotional Intelligence:

Emotional Intelligence is a term coined by two researchers: Peter Salovey and John Mayer which later gained popularity in the year 1995 in a book called "Emotional Intelligence" written by the author, psychologist and science journalist Daniel Goleman.

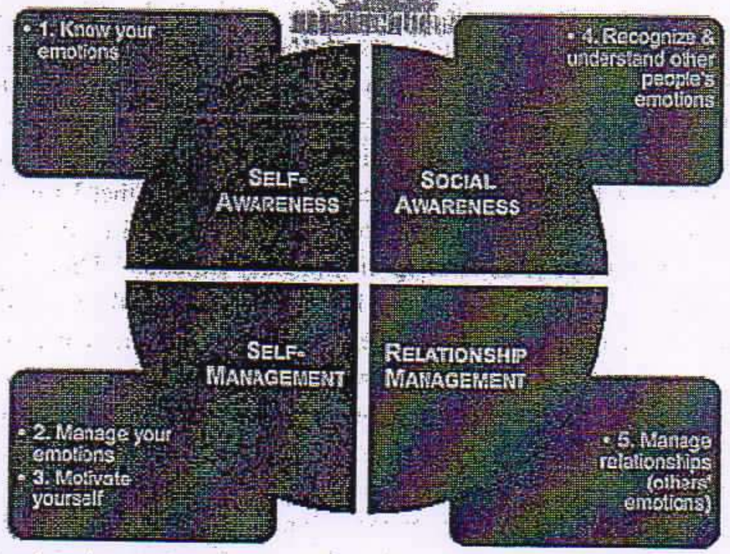
According to Daniel Goleman, "Emotional Intelligence is the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in us and in our relationships". He defined it as "Understanding one's own feelings, empathy, for the feelings of others and the regulation of emotion in a way that enhances living".

Emotional intelligence has various elements which help to reduce stress for individuals and organizations, by decreasing conflict, improving relationships, understanding and increasing stability, continuity and harmony

Domains of emotional intelligence :

Goleman identified the five domains of EI which are represented in four quadrants: two represent personal competence and two represent social competence.

Figure 1.1



Personal Competence:

This area of competence is concerned with three of the five domains Goleman referred to and is split into two quadrants: self-awareness and self-management.

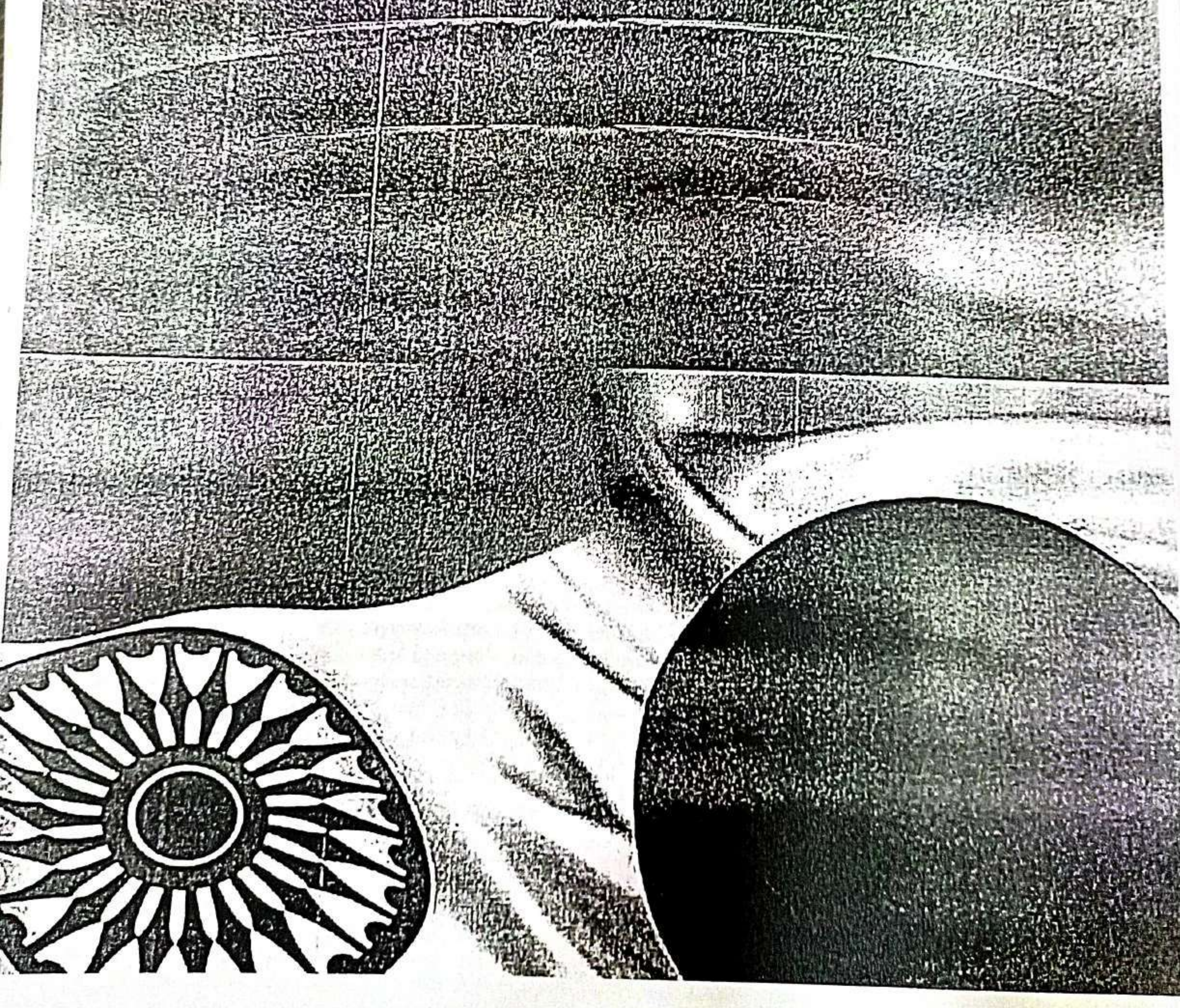
- **The first quadrant deals with Self-awareness, Self-assessment and Self-confidence.**

SJIF Impact Factor (2018) : 8.003
ISI Impact Factor (2017) : 1.365 (Dubai)
IC Value 2016 : 61.33
Print ISSN : 2349-0187
Online ISSN : 2347-9671

EPRA International Journal of ECONOMIC AND BUSINESS REVIEW

Monthly, Peer Reviewed (Refereed) & Indexed International Journal

Volume - 6 Issue - 12 December - 2018



IC Value 2016 : 61.33| SJIF Impact Factor(2018) : 8.003| ISI Impact Factor (2017):1.365 (Dubai)
Research Paper
Volume - 6, Issue- 12, December 2018 |e-ISSN : 2347 - 9671| p- ISSN : 2349 - 0187
EPRA International Journal of Economic and Business Review - Peer Reviewed Journal

PRODUCT PRICING AND PROMOTIONAL SCHEMES AT MODERN RETAIL STORES

Dr. C. S. Dalvi

Associate Professor, Chh/ Shahu Institute of Business Education and Research, (CSIBER), Kolhapur, Maharashtra, India

(From Sponsored Minor Research Project of ICSSR, New Delhi)

ABSTRACT

Retail Industry India is expected to grow at 10 per cent a Compound Annual Growth Rate (CAGR) of to $ 1.6 trillion by 2026 from $ 641 billion in 2016. Overall retail market of the consumer is likely to grow at the rate of 12 per cent per annum, retail through the organised retail industry may grow at the rate of 20 per cent per annum as compared to the traditional retail or unorganised retail market which is likely to grow at the rate of 10 per cent.

Lifestyle in India is changing and the concept of 'value for money' is picking up local companies, and local-foreign joint ventures are expected to position than the purely foreign ones more advantageously. Up and coming modern retail channels such as hypermarkets, supermarkets, convenience stores and discounters were unable to make a significant mark in grocery retailers' value due to a limited geographical spread in consumer reach. Department stores within mixed retailers were the forerunner in growth, being boosted by the introduction of lifestyle concept stores. The average Indian deserves consumption of good quality of products at prices he can afford. In a developing country like India, a major chunk of a consumer's expenditure is on retail products.

KEYWORDS:
Retailing, modern retails, service, FDI, Unorganised retail, Customer., facility

1. INTRODUCTION

The term 'retailing' refers to any activity that involves a sale to an individual customer. Currently, Retailing is the buzzword in Indian Industry. The Indian retail industry has emerged as one of the most dynamic and fast-paced industries due to the entry of several new players. It accounts for over 10 per cent of the country's Gross Domestic Product (GDP) and around 8 per cent of the employment. India is the world's fifth-largest global destination in the retail space. Retail Industry in India is expected to grow at 10 per cent a Compound Annual Growth Rate (CAGR) of to $ 1.6 trillion by 2026 from $ 641 billion in 2016. Overall retail market of the consumer is likely to grow at the rate of 12 per cent per annum, even though the organised retail industry may grow at the rate of 20 per cent per annum as compared to the traditional retail or unorganised retail market which is likely to grow at the rate of 10 per cent. (India Brand Equity Foundation, 2018)

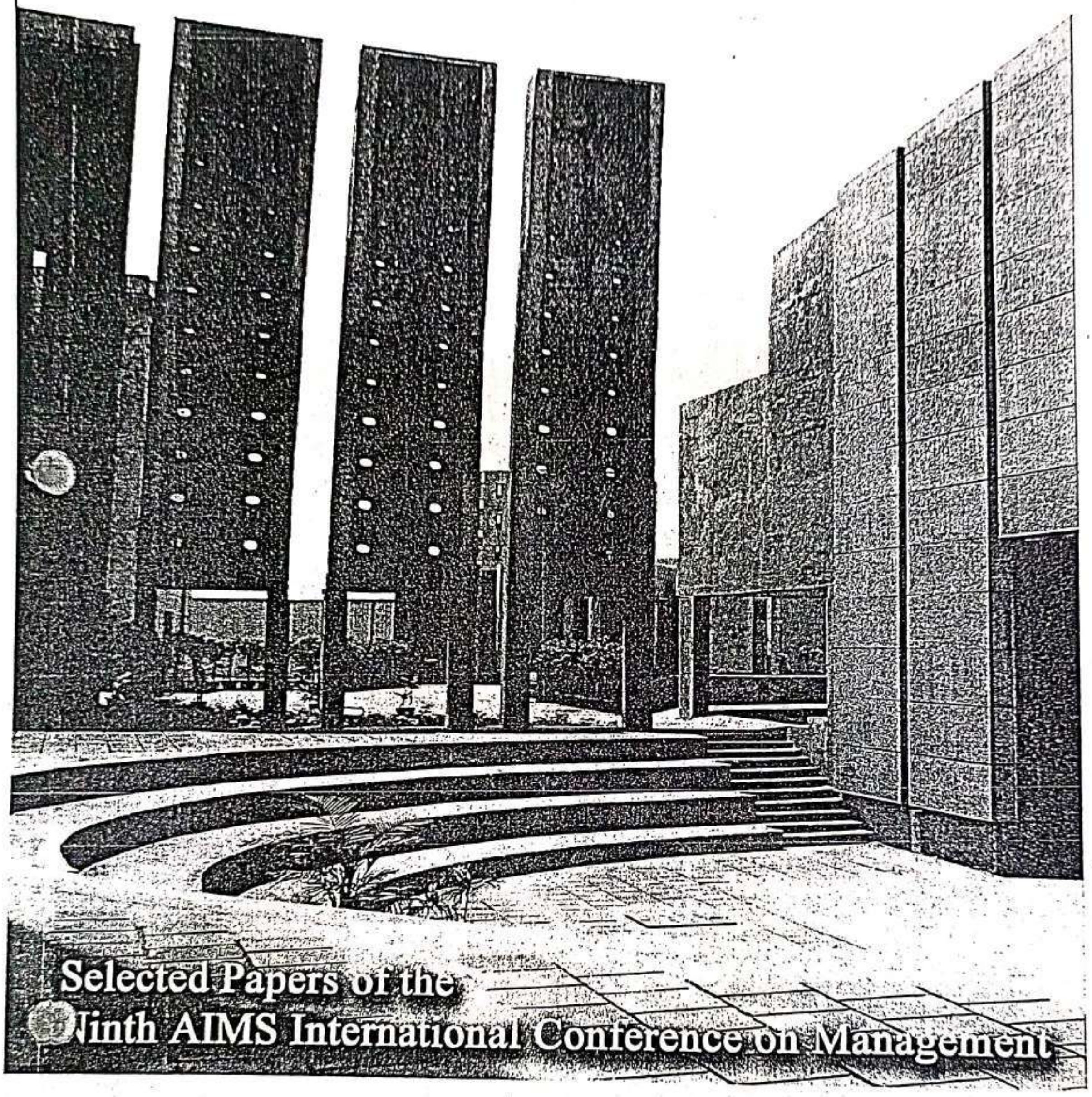
India's Business to Business (B2B) e-commerce market is expected to reach US$ 700 billion by 2020. India has replaced China as the most promising markets for retail expansion, supported by expanding economy, coupled with booming e-commerce market, driven by robust investment in the sector and a rapid increase in the number of internet users. Various agencies have high expectations about the growth of Indian e-commerce markets. Indian e-commerce sales are expected to reach US$ 120 billion by 2020 from US$ 30 billion in FY2016. Further, India's e-commerce market is expected to reach US$ 220 billion concerning gross merchandise value (GMV) and 530 million shoppers by 2025, led by faster speeds on reliable telecom networks, faster adoption of online services and better variety as well as convenience. The size of modern retail in India is expected to double to Rs 171,800 crore (US$ 25.7 billion) from Rs 87,100 crore (US$ 13 billion) in three years driven by Omni-channel retail. (India Brand Equity Foundation, 2018)

Lifestyle in India is changing and the concept of 'value for money' is picking up local companies, and local-foreign joint ventures are expected to position than the purely foreign ones more advantageously. Up and coming modern retail channels such as hypermarkets, supermarkets, convenience stores and discounters were unable to make a significant mark in grocery retailers' value due to a limited geographical spread in consumer reach. Department stores within mixed retailers

056

142

Managing Turbulence and Uncertainties in Management Education: New Landscapes and Roadmaps



Editors
Omprakash K. Gupta
Amit J. Shah
Shivprakash Agrawal

individuals may have a great motivation to engage into excessive risk out of their upward slopping utility curve would also call for scientifically researching it out. Yes, till it gets so established, we must consider it as the limitation of this work.

7. References

1. Bachelier, L. (1900), "Théorie de la spéculation" (in French), Gauthiers-Villars, Paris, pp. 21–86.
2. Fama, E. F. (1970), "Efficient Capital Markets: A Review of Theory and Empirical Work", *The Journal of Finance*, Vol. 25, No. 2, pp. 383–417.
3. Kendall, M. G. (1953), "The Analysis of Economic Time-Series-Part I: Prices", *Journal of the Royal Statistical Society*, Blackwell Publishing, pp. 11–25.
4. Mayer, Colin (1988), "New Issues in Corporate Finance", *European Economic Review*, 1988.
5. Pareto, Vilfredo (1971), Manual of Political Economy, Augustus M. Kelley (translation of French edition from 1927).
6. Rappaport, Alfred (2011), *"Saving Capitalism from Short-termism: How to Build Value and Take back Our Financial Future"*, McGraw Hill Companies.
7. Regnault , Jules (1863), "Calcul des chances et philosophie de la bourse" (in French), Mallet-Bachelier and Castel, Paris.
8. Stiglitz, Joseph (2010), *Economic Times*, Ahmedabad Edition, May 26, 2010.

8. Referred Web Link

1. Jeremy Grantham in GMO News Letter of October 2009 entitled, 'Just Desserts and Markets Being Silly Again', http://www.scribd.com/ doc/21682547/Jeremy-Grantham

Impulsive Buying Behaviour at Big Bazaar Kolhapur

C. S. Dalvi
Shahu Inst of Business Education & Research, Kolhapur, India
(drcsdalvi@yahoo.co.in)

Sayali Pataskar
H. N. College of Commerce, Solapur, India
(sayalipataskar@gmail.com)

Impulsive purchasing, generally known as a consumer's unplanned purchase is an important part of buyer behavior. The objective of the study is to analyze the buying behaviour of the consumers' of Big Bazaar, to measure the level of satisfaction derived by the shoppers at Big Bazaar and to assess the future relationship between the retailer and his customers. The study is based on the primary data collected from Big Bazaar in Kolhapur City with the help of a structured questionnaire. The findings of the study states that consumer impulsive buying behaviour and customer satisfaction is linked with buying performance.

1. Introduction

The last millennium has witnessed innovations at every stage of the supply chain, giving rise to new models. The consumer interface, i.e. the retailing factor has undergone a sea of change, partly due to changing consumer needs and partly due to the emergence of new technologies. While some of the changes have been evolutionary in nature, some others have been category killers, leading to radical change in both consumer perceptions and formats. The ever-increasing focus on the customer will encourage all retailers to investigate the best way to foster and retain customer loyalty. With the conventional wisdom in retailing questioned and factors like location and prices not deemed as differentiating enough the retailers look into more innovative methods to attract customers. The trend in marketing toward building relationships with customers continues to grow, and marketers have become increasingly interested in retaining customers over the long run. It is with this platform that all retailers are vying for a share in the pie with new promotional offers every day.

Organized retailing provides an ideal shopping experience through consumer preference analysis, excellent ambience and choice of merchandise. Changing lifestyles, strong income growth and favorable demographics are the drivers for the fast growth of this sector. Rising income level, education, acceptance of smart and credit cards and global exposure have an impact on the Indian consumer's shopping habits. Impact of factors like availability of favourite brands, social status, buying behaviour during discounts, influence of family and friends over the store and brand choice, relationship between store and store brand, and consumer perception towards

Managing Turbulence and Uncertainties in Management Education: New Landscapes and Roadmaps

Omprakash K. Gupta is a professor in the College of Business at University of Houston – Downtown in Texas, USA. He has previously been at Purdue University, Prairie View A&M University, Ball State University, Washington State University, IIM Ahmedabad, and CMC Ltd. He was the founder director of Nirma Institute of Management. Dr. Gupta has published widely in refereed journals such as Management Science, European J. of Operations Research, Journal of Business Ethics, Journal of OR Society, etc. He is the editor-in-chief of Int. J. of Operations and Quantitative Management, AIMS International Journal of Management, and The Management Faculty. He has received several teaching, research and service awards. He has been frequently invited to deliver speeches. He is also the founder of AIMS International and International Forum of Management Scholars.

Amit J. Shah is professor of Management and former Director of the Center for Leadership Development at Frostburg State University in Maryland, USA. He has over 25 years of experience in industry and academia. He has presented over 100 papers at various conferences both domestically and internationally, published over 70 articles and cases in various journals, textbooks, and published proceedings, authored a text, Business Now, co-authored a text, Introduction to Business, both published by McGraw-Hill, and conducted workshops for various organizations in the area of business, strategy, and active learning. He has received numerous awards in Teaching, Service, and Research including AIMS International's Gold Medal Award in the Global Researcher Category.

Shivprakash Agrawal is a professor and dean of Babaria Institute of Technology Vadodara. He had previously worked as Project Manager at Unisys Corporation, Chief General Manager at Rishabh Software, and Professor and head of Computer Engineering Department at Sardar Vallabhbhai Patel Institute of Technology. His area of interest includes Enterprise Resource Planning, Software Engineering, Software Project Management and Business Information System. He has presented several research papers in national and international conferences. He has worked at key positions for Computer Society of India and IT Forum of Vadodara. He is also the Managing Editor for AIMS International Journal of Management and The Management Faculty.

AIMS9

Ninth AIMS International Conference on Management

The mission of AIMS International is to unify Indian management scholars to foster excellence in education and research, to advance knowledge, and support practice in all business and related disciplines. It organizes international conferences, faculty development programmes, and publishes journals among many other activities to promote professionalization in Indian B-schools.

ISBN 978-81-924713-0-3

AAYUSHI INTERNATIONAL INTERDISCIPLINARY RESEARCH JOURNAL
(Peer Reviewed and Indexed Journal)
Special Issue No : 49 Impact Factor : 5.707 ISSN - 2349-638x

148

International Conference

On

"Advanced and Innovative Practices in Commerce & Management, Science & Technology, Humanities, Languages and Their Role in Achieving the Exponential Growth"

Date : 16th February 2019

Organised by

Shri Narayanrao Babasaheb Education Society's

SHRI VENKATESH MAHAVIDYALAYA, ICHALKARANJI

In collaboration with

SHIVAJI UNIVERSITY COMMERCE AND MANAGEMENT TEACHERS ASSOCIATION (SUCOMATA)

and

BVDU's INSTITUTE OF MANAGEMENT AND ENTREPRENEURSHIP DEVELOPMENT, (IMED) Pune

Web : www.venkateshcollege.com

INDEX

International Interdisciplinary Research Journal (AIIRJ) Special Issue: 49 ISSN 2349 -638x

CUSTOMER OPINION OF RETAIL SERVICES IN SELECTED CITIES

Dr. C. S. Dalvi
Associate Professor, CSIBER, Kolhapur

1) Introduction

Retail market In India is estimated to grow by 60% to reach US$ 1.1 trillion by 2020, factors considering rising income & lifestyle changes by the middle class and increasing connectivity through the internet. The growth of the overall retail market is 12% per annum. Organised trade would expand twice as fast at 20% per annum and traditional trade at 10%. The e-commerce market in India is a fast-growing market in the world. The primary cause is growing no. of internet users. E-commerce sales in 2017 were $39 billion. By 2026, Sales through the internet is expected to cross $ 200 billion by 2026. Estimated shoppers to the tune of 530 million by 2025, reliable telecom networks growth in India, customers can cope up with changing technology. Jio mobile service provider is an accelerating factor for internet usage in India in the last three years. Luxury retail market of India is expected to grow the US $ 30 billion by the end of 2018 from the US $ 23.8 billion in 2017. (2, IBEF 2018).Retail shop industry is an upcoming industry in India. The growth of the retail industry is because of changes in lifestyles, tastes and preferences of the customers. Some other factors like changes in awareness about brand & various services offered are responsible for the growth of the retail sector. Indian customers' expectations are increasing day-by-day than ever before. The middle class is growing in new India, and hence they demand a quality product and looking for a change. They are in a transition state of lifestyle. As a result, the customers are shifting from traditional shops to organised retail shops. They not only afford to spend money but also have a strong desire for uplifting their lifestyle.The article discusses about the various services provided by the retail stores in the selected cities, i.e. Kolhapur, Satara, Solapur and Sangli. The services such as billing procedure, customer care, help desk, grievance only are considered in the present article.

2) Objectives of Study

1) To understand the Indian market of the organised retail industry.

2) To study the various service aspects of Organised retail stores in selected cities of western Maharashtra.

3) To asses customer attitude and opinion about organised retail stores in selected cities.

6. Research Methodology of the Study

3) Collection of Data

Primary data was collected from the shoppers of the organised retail stores from Kolhapur, Solapur, Satara and Sangli cities. They were contacted at the retail stores and information was sought from them. One thousand customers of the retail stores were contacted at different times. 1000 customers were contacted by using stratified disproportionate sampling method.

4) Data Analysis and Interpretation

Table No. 4.1: Provision of Hassle Free Complaint Handling

City	Kolhapur		Solapur		Satara		Sangli		Total	
Opinion	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Strongly agree	13	5.2	45	18	69	27.6	45	18	172	17.2
Agree	89	35.6	108	43.2	59	23.6	126	50.4	382	38.2
Undecided	125	50	83	33.2	112	44.8	68	27.2	388	38.8
Disagree	23	9.2	10	4	7	2.8	8	3.2	48	4.8

Pimpri Chinchwad Education Trust's

S. B. PATIL INSTITUTE OF MANAGEMENT

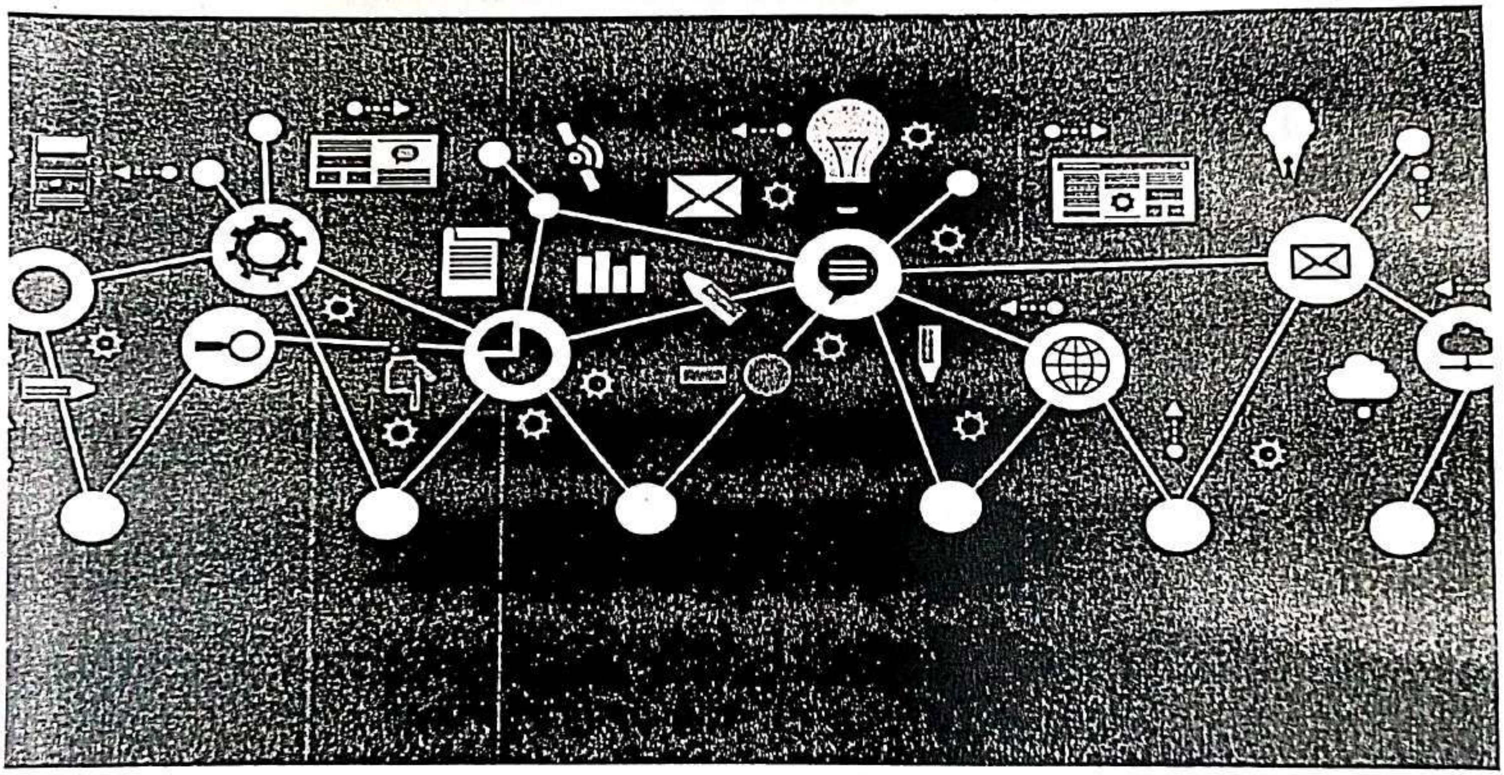
Seventh National Conference

On

"MANAGING RESOURCE THROUGH CREATIVITY FOR GENERATING OPPORTUNITIES IN 21ST CENTURY"

CONFERENCE PROCEEDINGS

18th and 19th January 2019



In association with

SAVITRIBAI PHULE PUNE UNIVERSITY

Under QIP Programme

Chairman
Seventh National Conference
Dr. Daniel Penkar

Chief Convener
Seventh National Conference
Dr. Hansraj Thorat

Convener
Seventh National Conference
Dr. Kirti Dharwadkar

SERVICE MEASUREMENT AT RETAIL STORES IN SELECTED CITIES

Dr. C. S. Dalvi
Associate Professor, CSIBER, Kolhapur
Email: drcsdalvi@siberindia.edu.in

(Sponsored Minor Research Project of ICSSR, New Delhi)

ABSTRACT

Retail Industry India is expected to grow at 10 per cent a Compound Annual Growth Rate (CAGR) of to $ 1.6 trillion by 2026 from $ 641 billion in 2016. Overall retail market of consumer is likely grow at the rate of 12 per cent per annum, retail though organized retail industry may grow at the rate of 20 per cent per annum as compared to the traditional retail or unorganized retail market which is likely to grow at the rate of 10 per cent.

Lifestyle in India is changing and the concept of 'value for money' is picking up local companies and local-foreign joint ventures are expected to more advantageously position than the purely foreign ones. Up and coming modern retail channels such as hypermarkets, supermarkets, convenience stores and discounters were unable to make a significant mark in grocery retailers' value due to a limited geographical spread in consumer reach. Department stores within mixed retailers were the forerunner in growth, being boosted by the introduction of lifestyle concept stores. The average Indian deserves consumption of good quality of products at prices he can afford. In a developing country like India, a major chunk of a consumer's expenditure is on retail products.

***Keywords:** Retailing, modern retails, service, FDI, Unorganized retail, Customer. Facility*

1. Introduction

The term 'retailing' refers to any activity that involves a sale to an individual customer. Currently, Retailing is the buzzword in Indian Industry. The Indian retail industry has emerged as one of the most dynamic and fast-paced industries due to the entry of several new players. It accounts for over 10 per cent of the country's Gross Domestic Product (GDP) and around 8 per cent of the employment. India is the world's fifth-largest global destination in the retail space. Retail Industry in India is expected to grow at 10 per cent a Compound Annual Growth Rate (CAGR) of to $ 1.6 trillion by 2026 from $ 641 billion in 2016. Overall retail market of consumer is likely to grow at the rate of 12 per cent per annum, even though organized retail industry may grow at the rate of 20 per cent per annum as compared to the traditional retail or unorganised retail market which is likely to grow at the rate of 10 per cent. (India Brand Equity Foundation, 2018)

India's Business to Business (B2B) e-commerce market is expected to reach US$ 700 billion by 2020.India has replaced China as the most promising markets for retail expansion, supported by expanding economy, coupled with booming consumption rates, urbanizing population and growing middle class. India is expected to become the world's fastest growing e-commerce market, driven by robust investment in the sector and rapid increase in the number of internet users. Various agencies have high expectations about growth of Indian e-commerce markets. Indian e-commerce sales are expected to reach US$ 120 billion by 2020 from US$ 30 billion in FY2016. Further, India's e-commerce market is expected to reach US$ 220 billion in terms of gross merchandise value (GMV) and 530 million shoppers by 2025, led by faster speeds on reliable telecom networks, faster adoption of online services and better variety as well as convenience. The size of modern retail in India is expected to double to Rs 171,800 crore (US$ 25.7 billion) from Rs 87,100 crore (US$ 13 billion) in three years driven by Omni-channel retail. (India Brand Equity Foundation, 2018)

Lifestyle in India is changing and the concept of 'value for money' is picking up local companies and local-foreign joint ventures are expected to more advantageously position than the purely foreign ones. Up and coming modern retail channels such as hypermarkets, supermarkets, convenience stores and discounters were unable to make a significant mark in grocery retailers' value due to a limited geographical spread in consumer reach. Department stores within mixed retailers were the forerunner in growth, being boosted by the introduction of lifestyle concept stores.

2. Objectives of Study

1. To study opinion about organized retail stores in selected cities in western Maharashtra.
2. To know customer satisfaction level about the services provided by the retail stores.
3. To put forth ...

International Journal of Trend in Scientific Research and Development (IJTSRD)
March 2019 Available Online: www.ijtsrd.com e-ISSN: 2456 - 6470

Fostering Innovation, Integration and Inclusion Through Interdisciplinary Practices in Management

4G Wave of Mobile Services in India

Ms. Mamata Alias[1], Aishwarya Rammrao Desai[1], Dr. C. S. Dalvi[2]

[1]M. Phil. Research Scholar, [2]Associate Professor

[1,2]Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra, India

Organised By:
Management Department, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra

How to cite this paper: Ms. Mamata Alias | Aishwarya Rammrao Desai | Dr. C. S. Dalvi "4G Wave of Mobile Services in India" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Special Issue | Fostering Innovation, Integration and Inclusion Through Interdisciplinary Practices in Management, March 2019, pp.145-148, URL: https://www.ijtsrd.com/papers/ijtsrd23087.pdf

IJTSRD23087

ABSTRACT

Telecommunication industry is one of the most rising industry which evolved at faster rate in last 10-15 years. Recently, India is the world's second largest telecommunication market and still growing. Mobile economy in India is increasing very fast and will add significantly to India's GDP. 4G technology is originated through 1G, 2G as well as 3G technology. 4G technology is the indicator of brisk growth of wireless communication technologies. The growth of 4G technology generates new services which are useful for the customers for various purposes like internet accessing with high data rate, global roaming, videos anywhere, any time and at any place with full grown support for all other multimedia. 4G technology is a very encouraging generation of wireless communication that will change the people life to wireless world in coming days.

This paper deals with the current scenario of 4G mobile services. There are various competitors in the telecommunication market such as Bharati Airtel, Vodafone, Idea Cellular, Reliance Jio and BSNL. The current scenario of 4G mobile services which includes current market share of different companies, different schemes and offers provided to their customers in terms of mobile data, pricing, call rates, the growth of the companies and their marketing strategies. It also throws light on competitive edge over other service providers. Entry of reliance jio has made great turbulence in the telecommunication market by providing schemes like free internet, free calling, 4G network provide a serious threat to other competitor.

Due to this, Reliance Jio is preferable choice for all the customers. Other service providers are facing challenges and find difficulty to cope up with the new game in the communication market. Reliance Jio marketing strategies have captured the more market share as compared to other competitors. It is very difficult for others to survive in the market. The other competitors are trying to survive in the market by changing their marketing strategies, satisfy their customers demand and retain their customers and refrain to switch to Reliance Jio or any other competitor.

KEYWORDS: *4G, Internet, Data, Talk-time, SMS, calling, Volte*

I. INTRODUCTION

Mobile communication systems regenerated the way people communicate, joining together communications and movability. Wireless connectivity is almost everywhere as well as getting highly cheap even for people who are in the bottom of the pyramid. Capable and compact wireless technologies have not only rised but also evolved in order to fulfill the expectations of businesses as well as end users. The ability to communicate with people on the move has derived vigorously and was accepted by the people throughout the world. The number of mobile subscribers has increased excessively during the last decade. More than one million new subscribers per day have been added globally.

In the mid of 1980's the initial wireless telephone technology is referred to as 'First Generation' and it supports only voice services. The second generation is not only totally digital but also supports additional services like SMS (Short Message Services).The third generation of mobile technology came into picture acquire higher data rate and supports services such as mobile T.V., video calls, etc. The rapid growth of the wireless technology as well as internet created a new wireless communication channel named as 4G or forth generation technology with characteristics as interactive multimedia, personalized services, high definition mobile tv interactive games and high speed broadband internet.

International Journal of Trend in Scientific Research and Development (IJTSRD)
March 2019 Available Online: www.ijtsrd.com e-ISSN: 2456 - 6470

154

Fostering Innovation, Integration and Inclusion Through Interdisciplinary Practices in Management

A Study on Retailing in India: Growth and Challenges

Supriya Udaykumar Mogale[1], Dr. C. S. Dalvi[2]

[2]Associate Professor

[1,2]Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra, India

ABSTRACT

Retailing in India has several outstanding achievements as well as impressive growth during last few decades. Indian retail market is one of the top five retail markets in the world by economic value and also it is considered as one of the fastest growing retail markets in the world. Retailing in India is the most important pillar of its economy and accounts of about 10% of its GDP. Indian retail industry is classified into organized and unorganized sectors. There is a rapid development of retailing which leads to shifting of customers from unorganized to organized sectors and it is mainly because of changing behavior and preferences of consumers. This changing behavior of consumers is due to increased income and changed life styles. Now the customer is very much aware about the product and services. He is becoming very specific and conscious about getting services by the retailers. His expectations are increasing day-by-day. Customers want everything under one roof i.e. shopping, food and entertainment and hence retailing in India is developing very fast. This is paper fully based on secondary data. This paper provides information about role of organized and unorganized sectors in India. It also includes various formats of retailing, current scenario, growth and challenges of retail industry and the future prospects of retailing in India.

Organised By:
Management Department, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra

How to cite this paper: Supriya Udaykumar Mogale | Dr. C. S. Dalvi "A Study on Retailing in India: Growth and Challenges" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Special Issue | Fostering Innovation, Integration and Inclusion Through Interdisciplinary Practices in Management, March 2019, pp.95-97, URL: https://www.ijtsrd.com/papers/ijtsrd23073.pdf

IJTSRD23073

INTRODUCTION

The Indian Retail Industry is the fifth largest in the world and it is one of the fastest growing sectors in India. Retailing in India has several outstanding achievements as well as impressive growth during last few decades and it is one of the pillars of its economy. This is only because of rising income, changing life styles by middle class, and increasing digital connectivity. Each of the retail companies has their own unique strategies and offering in order to sustain and grow the business. Development of mega malls in India is also one of the most important aspects to the booming retail sector. No. of big players are entering in this field and competing to survive in the market but it is not very easy to stand in the competition and so only few managed to survive and taste the success.

The main reason behind this is a Customer. He is the king of the market. Customers are now very much aware about getting some products, brands or services provided by the companies. He is becoming more specific and conscious about getting proper services and his expectations are increasing day-by-day. Hence it is very much important to identify their actual expectations. There must be a gap between services provided by the company and actual expectations of the customers. That gap is to be identified and retailers have to minimize that gap. This will lead to increase the level of satisfaction of the customers.

Objectives

- To understand the concept of retailing in India
- To study the growth trends of Indian retail sector

Research Methodology

This paper is based on secondary data

Indian Retail Sector: Current scenario

Indian Retail Sector is experiencing exponential growth wit retail development taking not only in major cities an metros but also in tier II and tier III cities. There are variou factors affect the growth in the retail market like changin demographic profile, increasing income, urbanization an changing tastes and preferences of the consumers. Accordin to AT Kearney (2017), Global Retail Development Inde (GRDI), India is at top position and got first rank among 3 developing countries in Retail Sector. Indian Retail is t fastest growing market in the world only because of i

720 Degree Performance Appraisal Systems

Aishwarya M. Patil[1], Dr. C. S. Dalvi[2]

[1]Student, M.Phil., [2]Associate Professor
[1,2]Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra, India

Organised By:
Management Department, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra

How to cite this paper: Aishwarya M. Patil | Dr. C. S. Dalvi "720 Degree Performance Appraisal Systems" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Special Issue | Fostering Innovation, Integration and Inclusion Through Interdisciplinary Practices in Management, March 2019, pp.4-8, URL: https://www.ijtsrd.com/papers/ijtsrd23048.pdf

IJTSRD23048

ABSTRACT
Human resource (HR), the most important asset in any organization and its significance to any company is very well known accordingly. The picture in present scenario tells us that the overall performance of the company depends on its ability to observe the performance of its members. The specific measure on which an organization's performance depend, by using the same measure we can improve and optimize the employee's performance. The performance appraisal system plays very important role in human resource framework. This concept has stated in 20th century. It is the process of obtaining, analyzing and recording information about an employee to evaluate and improve their performance. This appraisal system has started from 90 degree to the 720 degree till date. Before the 720 degree appraisal system, the companies are using 360 degree system. But in modern management, the 720 degree appraisal system is about to work efficiently. It is an integrated method where the employee's performance is evaluated from 360 degree (Management, Colleagues, Self and Customers) and timely feedback is given. The performance is evaluated against the set targets. Therefore, we can state 720 degree appraisal as twice 360 degree appraisal. As the name suggests, the 720 degree performance appraisal is one of the recently introduced concept and the evaluation of the performance from all the aspects and gives timely feedback. In this paper, we are going to analyze and study the 720 degree performance appraisal system on various aspects.

1. INTRODUCTION

Performance appraisal conjointly call worker appraisal could be an methodology by which the job performance of an employee is evaluated in terms of quality, quantity, price and time. It is part of career development. Performance appraisals are regular reviews of employee performance within organizations. Any performance appraisal processes in following manner. Review the performance, judging the gap between actual and desired performance, strengthen the relationship and communication between superior – subordinates and management – employees, diagnose the strengths and weaknesses of the people therefore on determine the coaching and development wants of the longer term, provide feedback to the employees regarding their past performance and provide clarity of the expectations.

Any organization firstly thinks about its goals and aims at the effective solutions to achieve these goals. Therefore, in order to do this, an organization must monitor or measure performance review on the basis of pre-determined standards and timely recognition of the accomplishments that motivates the worker to perform higher on a daily basis. While 360 degree performance appraisal can be a far framed performance appraisal system observe in several organizations, recently in the modern management, 720 degree performance appraisal system is also gaining popularity. In 720 degree system, we provide a feedback after the original 360 degree appraisal.

The 720 degree analysis is rising as attainable different appraisal technique. Organizations are slowly however steadily realizing the requirement for this new system which is better than the existing 360 degree evaluation especially in terms of the focus of the evaluation and the involvement of the evaluators in the process. Now, recently Cadbury introduces '720-degree' feedback. This study is targeting the requirement and significance of 720 degree Performance appraisal within the fashionable business

INTERNATIONAL RESEARCH

Impact Factor - 6.261 ISSN - 2348-7143 137

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

International E-Research Journal

PEER REFREED & INDEXED JOURNAL

January-2019 Special Issue - 114 (A)

Recent Trends in Research

This Journal is indexed in :
- University Grants Commission (UGC)
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- International Impact Factor Services (IIFS)

For Details Visit To ...

INDEX

'RESEARCH JOURNEY' International E- Research Journal
Impact Factor - (SJIF) – 6.261, (CIF) - 3.452(2015), (GIF)–0.676 (2013)
Special Issue 114 (A)- Recent Trends In Research
UGC Approved Journal
ISSN : 2348-7143
January-2019

Effect of Modern Retail Stores on Small Shops

Dr. C. S. Dalvi-
Associate Professor, CSIBER, Kolhapur
drcsdalvi@siberindia.edu.in
(from Sponsored Minor Research Project of ICSSR, New Delhi)

Abstract :

Retail Industry India is expected to grow at 10 per cent a Compound Annual Growth Rate (CAGR) of to \$ 1.6 trillion by 2026 from \$ 641 billion in 2016. Overall retail market of consumer is likely grow at the rate of 12 per cent per annum, retail though organized retail industry may grow at the rate of 20 per cent per annum as compared to the traditional retail or unorganised retail market which is likely to grow at the rate of 10 per cent.

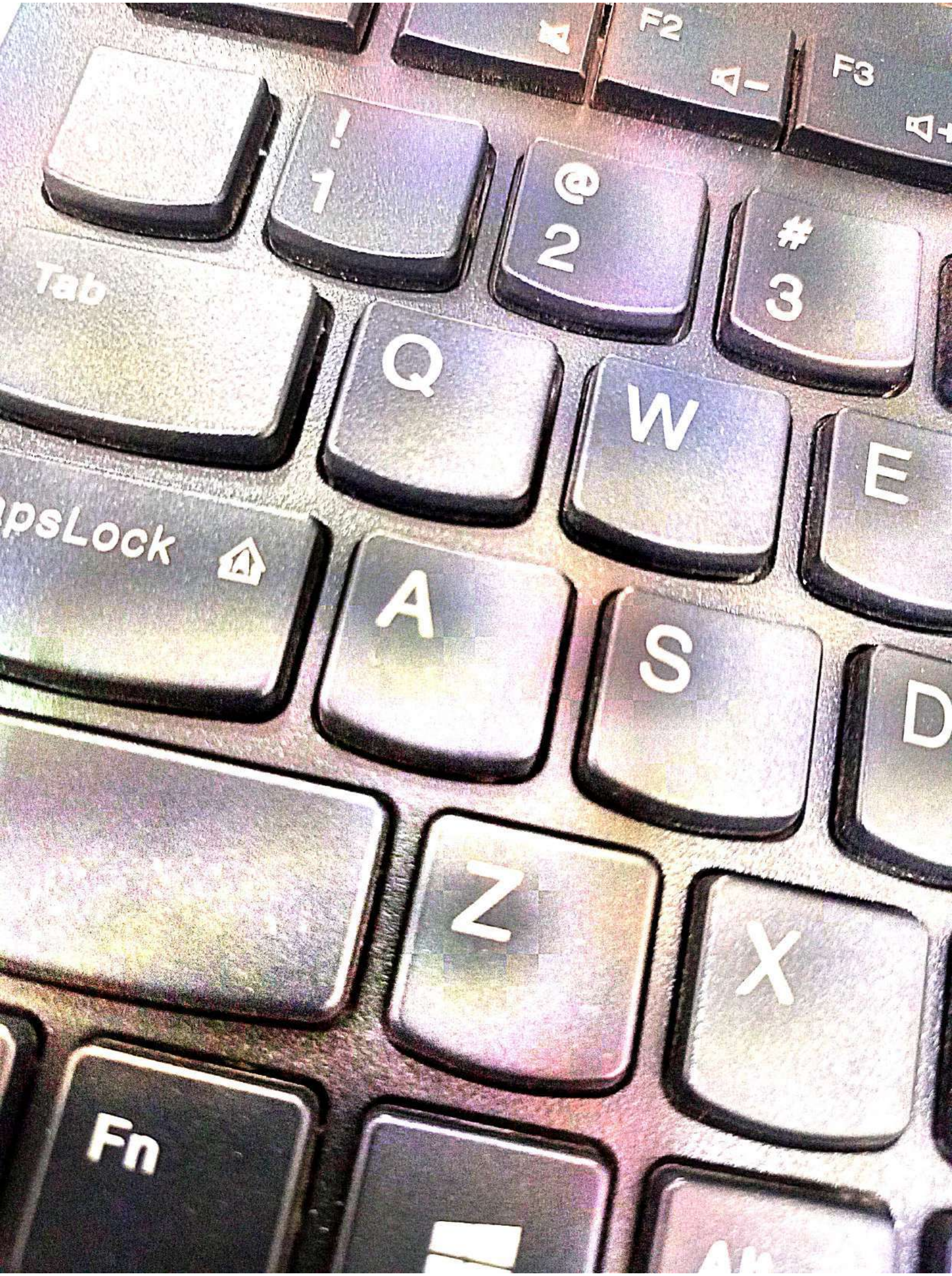
Lifestyle in India is changing and the concept of 'value for money' is picking up local companies and local-foreign joint ventures are expected to more advantageously position than the purely foreign ones. Up and coming modern retail channels such as hypermarkets, supermarkets, convenience stores and discounters were unable to make a significant mark in grocery retailers' value due to a limited geographical spread in consumer reach. Department stores within mixed retailers were the forerunner in growth, being boosted by the introduction of lifestyle concept stores. The average Indian deserves consumption of good quality of products at prices he can afford. In a developing country like India, a major chunk of a consumer's expenditure is on retail products.

Keywords:- Retailing, modern retail stores, Small shops, strengths , weakness

Introduction

The term 'retailing' refers to any activity that involves a sale to an individual customer. Currently, Retailing is the buzzword in Indian Industry. The Indian retail industry has emerged as one of the most dynamic and fast-paced industries due to the entry of several new players. It accounts for over 10 per cent of the country's Gross Domestic Product (GDP) and around 8 per cent of the employment. India is the world's fifth-largest global destination in the retail space. Retail Industry in India is expected to grow at 10 per cent a Compound Annual Growth Rate (CAGR) of to \$ 1.6 trillion by 2026 from \$ 641 billion in 2016. Overall retail market of consumer is likely to grow at the rate of 12 per cent per annum, even though organized retail industry may grow at the rate of 20 per cent per annum as compared to the traditional retail or unorganised retail market which is likely to grow at the rate of 10 per cent. (India Brand Equity Foundation, 2018)

India's Business to Business (B2B) e-commerce market is expected to reach US\$ 700 billion by 2020.India has replaced China as the most promising markets for retail expansion, supported by expanding economy, coupled with booming consumption rates, urbanizing population and growing middle class. India is expected to become the world's fastest growing e-commerce market, driven by robust investment in the sector and rapid increase in the number of internet users. Various agencies have high expectations about growth of Indian e-commerce markets. Indian e-commerce sales are expected to reach US\$ 120 billion by 2020 from US\$ 30 billion in FY2016. Further, India's e-commerce market is expected to reach US\$ 220 billion in gross merchandise value (GMV) and 530 million shoppers by 2025, led by faster speeds


F2
F3
!
1
@
2
#
3
Tab
Q
W
E
A
S
D
Z
X
Fn

[NC-Rase 18] ISSN 2348 – 8034
DOI: Impact Factor- 5.070

GLOBAL JOURNAL OF ENGINEERING SCIENCE AND RESEARCHES

DESIGN EFFICIENT ANTI DDOS INTRUSION DETECTION SYSTEM FOR CLOUDCOMPUTING

Miss Khot Meghmala Balwant & Dr. S. D. Bhoite
Research Scholar, Chhatrapati Shahu Institute of Business Education and Research, India
Associate Professor, Chhatrapati Shahu Institute of Business Education and Research, India

ABSTRACT

Today small and medium companies are increasingly realizing that simply by tapping into the Cloud they can gain fast access to best business applications Cloud services are becoming increasingly popular, both among the public and business enterprises. As more organizations are relying on cloud computing technology for their business operations. With more organizations moving onto cloud platforms, there will need to be new types of security best practices to help secure their environments. Data leaks and security breaches can be messy from an IT perspective to design Anti DDOS Solution.

Now a days Denial of Service or Distributed Denial of Service (DDoS) attacks are generally large-scale web based attacks against companies or websites. In this Research paper focus on a practical DDOS defense system that can protect the availability of web services during severe DDOS attacks with the help of Anti DDOS. The proposed system provides multistage detection through various modules like checking source, login test, turing test to fix whether the client is attacker or legitimate client, if detected that particular client address will be blocked, the service could not be provided. So our system protects legitimate traffic from a huge volume of DDOS traffic when an attack occurs. As there is strong need of designing Anti-DDOS IDS and hence the proposed research title is "Design Efficient Anti-DDOS Intrusion Detection System for Cloud Computing".

Keywords: *IDS, Cloud Computing DDOS etc.*

I. INTRODUCTION

In today's ever-changing business climate, it's critical that small business owners get what they need right when they need it. Whether they're on their computers, tablets or mobile phones, it's more important than ever for businesspeople to have information right at their fingertips, wherever they are. This is exactly the convenience that cloud computing provides.

Today small and medium companies are increasingly realizing that simply by tapping into the Cloud they can gain fast access to best business applications.

Cloud services are becoming increasingly popular, both among the public and business enterprises. As more organizations are relying on cloud computing technology for their business operations.

II. OBJECTIVE

The proposed system provide a multistage detection to more precisely detect the possible attackers. So with our Anti-DDoS software model will improve the existing DDoS mitigation technologies

- To study existing security system to mitigate DDOS attacks.
- To design and develop an Anti-DDOS Intrusion Detection System for Cloud Computing to defend from DDOS attacks.

Scope

The proposed Anti DDoS will provide good service to legitimate data exchange during the attack, which is the important goal of DDoS defense. DDoS mitigation also requires identifying incoming traffic to separate human traffic from human-like bots which will be done by the proposed system with attack detection.

III. PROBLEM STATEMENT

Firewall protects the front access points of system and is treated as the first line of defense. Firewalls [8] are used to deny or allow protocols, ports or IP addresses. It diverts incoming traffic according to predefined policy.

Different firewalls used in network for security purpose. As firewalls sniff the network packets at the boundary of a network, insider attacks cannot be detected by traditional firewalls. Few DoS or DDoS attacks are also too complex to detect using traditional firewalls. For instance, if there is an attack on port 80 (web service), firewalls cannot distinguish good traffic from DoS attack traffic

So there limitations of firewalls like:

- Allow/deny packet by inspecting only header information such as source or destination address, port numbers etc.
- Do not detect malicious code in packets.
- Cannot prevent against spoofing and fragment attack.
- Firewalls Cannot Distinguish between Malicious and Legitimate User

As many organizations moving onto cloud platforms and security is the major challenge for acceptance of cloud platform, there will need to be new types of security practices to help secure their environments. One of these security challenges is how to mitigate with DDoS (Distributed Denial-of-Service attack (DDoS attack).DDoS not only cost in terms of serious money but also can affect your business and image in seconds .So there is strong need of designing Anti-DDOS IDS. Cloud computing also suffers from various traditional attacks such as IP spoofing, Address Resolution Protocol spoofing, Routing information Protocol attack, Flooding, Denial of Service (DoS), Distributed Denial of Service (DDoS) etc. So Efficient intrusion detection systems (IDS) and intrusion prevention systems (IPS) should be incorporated in Cloud infrastructure to mitigate these attacks.

IV. BACKGROUND

The Intrusion detection system in a similar way complements the firewall security. The firewall protects an organization from malicious attacks from the Internet and the Intrusion detection system detects if someone tries to break in through the firewall or manages to break in the firewall security and tries to have access on any system in the trusted side and alerts the system administrator in case there is a breach in security**.** Intrusion detection systems are software or hardware systems that automate the process of monitoring the events occurring in a computer system or network, analyzing them for malicious activities or policy violations and produces reports to a management station. An intrusion detection system (IDS) monitors network traffic and monitors for suspicious activity and alerts the system or network administrator. In some cases the IDS may also respond to anomalous or malicious traffic by taking action such as blocking the user or source IP address from accessing the network.

V. TYPES OF DIFFERENT TYPES OF ATTACK

Denial of Service (DoS): In DoS attack, legitimate networking requests are not served because attacker makes the resources either too busy or full to serve the request. Hence the legitimate user cannot access the services of a machine or network resources. Example: apache, mail bomb, back etc.
Probing (Probe): In probing, attacker scans a machine or a network device for gathering the information about weaknesses or vulnerabilities that can be exploited later to compromise the target system. Example: saint, mscan, nmap *etc.*
User to Root (U2R): In U2R attacks, an authorized user attempt to abuse the vulnerabilities of the system in order to gain privilege of root user for which they are not authorized. Example: perl, xterm, Fd-format etc.

[NC-Rase 18] ISSN 2348 – 8034
DOI: Impact Factor- 5.070

Remote to Local (R2L): In this type of attacks, a remote user tries to gain access as a local user to a local machine by sending packets to a machine over the internet. An external intruder exploits vulnerabilities of the system to access the privileges of a local user. Example: xlock, phf, guest *etc*.

VI. PROPOSED SYSTEM

The proposed work also aims to investigate different issues over IDS. When an intruder attacks a system, the ideal response would be to stop his activity before any damage or access to sensitive information occurs.

Proposed modules

1) Checking source

In this module we are checking the source of attack. We are providing authentication for client for login. If client attacks with some pattern then by identifying that clients IP address, we are finding its source.

2) Counting

In this module we are recording the source address destination address and the time at which client performs login test. After login successful the counting module is reset. It will be enable by the Attack Detection module when there are some suspected traffic been detected.

3) Turing Test Module

So our Turing Test module challenges the suspected client, waits for their answers, and decides if the requesters are humans or programs

4) Question Generation Module

In this module if client fails to perform Login then admin will ask some questions which client has to answer perfectly. The question will be stored by admin at the time of client registration

Proposed architecture

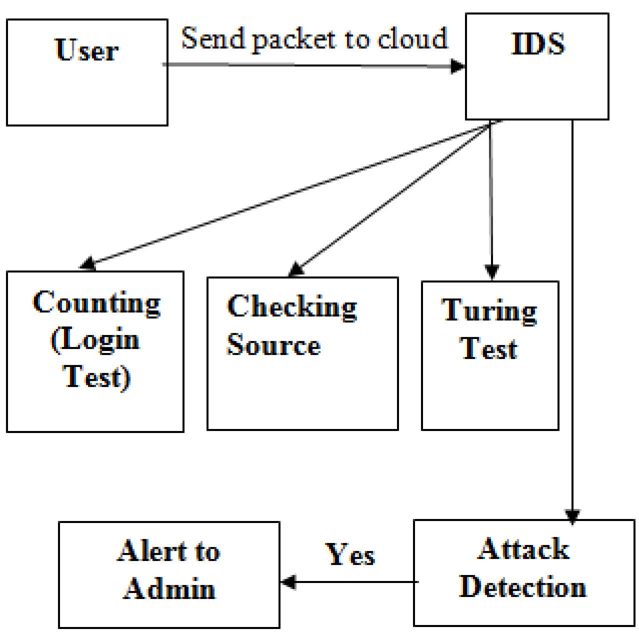


Fig 1. System Architecture

The system architecture of login test,turing test, intrusion detection, percentage of attack display, intrusion response and blocking the suspected client. In case of intrusion detection, it drops attacker packet, then sends alert message about the attack detected. This multistage approach is suitable for preventing Cloud system from DDoS attack.

THOMSON REUTERS ENDNOTE
[NC-Rase 18] ISSN 2348 – 8034
DOI: Impact Factor- 5.070

Proposed algorithm

Apriori Algorithm

Apriori algorithm is an algorithm for frequent item set mining and association rule learning over transaction databases. It's followed by identifying the frequent individual items in the database and extending them to larger and larger item sets as long as those item sets appear sufficiently often in the database. The frequent item sets determined by Apriori can be used to determine association rules which highlight general trends in the database

C_k: Candidate item set of size k
L_k : Frequent item set of size k
L_1= {frequent items};
For (k=1; L_k!=Φ;k++) do begin
C_{k+1} = candidates generated from L_k;
For each transaction *t* in database do
Increment the count of all candidates in C_{k+1}
Those are contained in *t*
L_{k+1} = candidates in C_{k+1} with min_support
End
Return U_k L_k;

Fig.2: Apriori Candidate Itemset Generation Algorithm

A support value is provided to the algorithm. First, the algorithm generates a list of candidate itemsets, which includes all of the itemsets appearing within the dataset. Of the candidate itemsets generated, an itemset can be determined to be frequent if the number of transactions that it appears in is greater than the support value.

Explicit association rules can then trivially be generated by traversing the frequent itemsets, and computing associated confidence levels. Confidence is the proportion of the transactions containing item A which also contains item B, and is calculated as

$$\text{Confidence}(A \Rightarrow B) = \frac{\text{Support}(A \cup B)}{\text{Support}(A)}$$

ID	Rule	Support	Confidence
r1	$\{a, b, c\} \Rightarrow \{e\}$	0.5	1.0
r2	$\{a\} \rightarrow \{c, e, f\}$	0.5	0.66
r3	$\{a, b\} \rightarrow \{e, f\}$	0.5	1.0
r4	$\{b\} \rightarrow \{e, f\}$	0.75	0.75
r5	$\{a\} \rightarrow \{e, f\}$	0.75	1.0
r6	$\{c\} \rightarrow \{f\}$	0.5	1.0
r7	$\{a\} \rightarrow \{b\}$	0.5	0.66
…	…	…	…

ISSN 2348 – 8034
Impact Factor- 5.070

VII. ANALYSIS AND DISCUSION

Experiment

KDD CUP 99

Data mining is the modern technique for analysis of huge of data such as KDD CUP 99 data set that is applied in network intrusion detection. Large amount of data can be handled with the data mining technology. It is still in developing state, it can become more effective as it is growing rapidly. KDD CUP 99 data set in the classification of attacks and compared their results which have been reached, and being used of the performance measurement such as, True Positive Rate (TP), False Alarm Rate(FP), Percentage of Successful Prediction (PSP) and training time (TT) to show the results, the reason for this survey is to compare the results and select the best system for detecting intrusion(classification).

KDD99 was the used data set for most researchers in the development of algorithms to determine the intrusion, which dealt with the data set in different ways and multiple processors to reach the best results.

KDD 99 that contains the Connection classified as normal and attack, into different distributions, while attacks were classified into four sections represented into DoS (deny of service), Probe (information gathering), U2R (user to root), U2L (remote to local) in different numbers

Hardware requirements

The minimum hardware requirements are:

Hard disk	:	500GB and above
RAM	:	4 GB and above
Processor speed	:	i3 and above

Software requirements

The minimum requirements for detection and prevention of phishing attacks are:

Operating System	:	Windows XP/7
Technology Used	:	JSP, Servlet, JDBC
Development IDE	:	Net beans 7.1

Implementation and Results

First we build the application to implement our various modules to tets whether the client is a human being or program. After successful conduction of these modules, we used attack simulation and dataset used for experiment is KDD CUP 99.We successfully implemented attack detection module and finally attack percentage was displayed to user.

VIII. CONCLUSION

Several intrusions which can threat integrity, confidentiality and availability of Cloud services in the future. One of the existing solutions viz. firewall may not be sufficient to solve Cloud security issues. The paper emphasized the usage of alternative options to incorporate multistage intrusion detection or intrusion prevention techniques into Cloud

REFERENCES

1. *Murat Kantarcioglu and Wei Jiang, "Incentive Compatible Privacy-Preserving Data Analysis", IEEE transactions on knowledge and data engineering, vol. 25, no. 6, june 2013.*
2. *Miss Khot Meghmala Balwant, Dr.S.D.Bhoite "A Survey On "A Survey on Design Anti DDOS Intrusion Detection System for cloud computing ", International Journal of Ongoing Research in Science and Engineering (IJORSE)Volume 2 Issue 9 SEP 2018,ISSN 2456-8481*
3. *M. Dhanalak," Effective Incentive Compatible Model for Privacy Preservation of Information in Secure Data Sharing and Publishing" International Journal of Computer Applications (0975 – 8887) Volume 96– No.16, June 2014*

ISSN 2348 – 8034
Impact Factor- 5.070

4. *M. Kantarcioglu and C. Clifton, "Privacy-Preserving Distributed Mining of Association Rules on Horizontally Partitioned Data," IEEE Trans. Knowledge and Data Eng., vol. 16, no. 9, pp. 1026-1037, Sept. 2004.*
5. *W. Du and Z. Zhan, "Building Decision Tree Classifier on Private Data," Proc. IEEE Int'l Conf. Data Mining Workshop Privacy, Security, and Data Mining, C.Clifton and V. Estivill-Castro, eds.,vol. 14, pp. 1-8,Dec. 2002.*
6. *J. Vaidya and C. Clifton, "Privacy Preserving*
7. *Association Rule Mining in Vertically Partitioned Data," Proc. ACM SIGKDD Int'l Conf. Knowledge Discovery and Data Mining (SIGKDD '02), pp. 639-644, July 2002.*
8. *R. Agrawal and E. Terzi, "On Honesty in Sovereign Information Sharing," Proc. Int'l Conf. Advances in Database Technology, pp. 240-256, 2006.*
9. *M. Kantarcioglu and R. Nix, "Incentive Compatible Distributed Data Mining," Proc. IEEE Int'l Conf. Soc. Computing/IEEE Int'l Conf. Privacy, Security*
10. *https://en.wikipedia.org/wiki/DDoS_mitigation*
11. *Chirag Modi, Dhiren Patel, Hiren Patel, Bhavesh Borisaniya, Avi Patel, Muttukrishnan Rajarajan,"A Survey of Intrusion Detection Techniques in Cloud", Centre for Cyber Security Sciences, City University ,London*
12. *https://blog.radware.com/security/2013/05/can-firewall-and-ips-block-ddos-attacks/*
13. *Marjan Kuchaki Rafsanjania, Zahara Asghari Varzaneha, 2013," Intrusion Detection by Data Mining Algorithms: A Review"*
14. *http://dwgeek.com/mining-frequent-itemsets-apriori-algorithm.html/*

International Journal of Trend in Scientific Research and Development (IJTSRD)
Conference Issue | March 2019 Available Online: www.ijtsrd.com e-ISSN: 2456 - 6470

Fostering Innovation, Integration and Inclusion Through
Interdisciplinary Practices in Management

Digital Marketing a Boost for Industries: A Study with Respect to Miraj Taluka

Dr. Sudhakar D. Bhoite[1], Mr. Omkar N. Pethakar[2]

[1]Associate Professor, [2]M.phil Research Scholar
[1,2]Department M.Phil Commerce & Management Computer Studies,
[1,2]Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra, India

Organised By:
Management Department, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra

How to cite this paper: Dr. Sudhakar D. Bhoite | Mr. Omkar N. Pethakar "Digital Marketing a Boost for Industries: A Study with Respect to Miraj Taluka" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Special Issue | Fostering Innovation, Integration and Inclusion Through Interdisciplinary Practices in Management, March 2019, pp.49-52, URL: https://www.ijtsrd.com/papers/ijtsrd23062.pdf

IJTSRD23062

ABSTRACT
Today, digital marketing is of foremost importance to any business, industries as digital presence has become an essential necessity to make their presence. The world is now moving from old newspaper advertisements to new handy Smartphone advertisements and so is India. The old days are gone when industries would rely on distributing surveys to collect information about the market. Data analyses, data gathering are the trending ways for a business to do its market research. The biggest problem in India's digital marketing scenario, primarily in tier 2 and tier 3 cities like Sangli, Miraj is poor internet infrastructure and technology adoption. But this scenario is changing rapidly because India is modernizing at a very fast pace and internet is a necessity as food, shelter and clothing. Hence tier 3 cities are also gradually evolving to be tech-friendly and therefore businesses should start pacing their strategies accordingly soon!

KEYWORDS: *Tier 3 cities, Digital Marketing, Marketing Strategies*

I. INTRODUCTION

The internet has unlocked the door of enormous digital marketing opportunities for businesses today. Digital marketing is the marketing of your products or services using digital technologies like website, apps, search engines, emails and social media, mainly on the Internet. The main objective of Digital marketing is to increase brand loyalty, brand awareness and to reach the customers in personal, relevant, timely and cost effective manner. The traditional ways of marketing involved industries to advertise their services or products on print media, radio and television commercials, business cards, Hoardings, banners and many other ways where online medium were not utilize for advertising. But now businesses are investing more in digital marketing for growing fast and gaining profitable results. Digital marketing gives industries of any size access to the mass market at an reasonable and cheaper price unlike print or TV advertising, it allows truly real time and personalized marketing. Digital marketing is involving in everything that goes on in the company from the marketing end today. Therefore it is very important to have a strong online presence for business.

India has emerged as the fast paced growing economy in the world as per the Central Statistics Organization and the International Monetary Fund. In India 35 percent of the population is using the Internet today, and by 2025, this figure is about to reach 55 percent or more. Today the average age of an Internet user in India is 24 years old or younger, it means that only a minority of the working people in India use the Internet for business on a daily basis, which leads to a conclusion that the Golden Age of digital marketing in India is yet to come. The main key players in Digital marketing in India are the Government, Shopping Portal, banking system, Software Service Providers and Internet Service Providers. The telecommunication sector is also performing a crucial role in the digitalization of India. Especially the reliance telecom Jio has played a revolutionary roll by providing the free & unlimited internet facilities. People are spending most of their times on internet compared to previous years. So being present on the online medium is a necessity of businesses, which will help for more growth and opportunities.

In India, there are some challenges which digital marketers are facing. There are two main ones that are common for both in-house marketers and agency. One is budget, which nobody seems to have in India. The second and more important one is lack of awareness. The lack of awareness is playing major role while creating digital marketing strategies. This especially happens in Tier II and more in Tier III cities. Tier I cities, which include the metropolises and the highly developed industrial and cultural hubs and the Tier II and Tier III cities which include the developing regions around the country. India is the second largest user of cell phones and the increasing number of mobile users also contributes to the enlarging digital consumer base. Therefore the telecom companies like Jio, BSNL, Idea, Vodafone etc. have introduced mega saving offers on their services and mobile handsets to successfully capture into the untapped market of Tier II and Tier III cities. These Tier II and Tier III cities consist of a major part of the Indian population, which can come up with great opportunity pool, making it an attractive market for business. It is also a reality that the large scale application of digital technologies in Tier I city has brought in a saturation that's why leading investors to shift focus to the lower tiers.

Digital marketing techniques includes Website, Search Engine Marketing(SEM), Search Engine Optimization(SEO), Social Media Marketing(SMM), Email Marketing, Content Marketing, Mobile Marketing, Blogging, Affiliate Marketing, SMS Marketing Remarketing and Analytics.

A. Website:

Company's online address is nothing but the website. Every business should have their user friendly responsive website to take advantage of Digital Marketing. The website must fulfils the essential things like responsiveness, user-friendliness, easy to navigate, loading time and consumer tracking tools.

B. Search Engine Marketing(SEM):

Search Engine Marketing manages the traffic whether it may be the organic or paid traffic through PPC. PPC means Pay-Per-Click. The Pay-Per-Click or paid marketing is one of the fastest method to rank high in the organic search results. There are various platforms for Search Engine Marketing like CPM (cost-per-thousand impressions) model or PPC (pay-per-click) or CPC (cost-per-click) model. Depending upon structure of business and strategies, businesses may choose those models.

C. Search Engine Optimization(SEO):

Search Engine Optimization is the technique for optimizing the content of a website to improve its ranking on the Search Engine Results Page. It is the reason you get the traffic or the viewers to your website. There are some well known search engines like Google, Yahoo, Bing, Baidu and Yandex. Optimizing the content in the website, having related keywords, building the back-links will help to increase the page traffic and a large number of viewers come to the website. Search engine optimization improves the organic search results.

D. Social Media Marketing (SMM):

Social Media Marketing is the process of promoting your brand and your content through social networking media channels to build brand value, get the traffic, and generate leads to your business. Facebook, Youtube, Twitter, LinkedIn, Instagram, Whatsapp, Pinterest, are well known social media platforms which can be utilized as a part of social media optimization. Social media Marketing involve both paid and unpaid marketing strategy. The aim is to engage substantial amount of people as possible and get larger the social engagement which can later to turned into the loyal customers. This is a significant digital marketing component which no businesses can never ignore.

E. Email Marketing:

Email marketing is for retargeting a customer and performing the rebranding of your company. It is the strategy of sending commercial messages through email to a list of prospects and potential customers. When people get the email, they think this is only for them and no one else gets this opportunity. Marketing through emails helps in targeting individual customer and making them know about your brand , your product and the latest things.

F. Content Marketing:

Content is the very important thing of online marketing. Content is king for any website and the digital media. A catchy and crispy content is liked and shared very rapidly. The creation of useful content is a method for commencing communication with the customer so as to drive engagement and customer activity. Businesses need to engage their customers on a daily basis by writing blogs, making videos and images, white-papers, presentations etc.

G. Affiliate Marketing:

Affiliate Marketing is a kind of performance based publicizing where you get commission for promoting another person's services or products on your website. In affiliate marketing, online retailer pays commission to an external website for sales or traffic generated from its referrals.

H. Remarketing:

Remarketing is also called as retargeting. It is a technique to target the customers who have already visited or taken action on your website. Remarketing helps the company better engagement with online customers. We can capture what are the interests of online customers which helps to engage these users.

I. Analytics:

Analytics is mainly concentrated on understanding the past, present and future; what happened, what is happening and what will happen. Web analytics is the process of knowing the behaviour of visitors to a website. The Web analytics is a way for measuring web traffic which can be used as a tool for market research, business strategies, decision making and to measure and improve the efficiency and performance of a website.

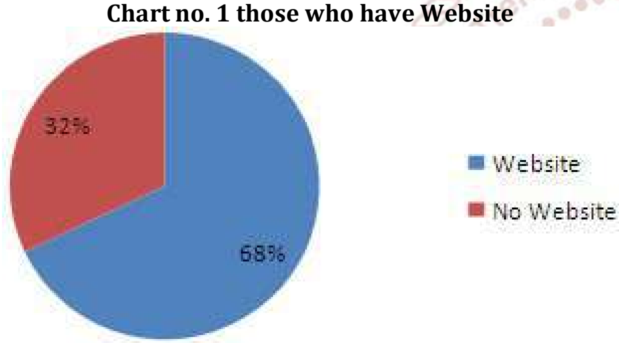
II. Digital Marketing Scenario In Industries Situated In Miraj Taluka

Miraj is a Taluka in Sangli District of Maharashtra State in India. Miraj town ir the Head Quarter of Miraj Taluka. It belongs to west Maharashtra region under Pune Division and it is located. 359 KM from State capital Mumbai towards North. Marathi is the Local Language and people also speaks Kannada due to Karnataka boundary. There are 3 towns and

64 villages in Miraj taluka. The smallest Village in Miraj Taluka is Sambarwadi and Malgaon is the biggest Village.
In Miraj Taluka, there are two MIDCs: Kupwad MIDC and Miraj MIDC. Sangli Miraj MIDC Industrial Area was set up in 1972. There are more than 500 companies are working in Sangli Miraj MIDC Industrial Area. This is one of the oldest Industrial Area in Sangli District. Sangli Miraj MIDC Manufacturers Association (SMMMA) and Krishna Valley Chamber Of Industries & Commerce (KVCIC) are the associations mainly established for to set up Common Communication Forum for Industries, to interact internally within members & put forward industries view points to various dimensions of Government & Key Regulatory Authority and press for pro-industry activities. SMMMA belongs to Miraj MIDC and KVCIC belongs to Kupwad MIDC. At present, in Sangli Miraj MIDC Manufacturers Association, 250 registered members and 318 registered members in the Krishna Valley Chamber Of Industries & Commerce. So the total unique registered industries are 568.

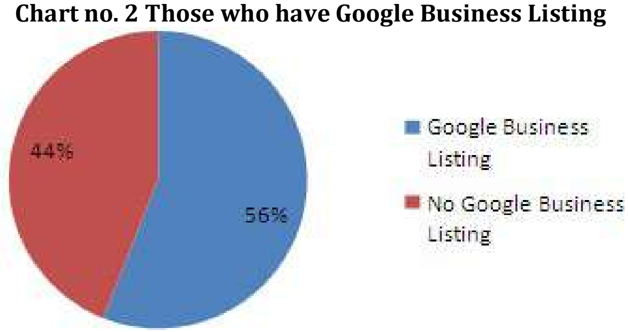
The Digital Marketing component like Social Media, Search Engine Optimization, Paid Campaigns, SMS marketing are well known in Miraj Taluka. In Social Media Facebook, Whatsapp and Instagram are more popular as compared to Twitter, LinkedIn etc. Local listing sites like indiamart, justdial are also very popular in industries in Miraj Taluka.

Chart no. 1 those who have Website



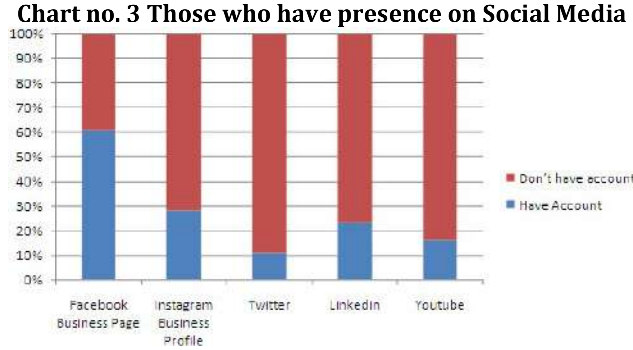
From the chart no.1 it shows that out of the total industries, 68% of the industries have their own website and remaining 32% of the industries do not have their own website. This indicates that majority of businesses having website of their company.

Chart no. 2 Those who have Google Business Listing



From the chart no.2 it shows that out of the total industries, 60% of the industries have listed their business in Google Business Listing and 40% of the industries have not their business in Google Business Listing.

Chart no. 3 Those who have presence on Social Media



From the chart no 3 it shows that out of the total industries, only 61% of the industries have created their Face book Business Page and 39% of the industries don't have their Face book Business Page. This indicates that less businesses having their Face book Business Page. 28% of the industries have Instagram Business Profile, only 11% of the industries Twitter account, 23% of the industries LinkedIn account and 16% of the industries have their YouTube channel. This indicates that Majority of businesses have their Face book profile as compared to other social media sites like Instagram,Twitter, LinkedIn and YouTube.

Chart no.4 Those who have presence on Local Listing Sites

From the chart no 4 it shows that out of the total industries, 85% of the industries have their presence on indiamart.com and 88% of the industries have their presence on justdial.com. This indicates that very less businesses who don't have their presence on indiamart.com and justdial.com.

III. Conclusion

As per the data collected it is seen that the industries situated in Miraj Taluka are not using entire Digital Marketing. There are many important components and tools of Digital Marketing like website, search engine optimization(SEO),search engine marketing(SEM), social media, content marketing, mobile marketing, email marketing, affiliate marketing, remarketing, blogging, web analytics, online reputation management, app store optimization but very less tools are being used in industries in Miraj Taluka. So we can say that there is lack of awareness of digital Marketing in industries. Industries here, have more presence on local listing sites like Just dial and India mart. Digital marketing is very cost effective as compared to traditional and having a very good commercial impact on the business. The customers are looking and searching more on digital medium to find the best deals and offers from the market. So Businesses must have their presence in all digital media. So there are excellent opportunities for industries situated in Miraj Taluka to spread their business using digital medium.

Reference

[1] Madhavi Damle, Avinash Aslekar, V. S. Subrahmanyam Yadavalli, "Comparative Study of Online Shopping Experience With Specific Reference to Mobile Apps BasedShopping" https://www.ijser.org

[2] https://www.midcindia.org/list-of-all-areas

[3] http://www.krishnavalleychamber.in/search.aspx

[4] http://www.assomiraj.com/new-block-sangli-miraj-midc-industries

[5] http://www.census2011.co.in/data/subdistrict/4302-miraj-sangli-maharashtra.html

[6] http://www.onefivenine.com/india/villag/Sangli/Miraj

[7] https://www.google.com/business/

[8] https://www.indiamart.com/

[9] https://www.justdial.com/

[10] https://www.socialbeat.in/blog/digital-marketing-evolving-tier-2-tier-3-cities-india/

[11] https://www.franchiseindia.com/content/why-franchisees-in-tier-2-and-tier-3-cities-look-at-digital-marketing.11573

[12] https://medium.com/whizz-media/how-digital-marketing-is-shaping-businesses-in-tier-3-cities-of-india-78e1148a62c3

[13] https://www.forbes.com/sites/forbescommunicationscouncil/2018/08/29/digital-marketing-trends-that-are-changing-the-way-we-market-to-consumers/#23cf75116891

[14] Menal Dahiya, , "Study on E-Commerce and it's Impacts on Market and Retailers in India" https://www.ripublication.com

Impact Factor – 6.261 ISSN – 2348-7143

INTERNATIONAL RESEARCH FELLOWS ASSOCIATION'S

RESEARCH JOURNEY

International E-Research Journal

PEER REFREED & INDEXED JOURNAL

April-2019 Special Issue – 183 (A)

Multidisciplinary Issue

This Journal is indexed in :
- University Grants Commission (UGC)
- Scientific Journal Impact Factor (SJIF)
- Cosmoc Impact Factor (CIF)
- Global Impact Factor (GIF)
- International Impact Factor Services (IIFS)

'RESEARCH JOURNEY' International E-Research Journal
Impact Factor - (SJIF) - 6.261, (CIF) - 3.452(2015), (GIF)-0.676 (2013)
Special Issue 183 (A)- Multidisciplinary Issue
UGC Approved Journal
ISSN : 2348-7143
April-2019

A Review of Literature on Problems and Prospects of Tourism in India.

Mr. Hemant S. Mahadik
M. Phil. Student.
CSIBER, Kolhapur.
Mob. No. 9404924525
E-mail : hemantxce135@gmail.com

Dr. C. S. Kale
Asst. Professor.
CSIBER, Kolhapur.

Introduction

Tourism industry plays a key role in total economic growth of the country. Essentially, tourism helps in industrial growth and acquiring foreign exchange reserves. For a developing country like India which is on the path of modern economic growth through structured transformation of the economy, the value added effect of tourism is increasing. Moreover, India's tourism has witnessed reasonable growth in recent years, paying rich dividends to both consumers and producers. In this industry, there is now an almost assured channel of financial flow to the country. With its forward and backward linkages with a host of sectors like transport, education, health, hospitality, banking etc. India is all set to reap full potential of this sector. Hence, the efforts are made by the government under various five year plans. Tourism development has always been an integral part of the country's five year plans. The ministry of tourism has also played an important role in the development 06 the industry, by initiating advertising campaigns such as the incredible India campaign which promoted Indian culture and tourist attractions in a memorable way. The Indian Tourism Industry has helped growth in other sectors as diverse as horticulture, agriculture, handicrafts, construction and even poutry. India's governmental bodies have also made a significant impact on tourism by helping that each and every state of India have a corporation to administer and support issues related to tourism. Essentially, review of literature provides the guidelines from the past researchers and gives foundation to the theoretical framework for the present investigation. Moreover, the review of the past literature makes the researcher to get some understanding into the methods and procedures to be followed. Therefore, in this paper an attempt has been made by the researchers to review the past and present studies relating to this topic which are as follows.

The study Jayasheela and Hans V. Basil (2007) Stated that the increased spending by tourists generated substantial income for both public and private sectors. It expanded the tourism industry and increased higher rate than merchandise export. The employment, taxes and investment from manufacturing and transport services, banking, basic infrastructure are all enhancing tourism's potential and performance.

The study by Reheem A et.al (2001) study observed that tourisms economic benefits are in overages by the industry for various reasons. Business community, government and the public have recognized these benefits giving the industry greater respect.

The study Hans V. Basil (2015) on the topic entitled "Tourism in India Innovation and Development. Stated that Tourism Uniqueness should be clearly understand India's Preparedness for new challenges can be tested by growth coupled with quality changes tested by growth coupled with quality changes Tourist's safety and eco balance must receive priority in Tourism

2019 – 20

1. Enhancing Engagement of Marginalized Girls in IT Education: An Inclusive Approach

Dr. Rajani S. Kamath
Associate Professor, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur.

Introduction

Education is a vital tool that empowers women and girls to partake in choices that influence their lives and in enhancing their economic wellbeing [8]. Investing in girls' education can change the lives of women around the globe, and furthermore beneficial for individuals and society. Women in the innovation area drive development for countries that are booming monetarily. Engaging more number of marginalized girls in IT education can unfold a number of opportunities for their growth, innovation and success [10].

Present report portrays the research project entitled "Enhancing Engagement of Marginalized Girl Students in IT Education: An Inclusive Approach" funded by "Maharashtra State Commission for Women, Mumbai". This project aimed at undertaking study of marginalized girls pursuing IT education in the jurisdiction of Shivaji University.

The intent of this project is to enhance engagement of marginalized girls in IT education with inclusive approach. Following are the objectives of the investigations taken up in this research:

- Study the current status of marginalized girlstudents in IT education
- Study how the different factors affect the education of the marginalized girls
- Know awareness of marginalized girls regarding career opportunities in IT
- Make marginalized girls proficient with the different avenues for self employment
- Engage marginalized girls and women in developing positive strategies towards IT education, financial stability;

Review of Literature

The aim of the literature review is to identify potential information gaps and refine the extent of the exploration for both the contributor and the implementer, so as to elucidate potential hazy areas. This study is supported by referring about 50 research articles. Few of the selected references for broad outline are mentioned here.

ISSN: 0474-9030

Vol-68-Issue-30-February-2020

Artificial Intelligence based Chatbot for Placement Activity at College Using DialogFlow

Sushil S. Ranavare
Department of Computer Studies
ChhatrapatiShahu Institute of Business Education and Research
Kolhapur, India

R. S. Kamath
Department of Computer Studies
ChhatrapatiShahu Institute of Business Education and Research
Kolhapur, India

Abstract
Chatbots work like virtual assistants, provide a platform for elevation of the products and services online. This paper reports design and development of Artificial Intelligence (AI) based Chatbot for handling placement activities in professional college. For this we have used DialogFlow, a Natural Language Processing (NLP) module to translate students' queries during conversation to structured data in order to understand the institute's service. This agent provides information related to placement activities to students.

Keyword's:- AI, NLP, Chatbot, Virtual Agent, DialogFlow

1. Introduction

Chatbot is a simple computer program that attempts to simulate human conversation using Artificial Intelligence.It uses to AI to simulate conversation with user throughmessaging chats or voice commands.These bots are used in many service areas as an information provider in online mode. Natural Language Processing made the Chatbots more sophisticated by means of not only pre-programmed responses to user questions but also improving their responsiveness. AI based Chatbots have the prospective to transform certain practices in educational organizations.

The present work is motivated by the various Chatbotprojects.The Chronicle of Higher Education, Inc elaborated how AI and Chabots support pedagogy in educational institutes [1]. This report explains the advantages of AI based Chatbots for teaching-learning process and administrative functions in educational organizations. Jayesh et al reported design and development of Andriod App for handling conversation [2]. This Chatbot is an intelligent voice recognition app interacts with user queries. Harshet al presented development of web application to handle students' enquiries using Microsoft Bot Builder [3]. The effective use of graphical user interface eases the conversation process. Yet another project by Arun et al explores AI based bot for management system at professional engineering colleges [4]. This is developed using Dialogflow provide auto response to user queries related to academics [5].

ISSN: 0976-075X
Vol-6-Issue-6 April-2020

BLOCKCHAIN TECHNOLOGY IN HEALTHCARE SECTOR: A REVIEW

Mrs. V. L. Badadare[1], Dr. A. M. Shaikh[2], Dr. R. V. Kulkarni[3]

[1]Asst. Prof.
Dept. of Computer Studies
CSIBER,
Kolhapur (Maharashtra).
vlbadadare@siberindia.edu.in

[2]Head
Dept. of Electronics
The New College,
Kolhapur (Maharashtra).
amshaikh7@gmail.com

[3]Head
Dept. of Computer Studies
CSIBER,
Kolhapur (Maharashtra).
drrvkulkarni@siberindia.edu.in

Abstract

Blockchain Technology confide on a distributed and decentralised ledger model. Axiomatically blockchain is more protected and robust as compared to the centralised models which are at present used in the various systems. In simple words blockchain technology is a distributed and immutable record of digital events which is shared point to point between various participants.

It's a very astonishing pace for collaboration of IT and health care sector. Due to innovation in authentic medicines and research in medical processes; health domain is countersigning state-of-the-art approaches for prevention and recovery mechanisms.

Unanimously, Technology innovations are continuously generating stream of health related big data through variety of health wearable, apps etc.

Traditional practice for record-keeping and sharing of health information with patient have a lots of limitations which leads to below circumstances:

- Restricted Access to patients' for accessing their clinical records, and
- Curtailed availability of required clinical data to health-care providers
- Increased duplication in health related diagnostic tests

In Indian healthcare ecosystem, patient data management is provider-centred, which bring out lack of transparency and

Environmental Science and Pollution Research
https://doi.org/10.1007/s11356-019-05795-7

RESEARCH ARTICLE

Conversion of organic biomedical waste into potential fertilizer using isolated organisms from cow dung for a cleaner environment

Pooja M. Patil[1] · Pranjali P. Mahamuni[1] · Mohamed M. Abdel-Daim[2,3] · Lotfi Aleya[4] · Roma A. Chougule[5] · Prem G. Shadija[5] · Raghvendra A. Bohara[1,6]

Received: 7 November 2018 / Accepted: 19 June 2019

Abstract
Management of organic biomedical waste is a global quandary, and it is becoming difficult to confront day by day. Conversion of organic biomedical waste into fertilizer is of great concern. In the present research, organic biomedical waste samples (blood swabs, dressing swabs, and used cotton) were collected then after cow dung was collected in sterile container and immediately transported to the laboratory and screened for any gastrointestinal infection by using routine microscopy for intestinal parasitic infection, routine bacterial culture, and fecal occult blood for any intestinal bleeding. Then after, the pure culture of organisms and fungus were prepared, and further samples were subjected to degradation for 288 h by using various organisms and fungus. Then after, the specific quantity of biomedical waste was subjected for incineration. The physicochemical parameters of biomedical waste samples were analyzed. Then treated samples were mixed with soil to confirm a role as potential fertilizer. Then after, tomato plantation was done and phytochemical parameters of tomato plant were analyzed. This study states that organic biomedical waste produces a sanitary and stable fertilizer.

Keywords Biomedical waste · Total dissolved solids · Chemical oxygen demand · Dissolved oxygen · Electric conductivity · Distilled water · Neem and tobacco extracts

Introduction

Hospital is a complex institution frequently visited by people without any dissimilarity of sex, age, religion, and race (Rajakannan et al. 2013). The normal population of hospitals and health care centers are staff and patients. Production of biomedical waste is not only restricted to research activities or hospitals, but biomedical waste can also be generated in rural areas or at home through dialysis or through insulin injection (Deb et al. 2017). Biomedical waste could act as a source of injury and infection to the individual and can also have a serious impact on the environment (Sharma et al. 2013). Around the globe, advancement in health care centers has led to significant improvement for management of biomedical waste in developed countries. In order to protect the environment and to prevent form infections, The Ministry of Environment and Forest has notified and formulated the rules of biomedical waste in 1998 which have to be followed by all the institutions producing biomedical waste (Vasistha et al. 2018).

Without preliminary treatment, direct discharge of hospital effluents into the urban sewage system is one of the major concerns (Ramesh Babu et al. 2009). In hospitals, numerous of chemical substances are used like radionuclides, pharmaceuticals, disinfectants, and solvents for treatment purpose like for disinfection, diagnostics, and for research purpose,

Responsible editor: Philippe Garrigues

✉ Raghvendra A. Bohara
raghvendrabohara@gmail.com

1 Centre for Interdisciplinary Research, D. Y. Patil University, Kolhapur, India

2 Pharmacology Department, Faculty of Veterinary Medicine, Suez Canal University, Ismailia 41522, Egypt

3 Department of Zoology, Science College, King Saud University, Riyadh 11451, Saudi Arabia

4 Chrono-Environment Laboratory, UMR CNRS 6249, Bourgogne Franche-Comté University, F25030 Besançon Cedex, France

5 Department of Microbiology, D. Y. Patil University, Kolhapur, India

6 CURAM, Centre for Research in Medical Device, National University of Ireland Galway, Galway, Ireland

Published online: 25 July 2019

and from this, many chemical substances resist general wastewater treatment (Chakraborty et al. 2013). Due to inefficient removal in wastewater treatment plant residues of pharmaceuticals are found in normal water (Thakur and Ramesh 2015). The existence of hazardous compounds in surface water or in an aquatic ecosystem may contaminate the entire ecosystem and may be accumulated by the food chain (Capoor and Bhowmik 2017). Hence, concern is rising regarding the safety of the individuals who are utilizing the water after treatment for household purposes, drinking the water, and working at the sewage treatment plant (Rudraswamy et al. 2012).

Cow dung acts as a tremendous bioremediation method. It is cheap, eco-friendly, and economically viable and is locally available in the rural areas of India (Anitha and Jayaaj 2012). The biodegradation process is enhanced by various microorganisms, and it is a natural process (Geetha and Fulekar 2008). Composting is a traditional method for recycling of organic biomedical waste. The organic matter present in waste is broken down to potential fertilizer by bacteria, fungi, and other microorganisms (Wang et al. 2018). Cow dung is a "gold mine" due to its spacious applications in the field of medicine, energy generation, and environmental protection (Randhawa and Kullar 2011). Mismanagement of biomedical waste is a great concern, so there is a need to improve the management of biomedical waste (Patil et al. 2019). Thus, the aim of the present research was to develop an innovative method for the treatment of biomedical waste, to study the rate of degradation of biomedical waste by using organisms and fungus, to study physicochemical parameters of treated waste and soil, and to study phytochemical parameters and heavy metals of plants to substantiate that organic biomedical is converted into potential fertilizer. It is reported that organisms isolated from cow dung are used as a source for degradation of solid waste. Cow dung has mixed organisms culture, and it has different benefits (Gupta et al. 2016). The presence of fungus in cow dung is responsible for the degradation of the organic biomedical waste sample. The fungus is used as an organic approach for biodegradation and for treatment of biomedical waste without existing any trace of dangerous effect on a community (Pandey et al. 2011).

Materials and methods

This study was approved by the institutional ethical committee (ICE), D.Y. Patil University, Kolhapur.

Collection of samples (for each set)

From D. Y. Patil Medical College Hospital and Research Institute Kolhapur, fresh 50 g organic biomedical waste samples (30 g blood swabs, 10 g dressing swabs, and 10 g used cotton) were collected, and then after, samples are doubled autoclaved at 121 °C and prior to use.

Collection of cow dung

Three cow dung samples were collected on three successive days by using the sterile container. A cow was maintained with the same diet pattern for 4 days. After collection, the cow was labelled properly and immediately transported to the laboratory and screened for any gastrointestinal infection using routine microscopy for intestinal parasitic infection, routine bacterial culture, and fecal occult blood for any intestinal bleeding. After confirmation of the above tests, the following analyses were performed for the isolation of bacteria and fungus from cow dung Gupta & Rana 2016.

Preparation of pure culture

One gram of sample was mixed with 10 ml of sterile physiological saline and shakes vigorously in a vortex for 3–5 min and incubated at 37 °C for 20–30 min for microorganism activation. After activation, samples were prepared by using standard dilution method with the help of sterile distilled water. Each test tube contained 9 ml of distilled water and added with 1 ml of activated suspension to the first test tube and serially diluted till the last tube (10th tube) (Patil and Deshmukh 2016).

Each test tube contained 0.1 ml of suspension that was transferred to a sterile nutrient agar plate and spread evenly by using a sterile glass rod (spread plate method). Plates were incubated at 37 °C for 24 h. Based on the different colony morphology, bacterial cultures were purified by a streak plate method. Colonies were inoculated into blood agar and MacConkey agar; plates were incubated at 37 °C for 24 h Gupta & Rana 2016.

Isolation of fungus

Pour plate technique was performed to isolate fungus from cow dung sample. One gram of a sample was mixed with 9 ml of sterile normal saline and serially diluted (10^1 to 10^6) (Patil and Deshmukh 2016). One milliliter of sample from each dilution was seeded into Sabouraud dextrose agar (SDA), and plates were incubated at 28 °C for 72 h, and fungal spore forming unit (sfu/g) were calculated. Repeated subculture was performed to obtain the pure culture of the fungi for easy identification.

After getting pure growth of the fungal isolate, macroscopically culture characteristics were studied, and microscopy was performed by Lacto-phenol Cotton Blue method. Slides were observed under × 10 and × 45 magnification. Further confirmation was done by 18 s rRNA sequencing (Accession Number LC413613.1) (Fig. 1).

Fig. 1 Isolation of organisms and fungus (pure culture)

Identification of bacterial isolates

Isolated cultures were identified by using standard microbiology procedures such as catalase test, oxidase test, indole test, methyl red test, Voges Proskauer test, citrate utilization test, urease test, triple sugar iron test, and automated Vitek 2 compact system (Biomeriux) (Table 1).

Preparation of experimental sets

After sample collection, the experimental sets were arranged and kept in anaerobic condition for 288 h. The composition of sets are as follows for control: (50 g of BMW + 30 ml d/w) it is denoted as set 1; for *E.coli* sample (suspension of *E.coli* 15 ml + 50g of BMW + 30 ml d/w), it is denoted as set 2; for *Bacillus subtilus* sample (suspension of *Bacillus subtilus* 15 ml + 50g of BMW + 30 ml d/w), it is denoted as set 3, for *Pasterulla canis* sample (suspension of *Pasterulla canis* 15 ml + 50g of BMW + 30 ml d/w), it is denoted as set 4; for *Mucor circinelloides* sample (suspension of *Mucor circinelloides* 15 ml + 50gm of BMW + 30 ml d/w) it is denoted as set 5, and further, we have taken equivalent quantity of BMW, and it was incinerated by standard method, and it is denoted as set 6.

Table 1 Biochemical reaction of isolated bacteria.

Biochemical test	*E. coli*	*Bacillus subtilus*	*Pasterulla canis*
Catalase	+	+	+
Oxidase	−	−	+
Indole test	+	+	+
Methyl red test	+	−	+
Voges Proskauer test	−	+	−
Citrate utilization test	−	−	−
Urease test	−	−	−
TSI	Acid/acid	Alkaline/alkaline	Acid/acid

Mixing of experimental sets into the soil

After degradation, the equivalent quantities of experimental sets were transferred with soil to confirm their role as a sanitary fertilizer. Set A1 is of control, then further, 50 g set 1 is mixed with 1000 g of soil, and it is denoted as B2; 50 g set 2 is mixed with 1000 g of soil, and it is denoted as C3; 50 g set 3 is mixed with 1000 g of soil, and it is denoted as D4; 50 g set 4 is mixed with 1000 g of soil, and it is denoted as E5; 50 g of incinerated waste set 6 is mixed with 1000 g of soil, and it is denoted as F6.

Plant selection for the experiment

The tomato plants, of (15 days) species *S. lycopersium*, were chosen for plantation, because it is of short duration.

Physicochemical parameters of sample

The analyses of physicochemical parameters were done by measuring the chemical oxygen demand (COD), total dissolved solids, and pH

Physicochemical parameters of soil

The physicochemical parameters of a soil sample that were analyzed are pH, organic carbon content, organic matter, EC, calcium, and magnesium, water-holding capacity, nitrogen, phosphorus, potassium, and heavy metals.

Phytochemical analysis of plants

The phytochemical parameters of tomato plants that were analyzed are chlorophyll content, polyphenol, and protein content.

Results and discussions

Physicochemical parameters of experimental sets

pH

It is reported that superior degradation of the solid waste was obtained at pH values 6–8; 70–90% degradation of total dissolved solids were observed in solid waste at neutral pH value (Dinamarca et al. 2018). Katheem Kiyasudeen S et al also reported that the neutral pH value is good for the degradation of organic waste, and it also supports the microbial activity during the degradation (Kiyasudeen 2016).

The sets of experiments were monitored at different intervals; the pH of control was slightly acidic; in *E. coli*, *Bacillus subtilus*, *Pasterulla canis*, and *Mucor circinelloides*, the pH was neutral, so the degradation value of the experimental sets is far superior, and *P* values are also significant in experimental sets. In Fig. 2b, the pH after incineration is slightly acidic.

Total dissolved solids (TDS) and chemical oxygen demand (COD) of experimental sets

Total dissolved solids can be evaluated by drying the prefiltered sample and then calculating the dry residue mass per liter of the sample. Total dissolved solids are geochemical characterization that links the bulk conductivity to hydrocarbon microbial degradation (Atekwana et al. 2004). S. K. Bansal et al treated a solid waste with cow dung in lab scale batch reactor at a modest temperature within 8 days; there was 68.75% TDS reduction respectively (Bansal et al. 2012). The wastewater of boy's hostel was treated with the vermicomposting technique, and there was an average of 85% reduction in TDS (Lakshmi et al. 2014).

Chemical oxygen demand is a standard method by which amount of pollution which is not oxidized biologically in a water sample is indirectly measured (Singh et al. 2012). The chemical oxygen demand method is based in decomposition of chemicals in inorganic and organic substances dissolved in water (Ali and Yasmin 2014). The solid waste is treated with the cow dung, and there was 35.75% reduction in COD respectively (Bansal et al. 2012). The landfill leachate is treated with the cow dung ash at neutral pH, and 79% removal of COD is achieved, so the cow dung is a good adsorbent, and it should be used for removal of COD and organic pollutant from waste (Kaur et al. 2016). Divya C Das et al. treated the ayurvedic industrial effluent with a microbial consortium and then after with vermifiltration unit, and it was confirmed that there is a significant reduction in COD by 98.03%, and the treated water was disinfected and cleaned enough to be reused for irrigation (Das et al. 2015). For the purpose of the biodegradation, Jianzheng Li et al. treated the sludge waste with cow dung, and within 4 weeks, the superior amount of COD has

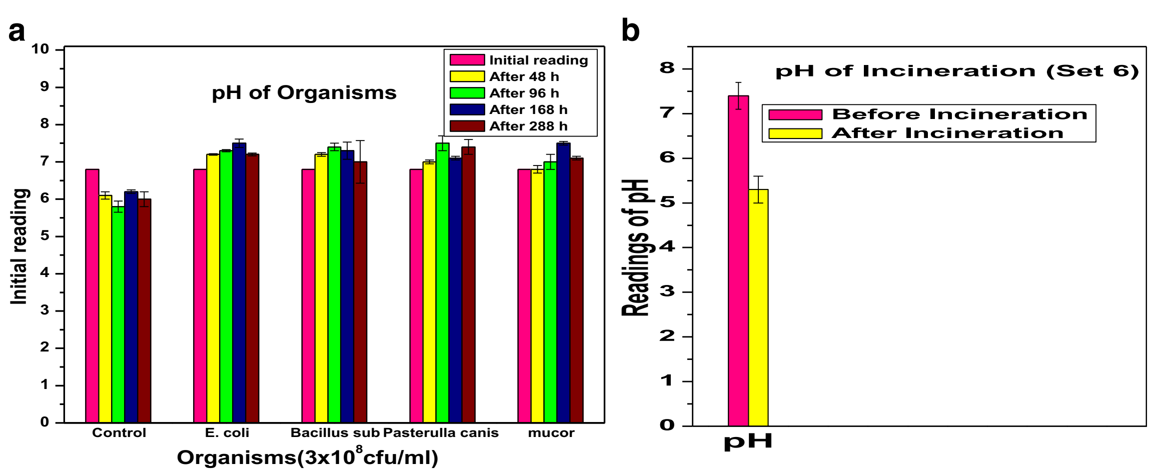


Fig. 2 pH of experimental sets at the different time interval is shown in (**a**), first set is of control, second is of *E. coli*, third is of *Bacillus subtilus*, fourth is of *Pasterulla canis*, and fifth is of *Mucor circinelloides*. The readings of pH before and after incineration are presented in (**b**)

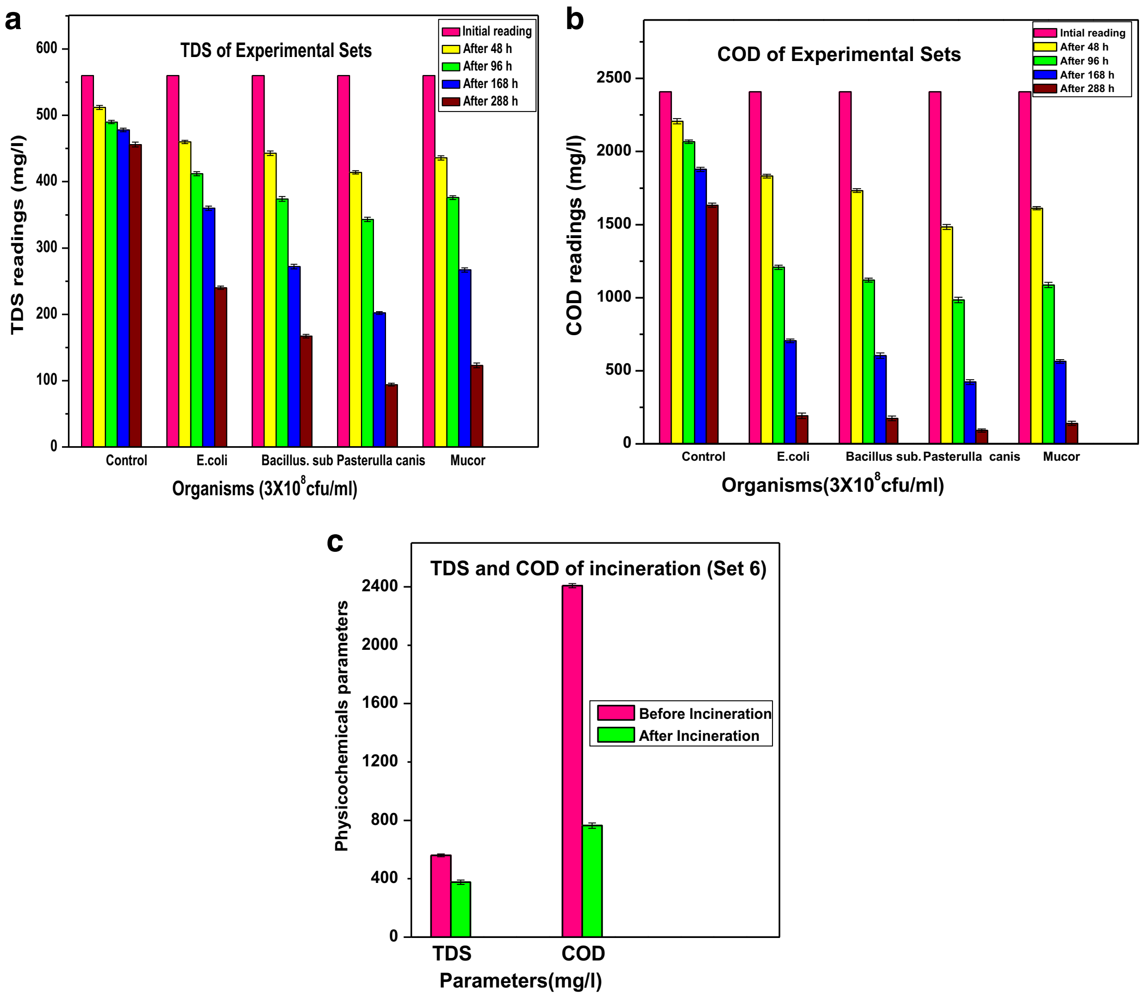


Fig. 3 TDS and COD of experimental sets at the different time interval are shown in (**a**), first set is of control, second is of *E. coli*, third is of *Bacillus subtilus*, fourth is of *Pasterulla canis*, and fifth is of *Mucor circinelloides* (**b**). The readings of TDS and COD before and after incineration are presented in (**c**)

been degraded (Li et al. 2011). So looking toward the ecofriendlly approach, we have designed that the experimental sets and parameters are analyzed to reveal the biodegradation rate of the waste. Figure 3 shows the COD values of experimental sets at various concentrations (mg/l).

The minute amount of organic matter and inorganic salts in solution are expressed as total dissolved solids (TDS). The TDS in experimental sets should be less than 700 mg/l, to make it eligible for the application of fertilizer. The TDS of different sets is shown in Fig.3a for a different time interval. It was confirmed that in over 288 h of the operating period there was progressive decrease in TDS in the case of *Pasterulla canis* (560 to 094 mg/l) than that of control and of incineration. The *P* value of the experimental sets is also extremely significant.

From Fig. 3b, we can conclude that there is a high degradation of biomedical waste within 288 h when it was treated with organisms and fungus except from control and of incineration. *P* value is also significant than that of required ($P > 0.05$). In experimental sets such as control, *E. coli*, *Bacillus subtilus*, *Pasterulla canis*, and *Mucor circinelloides*, incineration COD has decreased from 2408 to 1632 mg/l, 2408 to 192, 2408 to 174, 2408 to 91, 2408 to 140, and 2408 to 764 respectively This remarkable reduction in COD and in all other parameters suggests that organisms and fungus can effectively destroy pathogens which are present in biomedical waste with respect to time. As we know, cow dung is gold mine; it contains various microorganisms, and these organisms help to degrade the biomedical waste. Olga et al. (2015) has used common fungal strain of *Mucor circinelloides* and degraded diesel oil hydrocarbons. The readings of Fig. 3c shows TDS and COD before and after incineration. The TDS and COD decreased from 560 to 376 and 2408 to 764 respectively. It was far higher than that of the required value for fertilizer.

Physicochemical parameters of the soil sample

Numerous chemical processes are affected by soil pH, so the pH of the soil was acknowledged as a master variable. In most

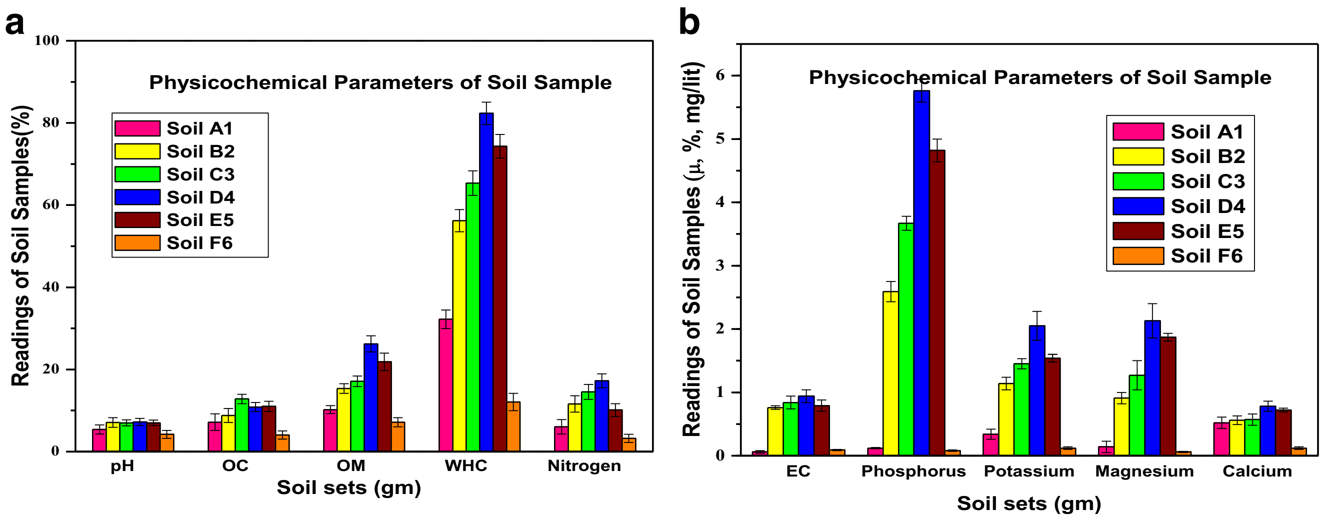


Fig. 4 Physicochemical parameters of all soil samples were pH, EC, organic carbon, organic matter, water holding capacity, nitrogen, phosphorus, potassium, magnesium, and calcium

of the plants, the optimum pH value is between 5.5 and 7.5 (Randhawa and Kullar 2011). Soils electrical conductivity varies depending on the moisture content held by particles in the soil. The change in electric conductivity will influence crop yield (Corwin and Lesch 2005). Organic matter which is present in the soil is known as soil organic matter; at various stages of decomposition, it consists of animal and plant residues, tissues and cells of organisms, and synthesized substances by organisms (Campion et al. 2015). To provide regulatory ecosystem, organic matter exerts various positive effects on the soil. In the soil, phosphorus is found in minerals and organic compounds. As compared with the total amount of phosphorus, readily obtainable phosphorus is very low (Bennett et al. 2001). Potassium is involved in the activation of an enzyme within the plant, which can affect the production of starch, protein, and adenosine triphosphate (ATP) (Van Raij et al. 2008). The amount of water that the given soil can hold is referred to as water holding capacity. In the process of photosynthesis, the opening and closing of stomata are regulated by potassium. (Ashley et al. 2006). Nitrogen is the most important building blocks of proteins, nucleic acid, and other constituents. Careful management of plants is warranted by the nitrogen (Bodelier and Laanbroek 2004). Each and every plant needs calcium for its growth and development as calcium helps to maintain the soil chemical balances; calcium reduced soil salinity that improves water penetration. Magnesium has a wide range of key roles in numerous plants functions. In the process of photosynthesis, magnesium plays its well-known role the building block of chlorophyll; the leaves appear green due to magnesium (Karhu et al. 2011). Different physiochemical parameters of the soil before and after the addition of the respective experimental sets are shown in Fig. 4.

Slightly acidic pH is observed in A1 soil, whereas neutral pH is seen in B2, C3, D4, E5 soils which increases the soil microbial activity, but in F_6 soil, acidic pH is observed. EC content of F6 soil is lower than that of control, and soil D_4 has more EC content. EC strongly correlates to soil size, soil particles, and soil textures, depending upon the moisture held by soil particle EC varies (Xu et al. 2006). After addition of treated organic biomedical waste to the soil, the organic matter and organic carbon content of D4 soil were increased as compared with others. The water holding capacity of treated soils has also enhanced as compared with F_6 soil control soil. Disposal of biomedical waste has become a well-known problem, so when we used this waste as a potential fertilizer, it contributes to minimize waste as well as enhance the parameters of soil. Phosphorus, potassium, nitrogen, calcium, and magnesium of the treated sets have enhanced as shown in the evaluation of the control A1 and F6 soil.

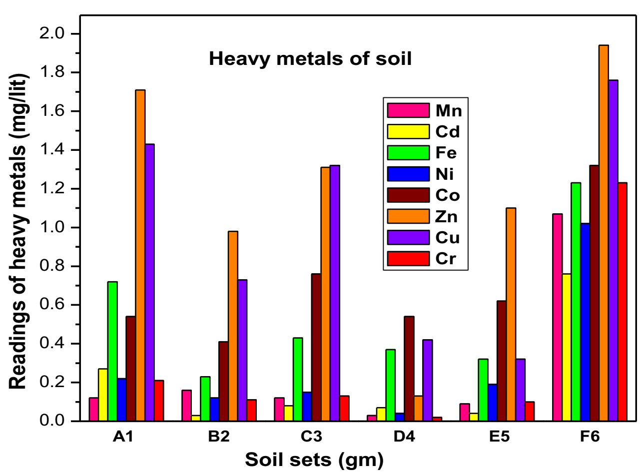


Fig. 5 Represents heavy metals of A1, B2, C3, D4, E5, and F5 soil samples

Table 2 Phytochemical parameters of (tomato plant)

Sr. no.	Name of set	Chlorophyll (mg/100 g)	Polyphenol (mg/1000 g)	Protein (mg/g)
1	A1	098.72 ± 1.01	18400 ± 5.02	0.34 ± 0.01
2	B2	173.42 ± 1.04	45700 ± 6.23	1.24 ± 0.02
3	C3	184.31 ± 1.45	53400 ± 5.56	2.01 ± 0.24
4	D4	236.24 ± 1.34	86300 ± 4.27	2.89 ± 0.13
5	E5	194.81 ± 1.32	63800 ± 4.12	2.12 ± 0.08

Heavy metals of the soil sample

The heavy metal in solid waste mainly enters through the use and disposal of products such as batteries, pigmented plastics, glasses, ceramics, electronics products, paints, etc. There are several methods and mechanisms by which the heavy metals are removed; they are chemical precipitation, particulate settling and trapping, and plant uptake; they are also removed through binding to organic substances, accumulation into plant tissues, sedimentation of suspended particles, adsorption of soil components, filtration, etc (Wuana and Okieimen 2011). The heavy metals of soil are analysed, and the results of heavy metals are mentioned in Fig. 5. From these results, the heavy metals are within the permissible limit. As there are no toxic metals in the soils, there is no risk to the environment. So with respect to time, organisms and fungus can effectively destroy pathogens which are present in the biomedical waste.

Phytochemical parameters of (tomato plant)

The tomato plants were sown, and phytochemical analysis of the treated tomato plant was studied. Chlorophyll plays a crucial role in the process of photosynthesis, and plants take energy from light. The substance which is soluble enhances the chlorophyll content and improves the growth of the plant (Baglieria et al. 2014). The condensed tannins are known as the most abundant polyphenol, which is found in all plant family. Larger polyphenols are often present in the epidermis, leaf tissue, fruits, and flowers which also play a crucial role in forest decomposition and in the nutrient cycle in forest ecology. Proteins which are present in plants are highly complex compounds. Enormous nutritional values are present in protein and they are involved directly in the chemical processes which are necessary for life.

In Table 2, the results of phytochemical parameters of tomato plants are shown and from the table, we can conclude that D4 show higher chlorophyll contents than that of other plants. There was maximum polyphenol content in plant D4 followed that of others.

Conclusion

From the study, it can be found that the organisms, and fungus show excellent degradation of organic biomedical waste. It was found that physicochemical parameters of experimental sets, treated soils, phytochemical, and morphological parameters of a plant were high in the set D4. So with respect to time organisms can effectively destroy pathogens which were present in the biomedical waste. As it is one kind of biological waste treatments, and it is an alternative method to recycle the organic matter and produce a stable. So using organism's cultures, organic biomedical is converted into potential fertilizer for a cleaner environment.

Funding information The corresponding author (RB) is thankful to D.Y. Patil University for financial support (DYPU/R&D/190). RB is supported through the Irish Research Council under the Government of Ireland Postdoctoral fellowship Grant GOIPD/2017/1283. The funding agencies are gratefully acknowledged.

Compliance with ethical standards

This study was approved by the institutional ethical committee (ICE), D.Y. Patil University, Kolhapur.

References

Ali SM, Yasmin A (2014) Open dumping of municipal solid waste and its hazardous impacts on soil and vegetation diversity at waste dumping sites of Islamabad city. J King Saud Univ Sci 26:59–65

Anitha J, Jayaaj I (2012) Isolation and identification of bacteria from biomedical waste. Int J Pharm Pharm Sci 4:10–12

Ashley MK, Grant M, Grabov A (2006) Plant responses to potassium deficiencies: a role for potassium transport proteins. J Exp Bot 57: 425–436

Atekwana EA, Rowe RS, Werkema DD, Legall FD (2004) The relationship of total dissolved solids measurements to bulk electrical conductivity in an aquifer contaminated with hydrocarbon. EPA. 56: 281–294

Baglieria A, Cadilia V, Monterumicib C, Gennaria M, Tabassoc S, Montonerid E, Nardie S, Negreb S (2014) Fertilization of bean plants with tomato plants hydrolysates. Effect on biomass production, chlorophyll content and N assimilation. Sci Hortic 176:194–199

Bansal SK, Singhal Y, Singh R (2012) Biohydrogen production with different ratios of kitchen waste and inoculum in lab scale batch reactor at moderate temperatures. Chem Phytopotentials Health Energy Environ Perspect:213–216

Bennett EM, Carpenter SR, Caraco NF (2001) Human impact on erodable phosphorus and eutrophication: a global perspective. 51:227–234

Bodelier PLE, Laanbroek HJ (2004) Nitrogen as a regulatory factor of methane oxidation in soils and sediments. FEMS Microbiol Ecol 47: 265–277

Campion N, Thiel CL, Woods NC, Swanzy L, Landis AE, Bilec MM (2015) Sustainable healthcare and environmental life-cycle impacts of disposable supplies: a focus on disposable custom packs. J Clean Prod 94:46–55

Capoor MR, Bhowmik KT (2017) Current perspectives on biomedical waste management: rules, conventions and treatment technologies. Indian J Med Microbiol 35:157–164

Chakraborty S, Veeregowda S, Gowda L, Sannegowda SN, Tiwari R, Dhama K, Singh SV (2013) Biomedical waste management. Adv Anim Vet Sci (2):67–72

Corwin DL, Lesch SM (2005) Apparent soil electrical conductivity measurements in agriculture. Comput Electron Agric 46:11–43

Das DC, Joseph M, Varghese D (2015) Integrated microbial-vermifiltration technique for ayurvedic industrial effluents. IJERGS 3:338–346

Deb A, Gajbhiye S, Raut S (2017) Awareness about biomedical waste management amongst medical interns- an interventional study from Central India. J Evol Med Dent Sci 6:1256–1259

Dinamarca S, Aroca G, Chamy R, Guerrero L (2018) The influence of pH in the hydrolytic stage of anaerobic digestion of the organic fraction of urban solid waste. Water Sci Technol 48:249–254

Geetha M, Fulekar MH (2008) Bioremediation of pesticides in surface soil treatment unit using microbial consortia. Afr J Environ Sci Technol 2:36–45

Gupta KK, Rana R (2016) Isolation and evaluation of cow dung bacteria for their antimicrobial potential. Biotechnol Int 9(2): 47–54

Gupta KK, Aneja KR, Rana D (2016) Current status of cow dung as a bioresource for sustainable development. Bioresour Bioprocess 3:28

Karhu K, Mattila T, Bergström I, Regina K (2011) Agriculture, ecosystems and environment biochar addition to agricultural soil increased CH 4 uptake and water holding capacity – results from a short-term pilot field study. Agric Ecosyst Environ 140:309–313

Kaur K, Mor S, Ravindra K (2016) Removal of chemical oxygen demand from landfill leachate using cow-dung ash as a low-cost adsorbent. J Colloid Interface Sci 469:338–343

Kiyasudeen K (2016) Composting: a traditional practice. AESE. 45–68

Lakshmi C, Ranjitha J, Vijayalakshmi S (2014) Wastewater treatment using vermifilteration technique at institutional level. J Archaeol Sci 1:581–590

Li J, Jha AK, He J, Ban Q, Chang S (2011) Assessment of the effects of dry anaerobic co-digestion of cow dung with wastewater sludge on biogas yield and biodegradability. Int J Phys Sci 6:3723–3732

Olga MM, Ewa K, Dorota W, Tadeusz A (2015) Biodegradation of diesel oil hydrocarbons enhanced with *Mucor circinelloides* enzyme preparation. Int Biodeterior Biodegradation 104:142–148

Pandey A, Afsheen, Ara F, Tiwari SK (2011) Isolation and characterization of multidrug resistance cultures from wastewater. JPBMS. 13: 1–7

Patil VS, Deshmukh HV (2016) Studies on molds from vegetable waste, cattle dung slurry and biogas digester effluent. Int J Curr Microbiol App Sci 5:182–118

Patil PM, Mahamuni PP, Shadija PG, Bohara A (2019) Conversion of organic biomedical waste into value-added product using green approach. ESPR. 26:6696–6705

Rajakannan C, Govindaradjane S, Sundararajan T (2013) Bio-medical waste management in pondicherry region: a case study. IJEAT 2: 75–79

Ramesh Babu B, Parande AK, Rajalakshmi R, Suriyakala P, Volga M (2009) Management of biomedical waste in India and other countries: a review. J Int Environ Appl Sci 4:65–78

Randhawa GK, Kullar JS (2011) Bioremediation of pharmaceuticals, pesticides, and petrochemicals with gomeya/cow dung. ISRN Pharmacol 2011:1–7

Rudraswamy S, Sampath N, Doggalli N (2012) Staff's attitude regarding hospital waste management in the dental college hospitals of Bangalore city, India. Indian J Occup Environ Med 16:75–78

Sharma P, Kumar M, Mathur N, Singh A, Bhatnagar P, Sogani M (2013) Health care industries: Potential generators of genotoxic waste. Environ Sci Pollut Res 20:5160–5167

Singh SN, Srivastav G, Bhatt A (2012) Physicochemical determination of pollutants in wastewater in Dehradun. Curr World Environ 7:133–138

Thakur V, Ramesh A (2015) Healthcare waste management research: a structured analysis and review (2005–2014). Waste Manag Res 33: 855–870

Van Raij B, Quaggio JA, Silva NM (2008) Extraction of phosphorus, potassium, calcium, and magnesium from soils by an ion exchange resin procedure. Commun Soil Sci Plan 17:547–566

Vasistha P, Ganguly R, Gupta AK (2018) biomedical waste generation and management in public sector hospital in Shimla City. Environmental Pollution, Water Science and Technology Library:77

Wang Q, Awasthi MK, Ren XZ, Wang J, Chen M, Zhang H, Zengqiang (2018) Recent advances in composting of organic and hazardous waste: a road map to safer environment. Biosynthetic Technology and Environmental Challenges:307–329

Wuana RA, Okieimen FE (2011) Heavy metals in contaminated soils: a review of sources, chemistry, risks and best available strategies for remediation. ISRN Ecology 20

Xu P, Zhang Y, Kang L, Roossinck MJ, Mysore KS, Division PB, Samuel T, Noble R (2006) Computational estimation and experimental verification of off-target silencing during posttranscriptional gene silencing in plants. Plant Physiol 142:429–440

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Biochemistry and Biophysics Reports 17 (2019) 71–80

Contents lists available at ScienceDirect

Biochemistry and Biophysics Reports

journal homepage: www.elsevier.com/locate/bbrep

Synthesis and characterization of zinc oxide nanoparticles by using polyol chemistry for their antimicrobial and antibiofilm activity

Pranjali P. Mahamuni[a], Pooja M. Patil[a], Maruti J. Dhanavade[b], Manohar V. Badiger[c], Prem G. Shadija[a], Abhishek C. Lokhande[d], Raghvendra A. Bohara[a,e,*]

[a] Centre for Interdisciplinary Research, D.Y. Patil University, Kolhapur, India
[b] Department of Microbiology, Shivaji University, Kolhapur, India
[c] CSIR, National Chemical Laboratory, Pune, India
[d] Department of Materials Science and Engineering, Chonnam National University, Gwangju, Republic of Korea
[e] CURAM, Center for Research in Medical Devices, National University of Ireland Galway, Ireland

ARTICLE INFO

Keywords:
Antibacterial
Antibiofilm activity
ZnO polyol method

ABSTRACT

The present investigation deals with facile polyol mediated synthesis and characterization of ZnO nanoparticles and their antimicrobial activities against pathogenic microorganisms. The synthesis process was carried out by refluxing zinc acetate precursor in diethylene glycol(DEG) and triethylene glycol(TEG) in the presence and in the absence of sodium acetate for 2 h and 3 h. All synthesized ZnO nanoparticles were characterized by X-ray diffraction (XRD), UV visible spectroscopy (UV), thermogravimetric analysis (TGA), fourier transform infrared spectroscopy (FTIR), field emission scanning electron microscopy(FESEM), transmission electron microscopy (TEM) and energy dispersive X-ray spectroscopy (EDX) technique. All nanoparticles showed different degree of antibacterial and antibiofilm activity against Gram-positive *Staphylococcus aureus* (NCIM 2654)and Gram-negative *Proteus vulgaris* (NCIM 2613). The antibacterial and antibiofilm activity was inversely proportional to the size of the synthesized ZnO nanoparticles. Among all prepared particles, ZnO nanoparticles with least size (~ 15 nm) prepared by refluxing zinc acetate dihydrate in diethylene glycol for 3 h exhibited remarkable antibacterial and antibiofilm activity which may serve as potential alternatives in biomedical application.

1. Introduction

Biofilms are the complex communities of microorganisms attached to any biological or non-biological surface that remain enclosed in self-produced hydrated polymeric matrix [1,2]. Microorganisms in biofilm transcribe genes that are different from the genes transcribed by planktonic bacteria [3]. The cells in the biofilm are inherently protected from phagocytosis, develops high resistance to antibiotics which make them difficult to treat [4–7]. Both Gram-positive and Gram-negative bacteria can form the biofilm on various medical devices such as catheters, prosthetic joints, endotracheal tubes, heart valves, contact lenses and ortho-dental instruments [8]. In this regard, *Staphylococcus aureus* and *Proteus vulgaris* are biofilm-forming pathogens on medical implants able to produce severe biofilm-associated infections such as urinary tract infection, musculoskeletal infection and respiratory tract infection [9]. It has been estimated that the maximum bacterial infections treated in hospitals are associated with bacterial biofilm [6]. In fact, the number of implant-associated infections near about 1 million/year in the US alone and their direct medical costs exceed $3 billion annually [10].

The problem of biofilm-related infections could be resolved by removal of biofilm physically or removal of implants which is not feasible economically. Other methods like use of depolymerase enzyme and the use of bacteriophages could be used to control biofilm formation [11]. Recent reports suggest that several synthesized antimicrobial peptides (AMPs) are able to interact with the membrane through penetration or dissolving the biofilms [12,13]. Alternatives to these conventional methods which recommend, recent developments in nanotechnology that have been proven to be an efficient approach to control biofilm formation [14].

The ability of nanomaterials for biofilm disruption has been reported. For example, Simona and Prodan et al investigated the effect of glycerol iron oxide nanoparticles for biofilm inhibition produced by *Pseudomonas aeroginosa* [15]. Among nanosized metal oxides, zinc oxide (ZnO) has gained much more attention due to its interesting properties such as high surface to volume ratio, low cost and long-term

* Corresponding author at: Centre For Interdisciplinary Research, D.Y.Patil University, Kolhapur India.
E-mail address: raghvendrabohara@gmail.com (R.A. Bohara).

https://doi.org/10.1016/j.bbrep.2018.11.007
Received 12 September 2018; Received in revised form 11 November 2018; Accepted 15 November 2018
2405-5808/

Table 1
Reaction conditions used for synthesis of Zinc oxide nanoparticles.

Polyol used	Sample ID	Zinc acetate dihydrate	Sodium acetate	Hydration ratio		Reaction time and temperature
DEG	A	0.1 M	–	2	All samples	2 h at 180 °C
DEG	B	0.1 M	0.01 M	2	Were	2 h at 180 °C
DEG	C	0.1 M	–	2	Kept on	3 h at 180 °C
DEG	D	0.1 M	0.01 M	2	Magnetic	3 h at 180 °C
TEG	E	0.1 M	–	2	Stirrer	2 h at 220 °C
TEG	F	0.1 M	0.01 M	2	at 80°C for	2 h at 220 °C
TEG	G	0.1 M	–	2	1 h	3 h at 220 °C
TEG	H	0.1 M	0.01 M	2		3 h at 220 °C

Table 2
Calculated crystallite size of ZnO NPs are listed below.

ZnO samples	Crystallite size from XRD in nm
DEG 2 h	~ 22 nm
DEG 2 h with sodium acetate	~ 23 nm
DEG 3 h	~ 15 nm
DEG 3 h with sodium acetate	~ 18 nm
TEG 2 h	~ 20 nm
TEG 2 h with sodium acetate	~ 21 nm
TEG 3 h	~ 18 nm
TEG 3 h with sodium acetate	~ 18 nm

Where, D = crystallite size, λ = X-ray wavelength, β = FWHM of diffraction peak and θ = .
angle of diffraction.

Table 3
TGA results of ZnO samples (1) DEG 2 h, (2) DEG 2 h with sodium acetate, (3) DEG 3 h, (4) DEG 3 h with sodium acetate, (5) TEG 2 h, (6) TEG 2 h with sodium acetate, (7) TEG 3 h, (8) TEG 3 h with sodium acetate.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Initial weight	100	100	100	100	100	100	100	100
1st decomposition	168	190	147	162	170	197	192	184
2nd decomposition	480	486	457	480	495	485	484	460
%weight loss	4.7%	6.5%	4.5%	5%	4.8%	9.7%	9.4%	2.6%
Remaining residue	95.21	93.5	94.5	95	94.2	90.3	90.6	97.4

% weight loss and remaining residue for all ZnO samples are given in Table 3. From table listed above it was observed that, DEG 3 h(3) and TEG 3 h with sodium acetate (8) shows minimum weight loss and maximum final residue.

environmental stability [16,17]. According to Sirelkhatim et al. and Dhillo et al., it is already reported by several studies that ZnO nanoparticles are non-toxic to human cells and toxic to bacterial cells. Toxicity studies showed that DNA in human cells do not get damaged by zinc ions. This fact made ZnO nanoparticles biocompatible to human cells [16,18,19].

Various methods have been used to prepare zinc oxide nanoparticles suchas hydrothermal [20–23], solvothermal methods [24,25],micro-emulsion [26], sol-gel [27,28] and thermal decomposition of precursors [29,30].

According to Raghupathi et al. and Applerot et al., ZnO nanoparticles exhibit a maximum degree of antibacterial activity with the decrease in particle size [7,31]. Method of synthesis of nanoparticles strongly affects the size and shape of nanoparticles, which determines the properties of nanoparticles [32,33].

Fievet, Lagier, and Figlarz first introduced the use of polyols for the synthesis of small particles termed as "polyol process" or "polyol synthesis." The polyol synthesis allows the formation of ZnO nanoparticles with excellent crystalline quality and controlled morphology. Its peculiarity lies in the properties of polyols like high boiling point (up to 320 °C), high dielectric constant, the solubility of simple metal salt precursors and coordinating properties for surface functionalisation preventing agglomeration [34,35]. Also, the presence of weak base sodium acetate in the reaction controls the nucleation process and assembly process through which nanoparticles with different morphology can be obtained [36].

In the present investigation, we have synthesized ZnO nanoparticles by applying different approaches, (i) regular synthesis in polyols, (ii) in presence of sodium acetate, (iii) increasing reaction time. We have employed different strategies to synthesize ZnO nanoparticles. The synthesis method mainly involves reflux of zinc acetate dihydrate precursor in diethylene glycol (DEG) and triethylene glycol (TEG) in the presence and in absence of weak base sodium acetate for varied reaction time. The effect of these two polyols, presence and absence of sodium acetate and reaction time on size and morphology of synthesized ZnO nanoparticles is presented. These nanoparticles were studied for their antimicrobial and antibiofilm activity against *Staphylococcus aureus* (NCIM 2654) and *Proteus vulgaris* (NCIM 2813).

2. Materials and methods

2.1. Materials

All chemicals used here were of analytical grade and used without further purification. All chemicals were purchased from Loba fine chemicals, Mumbai, India. The media have been procured from Himedia Laboratories Pvt. Ltd, Mumbai, India. Distilled water was used in the all experiments. The microorganisms, Gram-positive (*Staphylococcus aureus* NCIM 2654) and Gram-negative (*Proteus vulgaris* NCIM 2613) were collected from the National Collection of Industrial Microorganisms (NCIM), Pune, India.

2.2. Synthesis of ZnO nanoparticles

ZnO nanoparticles were prepared by refluxing precursor zinc acetate dihydrate (0.1 M) in diethylene glycol and triethylene glycol at 180 °C and 220 °C respectively. Reaction time varied for 2 and 3 h with and without sodium acetate (0.01 M). Before refluxing, the solution was kept on a magnetic stirrer at 80 °C for 1.5 h. After completion of reflux action, the samples were centrifuged at 8000 rpm for 15 min and washed with distilled water and ethanol for three times. Further, it was dried at 80 °C for overnight (Tables 1, 2).

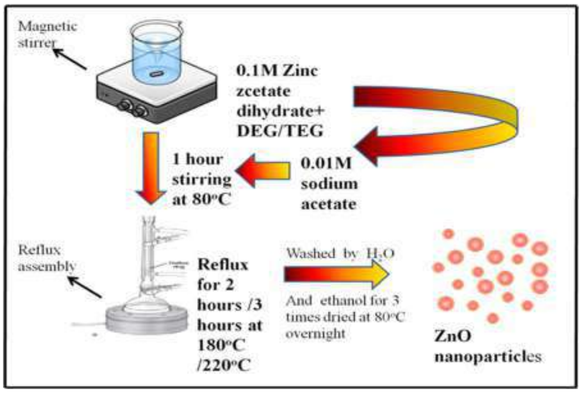
2.3. Reaction mechanism of ZnO formation

By considering the chemicals involved in the hydrolysis process, the mechanism of the ZnO nanoparticles formation is proposed as follows.

$$n\mathrm{Zn}\ (\mathrm{CH_3COO_2})\cdot 2\mathrm{H_2O}\ n + \mathrm{nDEG\ /TEG} \rightarrow [\mathrm{Zn(OH)_2\text{-}DEG\ /TEG}]\mathrm{n} \quad (1)$$

$$[\mathrm{Zn(OH)_2\text{-}DEG\ /TEG}]\mathrm{n} \rightarrow (\mathrm{ZnO\text{-}DEG/TEG}) + \mathrm{H_2O} \quad (2)$$

Formation of metal oxides proceeds in 2 steps: hydrolysis reaction and condensation reaction. Hydrolysis reaction is water dependent, absence of water in the reaction leads into failure of occurrence of next step of reaction that is condensation reaction which will not form any product. Also, due to presence of excess amount of water, particles start



Scheme 1. Schematic representation of synthesis of DEG and TEG mediated ZnO nanoparticles.

to agglomerate and give large sized particles with large distribution. So the hydrolysis ratio is considered as an important factor which affects the size and morphology. (Scheme 1).

Hydrolysis ratio is the ratio of number of moles of metal ions to number of moles of water. Alkaline ratio also considered an important factor affecting size and morphology. Amel Dalklaoui et al reported the effect of increasing alkaline ratio on morphology which showed the change in morphology from irregular and anisotropic forms to spherical form. Alkaline ratio is the number of moles of sodium hydroxide to metal which is attributed to the effect of OH^- ions on morphology. Also the concentration of precursor and temperature of the reaction affects the morphology of particles. In the present investigation, concentration of precursor, hydrolysis ratio and alkaline ratio is kept constant throughout the all synthesis processes of ZnO.

First, the reaction between zinc acetate dihydrate and DEG/TEG leads to esterification that forms $(Zn\text{-}OH)_2$. Further dehydration of $(Zn\text{-}OH)_2$ results into formation of ZnO nanoparticles. The basic approach for addition of sodium acetate was the addition of excess acetate ions that gives different particle morphologies than the particles synthesized in absence of sodium acetate. Sodium acetate causes a weak hydrolyzation, which controls the release rate of OH^- [36–42].

2.4. Characterization of nanoparticles

The X-ray diffraction studies of ZnO NPs were carried out using Rigaku 600Miniflex X-ray diffraction instrument (XRD) with Cukα radiation (λ = 1.5412 Å) in the scanning range of 10^0-80^0. To confirm the absorbance of ZnO NPs and to observe the changes in the absorbance caused due to variations in reaction conditions, UV–visible (UV–vis) spectra were carried in the wavelength range of 200–600 nm using Agilent Technologies Cary 60 UV–vis. In order to identify the characteristic functional groups present on the surface of the ZnO, Fourier transform infrared (FTIR) spectra of all samples were recorded by using JASCO INC 410,Japan,in a range of 400–4000 cm^{-1}. Thermal gravimetric analysis(TGA) was carried out to observe thermal stability of ZnO on instrument PerkinElmer STA-5000. All samples were heated from 50 to 900 °C at the rate of 10 °C/min. The surface morphology of all synthesized ZnO were studied by field emission scanning electron microscopy(FESEM) and transmission electron microscopy(TEM). Elemental analysis was performed by energy dispersive X-ray (EDX) spectroscopy (JSM-6701F, JOEL, Japan).

2.5. The antimicrobial assay

Antimicrobial study of different ZnO NPs was performed by agar well diffusion method. The relative activities of these samples were studied against both Gram-positive *Staphylococcus aureus (NCIM 2654)* and Gram-negative *Proteus vulgaris (NCIM 2613)*bacteria. In this method, in each well 1 mg/ml concentration of all ZnO NPs was inoculated on nutrient agar plates which were previously seeded by 100 µl of 24 h old bacterial inocula. ZnO samples were sonicated for 15 min in distilled water before inoculation. Then the plates were incubated at 37 °C for 24 h for the growth of microorganisms. Antimicrobial activity was observed by measuring the inhibition zone diameter (mm).

2.6. Determination of minimum inhibitory concentration

The determination of minimum inhibitory concentration was performed in sterile Muller –Hinton broth at concentration of nanoparticles ranging from 10 mg to 50 mg/ml against two pathogens Gram positive *Staphylococcus aureus (NCIM 2654)* and Gram negative *Proteus vulgaris (NCIM 2613)*bacteria. The assay was carried out in 96 well plates by using tryptic soy broth medium. In brief, 200 µl volume of tryptic soy medium was added in each well and inoculated with 24 h old 10 µl of bacterial inocula. One well was maintained without addition of nanoparticles, used as a control. The microplates were incubated at 37 °C for 24 h. After incubation OD was recorded at 600 nm. From graph, minimum inhibitory concentration and % of inhibition at each concentration was determined.

2.7. Antibiofilm activity

Antibiofilm activity was done by using microtiter plate method. For this, *Staphylococcus aureus (NCIM 2654)* and *Proteus vulgaris (NCIM 2613)* were inoculated in sterile tryptic soy broth and incubated for 24 h at 37 °C. Then samples were centrifuged at 5000 rpm and pellet was suspended in phosphate buffer(pH 7.0) 1 mg/ml stock of all ZnO samples were prepared. In brief, 200 µl medium with known concentrations of ZnO were inoculated with 10 µl of bacterial suspension and incubated for 24 h at 37 °C. After incubation, the wells were drained, washed with phosphate buffer saline(PBS),fixed with cold methanol, and then stained with 1% crystal violet for 30 min. Biofilm formed in wells was resuspended in 30% acetic acid. The intensity of suspension was measured at 570 nm and % of biofilm inhibition was calculated by using equation given below [8].

$$\%\text{age of biofilm inhibition} = \text{OD490 in control} - \text{OD490 in treatment} / \text{OD490 in control} \times 100$$

3. Results and discussion

3.1. X-ray diffraction studies

Fig. 1 A and B represents diffractograms of ZnO NPS.The XRD of all the samples having 2θ values with reflection planes at 31.72° (100), 34.39° (002), 36.23° (101) and 47.44° (102) corresponds to JCPDS Card No. 36-1451. So,all diffraction peaks fit well with hexagonal wurtzite structure of ZnO, which proves that ZnO was successfully synthesized by polyol hydrolysis method [43].

The crystallite sizes of ZnO NPs were calculated from FWHM of the most intense peak using the Debye–Scherrer formula (Eq. (1)), given below:

$$D = 0.9\lambda/\beta \cos\varphi \qquad (1')$$

3.2. UV–vis spectroscopy analysis

In order to observe the UV spectroscopy of synthesized ZnO nanoparticles, they were sonicated in distilled water for about 15 min and UV spectra were recorded Supplementary data Fig. 1 A and B shows the UV–vis absorption spectra of the ZnO nanoparticles synthesized by using DEG and TEG. The absorption peak was recorded in each spectrum in range of 360–380 nm which is a characteristic band for the pure

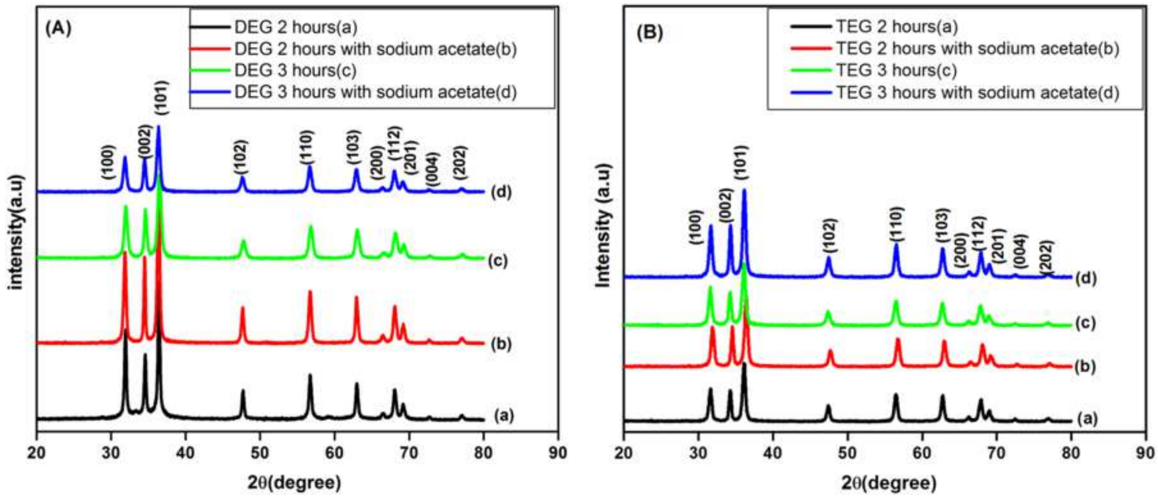


Fig. 1. (A) XRD of DEG 2 h(a), DEG 2 h with sodium acetate(b), DEG 3 h(c), DEG 3 h with sodium acetate(d), (B) TEG 2 h(a), TEG 2 h with sodium acetate(b), TEG 3 h (c), TEG 3 h with sodium acetate(d).

ZnO.Absence of any other peak in the spectrum confirms that the synthesized products are ZnO only [17]. (Figs. 2 and 3).

It is reported that the intensity of absorption peak in UV–visible spectrum is related with particle size of nanoparticles. As the particle size decreases, absorption peak shifts towards lower wavelength that is blue shift. As in case of DEG mediated synthesized ZnO nanoparticles, DEG 2 h sample shows absorption peak at 366 nm while DEG 2 h sample with sodium acetate show absorption peak at 368 nm. Similarly remaining all samples show blue shift with decrease in particle size which interpret that the intensity of the absorbance peak shows slight blue shift with decrease in particle size. The type of polyols used, temperature and reaction time have effect on absorption peak [44,45].

3.3. Field emission scanning microscopy (FESEM)/energy dispersive X-ray spectroscopy (EDX)

Morphology of all ZnO nanoparticles synthesized by using DEG and TEG were studied by images obtained by FESEM and TEM. Figs. 4 and 5 clearly shows that the zinc oxide nanoparticles obtained by refluxing diethylene glycol and triethylene glycol for 2 h and 3 h in presence and in absence of sodium acetate have uniform shape and size with different morphology. Image depicts addition of sodium acetate, use of different polyol and change in reflux time from 2 h to 3 h offers difference in morphology from oval to rod shape with average particle size of ~ 15 to 100 nm. FESEM and TEM analysis reports DEG refluxed for 3 h in absence of sodium acetate exhibited least particle size of ~ 15 nm.

The difference observed in the morphology of the ZnO nanoparticles depends upon release rate of OH^- ions. In presence of sodium acetate release rate of OH^- ions becomes slow due to its weak hydrolyzing ability of acetate ions, which affects on condensation and nucleation process. So particles show elongated rod shaped morphology [38].

The elemental analysis of all ZnO nanostructures was performed by EDX spectroscopy. The Supplementary Fig. 2 shows the EDX of all synthesized ZnO nanoparticles which reveals presence Zn and O that indicate the synthesis of pure ZnO nanoparticles. The impurity free nanoparticle exhibits the promising anti-microbial and antibiofilm activity.

3.4. Fourier Transform Infrared Spectroscopy (FT-IR) analysis

In Supplementary data Fig. 3 A and B, FTIR spectrum of ZnO nanoparticles synthesized in DEG and TEG showed characteristic peak at ~ 3443 cm^{-1}, which was assigned to stretching vibrations of hydroxyl group [46,47] and the peaks at ~ 2922 cm^{-1} were assigned to –CH stretching showing presence of CH_2,CH_3 groups [48]. The 2 peaks at about ~ 1586 cm^{-1} and ~ 1412 cm^{-1} were assigned to symmetric and asymmetric C=O stretching [49]. The peak position at 1125 cm^{-1} were assigned to –CH deformation showing –CH_2, CH_3 bending. Due to inter atomic vibrations, metal oxides generally exhibit absorption bands in fingerprint region below 1000 cm^{-1}. [50]. In the infrared region, the peaks at around 415–480 cm^{-1}corresponds to ZnO which show the stretching vibration of Zn-O [51]. This observation indicate that, DEG/TEG molecules get adsorbed on synthesized ZnO nanoparticles [48]. The differences in the particle sizes may lead to different wavenumber and frequencies are consistent to the reported literature [52].

3.5. Thermogravimetric analysis

The thermal decomposition behaviour and presence of adsorbed polyols of all ZnO samples were observed by TGA analysis. All samples were heated from 50 to 900 °C at the rate of 10 °C/min. The Supplementary data Fig. 4A and B shows the thermal decomposition of DEG and TEG mediated synthesized ZnO nanoparticles respectively. The two successive decompositions were observed in all samples. The initial weight loss observed was due to the evaporation of surface adsorbed water and moisture occurred in range of 145–270 °C [53] and further 2ndstage of decomposition was observed in the range of 452–490 °C due to loss of adsorbed DEG/TEG molecules in all samples and which was confirmed by FTIR [54].

3.6. Applications of ZnO NPs

3.6.1. Antimicrobial activity

From the results in Table 4, it was observed that among all ZnO nanoparticles the smallest ZnO nanoparticles synthesized in DEG for 3 h showed significant zone of inhibition against *Staphylococcus aureus (NCIM 2654) and Proteus vulgaris(NCIM 2613).*

The intensity of antibacterial activity is size dependent. Intensity of antibacterial activity is inversely proportional to the size of nanoparticles, so nano-sized ZnO show good antibacterial activity than bulk ZnO [55,56]. The intensity of inhibition by nanoparticles depends upon small size, shape and large surface area to volume ratio, as it affects on the interaction with membrane of microorganisms. Yamamoto et al reported, study of antibacterial activity of different sized ZnO nanoparticles (10–50 nm), which showed better antimicrobial property than bulk ZnO (2 µm) [57,58]. According to Pratap et al., ZnO synthesized by using green route *Coriandrum sativum* leaf extract exhibit antibacterial activity at concentration more than 100 mg/ml [59]. Sharmila

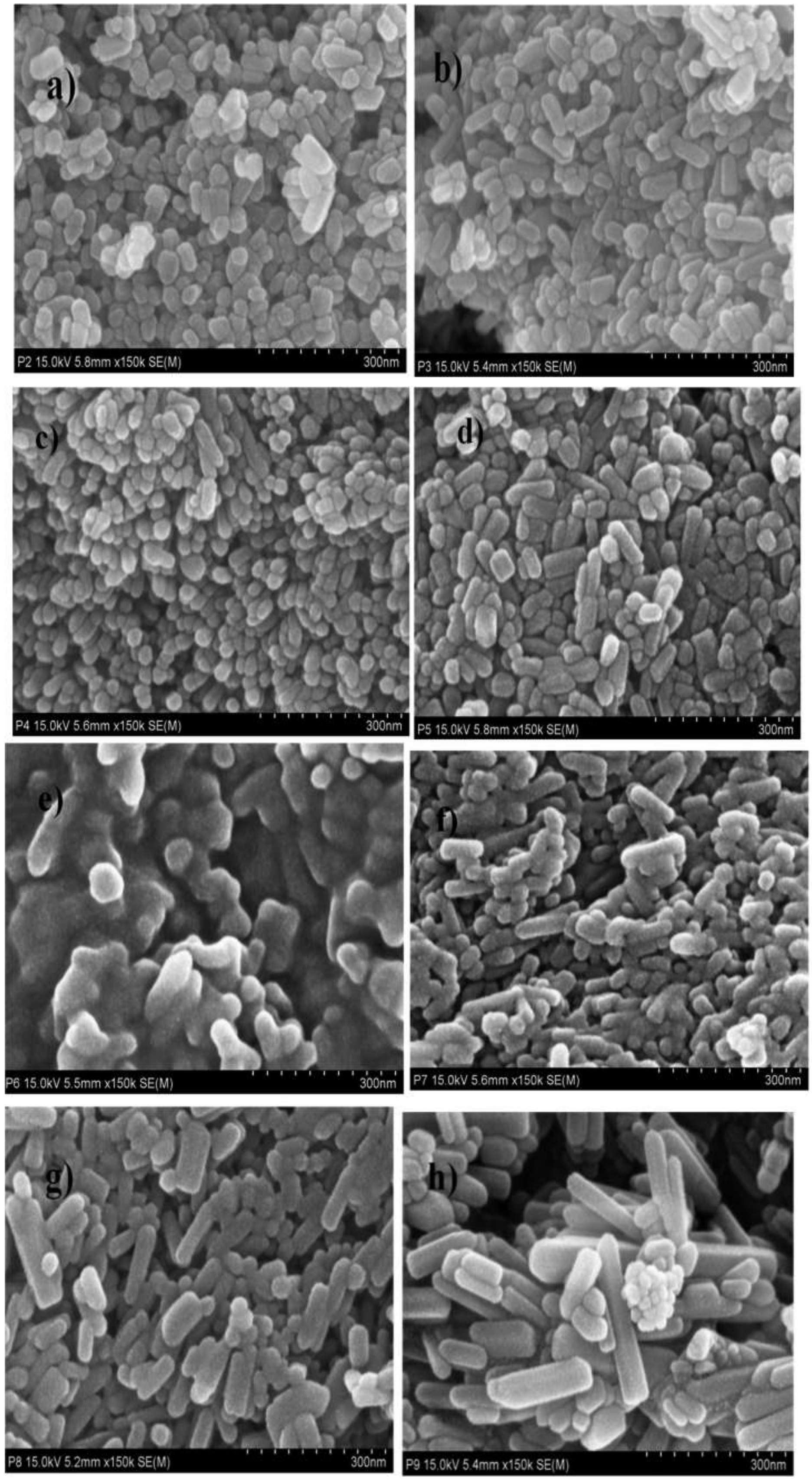


Fig. 2. FESEM micrographs of (a) DEG 2 h, (b) DEG 2 with sodium acetate, (c) DEG 3 h, (d) DEG 3 h with sodium acetate, (e)TEG 2 h, (f) TEG 2 h with sodium acetate, (g) TEG 3 h, (h) TEG 3 h with sodium acetate.

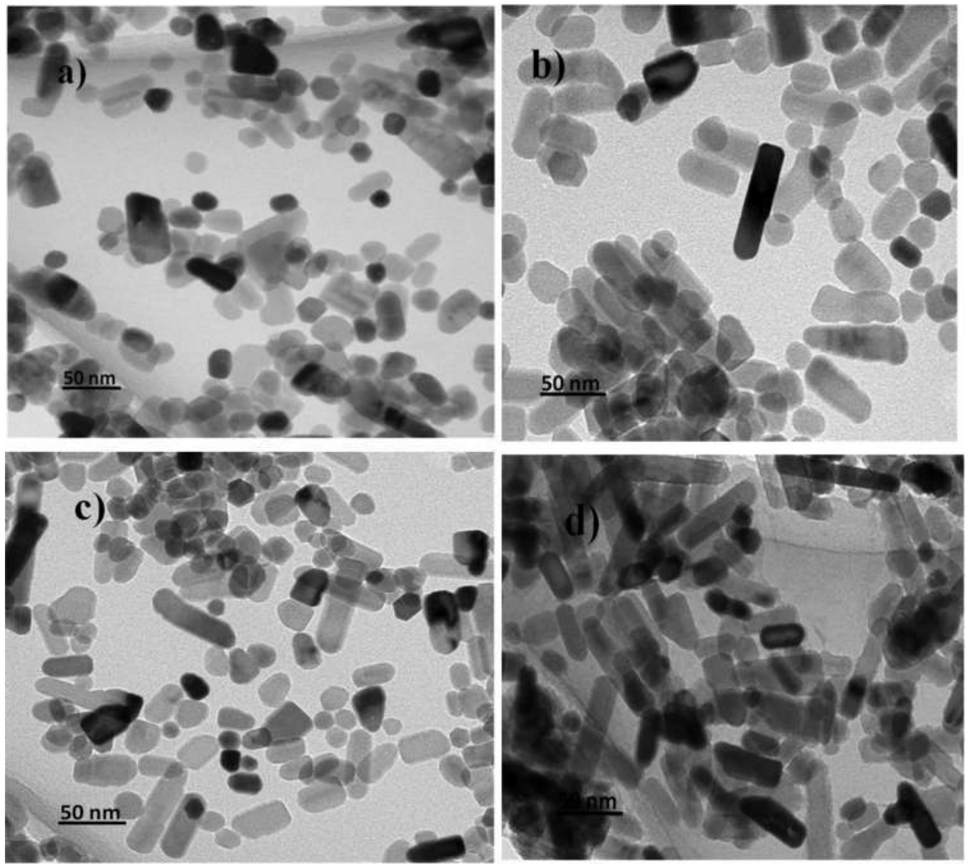


Fig. 3. Representative TEM images of (a) DEG 2 h, (b) DEG 2 h with sodium acetate, (c) DEG 3 h, (d) DEG 3 h with sodium acetate, (e)TEG 2 h, (f) TEG 2 h with sodium acetate, (g) TEG 3 h, (h) TEG 3 h with sodium acetate.

et al., demonstrated antibacterial activity of ZnO nanoparticles (22–93 nm) synthesized through green route *Bauhinia tomentosa* leaf extract, which showed antibacterial activity against Gram positive and Gram negative bacteria [60]. Several reports suggest that the action of ZnO on bacterial species is due to release of reactive oxygen species (ROS) species and zinc ions. Generated ROS species, that is, hydrogen peroxide (H_2O_2), OH^-(hydroxyl radicals), O_2^{-2} (peroxide) and zinc ions from ZnO nanoparticles bind to the negative surface of the cell membrane, leading to disruption of the cells followed by leakage of inner cellular material that causes cell death [61].

In the present study, our interest was to synthesize particles with different morphologies and to study their size dependent antibacterial activity. Out of all synthesized ZnO nanoparticles, DEG 3 h sample with least particle size (~ 15 nm) exhibited comparatively remarkable antibacterial activity against both bacteria. It's small size and it's high surface area to volume ratio may helped for more interaction with bacterial cell, than other ZnO NPs with greater size, this could be the reason why these nanoparticles exhibited significant antibacterial activity than other synthesized nanoparticles.

3.6.1.1. Quantitative antimicrobial assay. From the above results, it was concluded that minimum inhibitory concentration for all samples was in range of 10–20 µg/ml. It was revealed that among all samples DEG 3 h sample showed significant % of inhibition for *Staphylococcus aureus (NCIM 2654)*as compared to *Proteus vulgaris(NCIM 2613)*. For *Staphylococcus aureus* and*Proteus vulgaris* it showed 32.67% and 22.38% of inhibition at 50 µg/ml concentration respectively. (Figs. 6 and 7)

3.6.1.2. Antibiofilm activity by microtiter plate. Effect of all synthesized ZnO nanoparticles on biofilm formation on *Staphylococcus aureus (NCIM 2654)* and *Proteus vulgaris(NCIM 2613)* was shown in figure 11 A and B. These graphs indicate that all ZnO samples synthesized by using DEG and TEG inhibited the activity of biofilm formation. Out of all synthesized ZnO nanoparticles, ZnO synthesized by refluxing DEG for 3 h without sodium acetate showed significant % of inhibition in *Staphylococcus aureus* as compared to *Proteus vulgaris* at each concentration. All ZnO samples showed increased % of inhibition with increase in concentration. At 250 µg/ml concentration of ZnO synthesized by DEG refluxed for 3 h exhibited maximum 67.3% and 58.18% biofilm inhibition against *Staphylococcus aureus* and *Proteus vulgaris.*

Staphylococcus aureus and *Proteus vulgaris* are pathogens that have ability to form biofilm on medical implants associated with chronic infections. These infections are difficult to irradicate due to resistant nature of biofilm [62]. Action of antimicrobial agents against biofilm associated infections is not that much effective due to inability of penetration into network of biofilm. To overcome this problem application of nanoparticles for inhibition of antibiofilm is efficient [4,63].

In present study, by using different strategies we have synthesized ZnO nanoparticles with different morphologies in which ZnO nanoparticles synthesized by refluxing DEG for 3 h in absence of sodium acetate proved to be efficient nanoparticle with remarkable antibiofilm activity than other synthesized ZnO nanoparticles with size greater than these particles. These results revealed that smaller nanoparticles exhibited significant inhibition of biofilm than larger nanoparticles.

4. Conclusion

In the present investigation, we have synthesized ZnO nanoparticles by applying different approaches, i) regular synthesis in polyols, ii) In presence of sodium acetate, iii) increasing reaction time. We showed

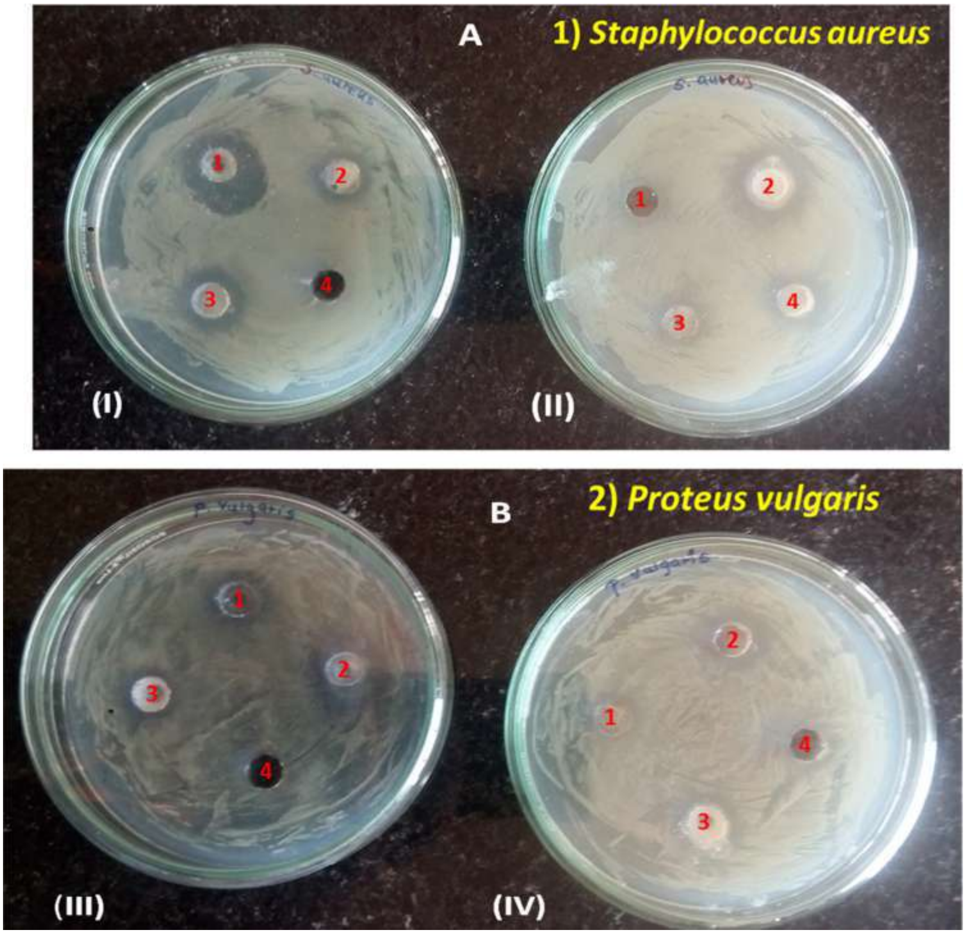


Fig. 4. Antibacterial activity of DEG and TEG mediated synthesized ZnO NPs (1 mg/ml) against Gram-positive *Staphylococcus aureus (NCIM 2654)*(A)and Gram-negative *Proteus vulgaris(NCIM 2613)* (B), In plate (I) and (III) samples inoculated are(1)DEG 3 h, (2) DEG 3 h with sodium acetate, (3) DEG 2 h, (4) DEG 2 h with sodium acetate and in plate (II) and (IV) samples inoculated are(1)TEG 2 h with sodium acetate, (2) TEG 3 h, (3) TEG 3 h with sodium acetate, (4) TEG 2 h.

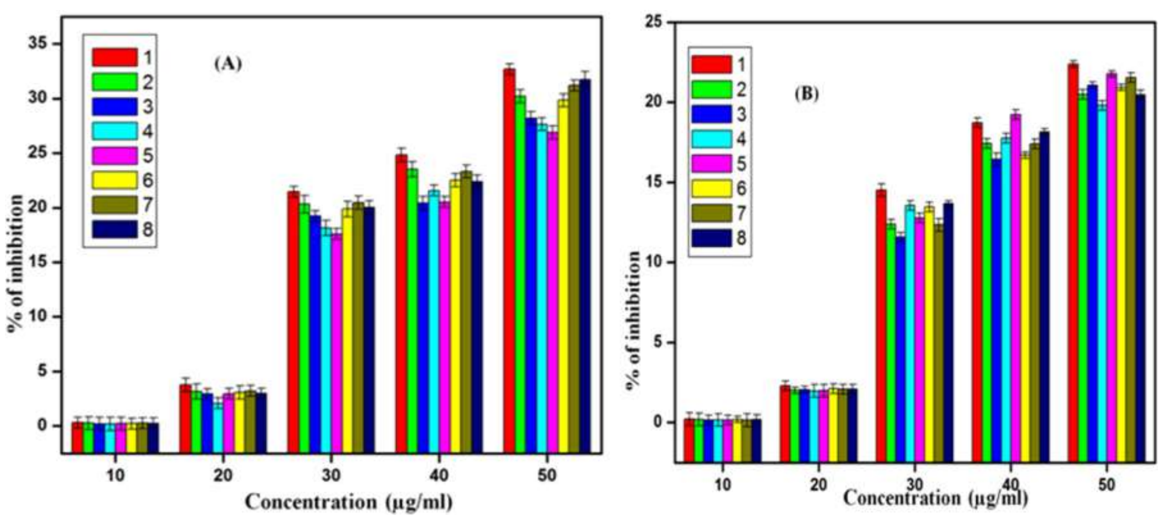


Fig. 5. % of inhibition of all ZnO samples at different concentrations of all ZnO nanoparticles against *Staphylococcus aureus(NCIM 2654)*(A) and *Proteus vulgaris(NCIM 2613)*(B), (1) DEG 3 h, (2) DEG 3 h with sodium acetate, (3) TEG 3 h, (4) TEG 3 h with sodium acetate, (5) TEG 2 h, (6)TEG 2 h with sodium acetate, (7) DEG 2 h, (8) DEG 2 h with sodium acetate.

that it is possible to control shape and size of nanoparticles through these approaches. XRD analysis revealed the phase purity. The synthesized nanoparticles have crystallite nature having hexagonal wurtzite structure. UV spectroscopy showed that absorption edges was shifted to a shorter wavelength showing blue shift due to decrease in crystal size. FTIR and TGA analysis presented that DEG and TEG molecule adsorbed on ZnO nanoparticles. The prepared all ZnO nanoparticles posses antibacterial and antibiofilm activity against *Staphylococcus aureus* and *Proteus vulgaris.* The most interesting observation found in present study is that, all synthesized nanoparticles showed nicely organized oval and rod shaped morphology with different size. In case of nanoparticles synthesized by using polyol DEG, it was observed that, addition of sodium acetate and increase in reflux time from 2 h to 3 h changes morphology of nanoparticles from oval to

Table 4
Diameter of zone of inhibition by ZnO against *Staphylococcus aureus and Proteus vulgaris*.

Sample	Zone of inhibition in diameter(in mm)	
	Staphylococcus aureus	*Proteus vulgaris*
DEG 3 h	14	6
DEG 3 h with sodium acetate	6	4
DEG 2 h	6	2
DEG 2 h with sodium acetate	1	1
TEG 2 h with sodium acetate	1	1
TEG 3 h	7	4
TEG 3 h with sodium acetate	4	3
TEG 2 h	4	1

rod shape, while in case of nanoparticles synthesized by using polyol TEG all particles show rod shaped morphology and increase in size with addition of sodium acetate and increase in reflux time from 2 h to 3 h which highlights the role of sodium acetate in change of morphology. Out of all particles, ZnO synthesized by refluxing zinc acetate precursor in DEG for 3 h in absence of sodium acetate with particle size ~ 15 nm showed maximum activity against *Staphylococcus aureus* and *Proteus vulgaris* than other synthesized ZnO nanoparticles. This study showed that the antimicrobial and antibiofilm efficacy of ZnO nanoparticles increases with decreasing particle size. We have demonstrated that applying different approaches affects on the size and shape of nanoparticles, these findings provide better understanding of ZnO nanoparticles that can serve as a potential antibacterial and antibiofilm agent in biomedical application.

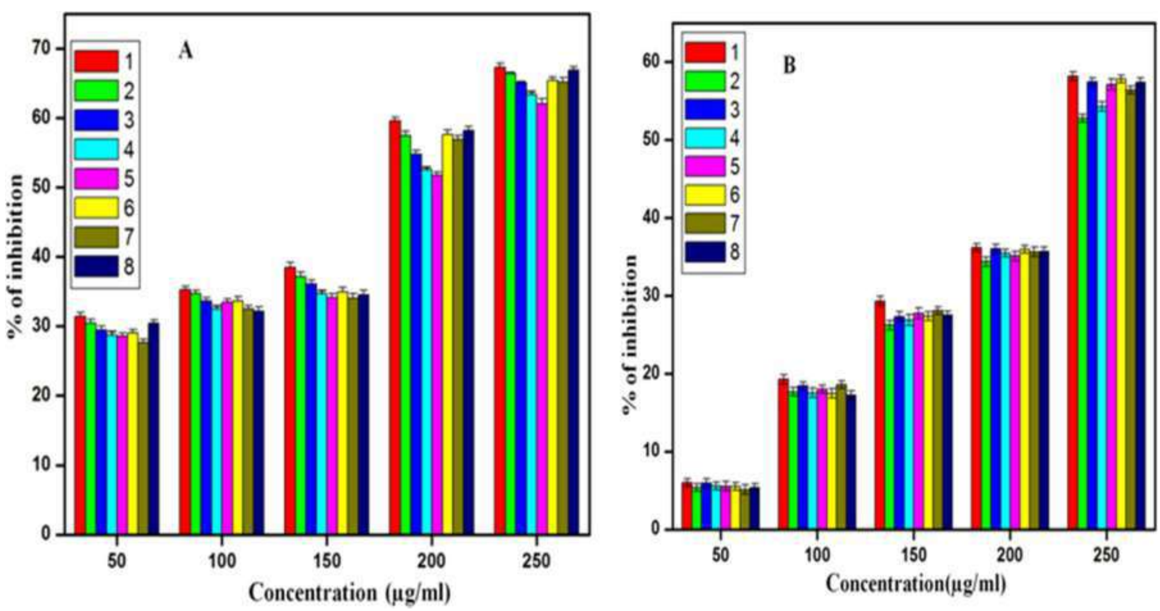


Fig. 6. % of biofilm inhibition of all ZnO samples at different concentrations of all ZnO nanoparticles against *Staphylococcus aureus(NCIM 2654)*(A) and *Proteus vulgaris(NCIM 2613)*(B), (1) DEG 3 h, (2) DEG 3 h with sodium acetate, (3) TEG 3 h, (4) TEG 3 h with sodium acetate, (5) TEG 2 h, (6) TEG 2 h with sodium acetate, (7) DEG 2 h, (8) DEG 2 h with sodium acetate.

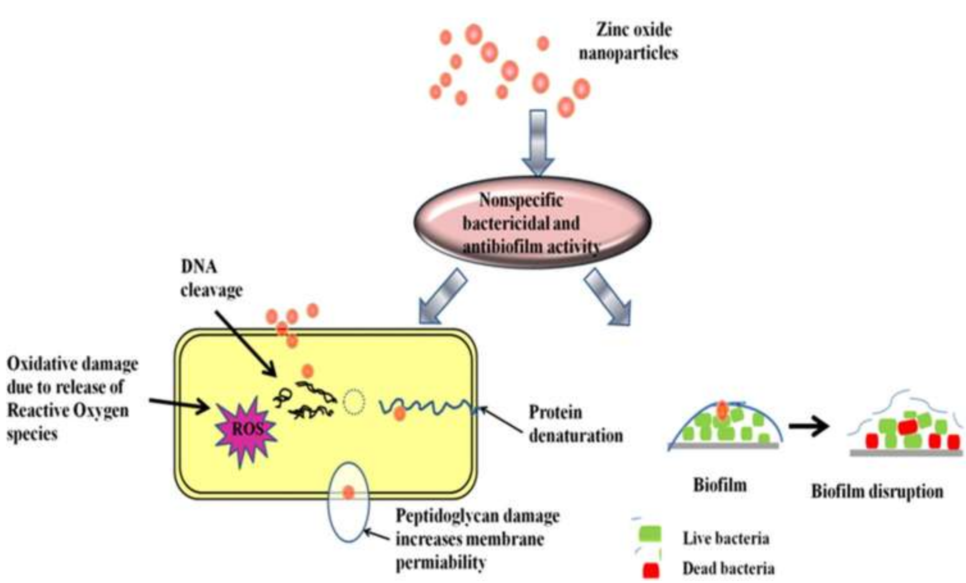


Fig. 7. Antibacterial and antibiofilm action of ZnO on bacteria.

Acknowledgements

The corresponding author is thankful for D.Y. Patil University for financial support (DYPU/R&D/190) and financial support from the Irish Research Council under the Government of Ireland Postdoctoral fellowship Grant GOIPD/2017/1283. The funding agencies are highly acknowledged.

Appendix A. Transparency document

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.bbrep.2018.11.007

Appendix B. Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.bbrep.2018.11.007

References

[1] J. Lellouche, E. Kahana, S. Elias, A. Gedanken, E. Banin, Antibiofilm activity of nanosized magnesium fluoride, Biomaterials 30 (2009) 5969–5978.
[2] C. Wu, J. Labrie, Y.D.N. Tremblay, D. Haine, M. Mourez, M. Jacques, Zinc as an agent for the prevention of biofilm formation by pathogenic bacteria, J. Appl. Microbiol. 115 (2013) 30–40.
[3] R.M. Donlan, Biofilms: microbial life on surfaces, Emerg. Infect. Dis. 8 (2002) 881–890.
[4] M. Shakibaie, H. Forootanfar, Y. Golkari, T. MohammadiKhorsand, M. Shakibaie, Anti-biofilm activity of biogenic selenium nanoparticles and selenium dioxide against clinical isolates of *Staphylococcus aureus, Pseudomonas aeruginosa,* and *Proteus mirabilis*, J. Trace Elem. Med. Biol. 29 (2015) 235–241.
[5] C. Ashajyothi, R. Manjunath, R. Chandrakanth, Prevention of multiple drug resistant bacterial biofilm by synergistic action ofbiogenic silver nanoparticle and antimicrobials, J. Microbiol Biotechnol. Res. 5 (1) (2015) 14–21.
[6] M.F. Gutierrez, L. Boegli, A. Agostinho, M.E. Sánchez, B. Horacio, F. Ruiz, G. James, Anti-biofilm activity of silver nanoparticles against different microorganisms, Biofouling 29 (6) (2013) 651–660.
[7] G. Applerot, J. Lellouche, N. Perkas, Y. Nitzan, A. Gedanken, E. Banin, ZnO nanoparticle-coated surfaces inhibit bacterial biofilm formation and increase antibiotic susceptibility, RSC Adv. 2 (2012) 2314–2321.
[8] C. Ashajyothi, V. Handral Harish, N. Dubey, R. Chandrakanth, Antibiofilm activity of biogenic copper and zinc oxide nanoparticles-antimicrobials collegiate against multiple drug resistant bacteria: a nanoscale approach, J. Nanostruct. Chem. 6 (2016) 329–341.
[9] K.H. Lee, S.J. Park, S.J. Choi, J.Y. Park, *Proteus vulgaris* and *Proteus mirabilis* decrease *Candida albicans* biofilm formation by suppressing morphological transition to its hyphal form, J. YMJ 58 (2017) 6,1135.
[10] R.O. Darouiche, Treatment of infections associated with surgical implants, N. Engl. J. Med. 350 (2004) 1422–1429.
[11] R.H. David, M.R.T.H. Parracho, J. Walker, R. Sharp, G. Hughes, M. Werthén, S. Lehman, S. Morales, Bacteriophages and biofilms, Antibiotics 3 (2014) 270–284.
[12] A. Mollica, G. Macedonio, A. Stefanucci, R. Costante, S. Carradori, V. Cataldi, M. Di Giulio, L. Cellini, R. Silvestri, C. Giordano, A. Scipioni, S. Morosetti, P. Punzi, S. Mirzaie, Arginine- and lysine-rich peptides: synthesis, characterization and antimicrobial activity, Lett. Drug Des. Discov. 14 (2017) 1–7.
[13] L. Travaglini, C. Giordano, A.D.' Annibale, M. Gubitosi, M. Chiara di Gregorio, K. Schill´en, A. Stefanucci, A. Mollica, N. Viorel Pavel, L. Galantini, Twisted nanoribbons from a RGD-bearing cholic acid derivative, Colloids Surf. B: Biointerfaces 159 (2017) 183–190.
[14] N.K. Palanisamy, N. Ferina, A.N. Amirulhusni, Z.M. Zain, J. Hussaini, L.Z. Ping, R. Durairaj, Antibiofilm properties of chemically synthesized silver nanoparticles found against *Pseudomonas aeroginosa*, J. Nanobiotechnol. 12 (2014) 2.
[15] L.I. Simona, A.M. Prodan, P.L. Coustumer, D. Predoi, Synthesis and antibacterial and antibiofilm activity of iron oxide glycerol nanoparticles obtained by co-precipitation method, J. Chem. Volume (2013) 6 (Article ID 412079).
[16] G.S. Dhillon, S. Kaur, S.K. Brar, Facile fabrication and characterization of chitosan-based zinc oxide nanoparticles and evaluation of their antimicrobial and antibiofilm activity, Int. Nano Lett. 4 (2014) 107.
[17] N.L. Salahuddin, E.M. Kemary, E.M. Ibrahim, Synthesis and characterization of ZnO nanoparticles via precipitation method: effect of annealing temperature on particle size, Nanosci. Nanotechnol. 5 (4) (2015) 82–88.
[18] A. Sirelkhatim, S. Mahmud, A. Seeni, N.M. Kaus, L.C. Ann, S.M. Bakhori, H. Hasan, D. Mohamad, Review on zinc oxide nanoparticles: antibacterial activity and toxicity mechanism, J. Nano-Micro Lett. 7 (3) (2015) 219–242.
[19] H. Yamada, K. Suzuki, S. Koizumi, Gene expression profile in human cells exposed to zinc, J. Toxicol. Sci. 32 (2007) 193–196.
[20] B. Liu, H.C. Zeng, Hydrothermal synthesis of ZnO nanorods in the diameter regime of 50 nm, J. Am. Chem. Soc. 125 (2003) 4430–4431.
[21] X.M. Sun, X. Chen, Z.X. Deng, Y.D. Li, A. CTAB, assisted hydrothermal orientation growth of ZnO nanorods, Mater. Chem. Phys. 78 (2003) 99–104.
[22] M. Bitenc, P. Podbr, Z.C. Orel, M.A. Cleveland, J.A. Paramo, R.M. Peters, Y.M. Strzhemecny, Correlation between morphology and defect luminescence in precipitated ZnO nanorod powders, Cryst. Growth Des. 9 (2009) 997–1001.
[23] L. Yan, G.Z. Wang, C.J. Tang, H.Q. Wang, L. Zhang, Synthesis and photoluminescence of corn-like ZnO nanostructures under solvothermal-assisted heat treatment, Chem. Phys. Lett. 409 (2005) 337–341.
[24] S.H. Yu, J. Yang, Y.T. Quian, M. Yoshimura, Optical properties of ZnS nanosheets, ZnO dendrites, and their lamellar precursor 3ZnS $(NH_2CH_2CH_2NH_2)_{0.5}$, Chem. Phys. Lett. 361 (2002) 362–366.
[25] L. Guo, Y. Ji, H. Xu, Regularly shaped, single-crystalline ZnO nanorods with wurtzite structure, J. Am. Chem. Soc. 124 (2002) 14864–14865.
[26] D. Mondelaers, G. Vanhoyland, H.D. Van den Rul, J. Haen, M.K. VanBael, J. Mullens J, L.C. Van Poucke, Synthesis of ZnO nanopowder via an aqueous acetate-citrate gelation method, Mater. Res. Bull. 37 (2002) 901–914.
[27] S. Lee, S. Jeong, K. Dongjo, S. Hwang, M. Jeon, J. Moon, ZnO nanoparticles with controlled shapes and sizes prepared using a simple polyol synthesis, Superlattices Microstruct. 43 (2008) 330–333.
[28] Z. Wang, H. Zhang, L. Zhang, J. Yuan, S. Yan, C. Wang, Low-temperature synthesis of ZnO nanoparticles by solid-state pyrolytic reaction, Nanotechnology 14 (2003) 11–15.
[29] S.C. Pillai, J.M. Kelly, D.E. McCormack, P.O. Brien, R. Ramesh, R, The effect of processing conditions on varistors prepared from nanocrystalline ZnO, J. Mater. Chem. 13 (2003) 2586–2590.
[30] R.A. Bohara, N.D. Thorat, S.H. Pawar, Role of functionalisation: strategies to explore potential nano-bio applications of magnetic nanoparticles, RSC Adv. 6 (2016) 43989.
[31] K.R. Raghupathi, R.T. Koodali, A.C. Manna, Size-dependent bacterial growth inhibition and mechanism of antibacterial activity of zinc oxide nanoparticles, Langmuir 27 (2011) 4020–4028.
[32] R.A. Bohara, N.D. Thorat, H.M. Yadav, S.H. Pawar, One-step synthesis of uniform and biocompatible amine functionalized cobalt ferrite nanoparticles: a potential carrier for biomedical applications, New J. Chem. 38 (2014) 2979.
[33] R.A. Bohara, S.H. Pawar, Innovative developments in bacterial detection with magnetic nanoparticles, Appl. Biochem. 176 (4) (2015) 1044–1058.
[34] H. Dong, Y.C. Chen, C. Feldmanna, Polyol synthesis of nanoparticles: status and options regarding metals, oxides, chalcogenides, and non-metal elements, Green. Chem00 1–3 (2015) 1.
[35] B.W. Chieng, Y.Y. Loo, Synthesis of ZnO nanoparticles by modified polyol method, Mater. Lett. 73 (2012) 78–8210.
[36] H. Gavilan, E.H. Sánchez, M.E.F. Brollo, L. Asín, K.K. Moerner, C. Frandsen, F.J. Lázaro, C.J. Serna, S.V. Verdaguer, M.P. Morales, L. Gutierrez, Formation mechanism of maghemite nanoflowers synthesized by a polyol-mediated process, ACS Omega 2 (2017) 7172–7184.
[37] J. Yang, T.C. Deivaraj, H. PhonToo, J.Y. Lee, Acetate stabilization of metal nanoparticles and its role in the preparation of metal nanoparticles in ethylene glycol, Langmuir 20 (2004) 4241–4245.
[38] T.E.P. Alves, C. Kolodziej, C. Burda, A. Franco, Effect of particle shape and size on the morphology and optical properties of zinc oxide synthesized by the polyol method, J. Mater. Des. 146 (2018) 125–133.
[39] M. Hosnia, Y. Kusumawatia, S. Farhat, N. Jouini, A. Ivansyah, M.A. Martoprawiro, T. Pauporte, Ruthenium polypyridyl TG6 dye for the sensitization of nanoparticle and nanocrystallite spherical aggregate photoelectrodes, ACS Appl. Mater. Interfaces 7 (3) (2015) 1568–1577.
[40] A. Dakhlaoui, M. Jendoubi, L.S. Smiri, A. Kanaev, N. Jouini, Synthesis, characterization and optical properties of ZnO nanoparticles with controlled size and morphology, J. Cryst. Growth 311 (2009) 3989–3996.
[41] D. Jezequel, J. Guenot, N. Jouini, F. Fievet, Submicrometer zinc oxide particles: elaboration in polyol medium and morphological characteristics, Mater. Res. 10 (1995) 1.
[42] C. Pholnaka, C. Sirisathitkula, S. Suwanboonb, D.J. Hardinga, Effects of precursor concentration and reaction time on sonochemically synthesized ZnO nanoparticles, Mater. Res. 17 (2) (2014) 405–411.
[43] H.M. Jung, M.J. Chu, Synthesis of hexagonal ZnOnanodrums, nanosheets and nanowires by the ionic effect during the growth of hexagonal ZnO crystals, J. Mater. Chem. 2 (2014) 6675–6682.
[44] J.V. Meshram, V.B. Koli, S.G. Kumbhar, L.C. Borde, M.R. Phadatare, S.H. Pawar, Structural, spectroscopic and anti-microbial inspection of PEG capped ZnO nanoparticles for biomedical applications, Mater. Res. Express 5 (2018) 045016.
[45] K.G. Kanade, B.B. Kale, R.C. Aiyer, B.K. Das, Effect of solvents on the synthesis of nano-size zinc oxide and its properties, Mater. Res. Bull. 41 (2006) 590–600.
[46] J.V. Meshram, V.B. Koli, S.G. Kumbhar, M.R. Phadatare, S.H. Pawar, Anti-microbial surfaces: an approach for deposition of ZnO nanoparticles on PVA-Gelatin composite film by screen printing technique, Mater. Sci. Eng. C 73 (2017) 257–266.
[47] N.L. Gavade, A.N. Kadam, Y. B. Gaikwad, M. J.Dhanavade, K.M. Garadka, Decoration of biogenic AgNPs on template free ZnO nanorods for sunlight driven photocatalytic detoxification of dyes and inhibition of bacteria, J. Mater. Sci: Mater. Electron 27 (2016) 11080–11091.
[48] M.K. Johnson, D.B. Powell, R.D. Cannon, Vibrational-spectra of carboxyl to complexes I. Infra red and Raman-spectra of berrylium(II) acetate and formate and of zinc(II) acetate and zinc(II) acetate dehydrate, Spectrochim. Acta 37 (1981) 899–904.
[49] M. Anandan, S. Dinesh, N. Krishnakumar, K. Balamurugan, Improved photocatalytic properties and anti-bacterial activity of size reduced ZnO nanoparticles via PEG-assisted precipitation route, J. Mater. Sci.: Mater. Electron. 27 (2016) 12517–12526.
[50] C. Janaki, E. Sailatha, S. Gunasekaran, Synthesis, characteristics and antimicrobial

activity of ZnO nanoparticles, Spectrochim. Acta Part A 144 (2015) 17–22.
[51] A.A. Zlovar, Z.C. Orel, K. Kogej, M. Zigon, Polyol-mediated synthesis of zinc oxide nanorods and nanocomposites with poly(methyl methacrylate), J. Nanomater. Volume (2012) 9.
[52] M.J. Chithra, M. Sathya, K. Pushpanathan, Effect of pH on crystal size and photoluminescence property of ZnO nanoparticles prepared by chemical precipitation method, Acta Metall. Sin. (Engl. Lett.) 28 (3) (2014) 394–404.
[53] R. Hachani, M. Lowdell, M. Birchall, A. Hervault, D. Mertz, S.B. Coline, N.T.K. Thanhab, Polyol synthesis, functionalisation, and biocompatibility studies of superparamagnetic iron oxide nanoparticles as potential MRI contrast agents, Nanoscale J. 00 (2013) 1–3.
[54] S. Kazan, E.E. Tanrıverdi, R. Topkaya, S. Demirci, A. Akmana, B.A. Baykal, Magnetic properties of triethylene glycol coated $CoFe_2O_4$ and Mn0.2Co0.8Fe2O4 NP's synthesized by polyol method, Arab. J. Chem. 9 (2016) S1131–S1137.
[55] Zarrindokht Emami-Karvani*, Pegah Chehrazi, Antibacterial activity of ZnO nanoparticle on gram-positive and gram-negative bacteria, Afr. J. Microbiol. Res. 5 (12) (2011) 1368–1373.
[56] Paula Judith Perez Espitia, Nilda de Fátima Ferreira Soares, Jane S.élia dos Reis Coimbra, N.élio José de Andrade, Renato Souza Cruz, Eber Antonio Alves Medeiros, Zinc oxide nanoparticles: synthesis, antimicrobial activity and food packaging applications, Food Bioprocess Technol. 5 (2012) 1447–1464.
[57] O. Yamamoto, Influence of particle size on the antibacterial activity of zinc oxide, Int. J. Inorg. Mater. 3 (2001) 643–646.
[58] A. Eman, R.A. Ahmed, Synthesis of copper nanoparticles with various sizes and shapes: application as a superior non-enzymatic sensor and antibacterial agent, Int. J. Electrochem. Sci. 11 (2016) 4712–4723.
[59] S.G. Goutam, A.K. Yadav, A.J. Das, Coriander extract mediated green synthesis of zinc oxide nanoparticles and their structural, optical and antibacterial properties, J. Nanosci. Technol. 3 (1) (2017) 249–252.
[60] G. Sharmila, C. Muthukumaran, K.S. Sandiya, R. Santhiya, N. Sakthi Pradeep, N. Manoj Kumar, M. Suriyanarayanan Thirumarimurugan, Biosynthesis, characterization, and antibacterial activity of zinc oxide nanoparticles derived from *Bauhinia tomentosa* leaf extract, J. Nanostruct. Chem. (2018).
[61] P.P. Patil, J.V. Meshram, R.A. Bohara, S.G. Nanaware, S.H. Pawar, ZnO nanoparticle-embedded silk fibroin–polyvinyl alcohol composite film: a potential dressing material for infected wound. NJC. 42 (17), pp. 14620–14629.
[62] R.M. Donlan, J.W. Costerton, Biofilms: survival mechanisms of clinically relevant microorganisms, Clin. Microbiol. Rev. 15 (2002) 167–193.
[63] S.R. Shah, A.M. Tatara, R.N. D'Souza, A.G. Mikos, F.K. Kasper, Evolving strategies for preventing biofilm on implantable materials, Mater. Today 16 (2013) 177–182.

Scenario Of Space Debris Management: A Review

K. D. Ahire, P. S. Sarolkar, H. V. Dongare, A. R. Kudale, P. V. Patil

Abstract: Space is always a curiosity for the human being, therefore to understand the space infinity, many countries are actively busy to do deep research in space and trying to develop new technology. But, our active involvement in the space has created a huge quantity of debris in the space. Nowadays, space debris has become one of the major problems for the countries actively engaged in space research and innovations. Therefore, its management is necessary for future space innovation. The present review article focuses on the various possible methods prescribed by some agencies which can be implemented for the removal of space debris. This article is also shown the current scenario of space debris and its management activities tried to carry out by some space research agencies. This review work also summaries that, Space debris management industries have a very great scope in the nearby future.

Index Terms: Space Debris Management, Lasers, Space Tugs, Tethers, Ion Beam shepherd, Solar Sail, Net Capturing.

1. INTRODUCTION

Space debris comprises millions of pieces of man-made material orbiting with the speed of several km per second around the Earth, these space debris poses a growing threat to satellites as well as it may cause serious problem for operational space missions. However, certain measures have been taken to address this global issue, such as internationally adopted debris mitigation guidelines are reducing the introduction of new fragments into Earth's orbit. Still, growing consensus within the space debris community that mitigation is insufficient to constrain the orbiting debris population. In this context, present review article try to show the possible strategies in space debris management.

2 CURRENT STATUS AND CHALLENGES

According to the judgment published by Roger Thompson in 2015, about more than 128 million fragments of debris smaller than 1cm to be in January 2019. There are about 900,000 pieces from one to ten cm. The current rate of large debris is 34,000 were estimated to be in orbit all over the earth [9].

Fig.1 *Space Debris*
(Credit: Business Insider India, 2019)

Due to Earth rotation orbital debris can reach speeds up to 56000 km/h. In recent years, consciousness of the space debris issue has increases considerably by and significant pursuit have been made to reducing the production of new debris through compliance with national and international guidelines. The space safety index identify that the existing normative framework for outer space activities is insufficient to address the current challenges facing the outer space domain.

- *Author[1], Assistant Professor, Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra, India, Contact- +91 9420449975.*
  E-mail: kdahire@siberindia.edu.in
- *Author[2,3,4,5] P. G. Students, Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra, India.*

3 PROBLEM FORMULATION

As one of the major reasons behind formulation of space debris is the race among the countries for the inventions in space research by sending satellites in the space for development purposes like communication, educational, atmospheric study, defense etc. Most space debris comes from breakup events caused by explosions and collision, many of them deliberate. Fragmentation debris is the largest source of space debris. Three countries in particular are responsible for roughly 95% of the debris currently in earth's orbit, viz China (42%), the United States (27.5%) and Russia (25.5%) [8]. The most serious consequence of collisions with space debris is the possibility of a cascade effect or chain reaction in which debris proliferates as collision generate more and more debris indented of any further introduction of man-made objects.[11].

4 IMPACT OF SPACE DEBRIS

Although debris smaller than 1cm in size does not generally pose a danger to space craft, a space craft may survive being hit by fine debris, but such hits can still result in adversity and mission failure. Some times because of the intensive heat space debris can produce nitric oxide, which can deplete ozone [7] and sunlight penetration on earth is reduced. The space debris also can impact on social economics and political aspect [2]. Interference with scientist and other observations can occurs as a result of orbital debris. Debris may also contaminate stratospheric cosmic dust accumulation experiments.

5 SPACE DEBRIS MANAGEMENT

There are two basic classes of action that can minimize the orbital debris burden:

5.1 Preventive measure
5.2 Proposed Space Debris Removal Methods

5.1 Preventive Measures:

The most effective near term measure are to design and operate launch vehicles and space craft so they have minimum potential for exploding or breaking up.

5.1.1 Key aspects of space debris mitigation guidelines:
a) Spacecraft and orbital stages should be designed not to release debris during normal separation.
b) Move satellites in higher orbits which are too far away to re-entry the atmosphere, into a graveyard orbit well outside the region used by active satellites. This would create a protected zone of a few hundred km either side of the geosynchronous orbit ring. [8]

5.1.2 Collision Avoidance:
Tracking information can be used to predict a collision in time for a satellite to manoeuvre out of the way, like, The International Space Station (ISS) performs around one avoidance manoeuvre each year. The Indian space agency told that foundation stone for a Centre to monitor and protect high value space assets from space debris.

5.2 Proposed Space Debris Removal Methods
A few observers have proposed active removal of existing debris. According to NASA, following are some of the proposed methods of debris removal [5].

5.2.1 Lasers:
This method is used to slowing objects using high powered lasers fired from earth where space debris can be vaporized so that they move out of orbit. China has a plan to clean up space Junk with Laser-universe today.

Fig. 2 *Lasers Method*
(Credit: Fulvio314/NASA/Wikipedia Commons)

5.2.2 Space Tugs:
Space tugs refers to using a robotic grappling device on another spacecraft to tug an object to a new orbit or to cause it to re-enter the atmosphere destructively. A space tug is actually a spacecraft that is used to move multiple pieces of debris to disposal orbits in geosynchronous orbit. Artificial Intelligence applications should be used in this type of method.

5.2.3 Tethers:
Tethers refers to using a momentum exchange tether which acts like a swing to pull on objects out of orbit or using an electrodynamics tether which cause a drag on the satellite due to the magnetic field of the earth. A conductive tether also known as an electrodynamics tether which is a long conducting wire that generates electric potential by its motion through the earth's magnetic field. Such tether can be attached to the targeted piece of orbital debris. The current generated by the tether produces a charge that de-orbits the objects causing it to re-enter the earth's atmosphere more quickly can be effective for de-orbiting large objects in low Earth orbit. This method is complex and costly to use.

5.2.4 Ion Beam shepherd (IBS):
The space dynamics groups of the technical university of Madrid (SDG-UPM) are the pioneer in exploring this concept by developing analytical and numerical control models. It is concept in which the orbit or aspects of a spacecraft or a generic orbiting body is modified by having a beam of quasineutral plasma have an effect or impact against its surface to create a force and or a torque on the target. Ion and plasma thrusters commonly used to drive spacecraft placed in vicinity of the target without physical attachment with the latter provides an interesting solution for space applications such as space debris removal and asteroid deflection[2].

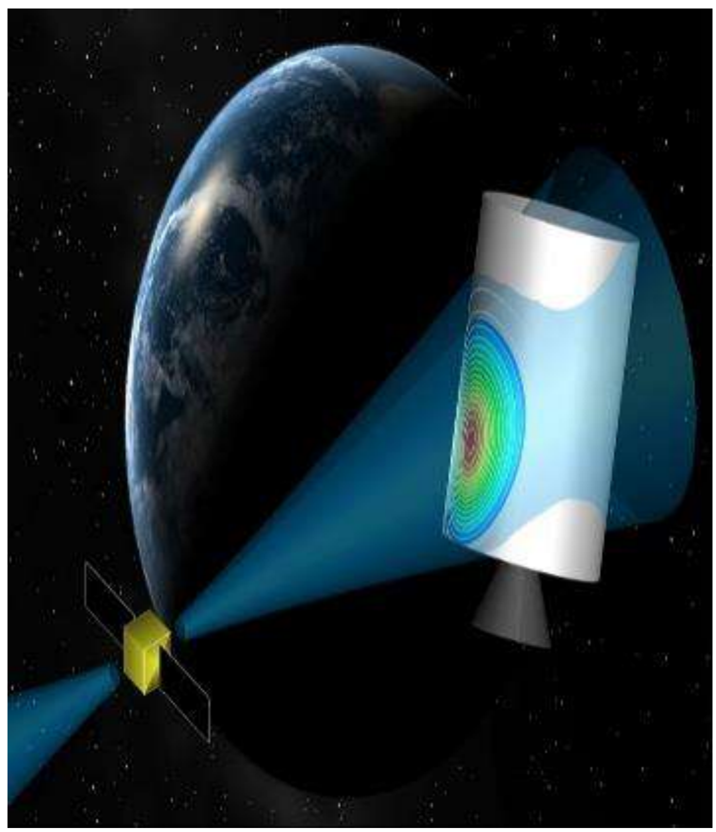


Fig.3 *Ion Beam Shepherd*
(Credit: https://leosweep.upm.es/en/ibs/ibs-concept-applications/31-the-ion-beam-shepherd-concept)

5.2.5 Solar Sail:
Solar sail is also called as light sail or photon sail. This is a method spacecraft, impulse using radiation, pressure, influences by sunlight large mirrors. The cube sail would use the drag of solar sail and to push orbiting space debris down

to the lower orbits.

$$\int_0^{r_2} F(r,\varphi)\, dr\, d\varphi = [\sigma r_2 / (2\mu_0)] \cdot \int_0^{\infty} \exp(-\lambda\,|\,z_j - z_i\,|)\, \lambda^{-1}\, J_1(\lambda\, r_2)\, J_0(\lambda\, r_i)\, d\lambda\,. \quad (1)$$

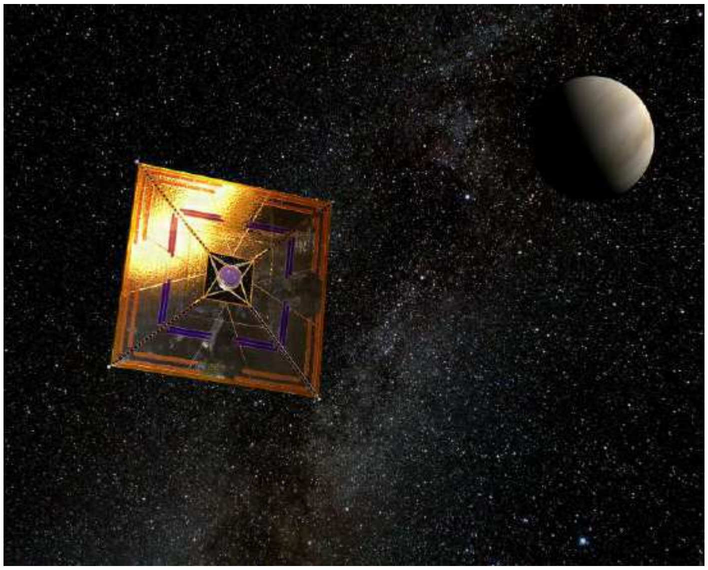


Fig.4 *Solar Sail*
(Credit: https://en.wikipedia.org/wiki/File:IKAROS_solar_sail.jpg)

5.2.6 Net Capturing:
The net is supposed to rotate around the earth and collect the orbital debris, ones the net is pull on the earth gravity would pull it down to the earth-and it well burn up as it is re-entered the atmosphere in the earth. A British satellite has successfully deployed a net in orbit to demonstrate how to capture space debris.

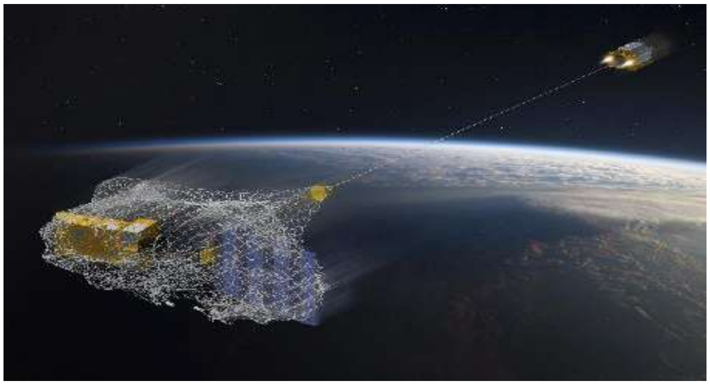


Fig.5 *Net Capturing*
(Credit: ESA's 3.Deorbit mission is developing robotic arms and nets to capture Envisat, the ESA Earth observing satellite that completed its mission in 2012)

6 CONCLUSION
The present review article suggests that space debris management need to be considered as one of the important global issues which will create very high negative and destructive impact on the earth. Space debris management by sustainable manner should be necessary part of space research plan of every country and possible methods need to be applied for the removal of space debris. It may also be concluded that Space debris management industries have very great scope in nearby future.

REFERENCES
[1] Consortium of space companies and research institutions led by Surrey Space Centre at University of Surrey, United Kingdom.
[2] Habimana Sylvester and VR Ramakrishna Parama(2017).Space debris management, Bengaluru 560065 India.
[3] H. Yoshida (senior analyst) M.Araki (Analyst). https//doi.org/10.1016/0094-5765(94), 90271-2.
[4] Johnson Nicholson L &NauerD(1987).History of an-orbit satellite fragmentation, 3d ed, (588-LKD-001), (Teledyne Brown Engineering).
[5] Kessler Donald J (1989).Orbital Debris Monitor, 2(4).
[6] Leonard David (May 19, 2009). Space Littering impact on Earth's atmosphere.
[7] Martin Griffiths (2010). The parliamentary office of science and technology, Postnote (millbank, London), 355 (7).
[8] National Aeronautics and space Administration(NASA). (2008). Orbital Debris Q News.
[9] Roger Thompson (2015).A Space Debris primer, crosslink Aero-space Corp Mon Adv. Aerospace Technology, 16, 7-64.
[10] Space debris by the numbers ESA. (January 2019, Retrieved 5 march 2019).
[11] US Congress, Office of Technology Assessment ,Orbiting debris : A space environmental problem -Background paper, OTA-BP-ISC -72 (Washington, DC:US Government Printing Office), September 1990.

International Journal of Trend in Scientific Research and Development (IJTSRD)
Conference Issue | March 2019 Available Online: www.ijtsrd.com e-ISSN: 2456 - 6470

Fostering Innovation, Integration and Inclusion Through
Interdisciplinary Practices in Management

A Meta-Analysis on Review of Studies on Water Management

Prof Anuradha Gaikwad[1], Dr S. D. Kadam[2]

[1]Assistant Professor, [2]Professor Head Environment Management
[1,2]chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra, India

Organised By:
Management Department, Chhatrapati Shahu Institute of Business Education and Research, Kolhapur, Maharashtra

How to cite this paper: Prof Anuradha Gaikwad | Dr S. D. Kadam "A Meta-Analysis on Review of Studies on Water Management" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Special Issue | Fostering Innovation, Integration and Inclusion Through Interdisciplinary Practices in Management, March 2019, pp.121-125, URL: https://www.ijtsrd.com/papers/ijtsrd23081.pdf

IJTSRD23081

ABSTRACT
Water is one of the most important resources available on this earth that has an influence on human activities. All important aspects such as agriculture, industry, day to day life is dependent on water. It is the most important factor for survival of life on this earth. As such it becomes imperative that we find out what is the status of various studies that have been conducted on various aspects of water management.

The present paper is an attempt to summarise various aspects of issues involved with use and consumption of water and studies involved therein. It focuses on theoretical concepts like definition of water management, compounding of water as well as actual practices of water management in various parts of the world.

INTRODUCTION

Water resource management is the activity of planning, developing and distribution system for managing the optimum use of water resources. World Bank has defined water resources management as development of surface and groundwater resources for urban, rural, agriculture, energy, mining, and industrial uses, as well as the protection of surface and groundwater sources, pollution control, watershed management, control of water weeds, and restoration of degraded ecosystems such as lakes and wetlands. This forms the basic element of their lending, supporting one of the essential building blocks for sustaining livelihoods and for social and economic development in general, (**World Bank, Technical Note, 2003**).

The World Bank document says that Integrated Water Resource Management as Integrated River Basin Management (IRBM) aims to establish a framework for coordination whereby all administrations and stakeholders involved in river basin planning and management can come together to develop an agreed set of policies and strategies such that a balanced and acceptable approach to land, water, and natural resource management can be achieved (World Bank, 2006). According to the Policy document (2012) on water of Government of India -Water resources development and management will have to be planned for a hydrological unit such as drainage basin as a whole or for a sub-basin, multi-sect orally, taking into account surface and ground water for sustainable use incorporating quantity and quality aspects as well as environmental considerations. Environmental and ecological concerns are equally important and have to be addressed while managing water resources. Egemen and Aras (2009) have stated in their paper that as the demand of the society with respect to both ecological and chemical quality of Specific River stretches, its use and protection increases, it leads to new views and strategies towards policy for river basin management. Akpabio (2007) has reported that integrated water resources management involves the co-coordinated development, allocations, use and management of water, and related natural resources in order to meet present and future human needs whilst maintaining the functioning of vital ecological systems. Integrated Water Resources Management (IWRM) has been defined by the Global Water Partnership (GWP) as "a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems" Over the last decades river basin management has become increasingly complex. Moreover, stronger, better and more efficient interlinked institutions will be required to handle the increased level of complexity (UN Jobs and Water 2016).

The Sydney Catchment Authority - Catchment Management Report 2007-2008 basically talks about practices for catchment management. Information about following aspects is collected: extent of gully and soil erosion, extent, type and condition of land cover and use, condition of native vegetation, condition of riparian vegetation, extent and severity of wildfires and hazard reduction burns, biomass of potential fire fuel loads, extent of priority weed species.

In the past no such system or procedure is found in India to manage either water or land resources. Thus it becomes very difficult to scientifically evaluate the efficiency of water management in India.

The United Nations Department of Economic and social Affairs came out with Status Report on 'The Application of Integrated Approaches to Water Resources Management' on the issue of water management and this is what they have to say: 54% of Very High Human Development Index (HDI) countries, 44% of medium and high HDI countries and 24% of low HDI countries reported high economic impacts from integrated approaches to water resources management (2002).

Gupta (2001) states in his article on Integrated Water Management that till very recently the Planning Process was dominated more by considerations of economic development. In 1996, the Working Group of the International Hydrological Program (IHP) of UNESCO defined sustainable management of water resources as "The management and use of water that supports society and its well-being into the indefinite future without degrading the integrity of the hydrological cycle or the ecological systems that depend on it".

The perceptions of what is required for sustainable water resources management and sustainability science in general have undergone major changes over the past decade. These are: An integrated approach expanding the scope of water protection to all waters, surface waters, and groundwater;

The hydrological principle where water management is based on river basins; The obligation to achieve a good status by 2015;

A "combined approach" of emission limit values and quality standards; Getting the prices right by introducing the principle of cost recovery; Getting citizens involved more closely by prescribing public participation in the development.

In India most of the systems of water management seem to be based on the Tennessee Valley Authority (TVA) approach of United States where the focus was more on compounding and distribution of water rather than sustainable water management (Tortajada, 2001) It is essential that the concept of sustainable water management is studied in totality so as to ensure water based livelihood for the further generations.

Water footprint

Traditionally the terms ground water and surface water have been used to denote water present in aquifers and rivers (also rivulets, streams, ponds) respectively. Of late two new concepts the green water and blue water have come into existence. Both surface water and ground water are denoted as blue water while water present in evapo transpiration cycle (water present in trees, crops and other vegetation) has been termed as green water (Taiekan Oki, et al, 2006). The water footprint of India is 987 m3 / cap / yr ie. A break up of the water footprint in terms of consumption of water shows that highly developed countries use more water for production of industrial goods while in a country like India 92 % of water is used for consumption of agricultural goods (Hoekstra, Chapagain, (2007). Hence an understanding the concept of water footprint is essential to understand and analyse water consumption patterns of irrigation. Another fact is that increased water usage leads to increased economic growth (Hoekstra, 2004) and impacts the water footprint of a nation.

There is absence of literature that has calculated water footprint of various states or districts in India or studied this concept for regions in India.

Environmental Flows

The water policy briefing of International Institute of Water Management clearly spells the dangers of reduced environmental flows. Continuous water supply through appropriate adoption of management strategies that do not destroy the natural ecosystems and environment) should be developed (Laddo, 1997)

In the district of Kolhapur special types of weirs have been constructed on the river itself that regulate the flow of water. This has been responsible in altering the natural flow of water as well as impacted the movement of fish across the river. It has also resulted in increasing the intensity of pollution at periodic intervals due to artificial compounding of water.

The tenth plan gives an importance to "Regulating ground water use on a sustainable basis in order to avoid indiscriminate drawing of ground water will be a priority in the Tenth Plan, as overexploitation of ground water is causing various complications like sharp fall in the water table." The Report of the Working Group on Water Resources for the XI Five Year Plan (2007-12) – Government of India briefly discusses the pattern of development over the successive plan periods reflecting the gradual change from total thrust on construction of new projects in the early plan periods to completion of ongoing projects, command area development, renovation and modernization of the existing projects.

Value of water

Another important consideration is the value water has for all its stakeholders. According to UNESCO the value of water can change from case to case basis or on stakeholder perspective (Shatanawi, 2011). The business world and the industry are more associated with the monetary value of water while the society is more akin to day to day usage for their basic needs and recreational use. The Dublin principle established in1992 specifically states that water has an economic value and therefore should be acknowledged as an economic good (Rohani, 2013). Water has multiple uses. The cultural and social values are often in conflict with the economic values of water (Young, 2005)

It is thus essential to find the value of water for people in any given region. This will help in finding out their opinions regarding value, usage and cost of water which are essential to come to conclusion about sustainable water management.

Water and Economic Growth

A document prepared for the HSBC by Frontier Economics explores the relationship between water and economic growth. Agriculture is responsible for 92 % of the total water footprint in the world while drinking water and industrial usage accounts for the remaining 8 % (Hoekstra et el, 2012). It is quite obvious that productivity of agriculture is dependent on water resources and an attempt has been made to find the relationship if any between the availability of water and the increase in economic indicators. As such effective management of water supply is a key element that should be incorporated into national employment Policy. Scarcity of water could negatively affect growth (Barbier, 2004). Proper utilisation of water can take place only through proper, holistic and sustainable management of water resources. India has a Seasonal Storage Index of 356.6 and GDP of 555 US dollars (Year 2003)In all industrial countries, the flows of almost all major rivers are regulated and managed, storing water for multiple uses, reducing peak flows, increasing low flows and protecting water quality, thus reducing the risk of water-related shocks and damage, increasing the reliability of water services for production, and reducing other negative impacts, such as disease (Gray 2006).Water and economic growth are linked to each other and as such scarcity of water would lead to lack of growth and development. The water management and water utilisation therefore needs to be studied. Water is a finite resource and one can only improve efficiency of yield using various techniques of irrigation but one can't per say increase the quantum of water. To ascertain the impact of water availability on life people the researcher has taken help of socio-economic indicators like literacy levels, number of children going to school, life expectancy levels, the income generated (EPW Research Foundation development indicators for India, 1994)

Thus though a lot of people have worked on the issue of water management, it is difficult to find work on the relationship between water availability and increase in socio economic indicators. Most of papers accessed for the literature review are non-Indian. One can find instances of work on water pollution, integrated river water management with respect to irrigation but not on socio-economic impact of water availability. Whatever literature is available; is again for countries other than India. If we look at the GDP data we do find an increase in it. Economic indicators also show steady rise in per capita income of the district of Kolhapur. But a clear relation between the two should be documented. Thus an extensive research would be fulfilling a major gap with respect to planning for river water resource management. The relation between socio economic development and availability of water resources will also have to be established. An overall holistic approach towards water management would then emerge from the research study.

References

[1] Behera Deepak Kumar, (2016), Measuring Socio-Economic Progress In India: Issues And Challenges, Revista Galega de Economia Vol. 25-2

[2] Bruntland Commsion (1987), our Common Future

[3] Brown Casey and Lall UPmanu, (2006), Water and economic development: The role of variability and a framework for resilience, Natural resources Forum, 306 – 317 https://doi.org/10.1111/j.1477-8947.2006.00118.x

[4] Brown Casey, Meeks Robyn, Ghile Yonas, Hunu Kenneth, (2013), Phil. Trans. R. Soc. A 2013 371 20120416; DOI: 10.1098/rsta.2012.0416. Published 30 September 2013

[5] Chaturvedi M. C. 1987. Water Resource Systems Planning and Management: Chapter 1 Introduction. Tata McGraw –Hill Publishing company Ltd: New Delhi.

[6] Davis Richard, Hirji Rafik (2003), Environmental Flows: Concepts and Methods Series Water Resources and Environment :Technical Note C.1 Environmental Flows: Concepts and Methods series editors

[7] Egemen, Togan Vedat, Berkun Mehmet. 2007. River water quality management model using genetic algorithm: Environ Fluid Mech, 439-50. Retrived 29th May, 2009 from Sringer Link database.

[8] Emmanuel M. Akpabio, Nigel M. Watson, Uwem E. Ite and Imoh E. Ukpong. 2007. Integrated Water Resources Management in the Cross River Basin, Nigeria: Water Resources Development, Vol. 23, No. 4, 691–708. Retrieved 29th May from INFLIBNET India Order.

[9] EPW Research Foundation. (1994). Special Statistics-8: Social Indicators of Development for India-II: Inter-State Disparities. *Economic and Political Weekly, 29*(21), 1300-1308. Retrieved from http://www.jstor.org/stable/4401238

[10] EPW Research Foundation. (1994). Special Statistics-7: Social Indicators of Development for India: I. *Economic and Political Weekly, 29*(20), 1227-1240. Retrieved from http://www.jstor.org/stable/4401207

[11] Fallenmark Malin (2013), Growing water scarcity in agriculture: future challenge to global water security, Phil. Trans. R. Soc. A 2013 371 20120410; DOI: 10.1098/rsta.2012.0410. Published 30 September 2013

[12] Five year plan Report of the Working Group On Water Resources For the XI Five Year Plan (2007-12) – Government of India

[13] Five year plan 10th – Government of India

[14] Five year plan 11th – Government of India

[15] Five year plan 12th – Government of India

[16] Gupta, Rajiv K. (2001)'River Basin Management: A Case Study of Narmada Valley Development with Special Reference to the Sardar Sarovar Project in Gujarat, India', International Journal of Water Resources Development,17:1,55 — 78

[17] Gupta and Sharma,(2010). Indian Journal of Agriculture Economics. Vol 65 No. 2 April June 2010 Dynamics of Land Utilisation, Land degradation and factors determining Land Utilisation in HP.

[18] HSBC – Frontier Economics: Executive Summary, 2012, exploring the links between water and economic growth – A report.

[19] Hardin Garett The Tragedy of the Commons Science 162 (3859), 1243-1248 DOI: 10.1126/science.162.3859.124

[20] Hoekstra AY, Mekonnen MM, Chapagain AK, Mathews RE, Richter BD (2012) Global Monthly Water Scarcity: Blue Water Footprints versus Blue Water Availability. PLOS ONE 7(2): e32688. https://doi.org/10.1371/journal.pone.0032688

[21] Hoekstra, A. Y. and Mekonnen, M. M. (2011) Global water scarcity: monthly blue water footprint compared to blue water availability for the world's major river basins, Value of Water Research Report Series No. 53, UNESCO-IHE, Delft, the Netherlands.

[22] International Bank for Reconstruction and Development/ The World Bank (1995), Social Indicators of Development

[23] Kumar Rakesh, Singh R. D. and Sharma K. D. (2010), Water resources of India: National Institute of Hydrology, Roorkee 247 667, India. Current Science, Vol. 89, No. 5, 10 September 2005 accessed via internet. On 5th sep 2010.

[24] Lado Cleophas (1997), Socio-economic factors influencing sustainable water supply in Botswana Author(s): Source: GeoJournal, Vol. 41, No. 1 (January 1997), pp. 43-53Published by: Springer Stable URL: http://www.jstor.org/stable/41147024. Accessed: 13/03/2014 07:01

[25] Maharashtra Government, (1989), Chapter 4, Maharashtra State Gazetteer Kolhapur District, published by Maharashtra Government.

[26] Maharashtra Pollution Control Board, (2004 – 2005), Chapter 9, Environmental Status Report Kolhapur Region, published by MPCB, pg 88

[27] Maharashtra Pollution Control Board, (2006), Chapter 6, White Paper on Pollution of River – Causes and Remedies published by MPCB, pg 305.

[28] Narayanmurthy A, (1997), Economic Viability of Drip Irrigation: An Empirical Analysis from Maharashtra, Indian Journal of Agricultural Economics; Bombay Vol. 52, Issue. 4

[29] National water Policy 2002 Government of India.

[30] Pahl- Wostl, MOstert C E, Tabara D. (2008), The growing importance of social learning in water resources management and sustainability science. *Ecology and Society* 13(1): 24. [online] URL: http://www.ecologyandsociety.org/vol13/iss1/art24/

[31] Rodriguez Martín, José Antonio, Holgado Molina, María Del Mar, Salinas Fernández, José Antonio, (2012), An Index of Social and Economic Development in the Community's Objective-1 Regions of Countries in Southern Europe, European Planning Studies, , Vol. 20 Issue 6, p1059-1074. 16p. 3 Charts 0965-4313; DOI: 10.1080/09654313.2012.673571, Accession Number: 76374208, Database: Entrepreneurial Studies Source

[32] Rohani M (2013), Freshwater Values Framework, A Review of Water Valuation Methods, Utilised Within Total Economic Valuation February 2013Working Report 2013/001

[33] Shatanawi M and Naber S , (2011), Dialogues on Mediterranean Water Challenges: Rational Water use, water price, water price versus value and lessons learned from the European Water Framework Directive, Valuing Water from Social , Economic and Environmental Perspective, pg 109 – 117.

[34] Shinde R. V. (1992) Studies on Hydrobiology of Panchaganga River System, Chapter 1 & 6, Division of Environmental Biology, Department of Zoology, Shivaji University

[35] Singh Prasoon Kumar , Bhakat Dipanwita , Singh Gurdeep (2011) Assessment of Groundwater Resources of Panandhro Lignite Mining Region, Gujarat State, India, International Journal Of Environmental Sciences Volume 1, No 7, 2011

[36] Skovlin Jon M. and Jain R. K. (1990), Range Management Stable, Source: Rangelands, Vol. 12, No. 5 (Oct., 1990), pp. 275-277Published by: Allen Press and Society for URL: http://www.jstor.org/stable/4000481Accessed: 06/09/2010 02:50.

[37] Society at a Glance (2009): The Organisation for Economic Co-operation and Development Social Indicators M2PressWIRE, Apr 26, 2010: Database: Newspaper Source Plus

[38] South Asia Network on Dams, Rivers and People (1999), River Basins Organisations in India – Institutional Frameworks and Management Options. - A Case for Fundamental Review. November 99 issue.

[39] Stuart E. Bunn* & Angela H. Arthington (2001), Basic Principles and Ecological Consequences of Altered Flow Regimes for Aquatic Biodiversity Cooperative Research Centre for Freshwater Ecology, Centre for Catchment and In-Stream Research Faculty of Environmental Sciences Griffith University Nathan, Queensland, Australia 4111

[40] Sukhpal Singh (2000) : Economic and Political Weekly, Vol. 35, No. 23 (Jun. 3-9, 2000), pp. 1886-1889, Published by: Economic and Political Weekly Stable URL: http://www.jstor.org/stable/4409348Accessed: 06/09/2010 02:57

[41] Sydney Catchment Authority (2008) Catchment Management Report 2007-2008

[42] Taikan OKI, et al, (2006) Global Hydrological Cyles and World Water Resources, cienc 313,1068, DOI 10.0026/Science. 1128845

[43] Tortajada Cecilia (2001), Institutions for Integrated River Basin Management in Latin America : Water Resources Development, Vol. 17, No. 3, 289–301, 2001

[44] UNEP 2012. The UN-Water Status Report on the Application of Integrated Approaches to Water Resources Management.

[45] United Nations Economic And Social Council,(1984) Chpater I -Definition, Selection And Use Of Socio-Economic Indicator

http://repository.uneca.org/bitstream/handle/10855/14513/Bib-56066.pdf?sequence=1

[46] UNESCO, (1976) The use of socio-economic indicators in development planning, The Socio-economic indicators for development planning by M . V. S. Rao, UNESCO Press Paris 1976,

[47] WWAP (United Nations World Water Assessment Programme). 2016. The United Nations World Water Development Report 2016: Water and Jobs. Paris, UNESCO.

[48] "Water for Growth and Development." David Grey and Claudia W. Sadoff in Thematic Documents of the IV World Water Forum. Comision Nacional del Agua: Mexico City. 2006.

[49] World Bank (2006) Integrated River Basin Management Briefing Note 1, An Introduction to Integrated River Basin Management

[50] Yanni Gunnell., Comparative regional geography in India and West Africa: Soils, Landforms and Economic Theory in agricultural development strategies.

[51] Young Robert A (1931), Determining the Economic Value of Water: Concepts and Methods, Resources for the Future, USA.

[52] Zuo Qiting, Zhou KeFa, Xia Jun, Chen Xi & Wang Yong Qin Xinjiang (2007), A quantified study method and its application to sustainable management of water resources in arid basins, Science in China Series D: Earth Sciences © 2007 Science In China Press Springer www.scichina.com www.springerlink.com Sci China Ser D-Earth Sci | June 2007 | vol. 50 | Supp. I | 9-15

[53] http://hdr.undp.org/en/content/human-development-index-hdi

[54] http://www.economicsonline.co.uk/Global_economics/Economic_development.html

[55] https://en.wikipedia.org/wiki/Economic_development

[56] http://shodhganga.inflibnet.ac.in/bitstream/10603/23739/9/09_chapter_03.pdf

'RESEARCH JOURNEY' *International E- Research Journal* | E-ISSN : 2348-7143
Impact Factor - (SJIF) – 6.625 (2019) | January 2020
Special Issue 222 (A)
Peer Reviewed Journal

Employee Stress Analysis among Manufacturing Units in Kolhapur

Dr. C. S. Kale
Assistant Professor
CSIBER, Kolhapur

Introduction :

Stress is a factor causing tension in an individual. It can be internal or external. When the individual faces huge demands, lot of constraints and lack of opportunities to grow the stress crops up. Emotional imbalance and threats cause stress in individuals. It has effect on health, performance and productivity of the individual.

Sources of stress are high expectations of performance at work, work pressure, increasing responsibilities at work and home, bad health of employees, poor peer relationships, defective organizational policies and rules etc.

Relation between Stress and Employee Performance :

In the comfort zone when the stress is manageable, initially as the stress increases the performance level increases. After the fatigue point the stress appears to be very high and the employee starts feeling very tired, sad, anxious leading to the arousal of negative feelings and the performance starts declining.

Objectives of the study:

- To know level of stress in the employees of selected organizations.
- To find out the reasons for stress among the employees in the selected organizations.
- To study impact of stress on performance of employees in the selected organization.
- To give suggestions if any to reduce stress among the employees .

Research Design :

<table>
<tr><th>Particulars</th><th colspan="2">Details</th></tr>
<tr><td>Population</td><td colspan="2">Manufacturing units with more than 500 employees in Shiroli M.I.D.C Kolhapur . There are 10 units fulfilling this criteria.</td></tr>
<tr><td>Sample unit</td><td colspan="2">Out of this population three manufacturing units were selected by lottery method.
10 % of the employees were Selected for the study.
In each of three companies, employees were selected by systematic random sampling .</td></tr>
<tr><td rowspan="5">Sample size</td><td>Selected Units</td><td>Selected employees</td></tr>
<tr><td>The Kolhapur Steel Ltd</td><td>51</td></tr>
<tr><td>Mantri Metallic Pvt Ltd</td><td>56</td></tr>
<tr><td>Yash Metallic Pvt Ltd</td><td>53</td></tr>
<tr><td></td><td>160</td></tr>
<tr><td>Data collection method</td><td colspan="2">Interview method</td></tr>
<tr><td>Tools for analysis</td><td colspan="2">Chi square test</td></tr>
</table>

'RESEARCH JOURNEY' *International E- Research Journal* | E-ISSN : 2348-7143
Impact Factor - (SJIF) – 6.625 (2019), Vol. 6, Issue 4 (A) | Oct.-Nov.-Dec. 2019
Peer Reviewed Journal

A Study on Onion and Potato Exports Performance from India

Dr. C. S. Kale
Asst. Professor
CSIBER, Kolhapur
Email ID: cskale@siberindia.edu.in
Mobile No.: 9822538788

Dr. G. Haresh
Associate Professor
CSIBER, Kolhapur
Email ID: drgharesh@siberindia.edu.in

Introduction:

Essentially, export performance of onion and potato from India play a significant role in the international trade of India. In this paper an attempt has been made by the researchers to highlight the importance of both onion and potato export performance, which are as follows. Section-A deals with onion exports and Section-B deals with potato exports.

Section-A: ONION Exports

Onion is one of the most important vegetable cum CONDIMENT crops of the LILIACEAE family grown in India. ONION has grown to become an important ingredient in the global diet and its production has emerged as the FORTE of developing countries. India is the second largest producer of onion in the world, producing about 10.4 percent of global onion production preceded by China, which contributes about 31.8 percent of total global production in 2006. A large variety of vegetables are grown in India. India is the second largest producer of vegetables in the world. Onion is the third most important commercial vegetable crop covering an area, of 0.695 million hectors of land, with a production of 9.2 million tons, contributing 9.7 percent of the area and 8.5 percent of the production in total vegetable production of India in 2010-11.

Onion has three major seasons of harvest that is Kharif, Late Kharif and Rabi. More than 60 percent production comes from Rabi crop and the rest from the other two seasons. Maharashtra ranks first in onion area under cultivation and production in India and contribute 22.15 percent and 20.31 percent respectively in 2010-11. Erratic weather and volatile market price is the major factors causing fluctuation in production which result in excess supply or demand. This in turn leads to instability in production which results in excess supply or demand.

Onion is cultivated all over the country for the both domestic consumption and as well as for the export purposes. Major onion growing states in India are Maharashtra, Uttar Pradesh, Karnataka, Gujarat, Bihar, Madhya Pradesh, Tamil Nadu, Rajasthan and Andhra Pradesh. These nine states accounts for 87 percent of area and production of onion in the country (NHB Report 2011). Out of these, the States of Maharashtra and Karnataka account for 50 percent.

As far as the World, context India is the second largest producer of in the World next to China according to 2015 FAO estimates, India contributes, newly 19.25 percent of World onion production. Though the second largest onion producer, India significantly lags behind in the productivity or yield of the onion.

'RESEARCH JOURNEY' International E- Research Journal | E-ISSN : 2348-7143
Impact Factor - (SJIF) – 6.625 (2019), Vol. 6, Issue 4 (A) | Oct.-Nov.-Dec. 2019
Peer Reviewed Journal

A Study on Onion and Potato Exports Performance from India

Dr. C. S. Kale
Asst. Professor
CSIBER, Kolhapur
Email ID: cskale@siberindia.edu.in
Mobile No.: 9822538788

Dr. G. Haresh
Associate Professor
CSIBER, Kolhapur
Email ID: drgharesh@siberindia.edu.in

Introduction:

Essentially, export performance of onion and potato from India play a significant role in the international trade of India. In this paper an attempt has been made by the researchers to highlight the importance of both onion and potato export performance, which are as follows. Section-A deals with onion exports and Section-B deals with potato exports.

Section-A: ONION Exports

Onion is one of the most important vegetable cum CONDIMENT crops of the LILIACEAE family grown in India. ONION has grown to become an important ingredient in the global diet and its production has emerged as the FORTE of developing countries. India is the second largest producer of onion in the world, producing about 10.4 percent of global onion production preceded by China, which contributes about 31.8 percent of total global production in 2006. A large variety of vegetables are grown in India. India is the second largest producer of vegetables in the world. Onion is the third most important commercial vegetable crop covering an area, of 0.695 million hectors of land, with a production of 9.2 million tons, contributing 9.7 percent of the area and 8.5 percent of the production in total vegetable production of India in 2010-11.

Onion has three major seasons of harvest that is Kharif, Late Kharif and Rabi. More than 60 percent production comes from Rabi crop and the rest from the other two seasons. Maharashtra ranks first in onion area under cultivation and production in India and contribute 22.15 percent and 20.31 percent respectively in 2010-11. Erratic weather and volatile market price is the major factors causing fluctuation in production which result in excess supply or demand. This in turn leads to instability in production which results in excess supply or demand.

Onion is cultivated all over the country for the both domestic consumption and as well as for the export purposes. Major onion growing states in India are Maharashtra, Uttar Pradesh, Karnataka, Gujarat, Bihar, Madhya Pradesh, Tamil Nadu, Rajasthan and Andhra Pradesh. These nine states accounts for 87 percent of area and production of onion in the country (NHB Report 2011). Out of these, the States of Maharashtra and Karnataka account for 50 percent.

As far as the World, context India is the second largest producer of in the World next to China according to 2015 FAO estimates, India contributes, newly 19.25 percent of World onion production. Though the second largest onion producer, India significantly lags behind in the productivity or yield of the onion.

Published 2019: PP: 8-15

ISBN: 978-93-5351-464-8

T. Q. M. A Means of Sustainable Development in Higher Education

Dr. C. S. Kale
Asst. Professor, CSIBER, Kolhapur
Mobile no: 9822538788
Email: cskale@siberindia.edu.in

ABSTRACT

In today's business achieving superior product/service quality within a business requires a long term process of changing the culture of the organization. The concept of Total quality management is seen as an effective method that can accomplish the task of higher quality levels and increased productivity.TQM has been accepted worldwide as the best methodology for ensuring "Quality".

The need for quality in education system is necessary in today's life. Educational institutions are intimately linked with the society at large. They are the temples of knowledge; they are the agents of change and transformation. Therefore, the general condition of educational institution is a matter of great concern to the nation." Many international observers tend to see education as one of India's biggest advantages. India has been able to create a large base of educational institutions and some of them are known to be excellent. We find today that our capacity and capabilities in higher education are woefully inadequate to meet the needs of a fast growing knowledge based economy of 21st century.

The TQM principles are applicable to education also. "Four Pillars of Total Quality Management" Are discussed here.. The first pillar of TQM to education emphasizes the synergistic relationship between the "suppliers" and "customers". The second pillar of TQM applied to education is the total dedication to continuous improvement, personally and collectively. The third pillar of TQM as applied in academics is the recognition of the organization as a system and the work done within the organization must be seen as an ongoing process. The fourth TQM principle applied to education is that the success of TQM is the responsibility of top management.

KEYWORDS Quality Management, Synergistic Relationships, Continuous Improvement, Leadership, Self Evaluation

Aayushi International Interdisciplinary Research Journal (AIIRJ) Special Issue: 49 ISSN 2349 -638x

AN OVERVIEW OF EMERGING TRENDS IN DIGITAL MARKETING IN INDIA

Dr. Sudhakar D. Bhoite
Associate Professor,Dept.M.Phil (Com & Mgt) CSIBER, Kolhapur
sdbhoite@rediffmail.com
Mr. Omkar N. Pethakar
M. Phil. Research Scholar, CSIBER, Kolhapur
pethakaromkar@gmail.com

Abstract:

In this booming age of dynamic change in technology marketers are relying more on the modern approach over being traditional. The Indian market is very huge and changing fast. The main advantage of digital marketing is getting to the target customers in real time. In India, peoples are spending more and more time on internet and day by day it is increasing rapidly. Digital marketing tools play vital role in their daily life. Every year we see the up and down of different trends that force the digital marketing world to evolve. Marketers should change their traditional marketing strategies to take competitive advantage.

Keywords: *E-Commerce, Online Marketing, Marketing Strategy*

I. Introduction

Digital Marketing trade in India is unfold to most of the business sectors. The growth in the online marketing trends is creating a substantial impact on marketing and advertisement. Digital Marketing means a term given to any variety of marketing products/services through online channels. Simply, Connecting and Marketing to the customers using online channels like website, apps, search engines, emails and social media is called Digital Marketing. The main difference of Digital marketing from traditional marketing is, it involves the use of digital channels and methods that enable organisations and businesses to telecommunication sector is also playing an important role in the digitalization of India. The free & unlimited internet facilities launched by reliance telecom Jio has played a revolutionary roll. The other telecom companies like BSNL, Vodaphone , Idea, & Airtel are also offering very attractive internet plans. Now a days, Indian banks are providing a lot of customer friendly & secure money transaction services too. People are spending most of their times online compared to previous years. So being present on the digital devices is a need of businesses, which will help for more opportunities and growth. Digital Marketing has a lot of opportunities for business

Digital Marketing is now a very important part of the Indian Economy. India is a fast paced nation towards digital economy and this has been accelerated with the demonetization of the Indian Currency in the year 2016. Indian government has launched various digital payment promotion schemes which motivated people in India to use more online medium. The

online medium than traditional marketing methods. The main key players in Digital marketing are government, banking system, Shopping Portal in India, Internet Service Providers and Software Service Providers. Digital market needs digital marketing and promotion strategies. The recent Developing Digital Skills 2018 report showed, more

marketers are now spending their more than 50% time of on digital marketing activities and also two of the three top job roles in marketing are related to digital, so it clearly indicates digital skills are needed for every managers and marketers.

Digital marketing techniques includes Website, Search Engine Optimisation(SEO),Search Engine Marketing(SEM), Social Media, Content Marketing, Mobile Marketing, Email Marketing, Blogging, Affiliate Marketing, Remarketing and Analytics.

a) Website:

Website is nothing but online address of your company. Every business should have proper responsive website to take advantage of Digital

very powerful due to population of India. So social media optimisation is the need of every business.

e) Content Marketing:

Content is the king of digital marketing. Content should be catchy and crispy. A good content is liked and shared very rapidly. So create content for various social media platforms are very important. Businesses need to engage their customers on a daily basis at least two to three times a day using blogs, articles, social media posts.

f) Mobile Marketing:

The mobile users are increasing day by day. The content, website, apps is being customized for mobile devices. People prefer Mobiles, Tabs instead of computers, Laptops so mobile

2020 – 21

Adaptive Learning System enabled by Machine Learning: An Effective Pedagogical Approach

3 authors:

Shruti Jamsandekar
CHHATRAPATI SHAHU INSTITUTE OF BUSINESS EDUCATION AND RESEARCH

Rajani S Kamath
Chh. Shahu Institute of Business Education & Research

Vidya L Badadare
CHHATRAPATI SHAHU INSTITUTE OF BUSINESS EDUCATION AND RESEARCH

Adaptive Learning System enabled by Machine Learning: An Effective Pedagogical Approach

S.S.Jamsandekar, R.S. Kamath, V. L Badadare

ABSTRACT

Machine Learning techniques are enabling personalized learning environment to effectively promote the development of adaptive learning. Technology enhanced pedagogy enables real time monitoring of learners' learning related activities. In view of this authors present practically realizable adaptive learning system leveraged by machine learning and graph theory. The model proposeduses a data driven approach to enable personalized learning with adjusted learning paths for each learner based on the pace of learning and knowledge level. To be specific, four adaptive learning models such as content model, learner model, adaption model and interface model are explored. The learner model utilizes data mining and deep learning techniques to do the user modeling process based on learner's featuresand the adaption model based on the learner engagements through user interface and learners acquired knowledge does the course content organisation and learning sequence of course content using an ensemble approach of graph theory and neural networks On this basis,a framework of adaptive learning system is proposed.

INTRODUCTION

Adaptive learning is a platform that aims to provide well-organized, effective, and personalised learning paths to engage each student. This allows each student to learn at its own pace compared to traditional classroom teaching learning or other e-learning instructional modes.This mode also scales up learner engagement where by early adopters can master the concepts by skipping the contents which they already know, also this saves their time to reach the proficiency. At the same a slow learner can take a different path to get their subject concepts clear until they are confident about it.

This way, learner not only improve their knowledge, they also gain confidence in that knowledge, "Adaptive learning enhances all aspects of learning". Charles Fadel, [1]founder of the Center for Curriculum Redesign, has defined education as encompassing four dimensions:

Kanpur Philosophers
ISSN 2348-8301
International Journal of humanities, Law and Social Sciences
Published biannually by New Archaeological & Genological Society
Kanpur India

Vol. VIII, Issue I (Summer) 2021

RECORD MANAGEMENT SYSTEM IN HEALTHCARE: DOMAIN SPECIFIC ANALYSIS AND REVIEW

Mrs. V. L. Badadare
Asst. Prof., Dept. of Computer Studies
CSIBER, Kolhapur (Maharashtra).
Dr. A. M. Shaikh
Head, Dept. of Electronics
The New College, Kolhapur (Maharashtra).
Dr. R. S. Kamath
Asso. Prof., Dept. of Computer Studies
CSIBER, Kolhapur (Maharashtra).
Dr. S. S. Jamsandekar
Asst. Prof., Dept. of Computer Studies
CSIBER, Kolhapur (Maharashtra).

Abstract
In this digital era, everyone is desiring one click service access. Healthcare is one of the thriving sector, where digitization is entered through wearables, mobile apps and Record Management Systems. And the public is getting easier access to various healthcare services in their turbo lifestyle. This in consequence leads to generation of massive amount of data which requires proper handling for future use. Along with digitization of Patient Records, one should focus on security facet as medical records may contain some sensitive data. So, Authors have done analysis of the current status of Record Management in Healthcare Sector and accordingly tried to find loopholes in present system, though it is computerised.
Keywords: Health Record Management, Double spending

Introduction

In fact a medical record of any patient is formal and crisp documentation, enclosing all the information regarding diagnosis, treatment as well as medical tests, scan reports etc. The Health record belongs to the patient while these records are under the care and responsibility of the doctors and health institutions. So, both the parties are closely related to Health Record Management System. And these records are having paramount importance as it will help in any medical issues arise in future.

Nowadays, the management of Patient health records has become easier through advanced technologies. And these improved technologies have expanded the demand for the collaborative sharing of medical records among healthcare professionals.

But this collaborative sharing of Electronic Medical Records deal with lots of challenges like:

- Refusal to information by the possible users
- Difficulties or lack of access to software, and

International Journal of Trend in Scientific Research and Development (IJTSRD)
Volume 4 Issue 4, June 2020 Available Online: www.ijtsrd.com e-ISSN: 2456 – 6470

A Study of Noise Pollution in Kolhapur City with Special Reference to Silence Zone

Kamble P. V.[1], Patil. G. T[1], Er. Mali. D. S.[2]

[1]Department of Environment Management, Chhatrapati Shahu Institute of Business Education and Research (CSIBER) University Road, Kolhapur, Maharashtra, India
[2]Associate Professor, Department of Environment Management, CSIBER, Kolhapur, Maharashtra, India

ABSTRACT

When the sound level goes beyond limit and become unwanted to hear and disrupts the quality of life then we call it as noise. World health Organization (WHO) 2001 stated that noise must be recognized as major threat to human being. The objective of present study was to monitor the noise level in silence zone in the Kolhapur city. Total six different locations which are in silence zones has been selected in the city to measure the noise level and after statistical analysis the data was compared with standards prescribed by Central Pollution Control Board (CPCB). The study reveals that the noise level in respective locations was found to be higher than permissible limit and it ranges between 59.22 dB (A) to 78.50 dB (A).

KEYWORDS: *Noise Pollution, Silence zone, CPCB etc*

How to cite this paper: Kamble P. V. | Patil. G. T | Er. Mali. D. S. "A Study of Noise Pollution in Kolhapur City with Special Reference to Silence Zone" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-4 | Issue-4, June 2020, pp.511-514, URL: www.ijtsrd.com/papers/ijtsrd31031.pdf

IJTSRD31031

INTRODUCTION

Noise pollution is generally defined as exposure of elevated sound levels that may lead to adverse effects in human and other living creatures. The expression of noise was introduced in to Air (Prevention and control) Act 1981 act as "Air pollution means any solid, liquid or gaseous substance including noise present in the atmosphere in such concentration as may be or tend to be injurious to human being or other living creatures or plant or property or environment". Various man-made activities includes traffic noise, construction noise, industrial noise and public noise are responsible for noise pollution. World Health Organization (WHO) 2001 stated that noise must be recognized as major threat to human being which causes harmful effects to human like temporary or permanent hearing loss, poor cognitive function, cardiovascular disorder, sleep disturbance, communication problem and mental health problems. The high noise level causes harmful effects to wildlife also. The Central Pollution Control Board constituted a Committee on Noise Pollution Control. The Committee recommended noise standards for automobiles, domestic appliances and construction equipment, which were later notified in Environment (Protection) Rules, 1986 as given below.

Table No.1 Noise level standards by Central Pollution Control Board (CPCB)

Code	Area / Zone	Limits in dB(A)	
		Day time	Night time
A	Industrial	75	70
B	Commercial	65	55
C	Residential	55	45
D	Silence	50	40

1. Day time is reckoned in between 6 am to 9 pm.
2. Night time is reckoned in between 9 pm to 6 am.
3. Silence zone is referred as areas up to 100 meters around such premises as hospitals, educational institutions and courts. The Silence zone is to be declared by the Competent Authority. Use of vehicular horns, loudspeakers and bursting of crackers shall be banned in these zones.
4. Mixed categories of areas should be declared as one of the four above mentioned categories by the Competent Authority and the corresponding standards shall apply. (https://www.cpcb.nic.in).

The present study was conducted to study the status of noise level in silence zone area of Kolhapur city. Kolhapur city is known as Karveer Nagri which is located on Sahyadri mountain range and southwestern part of Maharashtra state.

Kolhapur is famous for its own style of jaggery, leather goods, jewellery and culture. Through recent advancements in industrial sector and urbanization the noise level increases day by day so therefore this study is important.

Literature Review

Mangalekar et al. (2011) studied noise pollution in Kolhapur city by continuous method for 3 days in a month in industrial, commercial, residential and silence zone. The results shows that higher values of noise level than standards as per given by Central Pollution Control Board. The noise level ranges from 55.88 dB (A) to 74.28 dB (A).

Hunashal R. and Patil Y. (2012) carried out noise level assessment in Kolhapur city. The study was carried out for 10 days at locations like educational, commercial cum residential, industrial cum residential areas for different time period. The higher noise level was found at respective areas.

Phukan B. and Kalyan K. (2013) carried out work in Guwahati University campus which is silence zone. The readings were taken at 3 times of day i.e. 9 to11, 12 to 2, and 6 to 8 pm with 2 sec time interval. The final noise level was found to be 57 dB (A) to 64.4 dB (A) which was more than CPCB limits.

Sen P et al. (2014) carried out noise pollution assessment in Agartala city at 19 different locations including residential, silence, commercial and industrial zone at morning 6 am to 11 pm at time interval. The result was found to be as, in day time the noise level was from 54.98 dB (A) to 63.79 dB (A) which higher than standards while at night time level was 45.43 dB (A) to 47.76 dB (A) which was lowest or in limit of standards.

Shinde D and Singh N. (2014) had worked on noise pollution in Dhar town, MP with reference to silence zone. He measured noise level For 10 different locations of cities at day time and result shows that noise level varies from 65 dB (A) to 83 dB (A) which was much higher than CPCB.

Deshmukh A. and Kadu P. (2015) studied traffic noise pollution at silence zone in Amravati city for sample size of 5 min in each hour for fourteen days from 8 am to 8 pm. They found that sound exceeds limits. This variation from 60 dB (A) to 110 dB (A) may have moderate to very severe effects on human health.

Kadadevaru G et al. (2017) carried out work in Hubli-Dharwad twin cities of Karnataka at 8 different locations covering industrial, commercial, residential, silence zone. The noise level was found to be from 94.80 dB (A) to 106.60 dB (A) which was much higher than standards so he suggested that precautions must be taken.

Study area

Kolhapur city is located at 1790 feet above mean sea level which lies between16º 4’ 30” North latitude and 74 º 14’ 00” East longitudes. The focus of respective study was to measure the ambient noise level with reference to silence zone. Six different locations were to be taken for the ambient noise level measurement.

The New High School area has many hospitals, schools and colleges so nearby roads have traffic throughout day. The second location of study was Chhatrapati Pramilaraje Rugnalay (C.P.R.) area has many clinics, family court, Museum and traffic signal. Third location of study was Savitribai Phule Hospital which is government hospital, along with this hospital this area has Gopal Krishna Gokhale College and New English Medium school nearby. The fourth location was Mahalaxmi Temple area. Mahalaxmi Temple is famous for being a Shaktipeeth due to which Karveer Nagri is called as Dakshinkashi therefore many devotees visits this area. The next location was Shahupuri and location selected near Warna hospital. Last location was near Chhatrapati Shahu Institute of Business Education and Research (CSIBER) which is known as educational zone of Kolhapur city.

Table No.2 Details of locations

Sr. No	Location Name	Places near by
1	New High School area	3 Pediatric hospitals, 6 schools, 3 colleges and one garden.
2	Chhatrapati Pramilaraje Rugnalay (C.P.R.)	2 Multispecialty hospitals, CID office, Family court, Museum and one traffic signal.
3	Savitribai Phule Hospital	G.K.G College, one orthopedic hospital, one school and Hutatmaa garden.
4	Mahalaxmi temple area	Main-Rajaram High school and college, temple area
5	Shahupuri area	Warna hospital and BT College
6	CSIBER college area	CSIBER College, Radhabai Shinde High School

Materials and Method

For the present study 6 locations were selected. The ambient noise level monitored with the help of Sound Level Meter (SL 4010 ISO9001) in month of November and January during day time at different time periods i.e 10-11 am, 1- 2 pm, 4-5 pm and 7- 8 pm. The monitoring of ambient noise equivalence level (Leq) was carried out by protocols given by Maiti.S.K (2003).

The Sound Level Meter was placed 1.5 m above the ground and 3 m away from the source point. Precautions were taken to avoid strong vibration and shock. The readings were taken at 1 min time interval for 60 min at day time and also personal observation was done for understanding the real scenario. The data were collected and compared with that of standards given by Central Pollution Control Board (CPCB).

Result and Discussion

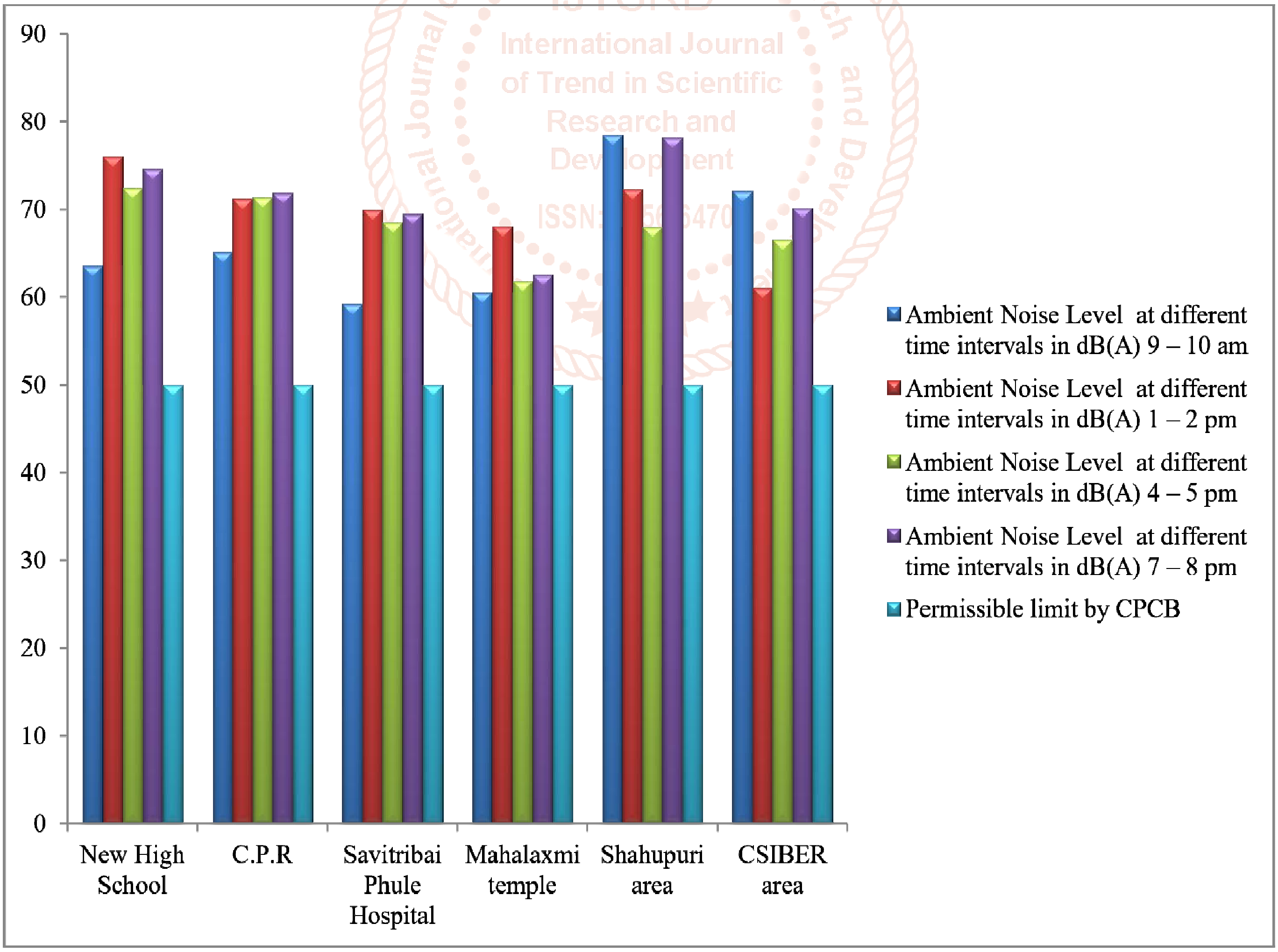
The present study was carried out in silence zone of Kolhapur city at six different locations. The results of study shows that the ambient noise level at all locations was found to be higher than the permissible limit as per given by CPCB. The work was carried out during month of November and January in year 2018 - 2019 at various time intervals.

Table No. 3 Ambient Noise Level in November month

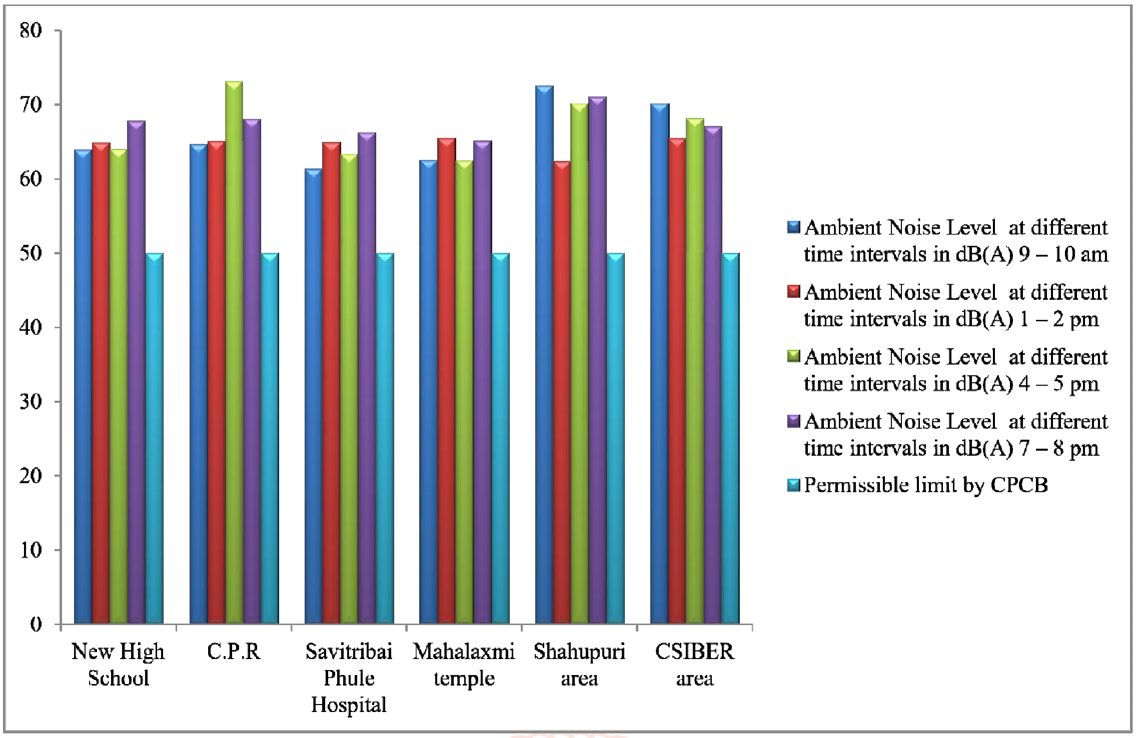
Sr. No	Location	Ambient Noise Level at different time intervals in dB(A)				Permissible limit by CPCB dB(A)
		9 – 10 am	1 – 2 pm	4 – 5 pm	7 – 8 pm	
1	New High School	63.59	76.01	72.48	74.65	50
2	C.P.R.	65.16	71.21	71.39	71.88	50
3	Savitribai Phule Hospital	59.22	70.00	68.49	69.50	50
4	Mahalaxmi temple	60.56	68.09	61.87	62.55	50
5	Shahupuri area	78.50	72.30	68.01	78.20	50
6	CSIBER area	72.09	61.10	66.54	70.19	50

Table No. 4 Ambient Noise Level in January month

Sr. No	Location	Ambient Noise Level at different time intervals in dB(A)				Permissible limit by CPCB dB(A)
		9 – 10 am	1 – 2 pm	4 – 5 pm	7 – 8 pm	
1	New High School	63.95	64.90	64.04	67.83	50
2	C.P.R.	64.71	65.11	73.20	68.12	50
3	Savitribai Phule Hospital	61.36	64.92	63.40	66.28	50
4	Mahalaxmi temple	62.59	65.51	62.52	65.17	50
5	Shahupuri area	72.60	62.41	70.21	71.10	50
6	CSIBER area	70.21	65.49	68.20	67.10	50



Graph No. 1 Ambient Noise Level in November month



Graph No. 2 Ambient Noise Level in January month

Table No.3 and Graph No.1 shows ambient noise levels in November month. The noise level ranged from minimum 59.22 dB (A) to maximum 78.50 dB (A). The New High School area noise level ranged from 63.59 dB (A) to 76.01 dB (A). At C.P.R it ranged between 65.16 dB (A) to 71.88 dB (A). At Savitribai Phule Hospital, noise level varied from 59.22 dB (A) to 70 dB (A). The noise level at Mahalaxmi temple ranged between 60.56 dB (A) to 68.09 dB (A). The Shahupuri area noise levels are from 68.01 dB (A) to 78.50 dB (A) and at CSIBER it was between 61.10 dB (A) to 72.09 dB (A).

Table No.4 and Graph No.2 shows ambient noise levels in January month. The noise level ranged from minimum 61.36 dB (A) to maximum 73.20 dB (A). At New High School area noise level found was between 63.95 dB (A) to 67.83 dB (A). The C.P.R area noise level ranged between 64.71 dB (A) to 73.20 dB (A). At Savitribai Phule Hospital area noise level ranged from 61.36 dB (A) to 66.28 dB (A). At Mahalaxmi temple area noise level ranged between 62.52 dB (A) to 65.51dB (A). The Shahupuri area noise level ranged between 62..41 dB (A) to 72.60 dB (A) and CSIBER area it ranged between 65.49 dB (A) to 70.21 dB (A).

Conclusion

The study was conducted in six different locations which are considered as silence zone of Kolhapur city. The noise levels obtained at respective locations were higher than permissible limits given by Central Pollution Control Board (CPCB). From the analysis it can be seen that increased use of vehicles, unnecessary honking and public noise becomes main reason or source of noise pollution so strict action has to be taken by government. At these locations there are hospitals, schools, colleges and religious place therefore unnecessary honking must be prohibited inside silence zone by governing authority.

Acknowledgement

The authors are thankful to the Department of Environment Management, Chhtrapati Shahu Institute of Business Education and Research (CSIBER), Kolhapur for providing facilities and co- operation during study period.

Reference

[1] Mangalekar S.B., Jadhav A.S. and Raut P.D., Study of Noise Pollution in Kolhapur city, Maharashtra, India, Universal Journal of Environmental Research and Technology, 2 (1): 65 - 69 (2011).

[2] Hunashal R.B. and Patil Y.B., Environment Noise pollution in Kolhapur city, Maharashtra, India, Nature Environment and Pollution Technology, 10 (1): 39 - 44 (2012).

[3] Phukan B. and Kalyan K., An experimental study of noise pollution in Guwahati University Campus, Guwahati, International Journal of Environmental Sciences, 3 (5): 1776 – 1784 (2013).

[4] Sen P., Bhattacherjee A., Das A. and Das D., Noise Pollution Assessment in Grater Agartala City: A case study, International Journal of Research in Engineering and Technology, 3 (9): 402 – 407 (2014).

[5] Shinde D. and Singh N., Study of Noise Pollution in Dhar Town, MP, India with reference to Silence zones, Research Journal of Recent Sciences, 3 (2014): 76-80 (2014).

[6] Deshmukh A. D and Dr. Kadu P. A., Study of Traffic Noise Pollution at Silence Zone in Amravati City, International Journal of Informative and Futuristic Research, 2(9): 3140 3144 (2015).

[7] Kadadevaru G. G., Dhangar S., Hanchate S., Hebbal S. and Golsangi S., Noise Pollution in Hubballi - Dharwad twin cities a Case Study, International Journal of Pure and Applied Bioscience, 5(6): 789 – 793 (2017).

[8] Maiti S. K., (2003), Handbook of Methods in Environmental Studies, Vol 2 Air, Noise, Soil, Overburden, Solid waste and Ecology, ABD publications, Jaipur.

[9] https://www.environmentalpollutioncentres.org

[10] https://www.cpcb.nic.in

International Journal of Trend in Scientific Research and Development (IJTSRD)
Volume 4 Issue 4, June 2020 Available Online: www.ijtsrd.com e-ISSN: 2456 – 6470

Performance Evaluation of a Sewage Treatment Plant (STP): A Critical Review

G. D. Mali[1], P. S. Saler[2], D. S. Mali[3]

[1]M.Tech. Student, [2]Assistant Professor, [3]Associate Professor,
[1,2]Department of Environmental Engineering, KIT's College of Engineering, Kolhapur, Maharashtra, India
[3]Department of Environmental Management, Chhatrapati Shahu Institute of Business Education and Research (CSIBER), Kolhapur, Maharashtra, India

ABSTRACT
Increase in population and urbanization has lead to water depletion and deterioration in water quality. Construction of Sewage Treatment Plants (STP) based on latest technologies in different parts of the country is necessary to reduce the problem of water pollution. The purpose of STP is to reduce the excessive contaminants from sewage and make the sewage reusable. Sewage treatment helps to reduce the pollution level of the water bodies and reduce the use of water by ensuring that treated water is used for irrigation & flushing toilets. Thus, the efficient working of the STP is utmost important. Anaerobic and aerobic biological processes are commonly used for wastewater treatment. The efficiency of individual units of STP determines the overall performance of the plant and quality of the final treated effluent in accordance with the prescribed governmental standards. This paper presents a critical review on the treatment of sewage by aerobic process and specifically by Activated Sludge Process (ASP) and its modifications. From the present paper it can be concluded that Sequencing Batch Reactor (SBR) technology is good in treating sewage.

KEYWORDS: *Efficiency, STP, SBR*

How to cite this paper: G. D. Mali | P. S. Saler | D. S. Mali "Performance Evaluation of a Sewage Treatment Plant (STP): A Critical Review" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-4 | Issue-4, June 2020, pp.700-702, URL: www.ijtsrd.com/papers/ijtsrd31155.pdf

IJTSRD31155

INTRODUCTION

Water is one of the important commodities on earth. Due to increase in population and industrialization, the use of water has drastically increased. On the other hand the availability of water is limited. About 80% of water utilized is converted into sewage. The site for the disposal of generated sewage is traditionally natural water bodies, land and coastal areas. These water bodies are most of the times used as a source for drinking water. Sewage being rich in nutrients, causes algal growth in the water bodies where it is released thus deteriorating the water quality of the water bodies. The aim of wastewater treatment is to remove the pollutants and protect and preserve the existing natural water bodies.

Most of the treatment processes in STPs imitate the natural treatment process to reduce the water pollutants level. The treatment in the treatment plant mainly consists of mechanical, biological and chemical process. The efficient working of the existing STPs is important to reduce the water pollution level and protect the environment. In present study, efforts are made to review the evaluated STPs. This can prove useful to improve the efficiency of the STPs.

REVIEW ON PAST WORK DONE

Pipraiya Ashutosh (2017) conducted a study for the performance evaluation of a STP at Kaithal town; Haryana during the period of January 2014 to April 2014. The plant capacity is 10 MLD and the plant is based on SBR technology. Sampling was done at inlet (grit chamber) and outlet of the STP. The parameters analyzed were pH, BOD5, COD, TSS, turbidity, nitrate, phosphate, Total Nitrogen (TN) and Total Phosphorous (TP). The laboratory analysis indicated that turbidity, BOD5, COD, TSS, nitrate, phosphate, TN and TP removal efficiencies were 91.14%, 95.96%, 90.89%, 96.74%, 42.59%, 35.29%, 46.20%, 43.34% respectively [6]. It is concluded that BOD5, COD and TSS in effluent were within the permissible limits due to proper aeration and settling mechanism. The treated effluent is found to be safe against disposal on land and used for irrigation. Proper settling is suggested to reduce turbidity in the effluent. pH, BOD5, COD, TSS, turbidity, TN and TP variations with respect to each sample were represented graphically.

Gedekar Ankusha R. et. al., (2016) assessed the performance efficiency of a sewage treatment plant (STP) of a tractor making company located at MIDC, Hingana, Nagpur (Maharashtra). The STP is based on extended aeration process and it is designed to treat a flow of 270 m3/d. During the study, the sewage was analyzed for design parameters like BOD5, COD, pH, solids. For the six months study period, composite and grab samples were collected from each unit of STP (at inlet, equalization tank, aeration tank, secondary sedimentation tank, final effluent) for every month. Overall percentage removal efficiency of COD and BOD5 was found to be 98.21% and 99.04% respectively. Total solids, Total Dissolved Solids (TDS) and TSS removal observed were 80.22%, 75.05% and 79.6% respectively [2].

Mohamed H. Hegazy and Mohamed A. Gawad (2016) evaluated and analyzed the performance and the efficiency of Shoubra Al Khaima (Balqus) wastewater treatment plant (WWTP). The treatment plant consists of three phases in terms of each stage is considered as an independent unit which are: Pretreatment, Primary treatment, Secondary (biological) treatment and Disinfection (chlorination). The performance evaluation is done based on the analysis of mainly four parameters Biochemical Oxygen Demand (BOD5), Chemical Oxygen Demand (COD), Total Suspended Solids (TSS) and Oil and Grease (O & G). The sampling was done for a period of six months. They have identified four sampling points: (1) the wastewater treatment plant influent; (2) the outlet of the primary sedimentation tanks; (3) the outlet of the secondary treatment process; (4) the outlet of the disinfection stage. All the laboratory analysis for samples was done according to Standard Methods for examination of water and wastewater. In the primary treatment the COD removal efficiency was 51% regarding to an average concentration of 213 mg/l [3]. The BOD removal efficiency was 49% with an average concentration of 140 mg/l [3]. The TSS removal efficiency was found 52% with an average concentration of 235 mg/l [3]. The O&G removal efficiency was 53% with an average concentration of 135 mg/l [3]. From the obtained results, it is concluded that the removal efficiencies of COD, BOD5, TSS and O& G were acceptable according to the process guide lines. Graphs of the removal efficiency (%) against the sampling time were plotted for all the analyzed parameters. It is suggested that the operation of the Secondary (Biological) treatment need a full control of the factors which affect the systems' efficiency such as temperature, organic loading rates, up flow velocity and the hydraulic retention time.

Kulkarni Bhakti et. al., (2016) conducted a research to evaluate the quality of sewage at the sewage treatment plant located at Vashi, Navi Mumbai. The plant is of 100 MLD capacity based on cyclic activated sludge technology. The treated effluent from the plant is discharged into the Vashi creek. Samples were collected from influent and effluent of the sewage treatment plant for the month of April 2015. The samples were analyzed for pH, COD, BOD5 and TSS. The obtained results were then compared with the standards given by the MPCB. The BOD5 value of treated effluent is 3.8 mg/l and that of COD is 20 mg/l [5]. It is concluded that the plant is working efficiently within the standards set by Maharashtra Pollution Control Board (MPCB).

Tsvetko Prokopov et. al., (2014) conducted a performance evaluation study on the wastewater treatment plant (WWTP) located in the Hisarya town which is one of the famous Bulgarian resorts with its mineral springs attracting thousands of tourists especially in summer. This study aimed the monitoring of physicochemical characteristics of municipal wastewater before and after treatment at SBR based treatment plant. The samples were collected into the plastic bag and brought to the laboratory for analysis. The following standard parameters were selected for the physicochemical monitoring of the wastewater treatment: BOD5, COD, TN, TP and Suspended Solids (SS). Individual emission limits for controlled pollutants which were specified in the permit for the use of Hisarya river water for discharge of wastewater were used for the WWTP performance evaluation. It was concluded that the WWTP is working perfectly. The average removal of BOD5 (95.1±0.6%), COD (93.2±0.7%), TN (80.3±8.0%), TP (53.4±7.2%) and SS (95.1±0.6%) of municipal wastewater were recorded after SBR treatment [7]. The obtained values of the standard parameters analyzed were considerably below the emission limits thus, indicating the better performance of the SBR wastewater treatment.

Wakode Prachi N. and Sayyad Sameer U. (2014) did study to evaluate the performance of sewage treatment plant located at Adharwadi, Kalyan of Thane district of 25 MLD capacity. The plant is based on SBR process. The treated effluent from the plant is discharged into river Ulhas. Samples were collected from inlet, SBR tank and chlorine contact tank (outlet). 36 samples (12 sets of 3 samples) were collected from December to February. Collected inlet samples were analyzed for pH, BOD5, COD, TSS, TN and TP. The samples from SBR Tank were analyzed for BOD5, COD, TSS and DO. And the samples from chlorine contact tank were analyzed for same parameters as that of the inlet. The BOD5 and TSS removal efficiencies were 96% and 92.74% respectively [9]. The removal efficiencies for TN and TP were 75.67% and 71.79% respectively [9]. Proper maintenance of degritor tank is suggested.

K. Sundara Kumar et. al., (2010) done a research to evaluate the performance efficiency of the Nesapakkam sewage treatment plant of Chennai city. The average wastewater flow to the plant is 23 MLD. The grab samples were collected at the inlet and outlet of all the treatment units and were analyzed. The samples were analyzed for various parameters like pH, COD, BOD5, TSS and TDS. Correlation between influent BOD5 and influent TSS is established by regression analysis. Sampling was done for a period of six months from June 2009 to November 2009. The overall removal efficiency of BOD5 observed was 94.56% and that of TSS was 93.72% [4]. Daily variations of the parameters are represented graphically. To characterize the wastewater, averages, standard deviations alongwith maximum and minimum values were calculated for the parameters. It is concluded that the treatment plant is working efficiently with the individual units also performing well with satisfactory removal efficiency.

Ravi Kumar P. et. al., (2010) conducted a comparative study of two sewage treatment plants located in Bangalore city The STP at Nagasandra handles an average flow of 20 MLD while the STP at Mailasandra is of 75 MLD. Composite samples were collected in clean plastic container of 5 liter capacity from three different units of the treatment plant, namely, influent to the treatment plant, effluent of aeration tank and final effluent from secondary clarifiers for seven days. The primary parameters analyzed were pH, BOD5, COD, TSS, TDS, DO, chlorides and sulphates. While the secondary parameters analyzed were Mixed Liquor Suspended Solids (MLSS) and Sludge Volume Index (SVI). In Mailasandra STP, TDS, TSS, BOD, and COD removal efficiency was 20.01, 94.51, 94.98 and 76.26 % and respectively, while in Nagasandra STP, TDS, TSS, BOD, and COD removal efficiency was 28.45, 99.0, 97.6 and 91.60 % respectively [8]. The order of reduction efficiency was TDS < COD < TSS < BOD and TDS <

COD < BOD < TSS respectively in Mailasandra and Nagasandra STPs [8]. It is concluded that both the plants are working efficiently. In order to achieve better performance, it is suggested to recycle fresh sludge with higher microorganism populations.

Gulnur Coskuner and Nur Seher Ozdemir (2006) conducted a performance evaluation of the wastewater treatment plant of Cumhuriyet University, Sivas, Turkey. The performance of different units of the treatment plant was investigated and a particular attention was given to the performance of the extended aeration system based on various operational parameters. The possibility of modifying the existing treatment plant is also checked. Fifteen grab samples were collected from different treatment units, once in a month starting from October 2003 to September 2004. Parameters analyzed were BOD5, TSS, nitrates, nitrites, F/M ratio, hydraulic retention time, sludge age, organic loading, temperature, pH, MLSS. Temperature was measured on site. It is concluded that the extended aeration provides combined removal of BOD5 and NH3N effectively. Average BOD5 and TSS concentration of effluent wastewater determined during one year analysis period were 7.1 and 13.5 mg/l respectively [1]. Average NH3N concentration of effluent wastewater was found to be 0.48 mg/l.

CONCLUSION

It is concluded that efficiency of the existing treatment plants can be increased by proper selection of treatment process, proper control over the treatment process and adequate operation and timely maintenance of the treatment facility. The modifications of ASP, particularly the SBR technology can be considered as the best treatment technology for domestic sewage due to its simple operation and higher BOD5 and TSS removal efficiencies alongwith nutrient removal.

REFERENCES

[1] Coskuner G. and Ozdemir, N. S. (2006) "Performance assessment of a wastewater treatment plant treating weak campus wastewater" *International Journal of Environment and Pollution*, 28, 185-197.

[2] 2. Gedekar, A. R., Bhorkar, M. P., Thergaonkar V. P. (2016) "Performance Evaluation of Sewage Treatment Plant Based on Activated Sludge Process" *International Journal of Software & Hardware Research Engineering*, 4 (4), 31-33.

[3] Hegazy, M. H. and Gawad, M. A. (2016) "Measuring and Evaluating the Performance of a Wastewater Treatment Plant" *Proceedings of the World Congress on Civil, Structural, and Environmental Engineering (CSEE'16) Prague, Czech Republic.*

[4] K. S. Kumar, P. S. Kumar, M. J. R. Babu (2010) "Performance Evaluation of Wastewater Treatment Plant" *International Journal of Engineering Science and Technology*, 2, 7785 -7796.

[5] Kulkarni B., Wanjule R. V., Shinde H. H. (2018) "Study on Sewage Quality From Sewage Treatment Plant at Vashi, Navi Mumbai" *International Conference on Processing of Materials, Minerals and Energy*, 1859-1863.

[6] Pipraiya A. (2017) "Performance Evaluation of Wastewater Treatment Plant Based on SBR Technology- A Case Study of Kaithal Town, Haryana (India)" *International Journal of Innovative Research in Advanced Engineering*, 6 (6), 10689-10695.

[7] Prokopov T., Mihaylova D., Mihalkov N. (2014) "Physicochemical Monitoring and Performance Evaluation of SBR Municipal Wastewater Treatment" *Journal of Faculty of Food Engineering, Stefan cel Mare University of Suceava, Romania* 13(3), 207-213.

[8] Ravi Kumar P., Liza Britta Pinto, Somashekar R. K. (2010) "Assessment of the Efficiency of Sewage Treatment Plants: A Comparative Study between Nagasandra and Mailasandra Sewage Treatment Plants" *Kathmandu University Journal of Science, Engineering and Technology*, 6 (2), 115-125.

[9] Wakode, P. N., and Sayyad, S. U. (2014) "Performance Evaluation of 25 MLD Treatment Plant (STP) at Kalyan" *American Journal of Engineering Research (AJER)*, 3 (3), 310-316.

IJISET - International Journal of Innovative Science, Engineering & Technology, Vol. 7 Issue 8, August 2020
ISSN (Online) 2348 – 7968 | Impact Factor (2020) – 6.72
www.ijiset.com

Food Waste Management at KIT'S College Of Engineering, Kolhapur

G. D. Mali*, D. S. Mali**
*M. Tech. Student, Department of Environmental Engineering,
KIT's College of Engineering, Kolhapur E-mail: girija17796@gmail.com
** Associate Professor, Department of Environment Management,
Chhatrapati Shahu Institute of Business Education and Research (CSIBER), Kolhapur

ABSTRACT

Due to increase in population, urbanization and industrialization; accumulation of solid organic waste materials in the environment has drastically increased. Open dumping, sanitary land filling and composting are major methods for organic waste disposal. Open dumping leads to unhygienic environment and cause epidemics breakdown. Land filling of biodegradable waste causes environmental degradation, mainly through the production of highly polluting leachate and methane gas. Composting reduces the waste volume to be handled than any other technology and requires less capital investment. Thus, composting process is the most environment friendly method of solid waste disposal. This paper aims to verify the fact that composting is the best waste disposal method for sustainable food waste management. During this study, the quantity of food waste generated from the girl's and boy's hostel of KIT's campus was found out by conducting a fifteen days survey. The characteristics of the food waste under study were analyzed and five composting pilot models were prepared comprising of anaerobic, aerobic composting with and without cow dung and vermicomposting. Based on the two months study, it can be concluded that for the food waste, the suitable waste disposal method is vermicomposting. It is observed that vermicomposting is a quick, easy to operate and maintain method than the aerobic and anaerobic composting. The compost obtained by vermicomposting is of good quality and can directly used by the farmers for getting higher agricultural yields.

KEY WORDS: Composting, Food Waste Solid Waste, Vermicomposting

INTRODUCTION

Solid waste is the unwanted or useless solid materials generated from combined residential, industrial and commercial activities in a given area. It may be categorized according to its origin (domestic, industrial, commercial, construction or institutional); according to its contents (organic material, glass, metal, plastic paper etc.); or according to hazard potential (toxic, non-toxin, flammable, radioactive, infectious etc.). A society receives energy and raw material as inputs from the environment and gives solid waste as output to the environment. In the long-term perspective, such an input-output imbalance degrades the environment.

Solid waste management reduces or eliminates adverse impacts on the environment and human health and helps towards the economic development and improved quality of life. A number of processes are involved in effectively managing solid wastes in a human society. These include monitoring, collection, transport, processing, recycling and disposal. Thus, solid waste management comprises of purposeful and systematic control of the generation, storage, collection, transport, separation, processing, recycling and disposal of solid waste.

Study Area

KIT’s College of Engineering, Kolhapur ranks one of the top colleges in the city in providing technical education for both under graduates and post graduate students. It is one of the top engineering colleges according to the government statistics. Today it has around 3000 students and around 150 faculties. In spite of all these advances in technical and educational fields it faces severe environmental concerns which need to be addressed immediately. The waste management issues in the college have been a hot topic in several years. Lack of dustbins, heap of waste at the backside of the ladies hostel and behind the canteen is a common sight in college campus.

For this study, the quantity of food waste generated from the girl’s hostel and boy’s hostel was found by conducting a fifteen days survey. The characteristics of the food waste under study were analyzed and five composting pilot models were prepared comprising of anaerobic, aerobic composting with and without cow dung and vermicomposting. Based on the two months study, it was concluded that for the food waste, the suitable waste disposal method is vermicomposting.

OBJECTIVES

Following are the objectives of the project:

1. To study the various solid waste disposal methods.
2. To carry out a brief study of quantity of food waste collected from the girl's hostel, boy's hostel and canteen.
3. Pilot study of various composting methods.
4. To adopt the best alternative of food waste disposal in KIT's campus.

Composting

About 35%–40% of the municipal solid waste generated in India comprises of organic waste. This waste can be recycled by the method of composting, one of the oldest forms of disposal. It is the natural process of decomposition of organic waste that yields manure or compost, which is very rich in nutrients. Composting is an organized method of producing manure by adopting the natural phenomenon of decomposition. Compost is particularly useful as organic manure which contains plant nutrients (Nitrogen, Phosphorous and Potassium) as well as micro nutrients which can be utilized for the growth of plants. It is the way to recycle the yard and kitchen wastes, and is a critical step in reducing the volume of garbage needlessly sent to landfills for disposal. Apart from being clean, cheap, and safe, composting can significantly reduce the amount of disposable garbage. The organic fertilizer can be used instead of chemical fertilizers and is better specially when used for vegetables. It increases the soil's ability to hold water and makes the soil easier to cultivate. It helped the soil retain more of the plant nutrients.

Composting can be carried out in two ways i.e., aerobically and anaerobically. During aerobic composting aerobic micro-organisms oxidize organic compounds to Carbon di oxide, Nitrite and Nitrate. Carbon from organic compounds is used as a source of energy while nitrogen is recycled. Due to exothermic reaction, temperature of the mass rises. During anaerobic process, the anaerobic micro organisms break down the organic compounds through a process of reduction. A very small amount of energy is released during the process and the temperature of composting mass does not rise much. The gases evolved are mainly Methane and Carbon di oxide. An anaerobic process is a reduction.

Types of Composting

Broadly, the composting systems can be grouped in three headings:

1. Aerobic composting
2. Anaerobic composting
3. Vermicomposting

The combination of aerobic and anaerobic composting is known as Beccari method. Composting in pits anaerobically is called as Bangalore method. Aerobic system of composting can be operated either manually or mechanically in open windrow, pits or enclosed digesters. Open windrow system is preferred in tropical region, while in temperate region closed digester system is used. The pit method of composting is known as Indore method. They can be used to digest most of your kitchen waste, turning it and their bedding material into high quality castings which can be added to the soil and used on house plants, vegetable seedlings and flowers.

Vermicomposting (worm composting) systems are simple to maintain. They take very little time and effort. Maintaining an enclosed bin specifically for 'vermicomposting' is an excellent way to take care of food wastes. With the exception of holes for drainage and ventilation, worm bins for indoor use are typically completely enclosed, with a lid of some sort to cover the top.

Factors governing the composting process

There are various factors, which governs the composting process. They are as follows:

1. Temperature
2. pH
3. Moisture content
4. Carbon: Nitrogen ratio (C/N)
5. Inoculums
6. Oxygen supply / Aeration
7. Insect control
8. Odor
9. Microbial aspect of composting
10. Time required for composting

DATA ANALYSIS AND METHODOLOGY

Analysis of food waste generated at KIT's campus:

The quantity of food waste generated daily from the girl's hostel and boy's hostel is dumped in the pit behind situated behind the hostel. It has lead to breeding of mosquitoes in the vicinity of hostel and is affecting the health of the students drastically. Same is the scenario for the canteen as well.

To analyze how each person contributes to the food waste generated in the campus, we had conducted a survey for fifteen days and from this we got to know the total amount of food waste generated daily in the KIT's campus. The results of the survey are illustrated in be next table.

Table No. 01: Details of Quantity of Food Waste generated daily

Sr. No.	DATE	QUANTITY OF FOOD WASTE(Kg)		
		GIRL'S HOSTEL	BOY'S HOSTEL	CANTEEN
01.	18/01/18	12.33	23.29	21.25
02.	19/01/18	12.40	24.76	22.86
03.	20/01/18	11.75	22.76	20.22
04.	24/01/18	13.46	25.28	21.88
05.	25/01/18	11.32	21.35	20.24
06.	27/01/18	10.98	21.88	20.54
07.	31/01/18	11.23	23.56	22.91
08.	01/02/18	12.62	25.18	20.53
09.	02/02/18	10.86	22.36	21.67
10.	03/02/18	11.54	24.30	22.43
11.	07/02/18	11.55	21.53	20.90
12.	08/02/18	10.86	21.65	20.45
13.	09/02/18	11.50	23.50	22.73
14.	14/02/18	12.26	25.27	20.95
15.	15/02/18	10.90	22.60	21.40
	AVERAGE	**11.70**	**23.28**	**21.40**

Food waste analysis:

The food waste sample was collected and following parameters were studied:

1. Moisture content
2. Density

1. Moisture content

Moisture content of solid waste is usually expressed as the mass of moisture per unit mass of wet or dry material. In the wet mass method the moisture in the sample is expressed as percentage of wet mass of the material. Moisture content of food waste varies between 50-80%.

Procedure

- Accurately weighed 500 gm sample of food waste is taken.
- It is then spread in the pan and kept in the oven for drying. Generally sample is dried at 77 ^{0}C to 110 ^{0}C.
- After 24 hours, oven is turned off and sample is kept for cooling for about 15 to 20 minutes.
- The weight of the dry sample is taken.
- Using the formula the moisture content of food waste is calculated.

$$\text{Moisture content}=\frac{\text{Wet weight - Dry weight}}{\text{Wet weight}}*100$$

Results: The moisture content of the food waste is **75.12%.**

2. Density

Knowledge of the waste density is essential for the design of all elements of the solid waste management system like storage, transportation and disposal. Density is defined as the weight of material per unit volume. The interest of knowing the density of waste is to access the total mass and volume of waste that must be managed. The density of food waste can be up to 290 kg/m^3.

Procedure

- Accurately weighed 500 gm sample of food waste is taken.
- Its dry mass is determined.
- The dry density is calculated by using the formula.

$$\text{Discarded Density}=\frac{\text{Dry mass}}{\text{Volume}}$$

Results: The discarded density of the food waste is **218.246 kg/m^3**.

Experimental Setup

Following models of composting for food waste are prepared:

1. Anaerobic without cow-dung
2. Aerobic without cow-dung
3. Anaerobic with cow-dung
4. Aerobic with cow-dung
5. Vermi-composting

According to various researchers, cow dung helps to improve the decomposition rate of the food waste. To confirm those researches, models of anaerobic and aerobic composting with and without cow dung are prepared.

The plastic buckets with 0.02 m^3 i.e., 20 liters volume are used as vessel for the composting setup. Following procedure is adopted to setup the aerobic and anaerobic composting setup:

1) First volume of bucket is accurately measured.
2) With the help of marker 4 cm thick layers are marked over the bucket.
3) Now the first layer of soil is given inside the bucket up to a thickness of 4 cm as mentioned earlier.
4) The second layer of waste is given over the soil layer.
5) Same procedure is continued up to a total height of 28 cm i.e., 7 alternate layers of soil and waste.
6) For the setups with cow dung, a layer of fresh cow dung is introduced in-between.
7) To maintain the moisture content, water is sprinkled.
8) For first six days no rotation is given
9) After the first six days, rotations are given after every four to six days.
10) No rotations are given for anaerobic composting setups.

For vermicomposting setup following procedure is adopted:

1) First volume of bucket is accurately measured.
2) Then the holes are pierced at the bucket bottom so that the extra moisture is removed as it is dangerous to the worms.
3) With the help of marker 4 cm thick layers are marked over the bucket.

4) The first layer of cow dung is given of 4 cm thickness.
5) The second layer of waste is given over the cow dung layer.
6) Then the waste layer is given over it followed by alternate layers of cow dung and soil.
7) Same procedure is continued up to a total height of 28 cm i.e., 7 alternate layers of soil, waste and cow dung.
8) Then earthworms of species *Eisenia foetida* (red earthworm) are introduced.
9) No rotations are to be given to the vermicomposting as the worms themselves rotate.

Table No. 02: Rotation Data

Sr.	AEROBIC	AEROBIC	VERMICOMPOSTING
01.	06/02/18	06/02/18	No Rotation
02.	16/02/18	16/02/18	
03.	23/02/18	23/02/18	
04.	27/02/18	27/02/18	
05.	01/03/18	01/03/18	
06.	08/03/18	08/03/18	
07.	14/03/18	14/03/18	
08.	21/03/18	21/03/18	
09.	28/03/18	28/03/18	
10.	31/03/18	31/03/18	

RESULTS AND DISCUSSIONS

Vermicomposting:

The vermicompost was ready to use after a month. The texture of the compost was perfect. The worms were found to be healthy. It can be concluded that vermicomposting is best alternative for food waste composting.

Aerobic Composting:

According to the literature available, aerobic composting requires 2 months duration for completing the entire process. The model under study was analyzed for one month. Hence, required time was not given to the model for completing the composting process. Hence the compost was not ready after a month.

Anaerobic Composting:

Anaerobic composting requires at least four to six months for the entire reduction of waste. The model was prepared for a month analysis. Thus, the model under study did not give the expected results.

CONCLUSION

The objective of the project was to analyze the current food waste management in KIT's campus and put forward a new and effective alternative for food waste management to reduce the nuisance caused due to food waste dumped openly in the campus.

For the food waste it was observed that the suitable waste disposal method is vermicomposting. It is a quick and easy to maintain and operate composting method. Aerobic and anaerobic composting are time consuming processes.

REFERENCES

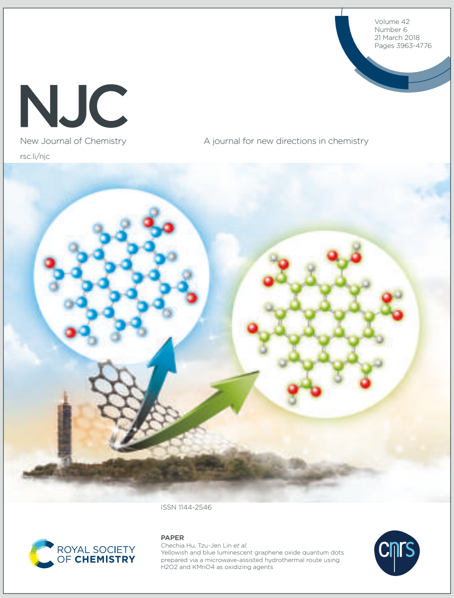
1. Bhavik Gupta and Shakti Kumar Arora, (2016), "A study on management of municipal solid waste in Delhi" *Journal of Environment and Waste Management*, 3(1), 131-138.
2. Handbook of Solid Waste Management, George Tchobanoglous, Frank Kreith
3. Manual on municipal solid waste management, MoUD GOI, 2000.
4. Nitin Prakash Pandit, Nabeel Ahmad and Sanjiv Kumar Maheshwari, (2012) "Vermicomposting Biotechnology: An Eco-Loving Approach for Recycling of Solid Organic Wastes into Valuable Biofertilizers" *Journal of Biofertilizers & Biopesticides*, 3(1), 1-8.
5. Rajiv K. Sinha, Upendra Patel, Brijalkumar K. Soni, Zheng Li (2014), "Earthworms for safe and useful management of solid wastes and wastewaters, remediation of contaminated soils and restoration of soil fertility, promotion of organic farming and mitigation of global warming: A review" *Journal of Environment and Waste Management*, 1(1), 11-25.
6. Saleh Ali Tweib, Rakmi Abd Rahman and Mohd Sahaid Kalil (2011) "A Literature Review on the Composting" *International Conference on Environment and Industrial Innovation IPCBEE*, 12, 124-127.

NJC
New Journal of Chemistry

A journal for new directions in chemistry

Accepted Manuscript

This article can be cited before page numbers have been issued, to do this please use: P. Mahamuni, P. M. Patil, P. Patel, M. J. Dhanavade, M. V. Badiger, Y. Marathe and R. A. Bohara, *New J. Chem.*, 2020, DOI: 10.1039/D0NJ01384F.



ROYAL SOCIETY OF CHEMISTRY

rsc.li/njc

View Article Online
DOI: 10.1039/D0NJ01384F

Electrospun poly (3-hydroxybutyrate-co-3-hydroxyvalerate)/Polyethylene oxide (PEO) microfibers reinforced with ZnO nanocrystals for antibacterial and antibiofilm wound dressing applications

Pranjali P.Mahamuni-Badiger[1].Pooja M. Patil[1]., Pratikshkumar R. Patel[2]., Maruti J. Dhanavade[3]., Manohar V. Badiger[2]., Yogesh N. Marathe[2], Raghvendra A. Bohara[1 4*]

[1]Centre for Interdisciplinary Research,D.Y. Patil University,Kolhapur.

[2]CSIR- National Chemical Laboratory,Pune.

[3]Department of Microbiology,Shivaji University, Kolhapur.

[4] CÚRAM, SFI Research Centre for Medical Devices, National University of Ireland Galway, Ireland

Corresponding Author

Dr. Raghvendra Bohara

View Article Online
DOI: 10.1039/D0NJ01384F

Abstract

Biocompatible and biodegradable polymers are extensively used in designing wound dressing materials. The present investigation deals with the preparation of a unique blend of zinc oxide (ZnO) nanoparticles incorporated in poly (3-hydroxybutyrate-co-3-hydroxyvalerate) (PHBV)/polyethylene oxide (PEO) microfibers via electrospinning technique for antibacterial, antibiofilm and wound dressing application. This composite was prepared by incorporating previously synthesized ZnO NPs with better antibacterial and antibiofilm activity in PHBV-PEO (4:1) polymers in chloroform solution. Scanning electron microscopy (SEM) and Fourier transform infrared (FT-IR) spectroscopy confirmed that ZnO NPs were incorporated in the PHBV-PEO microfibers. The synthesized microfibers exhibited enhanced mechanical properties after the incorporation of ZnO NPs. The results of antibacterial and antibiofilm activity of the prepared microfibers revealed that the incorporated ZnO NPs in different concentrations (1%, 3%, and 5%) showed different degree of antibacterial activity against pathogenic Gram-positive *Staphylococcus aureus* (NCIM 2654) and Gram-negative *Pseudomonas aeruginosa* (NCIM 5032) that are the main culprits in wound infections. The PHBV-PEO-ZnO microfibers exhibited excellent hemocompatibility with improved swelling behavior after the incorporation of ZnO NPs. In vitro cytotoxicity assay revealed the non-toxic nature of the prepared PHBV-PEO- ZnO microfibers. The current work confirms that utilized unique blend of biodegradable, biocompatible, thermoplastic and hydrophobic natural polymer PHBV with hydrophobic, biodegradable, non-toxic and synthetic polymer PEO with ZnO NPs holds great potential to be used as antibacterial and antibiofilm material for wound dressing application.

View Article Online
DOI: 10.1039/D0NJ01384F

1. Introduction

Biofilm associated microbial infections are an issue of great concern. Centre for Disease Control (CDC), United States, estimated that about 65% of chronic infectious diseases occur due to microbial biofilm.[1,2] Biofilm formation on implants causes failure of medical devices and implants that lead to serious health problems, that have become more complicated by the development of antibiotic tolerance in bacteria that increases with the maturation of biofilm.[3]Bacterial biofilm has been identified in chronic wound infections. The poor penetration of antimicrobials into the biofilm glycocalyx matrix due to the presence of a number of water-filled channels results in failure of their action. Chronic wound infections related to biofilm are recalcitrant and very hard to eradicate. So it is a time to take a step forward to adopt new approaches for treating biofilm-related wound infections.[4] Nanomaterials attracted greater interest than other antimicrobial agents as they possess unique properties like a high surface area to volume ratio, remarkable bioactivity and easy penetration inside the planktonic cell as well as a biofilm.[5–11] Among all nanoparticles, zinc oxide (ZnO) is highly preferred as it is recognized as a safe material by the United States Food and Drug Administration (FDA) 21Code for Federal Regulation (CFR)182.8991.[12] ZnO nanoparticles have gained much more attention due to excellent toxicity against drug-resistant micro-organisms. It destroys bacterial cell wall, enters the cell and finally leads to death by their accumulation in the cell membrane.[1,13,14]

For the prevention of initial colonization of different biofilm-forming bacteria, varieties of techniques have been developed to synthesize bio-friendly surfaces with antibacterial and antibiofilm properties.[15] One of these techniques, electrospinning technique is considered more convenient as it is a simple, cost-effective and versatile that can be used to yield fibers with diameters ranging from nanometer to micrometer. The electrospun fibers are extensively used in

View Article Online
DOI: 10.1039/D0NJ01384F

different medical applications like tissue engineering, drug release, wound healing and fabrication of antimicrobial agents containing biopolymer nanofibers.[16] Recent studies generally focused on the application of electrospun biopolymer fibers with antimicrobial agents in medicine, drug delivery, agriculture and wound healing.[17] Varieties of bio-polymers like polyesters, polyethylene oxide (PEO), polyvinyl alcohol (PVA), polycaprolactone (PCL), polyglycolic acid (PGA), poly lactic-co-glycolic acid (PLGA), polystyrene, polyurethane (PU), polyethylene terephthalate (PET) and polylactic acid (PLA) can be efficiently electrospun into micro and nanofibers mats.[18]

Poly (3-hydroxybutyrate-co-3-hydroxyvalerate) (PHBV) (Figure 1A) [19] is biocompatible, thermoplastic, biodegradable and non-toxic polyester produced by bacteria that make it a promising agent in the biomedical field.[20] The degradation product of PHBV, (R)-3-hydroxybutyric acid is a constituent of blood that promotes its use in the different biomedical fields such as sutures, prosthetic devices, drug delivery system and surgical clips. Many studies suggested that PHBV can enhance cell proliferation, such as fibroblasts, keratinocytes, and neural cells.[21,22] However, due to its poor mechanical performance, high crystallinity, inherent rigidity, and hydrophobicity this material is not explored much.[23] Therefore, defects of PHBV can be overcome by blending them with hydrophilic polymers such as gelatin,[24] chitosan,[25] PLA,[26,27]and polyethylene oxide (PEO).[23] Among these polymers, polyethylene oxide (PEO) (figure 1B) [28] which is certified by the FDA is highly preferred because of its properties like biocompatibility, hydrophilicity, and malleability. It is widely used in biomedical fields, mostly in blood-contacting devices because of its non-immunogenicity, non-antigenecity, non-toxicity and low adsorption of surface proteins. Furthermore, from PEO it is easy to obtain nanofibers by electrospinning technique than other polymers because of its high solubility in water as well as in different types of organic solvents.[29] The incorporation of ZnO NPs into PHBV polymer has gained much more

View Article Online
DOI: 10.1039/D0NJ01384F

attention in the nanocomposite field as ZnO is widely reported for its strong antibacterial activity against a broad spectrum of microorganisms. However, Yu et al. reported the effect of ZnO NPs on the crystallization behavior of electrospun PHBV nanofibers in which they found that the addition of ZnO NPs hindered the crystallization of PHBV nanofibers.[30] Also, different studies suggested the use of nanofillers reinforced with PHBV nanofibers for the potential application of wound dressing materials. Castro-Mayorga et al. observed that incorporation of ZnO NPs in PHBV structures maintained their antibacterial activity with improved thermal stability, mechanical properties, and optical properties.[31] Pittaratte et al. reported the incorporation of ZnO NPs (20 wt %) in cellulose acetate-PEO blended fibers improved the tensile strength, elongation, and elasticity of nanofibrous films. The improvement can be attributed to the association between ZnO NPs and the semi-crystalline structure of the PEO.[32] Bianco et al. evaluated the influence of PEO addition on the final properties of PHBV. They fabricated blends of PHBV-PEO by electrospinning in different weight ratios i.e. 100:0, 80:20, 70:30, 50:50, and 0:100 in which he investigated the appealing and improved properties in the PHBV-PEO blends with respect to neat PHBV and neat PEO. They also evaluated that mechanical properties of PHBV can be properly modulated through the blending with PEO, which gives reduced tensile modulus, maintained elongation at break values, which form a suitable system for biomedical applications. So, we have used the blend of PHBV-PEO polymers (4:1) rather than neat PHBV or PEO.[33] Very few literatures are available that reported the effect of reinforcement of ZnO NPs on the crystallization behavior of PHBV polymer and further evaluated for their antibacterial activity but their antibiofilm activity was not evaluated, while some literature reported the preparation and characterization of PHBV and PEO blends in different ratios, but their antibacterial and antibiofilm activities were not investigated by the incorporation of ZnO NPs. Even though, few attempts were reported for the incorporation of ZnO NPs in PHBV, not single report is available that reports their antibiofilm activity, use of

View Article Online
DOI: 10.1039/D0NJ01384F

PHBV and PEO blending system for ZnO NPs incorporation and effect of ZnO NPs incorporation on morphology, thermal, spectroscopic, antibacterial, antibiofilm and biocompatible properties of PHBV-PEO polymers. Because of widely reported antibacterial activities of ZnO NPs,[1,34] the present study deals with the incorporation of previously reported ZnO NPs with size ~ 15nm[13] in PHBV-PEO microfibers. *Staphylococcus aureus* and *Pseudomonas aeruginosa* are the most common drug-resistant biofilm-forming bacteria isolated from chronic wound infections. In the present study, for the first time the incorporation of different percentages of ZnO NPs into PHBV-PEO microfibers with their antibacterial and antibiofilm activity against two biofilm forming pathogens namely Gram-positive bacteria, *Staphylococcus aureus (NCIM 2654)* and Gram-negative bacteria, *Pseudomonas aeruginosa (NCIM 5032)* are reported. In the preparation of PHBV-PEO-ZnO microfibers, ZnO NPs are reinforced into biodegradable, biocompatible, thermoplastic and hydrophobic natural polymer PHBV with hydrophilic, non-toxic and synthetic polymer PEO in 4:1 ratio. Also, their morphology, thermal stability, mechanical properties, hemolytic study, cytotoxicity, antibacterial and antibiofilm activities were reported.

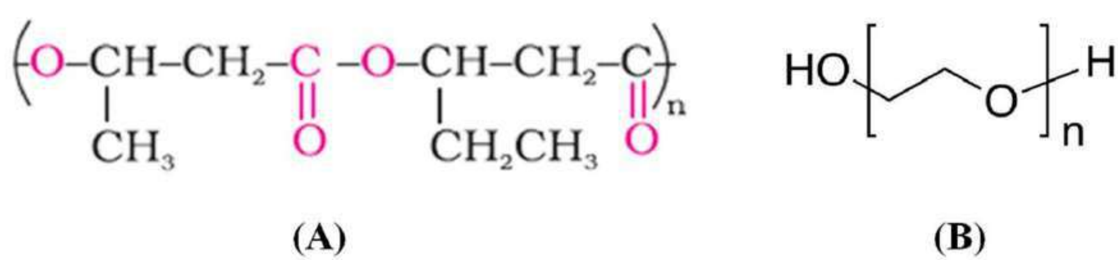


Figure 1: (A) Structure of PHBV, and (B) structure of PEO.

2. Experimental

2.1 Materials

Poly (3-hydroxybutyrate-co-3-hydroxyvalerate) (PHBV) with (molecular weight12, 00,000), polyethylene oxide (PEO) with (MW 300,000) powder were purchased from Alfa Aesar,

View Article Online
DOI: 10.1039/D0NJ01384F

Mumbai, India. Chloroform ($CHCl_3$, 99.94%) was supplied by Merk, Mumbai, India. ZnO NPs (~15nm) were used from our previously reported work.[13] All reagents and solvents were of analytical grade and used as purchased without any further purification. Double distilled water was used throughout the experiments. The micro-organisms Gram-positive *Staphylococcus aureus (S. aureus)* and Gram-negative *Pseudomonas aeruginosa (P. aeruginosa)* were purchased from National Collection of Industrial Microorganisms (NCIM), National Chemical Laboratory (NCL) in Pune, India.

2.2 Preparation of PHBV-PEO-ZnO Electrospinning solution

The 10% of a polymer solution containing PHBV and PEO (4:1) were prepared[35] and kept on magnetic stirrer overnight to make certain that the molecular chains of polymer were well entangled. This solution was mixed with previously prepared ZnO NPs[13] with different concentrations of (0, 1, 3 and 5wt %) in chloroform solutions and sonicated for 1 hour. The final solutions were kept for stirring for 12 hours before the electrospinning process.

2.3 Electrospinning process

The PHBV-PEO-ZnO microfibers were prepared by the electrospinning process with slight modifications.[36] The conditions used are: the applied voltage was 10 kV, the feeding rate was 0.3ml/h, and the tip-collector distance was 14cm. The solution was filled in a 10ml syringe equipped with a metallic needle (0.70×38mm) and a rectangular steel plate covered with aluminum foil paper was used as a collector.

2.4 Characterization of prepared microfibers

The morphology of the electrospun microfibers was studied by SEM (scanning electron microscopy), model (Micro Analysis System and Model Phoenix, Cambridge, England, U.K.). Elemental analysis of the microfibers was carried out by the EDX (Energy Dispersive X-ray spectroscopy) spectrometer which was connected to the scanning electron microscope. ATR-FTIR

View Article Online
DOI: 10.1039/D0NJ01384F

(Attenuated Total reflectance, Fourier transform infrared spectroscopy) spectra were observed on [PerkinElmer, Spectrometer I, FTIR diffused reflectance (DRIFT) mode, USA] in the range of 4000-400cm^{-1}. The thermal properties were studied by TGA (thermogravimetric analysis), model SDT model Q600 of TA Instruments Inc., USA, at a heating rate of 10 °C/min under the continuous flux of nitrogen at 100 mL/min. Differential scanning calorimetry (DSC) was investigated by using model Q10 DSC, TA Instruments, New Castle, DE, USA. The measurements were performed at a heating rate of 10^{o}C/min in 25-600^{o}C

2.5 Mechanical studies

The mechanical properties of prepared microfibers were studied by the dynamic mechanical analyzer (RSA3, TA Instruments, USA) at ambient temperature. Electrospun mats were cut into 20 × 0.5 cm^2 wide shape. The tensile strength, young's modulus, and elongation at break were determined.

2.6 Swelling behavior of microfibers

The swelling studies of ZnO-PHBV-PEO microfibers were carried out by the previously reported method.[37] It was analyzed by placing a known weight of microfiber mat in phosphate buffer solution (pH 7.4) at 37^0 C. These mats were removed from the medium after 24 hours. The percentage of the degree of swelling was calculated by using equation 1,

Degree of swelling = [(Wt - Wd)/Wd] × 100 …………….(1)

Where, Ws is the weight of the swollen microfiber sample, Wd is the dried weight of the sample dipped in the buffer medium, measured by drying microfiber in an oven at 40^0 C to obtain constant weight.

View Article Online
DOI: 10.1039/D0NJ01384F

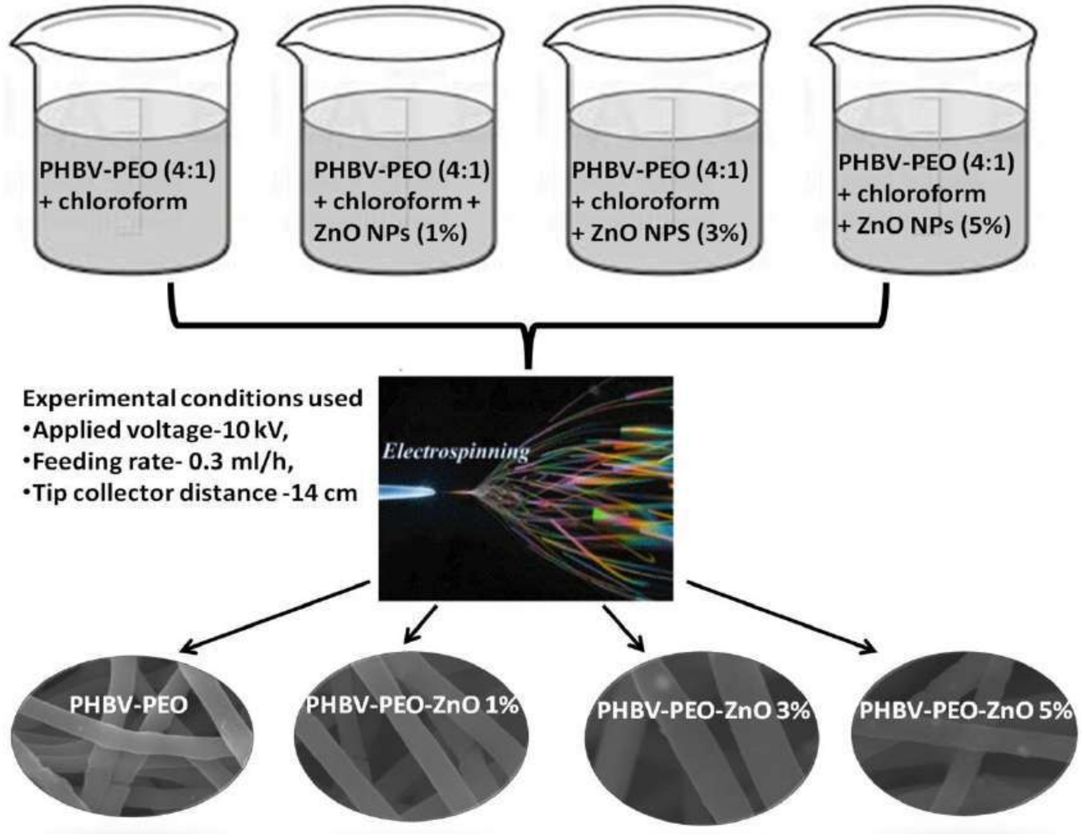


Figure 2: Schematic experiment procedures for preparing PHBV-PEO-ZnO microfibers through the electrospinning process (Polymer ratio PHBV:PEO, 4:1 is kept constant and ZnO NPs concentration is varied as 1, 3,5 by wt%, Conditions used for electrospinning process are, applied voltage 10kV, feeding rate 0.3ml/h, tip-collector distance 14cm).

2.7 Biological characterization

2.7.1 Antibacterial activity

The disc diffusion method was used to study the antibacterial activities of as-prepared microfibers against biofilm-forming pathogenic bacteria Gram-positive *Staphylococcus aureus* (NCIM 2654) and Gram-negative *Pseudomonas aeruginosa* (NCIM. 5032). In this method, bacterial cultures were used which was obtained by growing bacteria on nutrient agar medium for overnight. 100 µl of cultured cell suspension was spread on the agar plates with the help of a sterile glass spreader. The discs of microfibers were kept under UV light for half an hour for sterilization

View Article Online
DOI: 10.1039/D0NJ01384F

purposes. Then, discs were placed on the surface of agar plates with the help of sterile forceps. Then the plates were incubated at 37^{o}C for 24 hours. After 24 hours incubation, the zones of inhibition were observed on the plates and measured in mm.[38]

2.7.2 Antibiofilm activity

Antibiofilm activity of PHBV-PEO-ZnO microfibers is determined against Gram-positive bacteria (*Staphylococcus aureus* (NCIM 2654) and Gram-negative bacteria (*Pseudomonas aeruginosa* (NCIM 5032) by previously reported method with slight modifications.[39] These bacteria were inoculated in the sterile tryptic soy broth and incubated for 24h at 37^{o}C. Synthesized membranes were sterilized with 99% ethanol. Then membranes were dried inside laminar flow aseptically and transferred to sterile 24 well plates containing 1.5ml of sterile nutrient broth. 150 µl of bacterial suspension from the log phase was added to the wells containing sterile tryptic soya broth. The microtiter plate was incubated at 37^{o}C for three days to allow biofilm formation. For control membrane without ZnO NPs were used. Membranes submerged in sterile media without any bacterial growth were also used as a control. Once the biofilm is grown on the membranes, the membranes were carefully transferred to a new 24 well plate containing media and incubated at 37^{o} C. After incubation quantification is performed by crystal violet assay. The biofilm formed on the membrane was washed three times gently with sterile PBS buffer (pH 7.4). Then biofilm was stained by 500 µl of0.4% crystal violet dye for 15 minutes. Unbound dye was removed by washing with PBS buffer for 3 times. Crystal violet retained by biofilm was solubilized in 500 µl of 33 % acetic acid and absorption was determined at 620 nm by microtiter plate reader.Percentage of biofilm inhibition was calculated by using following equation2,

Percentage of biofilm inhibition=OD 620nm in control-OD620 nm in treatment/OD 620 nm in control ×100……………….(2).[40]

View Article Online
DOI: 10.1039/D0NJ01384F

2.7.3 Hemocompatibility

Blood was collected from goat in a slaughterhouse and it was stabilized in ethylenediaminetetraacetic acid (EDTA). The red blood cells (RBCs) were isolated from whole blood by using density gradient centrifugation. 5ml of whole blood was gently added on the top of 5ml of PBS solution and then centrifuged at 2000 rpm for 30 minutes. The supernatant was discarded, and red blood cells were collected. Later, RBCs were rinsed with phosphate buffer saline (pH 7.4) and centrifuged at 2000 rpm for 30 min. A stock solution of RBCs was prepared without serum at 2% (v/v) using phosphate buffer (pH 7.4). After that, 2ml of the diluted RBC solution was added to 2ml Eppendorf tubes containing PHBV-PEO and PHBV-PEO-ZnO microfibers (1%, 3%, and 5%). The negative and positive blood samples were prepared in the same way without microfibers and deionized water, respectively. All Eppendorf tubes were incubated for 2h at 37^{o}C. At an interval of 30 min, tubes were gently shaken and were centrifuged at 1500g for 10 min. at room temperature.The supernatant of PBS was transferred to another 96-well microtiter plate and hemoglobin (Hb) release was observed spectrophotometrically (OD 550nm) at 541 nm with a microtiter plate reader (Tecan). The percentage of RBC lysis can be calculated by the assumption that 100% RBC lysis takes place in mixing blood with distilled water at a 1:1 (v/v) ratio. The hemolytic percentage was calculated by using the following equation 3:

$$HP\% = (Dt - Dnc)/ (Dpc - Dnc) \times 100 \quad \ldots\ldots\ldots\ldots\ldots (3)$$

Where Dt is the absorbance of the test samples and Dpc and Dnc are the absorbances of positive and negative control respectively.[41]

2.7.4 Cell viability study of Microfibers

View Article Online
DOI: 10.1039/D0NJ01384F

The cell viability of PHBV-PEO and PHBV-PEO-ZnO (1,3 and 5%) microfibers were investigated by 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) assay by using mammalian fibroblast L929 cell lines.[7] Microfibers were sterilized under UV light for overnight. Cells were cultured in Dulbecco's minimal essential medium (DMEM) supplemented with 10% fetal bovine serum (FBS) and 1% antibiotic penicillin (1000U/mL penicillin G), and 100 µg/mL streptomycin. Then cells with a density of 1×10^4 cells/well with DMEM containing serum were transferred into 96 well plates and incubated overnight in a humidified incubator. The sterilized microfiber mats were transferred in serum-containing media and kept for incubation for 24h, 48h and 72 h at 37^{o}C. Blank PHBV-PEO microfibers were used as a control. After incubation, the media was removed. Cells were rinsed with phosphate buffer saline (pH 7.2) and100 µL of MTT (0.5mg/mL) prepared in serum-free medium was added to each well and incubated for 4h. Then the medium was removed and dimethyl sulphoxide (DMSO) was added to each well for solubilization of formazan crystals. The concentration of formazan was investigated by a multiwell plate reader at 570 nm absorbance. The cell viability was calculated by using the equation below,

Cell viability = A treated / A control ×100 ……………… (4).

Where, A treated and A control is the absorbance of uncoated and coated cells, respectively.

2.7.5. Statistical analysis

The data is presented as means ± standard deviation (SD). The statistical analyses between different groups were determined with one-way analysis of variance (ANOVA) of $p < 0.05$ was considered as statistically significant different (*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$).

3. Results and discussion

View Article Online
DOI: 10.1039/D0NJ01384F

3.1 Characterization of prepared microfibers

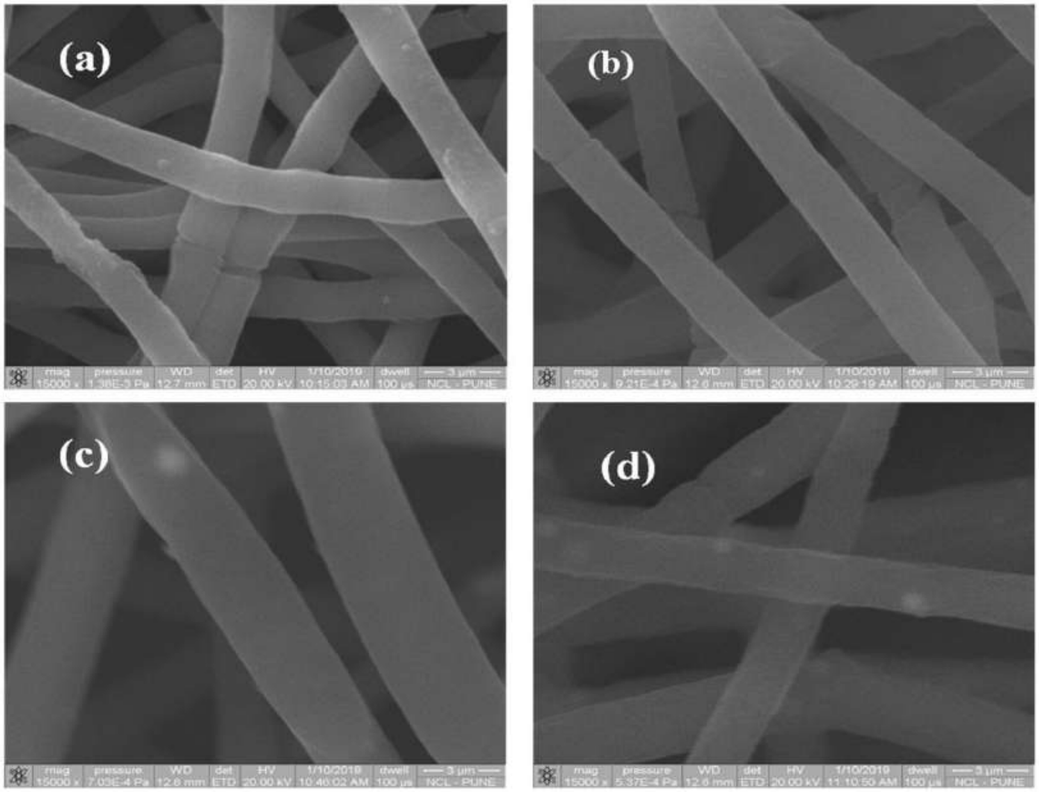


Figure 3: SEM images of neat PHBV-PEO (a), PHBV-PEO-ZnO 1 wt% (b), PHBV-PEO-ZnO 3 wt% (c) and PHBV-PEO-ZnO 5 wt% (d) shows that ZnO reinforced microfibers exhibited slightly higher diameter (2.2-3.1 µm) than that of neat PHBV-PEO microfibers (2-2.2 µm).The fiber diameter increased up to 3% concentration of ZnO NPs and slightly reduced for 5% concentration of ZnO NPs.

Typical morphologies of neat PHBV-PEO (4:1) and PHBV-PEO reinforced with different concentrations of ZnO are shown in figure 3. As compared to neat PHBV-PEO microfibers, ZnO reinforced microfibers exhibited slightly higher diameter. Neat PHBV-PEO hybrid microfibers obtained have an average diameter of 2.04-2.2 µm, whereas all other microfibers with different ZnO concentrations showed an average diameter of 2.2-3.1 µm. It was obvious that the diameter distribution of microfibers become wider upon the addition of ZnO nanoparticles with uniform morphology. It was also revealed that with an increase in ZnO contents, the fiber diameter increased from neat to 3% concentration of ZnO nanoparticles and reduced for 5% concentration

View Article Online
DOI: 10.1039/D0NJ01384F

of ZnO NPs. This reduction in diameter of microfibers may be due to increased electric field because of increased charge density, the conductivity of electrospinning solution during the electrospinning process.[42] EDX confirmed the successful incorporation of ZnO NPs in PHBV-PEO microfibers. The EDX spectrum for respective microfibers is shown in figure 4.

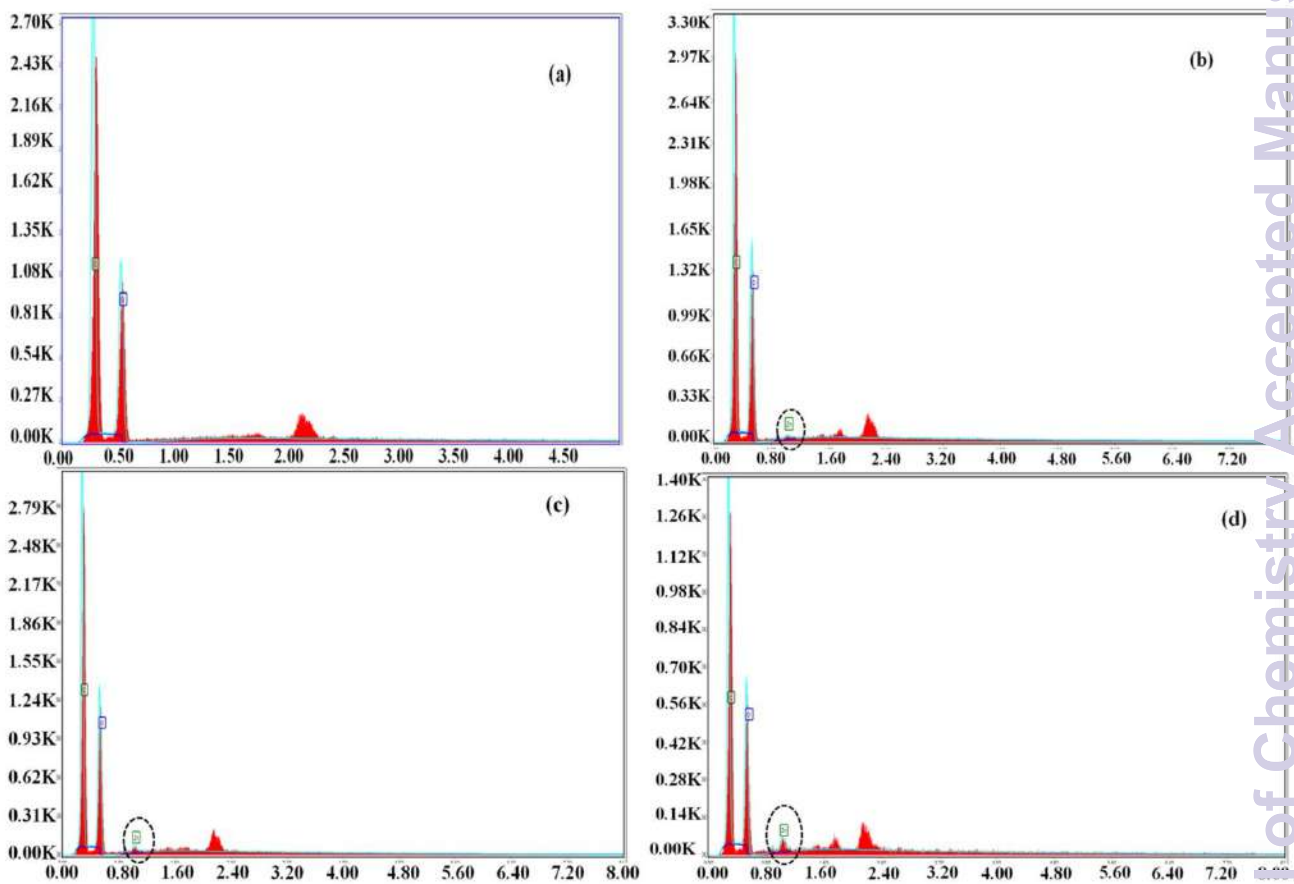


Figure 4: EDX spectrum of neat PHBV-PEO (a), PHBV-PEO-ZnO 1 wt% (b), PHBV-PEO-ZnO 3 wt% (c) and PHBV-PEO-ZnO 5 wt% (d) indicating increasing peaks of Zn from 1% to 5% of PHBV-PEO-ZnO microfibers confirms the successful incorporation of ZnO NPs in increasing amount from 1% to 5% in PHBV-PEO microfibers.

ATR-FTIR spectra of PHBV/PEO electrospun fibers with different concentration of ZnO NPs is presented in figure 5A and 5B. As other researchers investigated, for all PHBV/PEO electrospun fibers, the peak at 1722 cm^{-1} is assigned to the stretching band of ester group C=O.[18]

View Article Online
DOI: 10.1039/D0NJ01384F

The spectrum of ZnO shows a broad peak centered at 3450 cm $^{-1}$ which is assigned to the stretching of hydrogen bonded –OH groups on thenanoparticle surface.The peak becomes more intense than that of neat PHBV/PEO which is in agreement with increasing concentration of ZnO nanoparticles.[43]

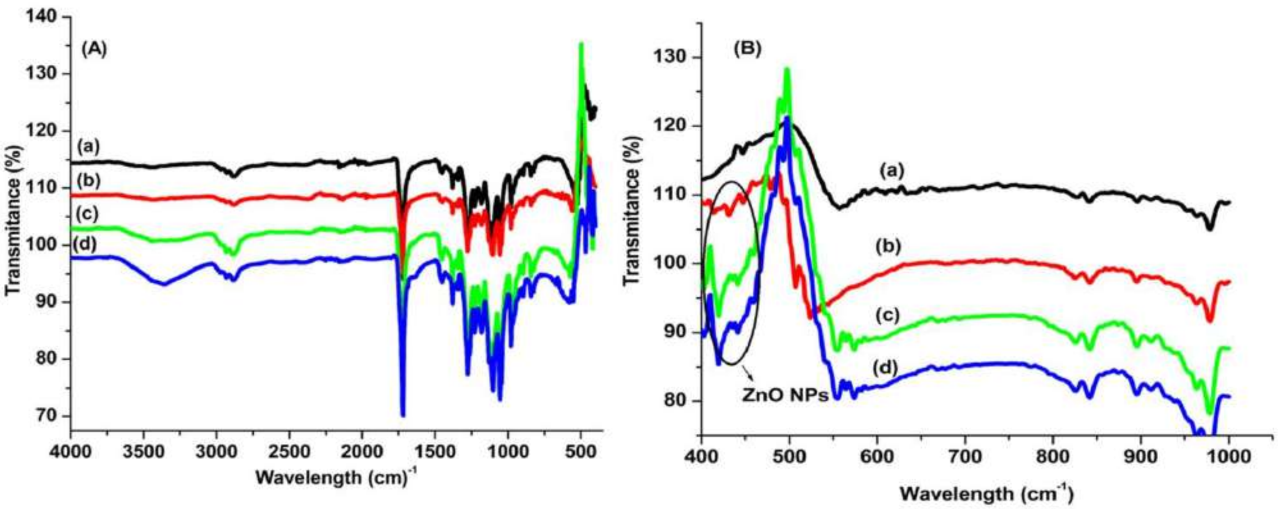


Figure 5: (A), FTIR spectra of PHBV/PEO electrospun fiber with different concentration of ZnO nanoparticles in the 400-4000cm^{-1} range (a) Neat PHBV-PEO, (b) PHBV-PEO-ZnO (1 wt %), (c) PHBV-PEO-ZnO (3 wt %), (d) PHBV-PEO-ZnO (5 wt%) (B) FTIR spectra of PHBV/PEO electrospun microfiber with different concentration of ZnO nanoparticles in 400-1000cm^{-1} range (a) Neat PHBV-PEO, (b) PHBV-PEO-ZnO (1 wt %), (c) PHBV-PEO-ZnO (3 wt %), (d) PHBV-PEO-ZnO (5 wt%) showing successful incorporation of ZnO NPs in increasing order as the peaks in range of ~ 440 cm^{-1}assigned to stretching of Zn-O bondbecome more intense with increased concentration of ZnO NPs.[43] Other peaks are also in agreement with the presence of functional groups of ZnO, PHBV and PEO.

The spectrum of ZnO shows a broad peak centered at 3450 cm^{-1} assigned to the stretching of hydrogen-bonded –OH groups that become more intense with the increased percentage of ZnO NPs in PHBV-PEO microfibers. The intense peak found at ~ 440 cm^{-1} corresponds to the stretching of the Zn-O bond that was increased with an increase in the percentage of ZnO NPs. The peaks at 2891 cm^{-1}, 2930 cm^{-1}, and 2978 cm^{-1} correspond to asymmetric and symmetric stretching; intense peak at 1731 cm^{-1} assigned to C=O stretching of ester group; [43] the peaks at 1280 cm $^{-1}$ and 1262

View Article Online
DOI: 10.1039/D0NJ01384F

cm^{-1} are assigned to asymmetric and symmetric stretching of C-O-C; peaks at 1133 cm^{-1} and 1100 cm^{-1} are assigned to asymmetric and symmetric stretching of C-O; peak at 1232 cm^{-1} thought to be CH_3 vibration; peak at 1187 cm^{-1} corresponds to C-O-C stretching and peak at 1055 cm^{-1} is assigned to C-O stretching and CH_2 rocking.[44,45]

3.2 Thermal analysis of prepared microfibers

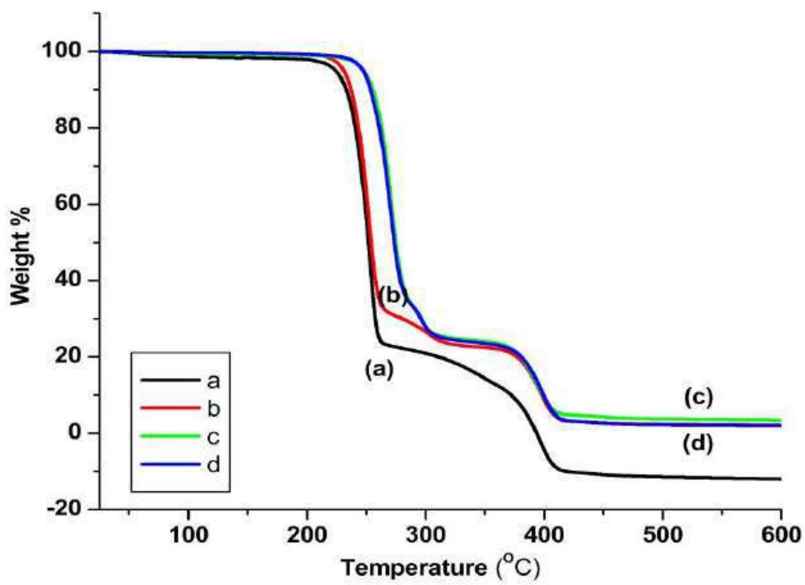


Figure 6: TGA of (a) Neat PHBV/PEO, (b) PHBV/PEO/ZnO (1 wt %), (c) PHBV/PEO/ZnO (3 wt %), (d) PHBV/PEO/ZnO (5 wt%) showing that shifting of curves from neat PHBV-PEO microfibers to 5% PHBV-PEO-ZnO microfibers exhibited better thermal stability due to crystalline nature of ZnO NPS.[36]

Figure 6 depicts two distinguishable thermal decomposition peaks ascribed to PHBV-PEO-ZnO components. The measurements were performed at the heating rate of 10°C/min in 25-600°C. It was clear that the weight loss of PHBV-PEO-ZnO fibers presented two weight loss. Two successive decompositions were observed in all samples. The first decomposition weight loss is in the range of 215°C-310°C and second weight loss is in range of 345-417°C. The temperature of maximum weight loss rate is 220°C-262°C and 373-410°C respectively.

View Article Online
DOI: 10.1039/D0NJ01384F

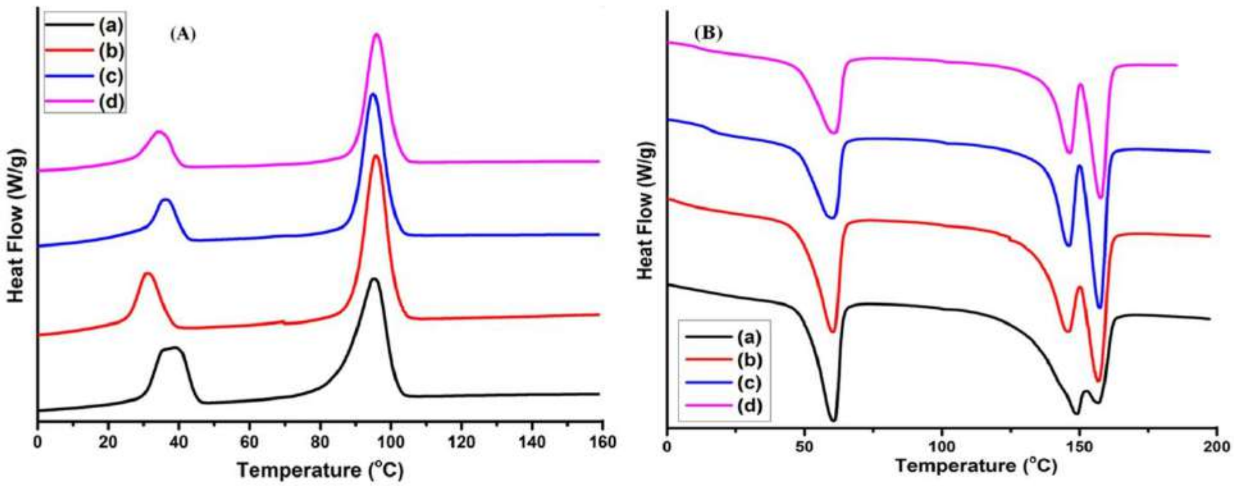


Figure 7: DSC thermogram of (a) Neat PHBV/PEO, (b) PHBV/PEO/ZnO (1 wt %), (c) PHBV/PEO/ZnO (3 wt %), (d) PHBV/PEO/ZnO microfibers (5 wt %) (A) heating scan, (B) cooling scan, indicating that incorporation of ZnO NPs doesn't have any effect on the crystalline nature of PHBV-PEO microfibers, with the increase in ZnO content new melt crystallization temperature slowly decreased that shows the addition of ZnO decreased crystallization rate of PHBV-PEO.[46]

Neat PHBV-PEO displayed 86% of initial mass loss and it is attributed to the degradation of the polymer molecule.[33] No significant weight loss was observed at 100^{o}C which shows the absence of water molecules in fiber composition. Functionalisation of fibers with ZnO NPs with ZnO showed ~ 80%, ~83% and ~ 89% of weight loss for 1%, 3% and 5% ZnO NPs respectively. With an increase in the percentage of ZnO NPs, the degradation temperature of microfibers were increased.The shifting of the curve of neat PHBV-PEO to high temperature suggests better thermal stability, which may be due to the crystalline structure of NPs.[47,48]

It is very important to study the crystallization and melting behavior of polymer bionanocomposite as it affects not only the crystalline structure and morphology but also the macroscopic properties of the materials. Non-isotheral malt crystallization of neat PHBV-PEO and their nanocomposites was studied by DSC analysis, and their cooling and heating thermograms are shown in figure 7 A, and B respectively. The thermal parameters obtained from DSC curves

View Article Online
DOI: 10.1039/D0NJ01384F

are collected in table1. In DSC thermograms, the ZnO crystallization peak was not detectable, due to the low amount in the blend.[33] With the increase in ZnO content new melt crystallization temperature was slowly decreased that shows the addition of ZnO decreased crystallization rate of PHBV-PEO.[46] Appearance of 1st melting peak was around 40^0C and 2nd melting peak around 95^oC for all samples suggests that addition of ZnO doesn't affect main crystal structure and lamellar size. The intensity of the 2nd melting peak was decreased as compared with neat PHBV-PEO due to decreased mobility of polymer chains. With the increase in ZnO content, Tm_2 for PHBV and PEO is slightly shifted towards lower degree.

Table1: Melting temperature (T_m), crystallization temperature (T_c), melting enthalpy (ΔH_m), crystallization enthalpy (ΔH_c), and crystallinity degree (χ) of PHBV-PEO and PHBV-PEO-ZnO microfibers.

Sample	First Heating						First Cooling				Second heating		
	Tm_1(^{o}C)		ΔHm(J/g)		X_1 (%)		Tc1 (^{o}C)		ΔHc1 (J/g)		Tm2 (^{o}C)		
	PEO	PHBV	PEO	PHBV	PEO	PHBV	PEO	PHBV	PEO	PHBV	PEO	PHBV	
												Tm2 1	Tm2 2
PHBV-PEO	61	160	26	39	13	35	39	95	17	38	61	149	157
PHBV-PEO-ZnO (1%)	62	161	27	40	13	36	31	96	14	40	60	146	156
PHBV-PEO-ZnO (3%)	62	159	20	33	10	30	36	95	12	32	60	146	157
PHBV-PEO-ZnO (5%)	63	160	19	30	9	27	34	96	11	29	61	146	158

PHBV-PEO and PHBV-PEO-ZnO composites exhibited similar cooling scans decreasing crystallization enthalpy (ΔH_c) and T_c with ZnO addition, suggesting decreasing degree of crystallization of PHBV-PEO. [46] In the first heating process of DSC, it was observed that Tm doesn't affect significantly before and after the incorporation of ZnO NPs.

View Article Online
DOI: 10.1039/D0NJ01384F

This deduced that the addition of ZnO NPs doesn't influence the basic crystalline structure of microfibers. The relative crystallinity decreases after the addition of ZnO NPs confirming that they act as a retarding agent for the crystallization in the electrospun microfibers.

It is widely reported that the crystallinity of the polymer matrix increases with the addition of nanomaterials which act as a nucleating agent. Previously, Diez-Pascual et al. reported that the addition of ZnO NPs accelerated the crystallization of PHBV due to heterogeneous nucleation effect.[43] However, here in this study, the crystallinity of the electrospun microfibers doesn't increase after the addition of ZnO NPs but it decreases. Yu et al. suggested the retarding effect of the addition of ZnO particles on the crystallization of PHBV-nanofibers that decreased crystallinity, showing no effect on T_m value. This behavior was attributed to the formation of hydrogen bonds between ZnO and PHBV, disturbing PHBV chains mobility and decreasing crystallinity.[30]

3.3 Mechanical properties

The room temperature static mechanical properties of PHBV-PEO-ZnO microfibers were evaluated and represented in figure 8. Their values of the tensile strength (σ_y), youngs modulus (E) and elongation at break (ε_b) are plotted as a function of ZnO concentration in figure 8. A-C. From these results, it can be deduced that mechanical properties were mainly affected by the presence of ZnO NPs. ZnO NPs might have a role in effective stress transfer across the polymer matrix since tensile strength was observed to increase with ZnO addition into PHBV-PEO matrix. Young's modulus values were reduced slightly with increased addition of ZnO NPs. The addition of ZnO into the PHBV-PEO matrix significantly increased elongation break. These results were in correspondence with DSC findings since lower crystallinity is related to higher ductility. In

View Article Online
DOI: 10.1039/D0NJ01384F

general, mechanical properties of fibers were affected by factors such as the interaction between ZnO and PHBV-PEO, fiber diameter and porosity.[46]

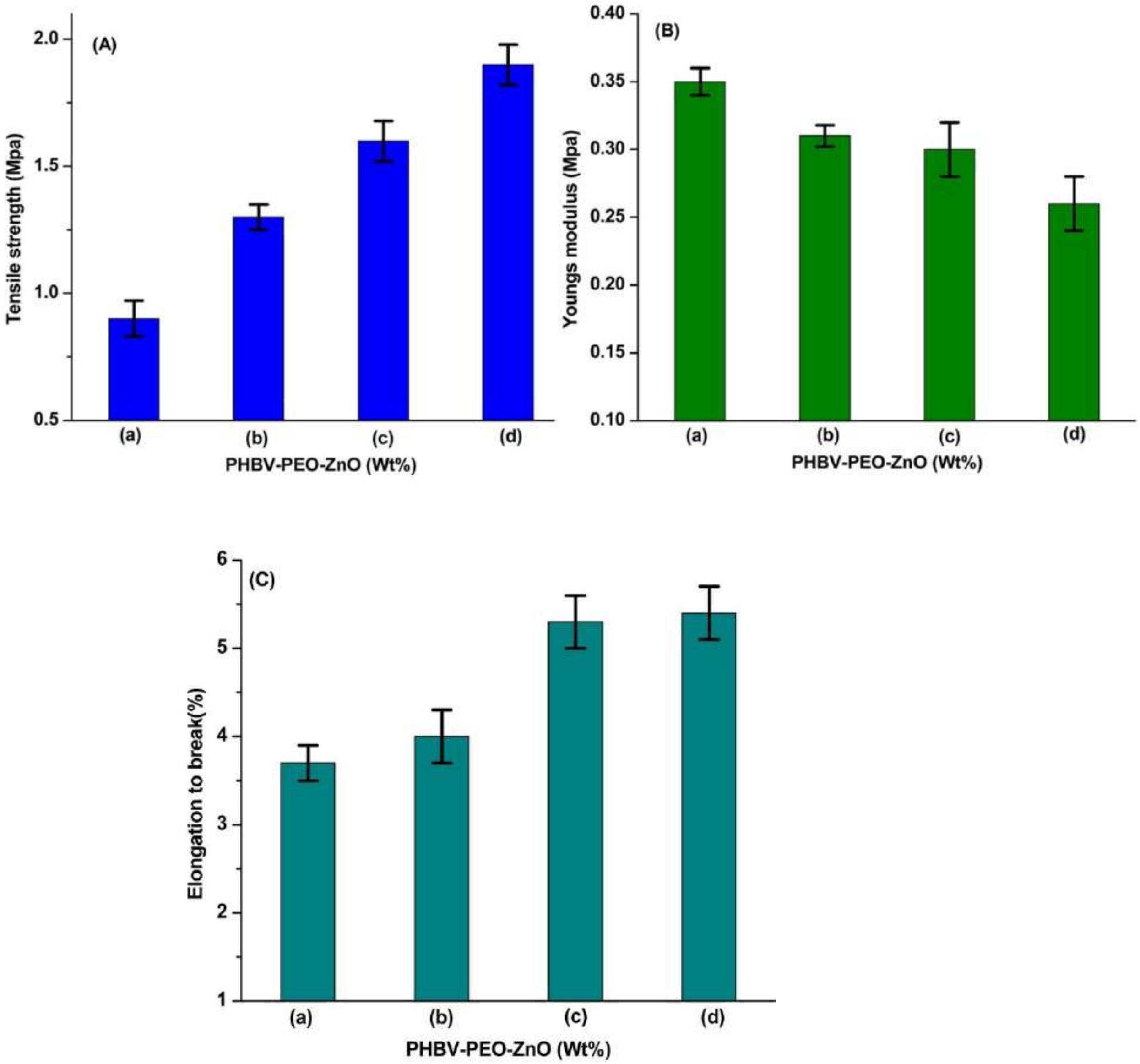


Figure.8: Mechanical properties of (a) Neat PHBV/PEO, (b) PHBV/PEO/ZnO (1 wt %), (c) PHBV/PEO/ZnO (3 wt %), (d) PHBV/PEO/ZnO microfibers (5 wt %). (A) Tensile strength(SD± 0.05), (B) Young's modulus (SD±0.01), and (C) Elongation to break (SD±0.03) showing that addition of ZnO NPs increased tensile strength and elongation at the break with reduced young's modulus.

3.4 Degree of swelling

View Article Online
DOI: 10.1039/D0NJ01384F

Figure 9 shows the percentage of weight gain of neat PHBV-PEO, PHBV-PEO-ZnO (1 wt %), PHBV-PEO-ZnO (3 wt%) and PHBV-PEO-ZnO (5 wt%) microfibers. Neat PHBV-PEO microfibers showed a higher percentage of weight gain than PHBV-PEO-ZnO microfibers. The addition of ZnO NPs slightly reduced the percentage of weight gain as microfibers with ZnO had lower porosity than PHBV-PEO microfibers. This could be attributed to the fiber diameter. The fibers with the finest diameter showed maximum swelling and fibers with thicker diameter showed relatively poor swelling[49].

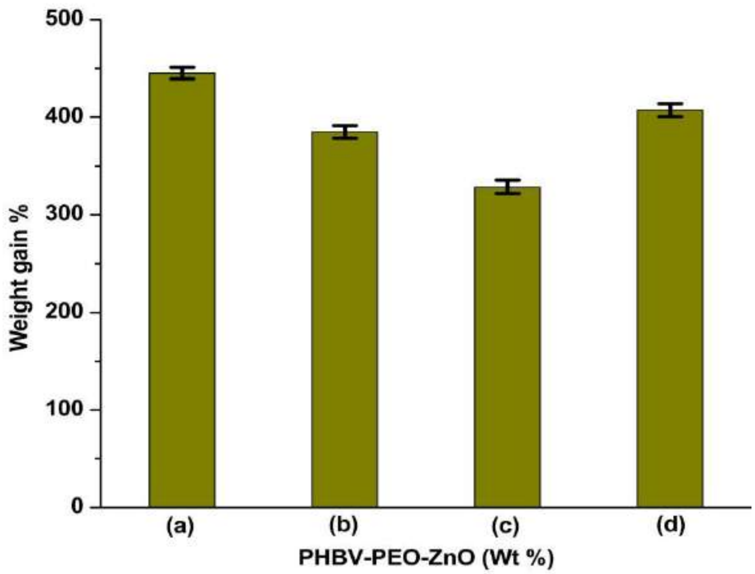


Figure 9:Percentage of weight gain of (a) Neat PHBV/PEO, (b) PHBV/PEO/ZnO (1 wt %), (c) PHBV/PEO/ZnO (3 wt %), (d) PHBV/PEO/ZnO microfibers(5 wt %) showing that neat PHBV-PEO microfibers showed the higher percentage of weight gain than PHBV-PEO-ZnO NPs (SD±6.5). This confirms neat microfibers and microfibers with 1 and 5% of ZnO NPs will have good uptake capacity as compared with 3% of PHBV-PEO-ZnO microfibers.

.The results concluded that 1 and 5wt% microfibers will have good uptake capacity than the other 3% of ZnO microfibers.[50]

3.5 Biological characterization

3.5.1Antibacterial activity

View Article Online
DOI: 10.1039/D0NJ01384F

The application of antibacterial agents is mainly to treat infections and for wound healing. The incorporation of nanoparticles into a polymeric matrix makes them effective biomaterial from toxicological and biocompatibility point of view. The antimicrobial activity of nanoparticles mainly depends upon varieties of factors like their size, shape, surface charge, solubility, surface area to volume ratio, concentration, temperature, pH, type of test microorganism species, and cell number of culture etc.[51,1] Therefore, in this study, ZnO NPs were incorporated into the PHBV-PEO matrix for preparing antibacterial membrane by electrospinning technique. The antibacterial activity of the control sample (PHBV-PEO) and microfibrous composite membranes with different ZnO NPs concentration were observed by measuring the zones of inhibition of *S.aureus and P. aeruginosa* as shown in figure 10.

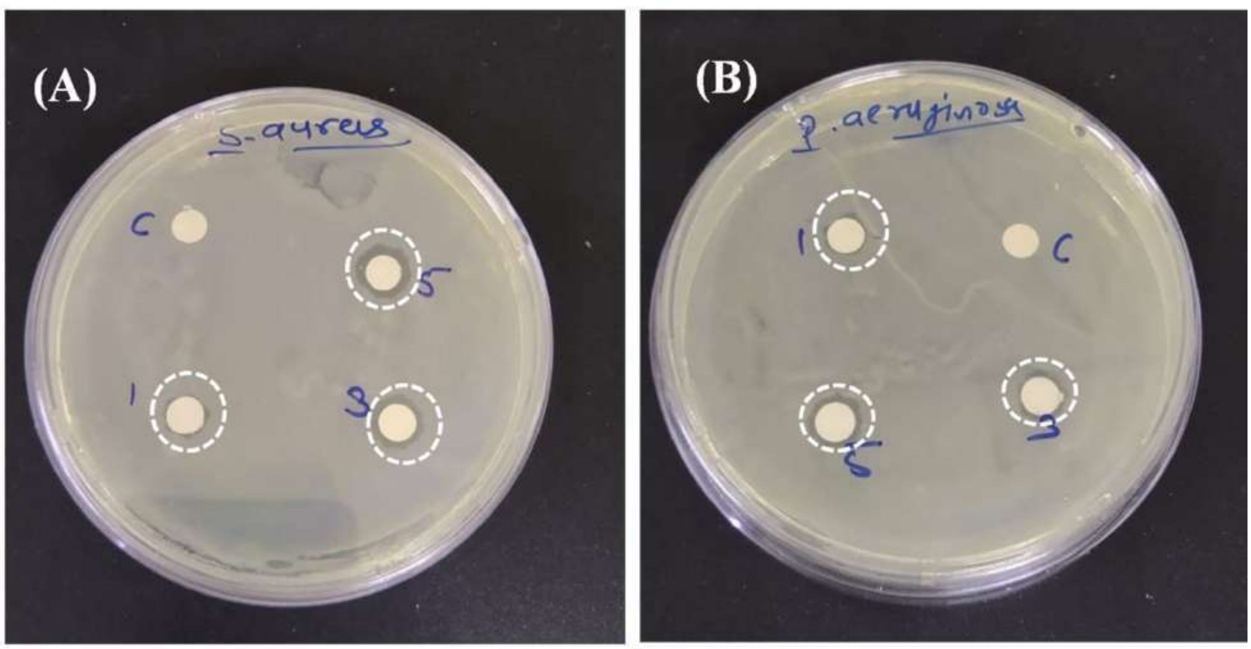


Figure 10: Antibacterial activity of (C) neat PHBV-PEO, PHBV-PEO-ZnO (1%), PHBV-PEO-ZnO (3%), PHBV-PEO-ZnO (5%) microfibers against pathogenic bacteria (A) Gram-positive *S.aureus (NCIM 2654)* and (B) Gram-negative *P.aeruginosa (NCIM 5032)*showing that PHBV-PEO-ZnO (5%) microfibers have maximum antibacterial activity than other microfibers against *S.aureus* (zone of inhibition– 4mm) as compared with *P.aeruginosa* (zone of inhibition-3mm).

View Article Online
DOI: 10.1039/D0NJ01384F

The zones of inhibition are presented in table 2. It can be clearly observed that neat PHBV-PEO microfiber showed no zone of inhibition, while composite microfibers with 1, 3 and 5% of ZnO NPs showed zone of inhibition against *S.aureus* and *P. aeruginosa* were (1mm,3mm, and 4mm) and (1 mm, 2mm and 3mm) respectively. The antimicrobial activity of ZnO NPs has been already reported in the literature.[1] The mechanism of ZnO Nps antibacterial action in the PHBV-PEO matrix involves the slight contact with the cell wall rather than the penetration that alters the microenvironment, enhancing the solubilization of metal or reactive oxygen species (ROS) species that destroy the cell membrane.[52] The maximum antibacterial activity was observed for the samples with 5wt % ZnO NPs against both *S.aureus* and *P.aerogenosa* as compared with samples with1 and 3 wt % of ZnO NPs. It was observed that the intensity of antibacterial activity was increased with an increase in the concentration of ZnO NPs.

Table2: Diameters of zones of inhibition by PHBV-PEO-ZnO microfibers.

Sample	Zones of inhibition (in mm)	
	S.aureus	*P. aeruginosa*
PHBV-PEO	0	0
PHBV-PEO-ZnO (1%)	1	1
PHBV-PEO-ZnO (3%)	3	2
PHBV-PEO-ZnO(5%)	4	3

View Article Online
DOI: 10.1039/D0NJ01384F

3.5.2Antibiofilm activity

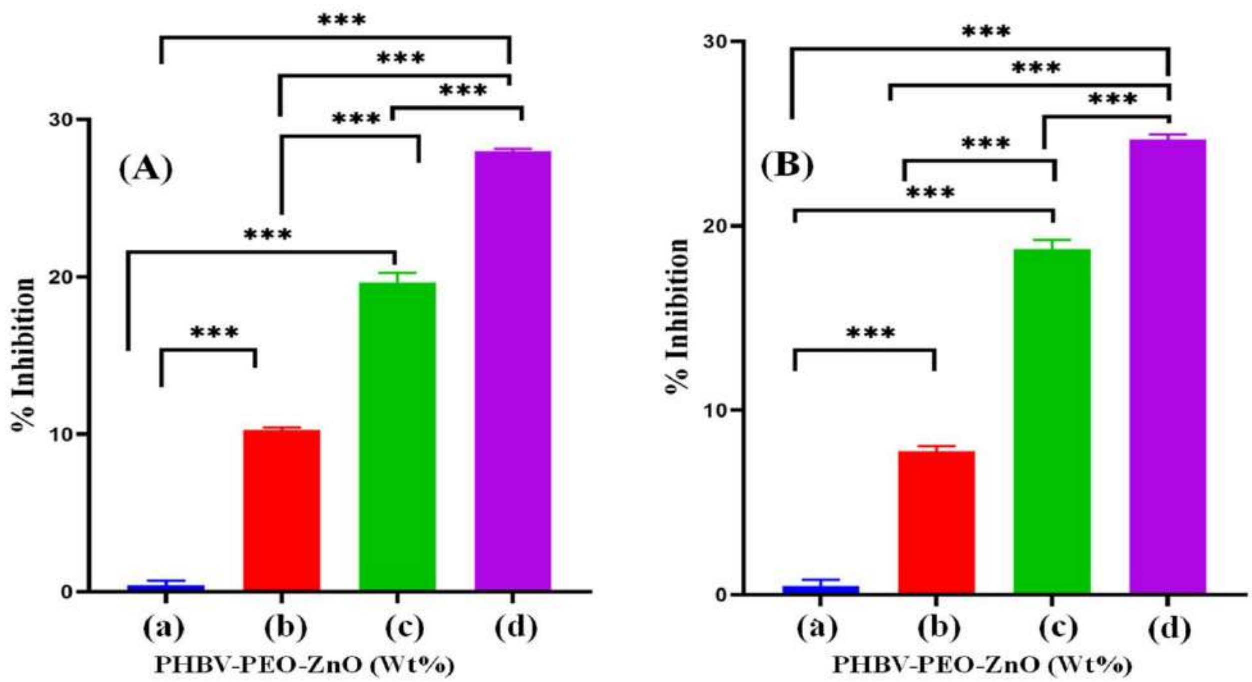


Figure 11: Antibiofilm activity of (a) Neat PHBV/PEO, (b) PHBV/PEO/ZnO (1 wt %), (c) PHBV/PEO/ZnO (3 wt %), (d) PHBV/PEO/ZnO microfibers(5 wt %) against pathogenic bacteria (A) Gram-positive *S.aureus (NCIM 2654)* and (B) Gram-negative *P.aeruginosa (NCIM 5032)* indicating that PHBV-PEO-ZnO (5%) showed the maximum percentage of biofilm inhibition (28.17%) in *S.aureus* as compared with *P.aeruginosa* (24.51%) (SD±0.5).The percentage of biofilm inhibition was increased with the increase in ZnO content in PHBV-PEO microfibers.

Effect of as-prepared PHBV-PEO-ZnO microfibers on the biofilm formation on *Staphylococcus aureus (NCIM 2654)* and *Pseudomonas aeruginosa* (*NCIM 5032)* was shown in figure 11. This graph indicated that ZnO incorporated PHBV-PEO microfibers inhibited biofilm formation. Among all 5 wt%, PHBV-PEO-ZnO microfibers showed a maximum percentage of inhibition against *Staphylococcus aureus* (28.17%) as compared with *P.aeruginosa* (24.51%), while PHBV-PEO-ZnO (1%) and PHBV-PEO-ZnO (3%) microfibers showed 10.17% and 19.18% of inhibition against *Staphylococcus aureus* and 18.28% and 24.51% against *P.aeruginosa* respectively. *S.aureus* and *P.aeruginosa* are opportunistic pathogens that have the ability to form

View Article Online
DOI: 10.1039/D0NJ01384F

biofilm on medical implants and in wounds. The wound infections are difficult to eradicate due to the antibiotic-resistant nature of biofilm.[53] This result demonstrates that the antibiofilm activity was dependent on ZnO NPs concentration in the PHBV-PEO matrix. ZnO NPs are well reported for their antibacterial and antibiofilm activity.[54] Therefore, the incorporation of ZnO NPs in the synthesis of the antimicrobial surface is a promising approach for developing biofilm resistant biomedical surfaces. The results obtained from this study demonstrated that microfibers incorporated with ZnO NPs exhibited significant antibiofilm activity. The possible antibacterial and antibiofilm mechanism of PHBV-PEO-ZNO microfibers are illustrated in figure12.

The antibacterial mechanism of ZnO NPs include direct interaction with bacterial cell, destruction of cell integrity, liberation of reactive oxygen species, and antimicrobial action of

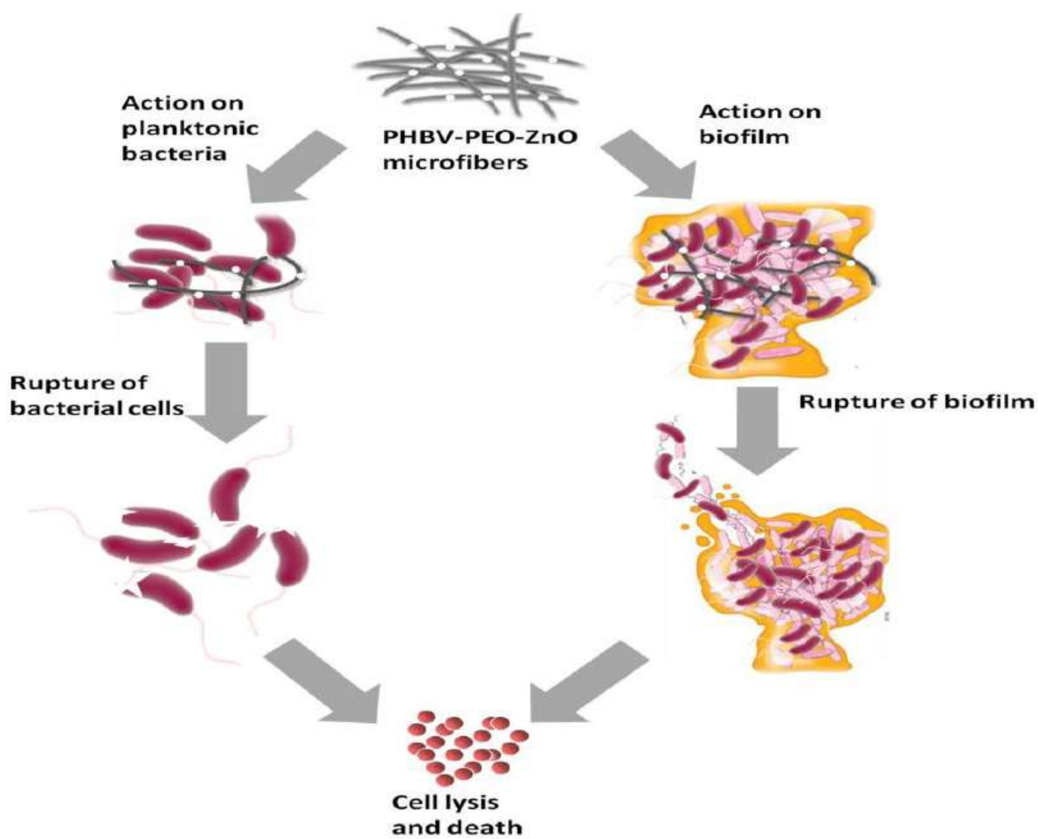


Figure 12: Possible antibacterial and antibiofilm mechanism of PHBV-PEO-ZnO microfibers.

View Article Online
DOI: 10.1039/D0NJ01384F

Zn^{2+} ions, damage of lipids, proteins, carbohydrates and DNA by the oxidative stress, lipid peroxidation that disrupts the vital cell functions. The mechanism of ZnO NPs in PHBV-PEO microfibers may involves the slight contact with the bacterial cell wall rather than its penetration inside the cell. ZnO NPs first destroy the bacterial cell wall, then enter the cell, and finally accumulate in the cell membrane leading to death. The toxicity of ZnO NPs doesn't always depend upon the internalization in bacteria; these NPs can change the microenvironment near the bacteria and induce their solubility.[1,55]

3.5.3 Hemocompatibility

Hemocompatibility is one of the most important methods to prove the in vitro biocompatibility of polymeric materials using RBCs isolated from blood. As per ASTMF-756-08, the hemolytic percentage less than 2% is considered as non-hemolytic, 2-5% is slightly hemolytic and more than 5% is considered as hemolytic.[56] Figure 13 shows the percentage of hemolysis of PHBV-PEO and PHBV-PEO-ZnO microfibers. The results showed that the percentage of hemolysis of PHBV-PEO-ZnO microfibers was higher than that of PHBV-PEO microfibers. The hemolysis percentage was 0.8%, 1.1%, 1.8% and 1.9% for PHBV-PEO, PHBV-PEO-ZnO 1%, 3% and 5 % respectively.

View Article Online
DOI: 10.1039/D0NJ01384F

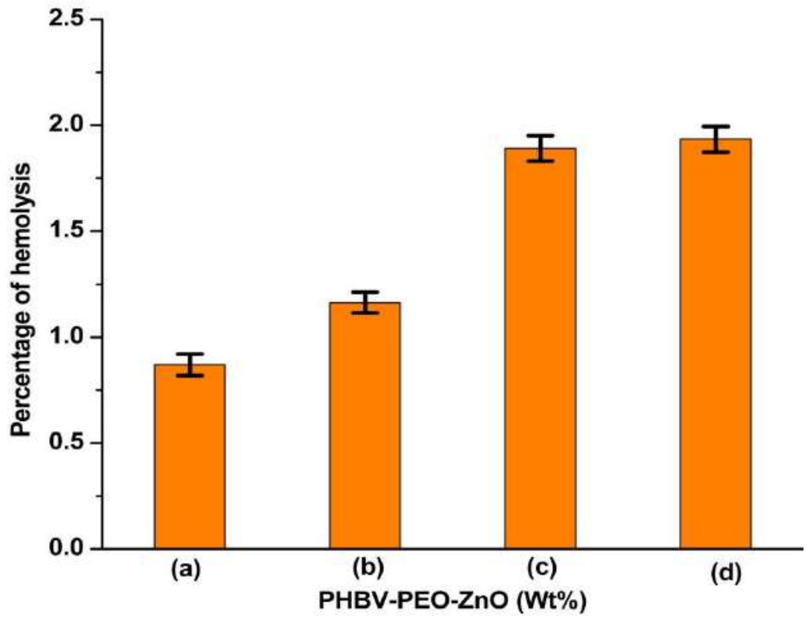


Figure 13: Hemocompatibility studies of (a) Neat PHBV/PEO, (b) PHBV/PEO/ZnO (1 wt %), (c) PHBV/PEO/ZnO (3 wt %), (d) PHBV/PEO/ZnO microfibers (5 wt %) showing the percentage of hemolysis below 2% (SD ±0.01). The percentage of hemolysis was increased with an increase in ZnO NPs concentration indicating concentration dependant hemolytic activity. The percentage of hemolysis observed is below 2% indicating the non-hemolytic nature of all microfibers. [57]

The hemolysis percentage of all microfibers was below 2% indicating that microfibers are non-hemolytic in nature. The observed results showed that the hemolysis percentage was increased with increasing concentration of ZnO NPs. ZnO NPs caused hemolysis when they come in contact with blood in a concentration-dependent manner.[57] The results showed that these microfibers can be used for wound dressing applications.

3.5.4 Cell viability study of microfibers

The cell viability studies of PHBV-PEO and PHBV-PEO-ZnO (1%, 3%, and 5%) microfibers were investigated and represented in figure 14. Material to be used for a wound dressing purpose should be non-toxic and biocompatible. This study was carried out using L929 fibroblast cells by using MTT assay. PHBV-PEO mats were used as a control. It was observed that

View Article Online
DOI: 10.1039/D0NJ01384F

the cell viability was decreased for 24 hours, 48 hours and 72 hours as the concentration of ZnO NPs were increased. It was also investigated that the cell viability of PHBV-PEO-ZnO microfibers slightly increased after 48h and 72h of incubation than 24h incubation for PHBV-PEO-ZnO microfibers.

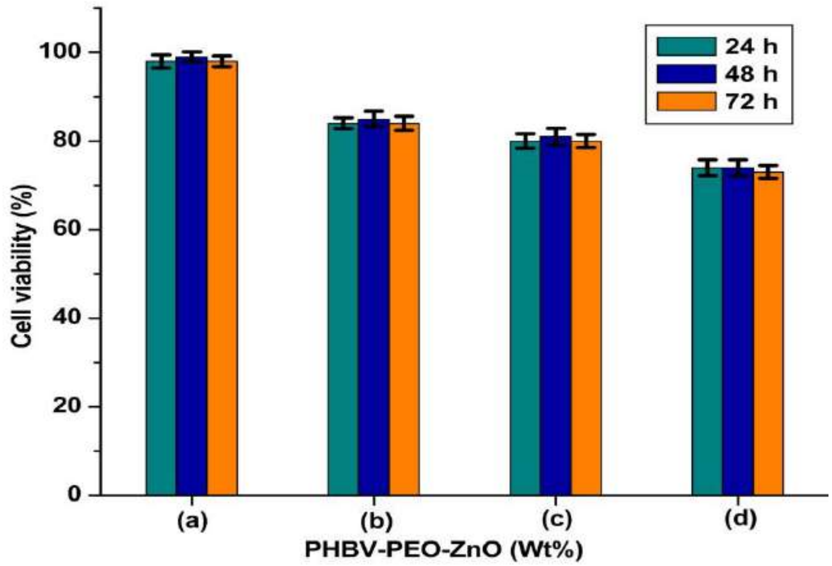


Figure 14: Cytotoxicity of synthesized (a) Neat PHBV/PEO, (b) PHBV/PEO/ZnO (1 wt %), (c) PHBV/PEO/ZnO (3 wt %), (d) PHBV/PEO/ZnO microfibers(5 wt %) in L929 fibroblast cells indicating that the cell viability decreased after 24h, 48h and 72h incubation with increased concentration of ZnO NPs from 1 to 5% (SD±1.2). Also, the cell viability slightly increased after 48 h and 72 h incubation as compared with 24 h incubation. PHBV-PEO microfiber with 5% of ZnO showed minimum cell viability that is 73% after 24h and 75% after 48h and 72h incubation as compared with other microfibers indicating all microfibers are non-toxic to cells.

Cell viability of PHBV-PEO microfibers was 98% for 24h and 99% for 48h and72h of incubation. However, the cell viability was 84% after 24h incubation and 85% after 48h and 72 h incubation for 1% of ZnO content in PHBV-PEO microfiber, 80% after 24h incubation and 81% after 48h and 82% after 72 h incubation for 3% of ZnO and 73%after 24h incubation and 75%

View Article Online
DOI: 10.1039/D0NJ01384F

after 48h and 72 h incubation for 5% of ZnO content in PHBV-PEO microfibers. From this investigation, it can be concluded that these microfibers are non-toxic to cells.[58]

4. Conclusion

Novel PHBV-PEO-ZnO microfibers reinforced with uniformly dispersed ZnO NPs were successfully prepared via electrospinning technique. Their morphology, thermal, mechanical, spectroscopic, antibacterial, antibiofilm and biocompatible properties were investigated. The addition of ZnO NPS in PHBV-PEO microfibers affected the fiber morphology and average fiber diameter was increased for up to 3% concentration of ZnO NPs and slightly decreased for 5% of ZnO NPs concentration. The successful addition of ZnO NPs in an increasing manner was proved by peaks in the EDX analysis. FTIR spectra also confirmed the successful addition of ZnO NPs in increasing manner by the more intense peaks of stretching of the Zn-O bond in the range of ~440 cm^{-1}. Moreover, they enhanced tensile strength and elongation at break values with decreased young's modulus values with ZnO NPs addition. These results were consistent with DSC findings, which suggested that the addition of ZnO NPs doesn't influence the basic crystalline structure of PHBV-PEO microfibers and relative crystallinity decreased after the addition of ZnO NPS. This showed that the ZnO NPs acted as a retarding agent for crystallization in electrospinning microfibers. The remarkable increased thermal stability was observed after the addition of ZnO NPs which was evaluated by the TGA study. These composites exhibited antibacterial activity against human pathogenic bacteria causing wound infections and the effect on *S.aureus* was systematically stronger than *P. aeruginosa* with increased ZnO concentration. The antibiofilm activity was higher against *S.aureus* as compared with *P. aeruginosa* at a concentration of 5wt % of ZnO NPs than 1 and 3 wt % of ZnO NPs concentrations. In the hemolysis study, the percentage of hemolysis was increased with ZnO NPs concentration which showed that these composites

View Article Online
DOI: 10.1039/D0NJ01384F

showed ZnO concentration-dependent nature of hemolysis. However, the percentage of hemolysis was below 2% concluded that these composites are hemocompatible. In vitro cytotoxicity study proved the non-toxic nature of all prepared microfibers. In conclusion, PHBV-PEO-ZnO microfibers fulfill many requirements of potential wound dressing material and can be considered as a promising biomaterial for treating bacterial infections instead of using conventional antibiotics. The continued development of antimicrobial resistance of specific bacterial strains towards antibiotics highlights the importance of reported PHBV-PEO-ZnO materials.

Acknowledgement

RB is supported through the Irish Research Council under the Government of Ireland Postdoctoral fellowship Grant GOIPD/2017/1283. The corresponding author is thankful to D.Y. Patil University, Kolhapur for financial support (DYPU/R&D/190). The funding agencies are gratefully acknowledged.

Reference

1 P.P. Mahamuni-Badiger, P. M. Patil, M. V. Badiger, P. R Patel, B. S. Thorat- Gadgil, A. Pandit, R.A. Bohara, *Mater. Sci. Eng. C*, 2019, 110319.

2 Z. Khatoon, C. D. Mctiernan, E. J. Suuronen and T. Mah, *Heliyon*, 2018, e01067.

3 M. Salas-Orozco, N. Niño-Martínez, G.-A. Martínez-Castañón, F. T. Méndez, M. E. C. Jasso and F. Ruiz, *J. Nanomater.*, 2019, **2019**, 1–11.

View Article Online
DOI: 10.1039/D0NJ01384F

4 A. Omar, J. B. Wright, G. Schultz, R. Burrell and P. Nadworny, 2017, 1–15.

5 R. M. Patil, N. D. Thorat, P. B. Shete and P. A. Bedge, *Biochem. Biophys. Reports*, 2018, **13**, 63–72.

6 H. M. Yadav, S. V. Otari, R. A. Bohara, S. S. Mali, S. H. Pawar and S. D. Delekar, *J. Photochem. Photobiol. A Chem.*, 2014, **294**, 130–136.

7 R. A. Bohara and S. H. Pawar, , DOI:10.1007/s12010-015-1628-9.

8 R. A. Bohara, D. Thorat and S. H. Pawar, *RSC Adv.*, 2016, **6**, 43989–44012.

9 D. S. Nikam, S. V Jadhav, V. M. Khot, R. A. Bohara, C. K. Hong and S. H. Pawar, *RSC Adv.*, 2014, **5**, 2338–2345.

10 P. M. Patil, P. P. Mahamuni, P. G. Shadija and R. A. Bohara, *Environ. Sci. Pollut. Res.*, 2019, **26**, 6696–6705.

11 P. M. Patil, P. P. Mahamuni, M. M. Abdel-daim, L. Aleya and R. A. Chougule, .

12 D. L. Romana, K. H. Brown and J.-X. Guinard, *J. Food Sci.*, 2006, **67**, 461–465.

13 P. P. Mahamuni, P. M. Patil, M. J. Dhanavade, M. V. Badiger, P. G. Shadija, A. C. Lokhande and R. A. Bohara, *Biochem. Biophys. Reports*, 2019, **17**, 71–80.

14 C. H. Li, C. C. Shen, Y. W. Cheng, S. H. Huang, C. C. Wu, C. C. Kao, J. W. Liao and J. J. Kang, *Nanotoxicology*, 2012, **6**, 746–756.

15 Y. N. Marathe, A. T. A. Torris, C. Ramesh and M. V Badiger, 2019, **47440**, 1–11.

16 X. Hu, S. Liu, G. Zhou, Y. Huang, Z. Xie and X. Jing, *J. Control. Release*, 2014, **185**, 12–

View Article Online
DOI: 10.1039/D0NJ01384F

21.

17 W. Zhang, S. Ronca and E. Mele, 2017, 1–17.

18 Y. Xu, L. Zou, H. Lu and T. Kang, 2017, 4000–4010.

19 Q. Liu, H. Zhang, B. Deng and X. Zhao, *Int. J. Polym. Sci.*, 2014, **2014Volume**, 11 pages.

20 K. Sudesh, H. Abe and Y. Doi, 2000, **25**, 1503–1555.

21 P. Kuppan, K. S. Vasanthan, D. Sundaramurthi, U. M. Krishnan and S. Sethuraman, 2011, 3156–3165.

22 N. Nagiah, L. Madhavi, R. Anitha, C. Anandan, N. Tirupattur and U. Tirichurapalli, *Mater. Sci. Eng. C*, 2013, **33**, 4444–4452.

23 S. M. Tan, J. Ismail, C. Kummerlo and H. W. Kammer, , DOI:10.1002/app.21921.

24 S. H. Diermann, M. Lu, G. Edwards, M. Dargusch and H. Huang, 2018, 1–9.

25 B. Veleirinho, D. S. Coelho, P. F. Dias, M. Maraschin, R. M. Ribeiro-do-valle and J. A. Lopes-da-silva, *Int. J. Biol. Macromol.*, 2012, **51**, 343–350.

26 S. Modi, K. Koelling and Y. Vodovotz, *Eur. Polym. J.*, 2015, **47**, 179–186.

27 P. Taylor, W. Meng, S. Kim, J. Yuan and J. C. Kim, 2012, 37–41.

28 S. Pal, G. Milano and D. Roccatano, *J. Phys. Chem. B 2006,* 2006, **110**, 26170–26179.

29 H. Phbv, S. E. M. Catoni, K. N. Trindade, C. A. T. Gomes, A. L. S. Schneider, P. Ana and T. Pezzin, 2013, **23**, 320–325.

30 W. Yu, C. Lan, S. Wang, P. Fang and Y. Sun, *Polymer (Guildf).*, 2010, **51**, 2403–2409.

View Article Online
DOI: 10.1039/D0NJ01384F

31 M. J. Fabra, A. M. Pourrahimi, R. T. Olsson and J. M. Lagaron, *Food Bioprod. Process.*, , DOI:10.1016/j.fbp.2016.10.007.

32 C. Pittarate, T. Yoovidhya, W. Srichumpuang, N. Intasanta and S. Wongsasulak, 2011, **43**, 978–986.

33 A. Bianco, M. Calderone and I. Cacciotti, *Mater. Sci. Eng. C*, 2013, **33**, 1067–1077.

34 N. Padmavathy and R. Vijayaraghavan, *Sci. Technol. Adv. Mater.*, 2008, **9**, 035004.

35 Y. Xu, L. Zou, H. Lu, Y. Wei, J. Hua and S. Chen, *J. Mater. Sci.*, , DOI:10.1007/s10853-016-9872-0.

36 S. Y. H. Abdalkarim, H. Y. Yu, D. Wang and J. Yao, *Cellulose*, 2017, **24**, 2925–2938.

37 Z. Xu, J. Li, H. Zhou, X. Jiang, C. Yang and F. Wang, *RSC Adv.*, 2016, **6**, 43626–43633.

38 S. H. Pawar, P. P. Patil, R. A. Bohara, S. G. Nanaware and J. V. Meshram, *Int. J. Biol. Macromol.*, 2018, **122**, 1305–1312.

39 S. T. K. Hamad F. Alharbi, Monis Luqman, *Mater. Res. Express*, , DOI:https://doi.org/10.1088/2053-1591/aad4df Manuscript.

40 C. Ashajyothi, K. H. Harish, N. Dubey and R. K. Chandrakanth, *J. Nanostructure Chem.*, 2016, **6**, 329–341.

41 S. Agrawal, P. R. Patel, R. Venkata and N. Gundloori, *ACS Omega*, 2019, **4**, 6301–6310.

42 H. Joo and M. Otto, *Chem. Biol.*, 2012, **19**, 1503–1513.

43 A. M. Díez-pascual and A. L. Díez-vicente, 2014, 10950–10973.

View Article Online
DOI: 10.1039/D0NJ01384F

44 G. Kim, G. H. Michler, S. Henning, H. Radusch and A. Wutzler, , DOI:10.1002/app.

45 Y. Ding, J. A. Roether, A. R. Boccaccini and D. W. Schubert, *Eur. Polym. J.*, 2014, **55**, 222–234.

46 T. Bekat and M. Oner, 2016, 1–8.

47 A. V Kabashin and M. Meunier, 2012, **7941**, 18–21.

48 V. S. Chirvony, M. Sentis, Y. Timoshenko and A. V Kabashin, 2013, 2489–2495.

49 Z. Emami-karvani and P. Chehrazi, 2011, **5**, 1368–1373.

50 P. P. Patil, J. V Meshram and R. A. Bohara, , DOI:10.1039/c8nj01675e.

51 J. S. Boateng, K. H. Matthews, H. N. E. Stevens and G. M. Eccleston, *J. Pharm. Sci.*, 2008, **97**, 2892–2923.

52 A. Emamifar, M. Kadivar, M. Shahedi and S. Soleimanian-Zad, *Innov. Food Sci. Emerg. Technol.*, 2010, **11**, 742–748.

53 M. Kanitkar, V. P. Kale, A. Jaiswal, J. R. Bellare, R. Deshpande and H. Chhabra, *RSC Adv.*, 2015, **6**, 1428–1439.

54 K. T. Shalumon, K. H. Anulekha, S. V Nair, S. V Nair, K. P. Chennazhi and R. Jayakumar, *Int. J. Biol. Macromol.*, 2011, **49**, 247–254.

55 S. Yassin, H. Abdalkarim and H. Y. Duanchao, *Cellulose*, , DOI:10.1007/s10570-017-1303-0.

56 R. A. Bohara, N. D. Thorat, K. Chaurasia and S. H. Pawar, 2015, 47225–47234.

View Article Online
DOI: 10.1039/D0NJ01384F

57 Z. J. Deng, N. J. Butcher, G. M. Mortimer, Z. Jia, M. J. Monteiro, D. J. Martin and R. F. Minchin, 2014, 377–383.

58 S. Malmir, L. Barral, R. Bouza, M. Esperanza, F. Lago and M. S. S. Feijoo-bandı, , DOI:10.1007/s10570-018-2216-2.

Review Article

WM&R

Waste Management & Research
1–15

DOI: 10.1177/0734242X20936761
journals.sagepub.com/home/wmr
SAGE

Nanoparticles impact in biomedical waste management

Pooja M Patil[1] and Raghvendra A Bohara[1,2]

Abstract

Effectual management of biomedical waste is obligatory for healthy human beings and for a safe environment. Mismanagement of biomedical waste is a community health problem. Safe and persistent methods for the management of biomedical waste are of vital importance. This article reviews the classification of biomedical waste, sources, colour-coding system of biomedical waste and salient features of biomedical waste rules in 2016, and the future prospective of nanoparticles. The untreated disposal of biomedical waste is associated with a huge amount of risk, so the efficient treatment for biomedical waste is most imperative. The review also highlights the current methods for disposal of biomedical waste, biological treatments given to biomedical waste water in the effluent treatment plant, and impacts due to the current method. Management of biomedical waste is a great challenge in developed and developing countries. To manage the biomedical waste there is a need for cost-effective, ecofriendly and less contaminating approaches for a greener and safe environment. The awareness regarding waste management is of great interest not only for the community but also for associated employees.

Keywords

Biomedical waste, waste management, hospital waste nano impact, nanoparticles, chemical oxygen demand, central pollution control board, National AIDS Control Organization, chloro fluoro carbons

Received 31st October 2019, accepted 31st May 2020 by Editor in Chief Arne Ragossnig.

Introduction

The waste generated during the diagnosis, treatment, or immunization of human beings, animals, or research activities is referred to as biomedical waste (Deb et al., 2017). Biomedical waste is not only generated in hospitals, laboratories, and research activities, but it can also be produced at homes by dialysis or using medicines, insulin injections, and even in rural areas through animal health activities (Sharma et al., 2013; Vasistha et al., 2018). The biomedical waste should be treated and disposed of according to the biomedical waste rules (Chudasama et al., 2013). If biomedical waste is dumped openly it leads to serious environmental problems and health hazards (Ramesh Babu et al., 2009). It is stated that 85% of biomedical waste is non-hazardous, 10% is non-hazardous infectious waste, and 5% is hazardous waste. In the United States, 15% of biomedical waste is an infectious waste, but in India it could rise from 15% to 35% depending on total biomedical waste generation (Rajakannan et al., 2013). The total generation of biomedical waste in developed countries is more compared to developing countries. The segregation of biomedical waste is done at point sources in developed countries. On the other hand, in developing countries due to the mixing of hazardous biomedical waste with the general waste or due to poor sanitation the problems of mismanagement of biomedical waste are rising (Ali et al., 2017). On an average 0.5 kg/bed/day of hazardous waste is generated in developed countries and in developing countries 0.2 kg/bed/day hazardous waste is generated (Gupta and Boojh, 2006). In developed countries, the transportation of biomedical waste and hazardous waste has been done according to international regulations (Jang, 2011). So, during transportation by online tracking systems we can monitor the transportation and information regarding the characterization of the waste and the treatment facility type is regularly recorded (Marinković et al., 2008). In developed countries the biomedical waste is transported only by a licensed transporter. In the case of developing countries, various mechanisms are used for the transportation of waste. In various hospitals the staff of that hospital carries onsite and offsite transportation, whereas in particular cases private contractors' carry offsite transportation and hospital staff carry onsite transportation. In specific cases, both onsite and offsite transportation are carried by private contractors (Manga et al., 2011). So, in developing countries, proper biomedical waste transportation, online tracking, and a monitoring system should be applied to those biomedical waste transportations which are

[1]Centre for Interdisciplinary Research, D. Y. Patil University, India
[2]CÚRAM, SFI., Center for Research in Medical Devices, National University of Ireland Galway, Ireland

Corresponding author:
Raghvendra A. Bohara, Centre for Interdisciplinary Research, D. Y. Patil University, D. Y. Patil Vidyanagar, Kasaba Bavada, Kolhapur, 416006, Maharashtra, India.
Email: raghvendrabohara@gmail.com

implemented in developed countries (Haylamicheal et al., 2011). In developed countries, numerous technologies are available for disposal of biomedical waste. These include thermal, mechanical, irradiative, chemical, and biological methods such as autoclaving, incineration, landfilling, recycling, bioconversion, electron beam technology, etc. Numerous countries, such as Portugal, Slovenia, Germany, etc. are phasing out biomedical incinerators in order to avoid environmental pollution (Ali et al., 2017). In numerous research articles, it is noted that developing countries are using poor quality incinerators – in specific cases the biomedical waste is burned or thrown in open sites and much of pharmaceutical and chemical effluent is discharged in a sewage system (Abd El-Salam, 2010; Gupta and Boojh, 2006). Due to this huge amount of environmental pollution environmental problems have been caused, so in developing countries innovative and eco-friendly technologies should be implemented.

The total generation of biomedical waste in India is 0.115 million metric tonnes (Mt) of waste per day and 42 million Mt annually. There are a number of problems regarding the management of biomedical waste (Paulraj et al., 2019). There is much confusion regarding generation, segregation, transportation, and safe disposal of biomedical waste (Thakur and Ramesh, 2015). The International Clinical Epidemiology Network has performed a nationwide survey for management of biomedical waste in India (Kumar and Samadder, 2017; Singh et al., 2011). It was noted that 82% of cities are in the primary stage, 60% are in secondary stage, and 54% are in a tertiary stage in the red category, that is, improper management of biomedical waste is observed in cities. Management of biomedical waste at source is a foremost challenge (Capoor and Bhowmik, 2017; Sapkota et al., 2014). The study was done in government and private hospitals and it revealed that not a single doctor knowledgeable regarding disposable categories of biomedical waste. A similar study also shows that 26% of doctors and 43% of paramedical staff do not have awareness of the risk associated with biomedical waste (Kotasthane et al., 2017; Rudraswamy et al., 2012).

Management of biomedical waste is a priority issue in the hospitals and health care centres. Improper segregation, discarding of biomedical waste, and addition of it to municipal waste can lead to the potential exposure to it for health care employees, waste pickers, and the general public (Makajic-Nikolic et al., 2016; Mata-Alvarez et al., 2000; Narang et al., 2012). Landfills and incinerators are widely used methods for disposal of biomedical waste (Marinković et al., 2008). Biomedical waste management will directly relate to potential health hazards to public health and the environment (Baguma, 2016; Ehtesham et al., 2017). Hence the focus of the review is to: execute, manage, and segregate biomedical wastes according to the classification at the point source; to review the treatments of biomedical waste as mismanagement of biomedical waste has become a global issue; and also examine the salient features of biomedical waste rules in 2016 and the future prospective of nanoparticles (NPs). Biomedical waste is classified in this study according to, category, type of waste, colour- coding, and treatment based on the research results of Kharat et al. (2017), Sharma and Gupta (2017) and Singh et al. (2014) as shown in Table 1.

Types of biomedical waste

There are various types of biomedical waste and these are described briefly in the following subsections.

Infectious waste. This is waste which includes pathogens; for example, laboratory waste, blood, tissues, cotton swabs, excreta, waste from isolation wards, and infected equipment are known to be an infectious waste (Reddy et al., 2014; Tudor et al., 2005) (Figure 1).

Pathology waste. Waste which contains human tissues, body parts, blood samples, and other body fluid is known as pathology waste.

Genotoxic waste. Genotoxic waste contains cytotoxic drugs used in cancer therapy and genotoxic chemicals.

Pharmaceutical waste. Waste containing expired medicine or no longer needed products, drugs, and contaminated pharmaceutical chemicals are referred to as pharmaceutical waste (Arora et al., 2014).

Heavy metals waste. Unused batteries, broken thermometer, gauges of blood pressure, gas cylinders, and pressurized containers a have high content of heavy metals.

Radioactive waste. Waste which contains infected glassware, urine, and excreta of patients treated with radionuclide is referred to as radioactive waste (Rao et al., 2004).

Chemical waste. Chemical waste includes laboratory chemicals, solvents, and disinfectants that are expired.

Sharps. Sharps include broken glasses, blades, syringes, scalpels, needles, and other objects that can cause a puncture (Matsuo et al., 2011).

Sources of biomedical waste

The biomedical waste is classified into two sources: major sources; and minor sources.

Major sources. Government hospitals, private hospitals, health care centres, nursing homes, medical colleges, veterinary colleges, and research centres, animal research centres, biotechnology institutes, blood banks, mortuaries, and production units are the major sources from which the largest quantity of biomedical waste is generated (Franchini et al., 2004).

Table 1. Classification of biomedical waste: colour category; type of waste; colour-coding; and treatment (Kharat et al., 2017; Sharma and Gupta, 2017; Singh et al., 2014).

Colour	Waste type	Colour-coding	Treatment
Yellow	Human anatomical waste and animal anatomical waste	Yellow-coloured plastic containers or yellow-coloured non-chlorinated plastic bags	Incineration or deep burial or plasma pyrolysis
	Expired or discarded medicines	Yellow-coloured plastic containers or yellow-coloured non-chlorinated plastic bags	Incineration or plasma pyrolysis
	Soiled waste and chemical waste	Yellow-coloured plastics container or yellow-coloured non-chlorinated plastic bags	Incineration or deep burial or plasma pyrolysis
	Mattresses and beddings contaminated with blood or body fluids	Yellow-coloured plastic containers or yellow-coloured non-chlorinated plastic bags	Chemical disinfection followed by incineration or plasma pyrolysis
	Microbiological waste and clinical waste	Safe autoclave plastic bags or containers	Onsite pretreatment with sterilizer then again after incineration
Red	Recyclable contaminated waste	Red-coloured plastic containers or red-coloured non-chlorinated plastic bags	Onsite pretreatment with sterilizer then again after incineration
White	Sharps and metals	Leak-proof, puncture-proof, and tamper-proof containers	Dry heat sterilization and autoclaving followed by shredding or mutilation
Blue	Glassware and metallic body implants	Cardboard box with blue colour marking	Autoclaving or disinfection before recycling

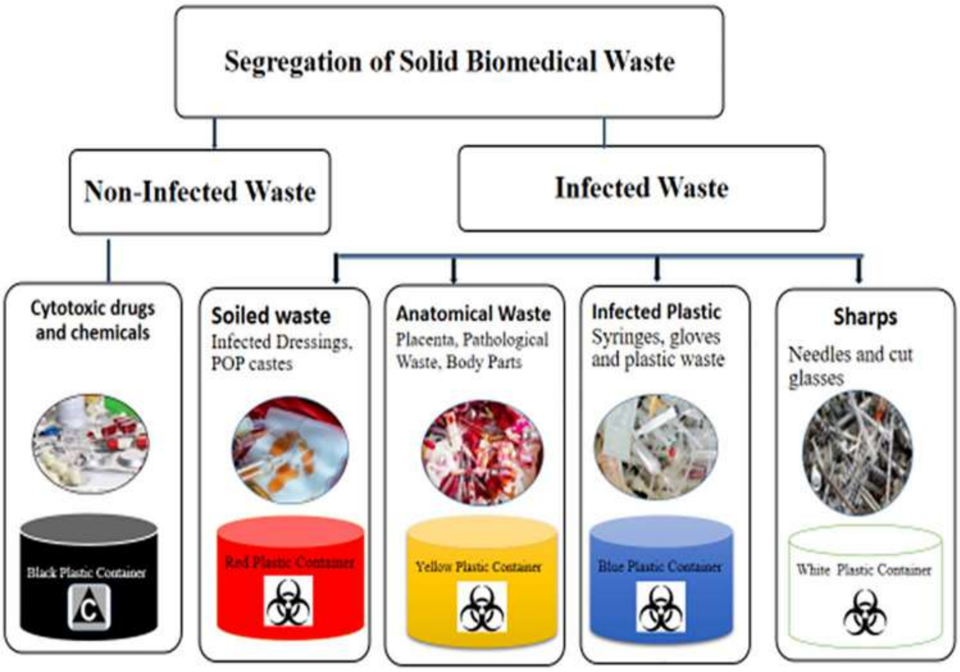


Figure 1. Segregation of biomedical waste.

Minor sources. Physicians, dental clinics, animal and slaughter houses, blood donation camps, vaccination centres, acupuncturists, cosmetic piercing, and institutes for disabled persons (Kumari et al., 2013; Zimmermann, 2017).

Within these major and minor sources, hypodermic needles, broken vials, ampoules, intravenous set needles, dressings, cotton, bandages, gauze contaminated with body fluids or blood, masks and gloves contaminated with body fluids or blood, blood-pressure gauges, broken thermometers, spilt medicines, waste anaesthetic gases, cleaners, spent disinfectants, organs, tissues, foetuses, body parts, spilled mercury etc. are all significant contributors to biomedical waste (Padmanabhan and Barik, 2018).

Salient features of biomedical waste rules 2016

On 20July 1998, the Government of India and the Ministry of Environment, and Forests delivered a structural framework of biomedical waste management and handling rules. Timely revisions of biomedical waste management rules have been performed thereafter to meet the prevalent needs (Ministry of Environment, Forest and Climate Change: Government of India, 2016). The biomedical waste management rules have been amended four times in 2000, 2003, 2011, and on 28 March 2016. The latest rule or guidelines for biomedical waste management contain more significant features and are more comprehensive than the 1998 structural framework of biomedical waste management and handling rules. Furthermore, supplementary provisions are added in this guideline. In 2016, the biomedical waste management rules included four schedules, five forms, and eighteen rules (Singhal et al., 2017).

The salient features of biomedical waste rules 2016 are described in the following list:

(1) The rules have been extended to include various fitness camps such as blood donation camps, vaccination camps, and surgical camps.
(2) All health care facilities should have a resident person having organizational control over the biomedical waste management (Sanjeev et al., 2014).
(3) Biotechnological waste, laboratory waste, and blood bags should be mandatorily pretreated before disposal. The sterilization method should be followed in accordance with the Indian National AIDS Control Organization.
(4) The used chlorinated bags, blood bags, and gloves should not be re-used.
(5) Training should be given regarding biomedical waste management to control against diseases (Madras, 2014).
(6) The liquid biomedical waste should be segregated and pretreatment should be given at source, and then it should be disposed of.
(7) The operator of a biomedical waste treatment plant should notify the detailed information of waste and it should have a barcode. Five years of records should be maintained of incineration, autoclaving, and hydroclaving (Datta et al., 2018).
(8) If a common biomedical waste plant is located at a distance of 75 km from a health care facility it shall not set up an onsite biomedical waste treatment plant. If a common biomedical waste treatment plant is not accessible then the operator of biomedical waste treatment plant should establish treatment facilities by taking prior appraisal from an approved authority.
(9) Standard limits for incineration is suspended particulate matter 50 mg Nm^{-3}, standard limit for dioxins and furans is – 0.1 ng toxicity equivalent-Nm^{-3}, and the time duration in the incineration secondary chamber is two seconds (Mathur et al., 2012).
(10) The biomedical waste rules are yearly implemented by the Ministry of Environment, Forest and Climate Change. The reports of biomedical waste after every six months should be submitted to the State Pollution Control Board (Ministry of Environment, Forest and Climate Change: Government of India, 2016).

The current method and newer methods for disposal of biomedical waste

Current methods for disposal of biomedical waste are as follows

Incineration. In incineration at a high temperature, the solid waste is oxidized and infectious substances that are present in the waste are destroyed – this method is also known as controlled combustion treatment. Incineration temperature varies from 980 to 2000°C. Once the waste is incinerated that waste cannot be recycled, reused or disposed of in dumping sites (INCLEN Program Evaluation Network (IPEN) Study Group, 2014). The most important feature of the incineration method is to reduce the volume of solid waste. In some modern incinerators, the temperature is high enough to produce molten material, and from that molten material volume is reduced till 5% or even less. This is due to the high moisture content, organic material, low calorific value content, and high inert content (Ranzi et al., 2011). However, from the incineration method toxic and carcinogenic compounds are released which leads to a huge amount of environmental pollution, causing damage to the human reproductive system and hormonal imbalance (Delmonico et al., 2018).

The waste that is not integrated for incineration is pressurized gas containers, silver salts, radiographic wastes, reactive chemical waste, heavy metals, batteries, sealed ampoules, radioactive materials, and unstable pharmaceuticals waste (Komilis et al., 2012).

Autoclaving. Autoclaves disinfect a variety of infectious waste such as cultures, medical equipment and sharps, materials infected with blood, microbiological waste, pathological waste, and spoiled waste (Çalıs et al., 2014). Autoclaving is a thermal process where waste is brought into direct contact with temperature for a satisfactory duration to disinfect the wastes. The autoclave should be able to hold up the repetitive build-up and liberate steam pressures, have constructive materials, engineered design, accuracy of temperature, and pressure should be maintained and testing must meet necessities to activate safely as per the international standards associated to a pressure vessel (Rajor et al., 2012). For relief and safety in operation, the autoclave should be a horizontal type and designed for the treatment of waste (Randhawa and Kullar, 2011).

Microwaving. Microwaving is a steam-based process where microwave generates energy by moist heat and steam with a cycle of 30 minutes to 1 hour. The types of biomedical waste treated under microwave technology are laboratory waste, contaminated waste, infected material blood, and body fluid, sharps, and spoiled waste (e.g., used cotton, bandages, and bedding). Cytotoxic, explosive compounds, hazardous waste, radioactive wastes, contaminated animal cadaver, and body parts should not be treated with microwaving technology (Bhatt et al., 2018). The toxic metals which are present in waste are remediated by the microwaving technology. In microwaving, the thermal effect of an electromagnetic radiation spectrum lying between the frequencies 300 and 300,000 MHz is given to waste, and due to this microbial inactivation occurs. It has been reported that industrial and sewage sludge is treated with the microwaving treatment and excellent reduction in volume is observed (Sahoo et al., 2013). To heat dielectric materials in many technological and scientific fields microwave technology has been applied. In the field of environmental chemistry, the microwave is very valuable as it extracts a huge range of pesticides, organic compounds, and fats from waste. A microwave heating has the supplementary advantage of selective heating, shorter heating time, and no direct contact with materials as compared to the conventional heating methods (Manoj Kumar et al., 2018).

Shredding. In the process of shredding the biomedical waste are dispersed or cut into small pieces so that this makes the wastes unrecognizable. It helps in the prevention of recycling hazardous waste and also acts as an identifier that the biomedical waste is disinfected and secure to dispose of (Sharma et al., 2013). Shredding could also be used if the diminution of a waste volume is preferred. 80% volume of biomedical waste is reduced by advanced single or multiple shaft shredders which are specially designed for biomedical waste (Gupta et al., 2009). The advanced shredders are normally low speed, high torque, and distinct pass shredders with easily expendable cutters, and with expulsion screens that control the size of shredded biomedical waste. When solid waste is treated with the shredding method the material can be recycled or reclaimed (Sahoo et al., 2013).

Deep burial and inertization. In a deep burial method, the biomedical waste is dug 2 m deep. The waste should fill half of the burial hole, be covered with a 50 cm surface, and then covered with soil. Finally, the burial must be covered with galvanized iron or wire meshes (Chakraborty, 2014; Sanjeev et al., 2014). To diminish the risk of toxic substances the inertization process is carried out. In the process of inertization, biomedical waste is mixed with cement and other material before disposal (Tabish and Pandit, 2007). A distinctive concentration of the mixture is made with 65% biomedical waste, 15% cement, and 5% water. A homogeneous mass is prepared and cubes are produced, and then this is transported to suitable sites (Li et al., 1993).

Impacts of the current method

Incineration. Incineration is processes based on the high temperatures that destroy the pathogens and kill the microbes existing in the waste. A number of toxins and gasses is produced due to incineration, such as products of incomplete combustion and dioxins (Rajan et al., 2018). These toxic gases are carcinogenic and cause damage to the human respiratory system, human immune, and human endocrine system (Çalıs et al., 2014). The ash produced after the incineration is also harmful, so there is a need to check the level of toxins before sending the ash to a landfill site (Geetha and Fulekar, 2008). Therefore, keeping these points in mind, the majority of countries are shifting to environmentally friendly methods for disposal of biomedical waste (Marinković et al., 2008).

Chemical based technology. Chemical based technology plays a vital role in the treatment of biomedical waste. Various chemicals are used for treatment of biomedical waste. The cultures, sharps, liquid waste, human waste, laboratory waste, and soft waste are treated with chemical based technology (Oweis et al., 2005). The chemical disinfection of the biomedical waste is carried out in hospitals before transportation to a disposal site (Mattiello et al., 2013).

Landfilling. Gas and leachate formation are unavoidable consequences due to the disposal of biomedical waste in landfills (El-Fadel et al., 1997). The spreading of gas and leachate away from the landfill area and their exposure to the environment will cause serious environmental concerns such as health hazards, fires and explosions, unpleasant odours, damage to vegetation, air pollution, ground water pollution, and global warming (Windfeld et al., 2015). A diagrammatic representation of various disposable methods of biomedical waste is shown in Figure 2.

Current treatments given to biomedical waste water in the effluent treatment plant

Preliminary treatment. The preliminary treatment is mainly done for the removal of solid particles and a large particle which is often present in the raw biomedical waste water (Saliba and Von Sperling, 2017). In preliminary treatment, there is a reduction and removal of suspended particles and floating particles present in waste water. These solid particles consist of garbage, plastics, papers, etc. and are removed by preliminary treatment (Pauwels et al., 2006). In preliminary treatment, filtration or screening is done for separation of solid particles present in the effluent. Screening is usually made with a stainless-steel net with varying pore size. After completion of the preliminary treatment of waste water, screens are regularly cleaned (Azuma et al., 2016).

Primary treatment. In primary treatment, there are two types of methods: physical and chemical. Furthermore, these two methods are divided into the following aspects. In the physical method, sedimentation and flotation treatment are carried out, and in chemical method neutralization, coagulation and flocculation treatments are given to waste water (Carraro et al., 2016; Chandra et al., 2011). The main objective of primary treatment is to remove organic and inorganic particles present in waste water. Approximately 60–65% of oil and grease, 60–70% of total suspended solids, and 40–50% of biochemical oxygen demand are removed throughout primary treatment (Chitnis et al., 2004; Hong et al., 2018). During the process of sedimentation heavy metals, organic nitrogen, and organic phosphorus are also removed (Martínez et al., 2018). In the process of sedimentation, sludge settles down at the bottom of the tank and effluent

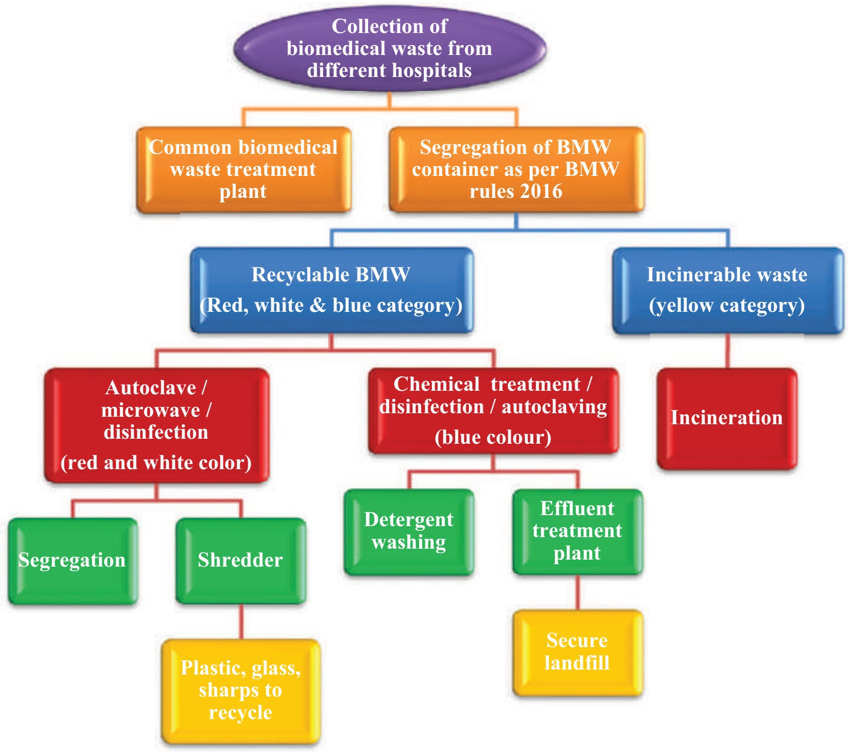


Figure 2. Diagrammatic representation showing various methods of disposal of biomedical waste.

is transferred to another tank. Thus, primary treatment plays a crucial role in waste water treatment (Kajitvichyanukul et al., 2006; Sonune et al., 2004).

Secondary treatment. In the secondary treatment process, there are various types of methods carried out for the treatment of waste water (Rajasulochana and Preethy, 2016). These methods are: activated sludge; aerated lagoons; trickling filter; anaerobic lagoons; and stabilization tank. In secondary treatment, various types of microorganisms are used in a prohibited environment (Lee et al., 2016; Mackuľak et al., 2015). Secondary treatment is designed for removal of suspended and residual organic matter present in waste water (Oli et al., 2016). Approximately 60–65% dissolved solids, 30–35% suspended particles, 85–95% of biological oxygen demand, and 5–10% colloidal particles are present in the secondary waste water. In primary treatment, the clarifiers are used for the removal of organic and inorganic particles (Suarez et al., 2009). Therefore, the primary waste water contains a larger amount of organic and inorganic particles and colloidal forms than the secondary waste water (Nkwonta et al., 2010). The waste water standards and water quality regulations require a greater amount of removal of organic matter from effluent than primary treatment alone can accomplish. Supplementary elimination of organic matter can be accomplished by secondary waste water treatment (Chonova et al., 2016) (Figure 3).

Tertiary treatment. Several methods are carried out in tertiary treatment such as carbon absorption, iron exchange, sand filtration, denitrification, ultra-filtration, and reverse osmosis (Zhang et al., 2008). After secondary treatment, the next step of waste water treatment is tertiary treatment. Tertiary treatment is also referred to as a final treatment or advanced method (Larsson et al., 2007; Yadvika et al., 2006). In tertiary treatment, the pathogenic bacteria are destroyed and the residues left after the secondary treatment are removed (Ajo et al., 2018). The main objective of tertiary treatment is to use the treated waste water for the land application or to directly dispose of it into lakes, rivers, ponds, etc. The tertiary treatment removes infectious agents and reduces total dissolved solids from the secondary treated waste water (Balasubramanian et al., 2006; Puri et al., 2012).

Organic methods for treatment of waste

Degradation of waste using cow dung. Cow dung is not waste material, but it is a disinfectant of all wastes in the environment. Cow dung is very important due to its many applications in the fields of medicine, environment management, energy source, agriculture, and other beneficial applications. In cow dung a sufficient amount of microflora is present, and it is cheap and easily accessible (Anitha et al., 2012). The cow dung contains proteins, fibres, and minerals such as potassium, nitrogen, magnesium, cobalt, calcium, etc. The cow dung also contains 100 species of yeast and protozoa, and 60 species of bacteria and fungi, occurring naturally. The organic substance present in a waste sample is broken down by bacteria, fungi, and other microorganisms and degrades the waste (Geetha et al., 2008).

The biomedical waste samples such as bandages and used pieces of cotton were kept for degradation by using cow dung for a specific time interval. After ten days it was observed that *Periconiella* species of fungus are responsible for the

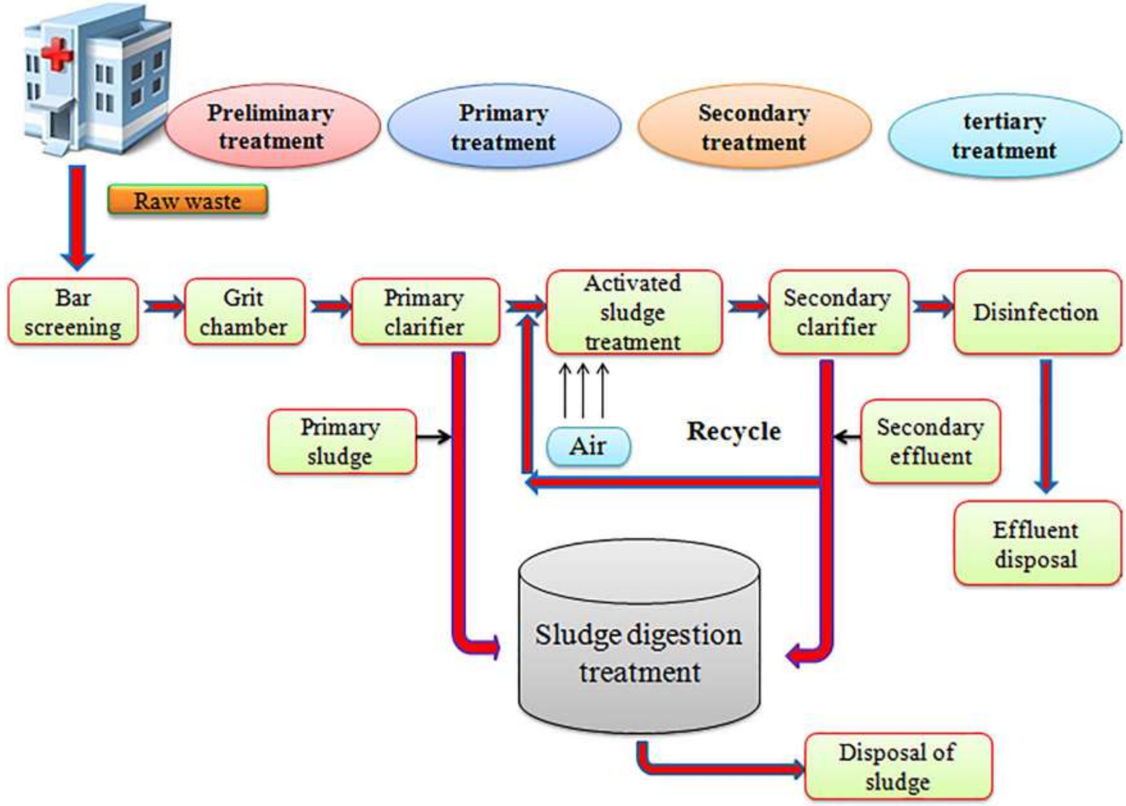


Figure 3. Treatments given to biomedical waste water in the effluent treatment plant.

degradation of cotton (Anupriya Pandey et al., 2008). The waste includes plenty of organic substances and nutrients, and also includes numerous kinds of contaminated materials. The inappropriate disposal of wastes would produce environmental pollution and possible hazard to human health (Patil et al., 2019a). Composting technology is a kind of biological treatment, which has been extensively acknowledged as a substitute method to recycle organic substances and generate a potential soil fertilizer (Wang et al., 2018).

Taking inspiration from Ayurveda traditions, cow dung performs as an excellent bioremediation method. It is inexpensive, an efficiently viable alternative, and is easily accessible in the rural areas of India. Many more exhaustive researches are essential to bioremediate the active biomedical waste, particularly the ones which are non-degradable in the environment. Thereby, the unfavourable effects of these compounds on the environment can be diminished for a healthy and secure future (Randhawa and Kullar, 2011).

Degradation of waste using plant extracts. The secure and professional methods for management and disposal of biomedical waste are important. The most significant feature in the management of biomedical waste is the obliteration of pathogens for which a reliable conventional approach can be used. The subsistence of polyphenols content in herbal extracts are accountable for the degradation of any organic matter present in waste sample. Enormous research has been approved in a wide range of herbal extracts and its chemical components. The polyphenols content is used as a "green" approach for biodegradation and treatment purposes (Devatha et al., 2018). Herbal extracts were preferred based on the existence of polyphenols. Neem (*Azadirachta indica*) shows 82.35% reduction of chemical oxygen demand, and it also shows the satisfactory reduction of organic matter present in waste samples as compared to other herbal extracts. On the 11th day of its use, there is an 82.35% reduction in COD of the waste sample due to the polyphenols content in neem leaf extracts. A study by Devatha et al. (2016) proved that the exploitation of herbal extracts for the degradation of organic waste are agreeable, cost-effective and ecofriendly method.

Jayanthi et al., used 'neem' extract for the devastation of pathogens present in biomedical waste which was collected from a hospital. From the results, it was observed that lime solution has efficiently destroyed the pathogens present in the biomedical waste. The superior degradation of biomedical waste was observed in extract from fresh neem leaves. However, the viability and performance of organic treatment have to be tested, by combining them with the use of related kinds of resources, either alone or in the mixture, and based on broad researches carried out on biomedical waste (Jayanthi et al., 2010).

Patil et al. used neem and tobacco extract for degradation of biomedical waste. The biomedical samples were collected from a hospital and experimental sets were arranged in airtight containers. The individual sets of neem and tobacco extracts were organized and the combination of both was also done. After giving treatment of neem and tobacco extracts the physicochemical samples and biological parameters were analysed. From the physicochemical and biological parameters, it was concluded that there was 86.15% of reduction in COD by using neem and tobacco extract. Superior results were observed when the biomedical waste was treated with a combination of neem and tobacco extracts, because a combination of tobacco and neem extracts was shown to be three times more cost-effective than the current methods used for the treatment of biomedical wastes (Patil et al., 2019b).

The emerging approach of nano-biotechnology. Nanotechnology has emerged in the field of applied science and research since the 1980s. By using nanotechnology various materials are produced at nanoscale level, that is, dimensions between 1 and 100 nm. It is also referred to as NPs or ultra-fine particles. These ultra-fine particles are more reactive and mobile (Rengaraj et al., 2006). NPs are broadly divided into two groups based on the structure and availability such as organic NPs and inorganic NPs, the latter of which includes magnetic NPs, metal NPs (excluding gold and silver), and the semiconductor NPs environment (Di Zhang et al., 2010). Synthesis of NPs biologically has great potential to create the novel particles that are ecofriendly, cost-effective, and more stable, with a wider application in the fields of electronics, medicine, and agriculture (Shen et al., 2009).

Environmental pollution is a major problem nowadays as a result of industrial and agricultural activities. Air is greatly polluted by carbon monoxide (CO), chlorofluorocarbons, volatile organic compounds, hydrocarbons, and nitrogen oxides. Water and soil are mostly contaminated by sewage water, industrial effluents, and random use of pesticides, fertilizers, and oil spills. Air contains organic and inorganic polluted compounds (Krug, 2009). Removal of pollutants and toxins from the environment is a major public issue. The next generation of humans has a right to control and protect a clean and safer environment. Traditional methods are available to remediate organic and toxic waste such as absorption, bio-oxidation chemical oxidation etc., but nowadays synthesis of NPs is slowly increasing and gaining more importance because of the improved adsorption capacity and effective removal of organic and inorganic toxic materials (Kritidis et al., 2012). In the last few years, magnetic NPs have become more influential, being increasingly used as sorbents due to their properties such as high surface-to-volume ratio, short diffusion rate, highly dispersible in water, and exhibiting superior magnetic properties. For example, micro- and nano-plastics (MNPs) have been used as catalysts in photocatalytic degradation of dyes and pollutants in water, and also they have been used in various biological applications such as enzyme immobilization to stabilize enzymes, biosensors, etc. (Bystrzejewska-piotrowska et al., 2009). Cr (VI) is more toxic to animals and plants when compared to Cr (III) present in the waste water. Modification of $MnFe_2O_4$ NPs acts as an effective absorbent for the rapid removal of Cr (IV) from the waste water. Textile industry effluents are the most important source of water pollution because they lead to biological and chemical changes in the water, such as consuming dissolved oxygen, destruction of aquatic environment, etc. Mak et al. developed a novel magnetic NP by using iron oxide NPs as a core shell, and polyacrylic acid as an ion exchange, for the effective and fast removal of basic dye methylene blue from effluents (Mak et al., 2004).

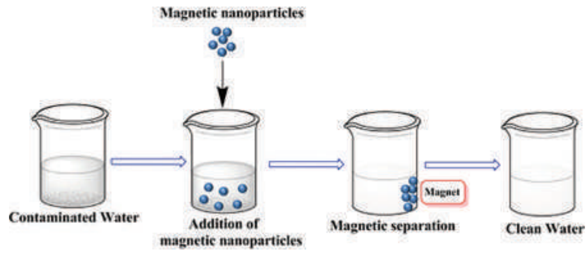


Figure 4. Purification of water by magnetic nanoparticles (Ekta Roy et al., 2017).

Purification of water by using magnetic NPs is shown in Figure 4. It has recently been found that the unique characteristics of a magnetic property to impart on non-magnetic materials such as activated carbon, carbon nano tubes, grapheme, grapheme oxide, etc. allows the separation of nano-composites by applying an external magnetic field (Ekta Roy et al., 2017).

Types of NPs and synthesis strategies. Among the multiple applications of nanotechnology, its environmental application has remarkably gained much more attention, as it is concerned with human health-care. NPs possess a great ability to clean-up a large variety of high-risk wastes generated in the environment, due to their unique properties. Their high surface area to volume ratio increases the adsorption capacity of sorbent materials and can degrade and scavenge water and air pollutants efficiently (Mahamuni et al., 2019; Shen et al., 2009; Sivashankar et al., 2014). Differences in size, shape, and morphologies of NPs have significant effects on water and air quality. Also, the presence of pesticides and heavy metals can be detected by the use of NPs (e.g., cadmium, copper, lead, mercury, and arsenic) (Rengaraj et al., 2006). Different types of nanomaterials and their synthesis strategies are described in the following subsections.

Magnetic NPs. Among all NPs, magnetic NPs for environmental remediation, are leading a growing interest in their application for the treatment of polluted water or the environment. Magnetic NPs, mainly nano zerovalent iron (nZVI), magnetite (Fe_3O_4), and maghemite ($\gamma\ F_e2O_3$) NPs have an immense role in the removal of contaminants. They exhibit different physicochemical properties due to differences in iron oxidation states, and show different capabilities for removal of the contaminants. The application of magnetic NPs depends upon the use of a magnetic field that manipulates their properties, which in turn depends upon the effectiveness of the particle's magnetic moment and field gradient. Their magnetic property tends them to become a powerful agent in waste water treatment (Li et al., 2006). It is reported that the removal of hexavalent chromium from waste water by using polypyrrole magnetic NPs, in which maximum removal was obtained with an increase in the intensity of rotating magnetic field, is effective (Aigbe et al., 2018). Heavy metals such as arsenic, and chromium, and organic pollutants can be reduced to less toxic species. Variations in properties of magnetic NPs rely upon synthesis processes and coatings. Zhang et al. (2010) showed an efficient reduction of trichloroethane (TCA), trichloroethane (TCE), and tetrachloroethene (PCE) by synthesized nano-iron (Fe^{BH}). Commonly nZVI is synthesized through reductive precipitation of $FeCl_3$ with $NaBH_4$, or by reduction of goethite and hematite particles in the presence of H_2 at high temperature (200–600°C). Several studies suggest that nZVI prepared by reductive precipitation of $FeCl_3$ with $NaBH_4$ show higher reactivity and higher iron content, which gives rapid degradation of pollutants (e.g., Nurm et al., 2005). The higher reactivity of nZVI may limit its application. This is because reactive nZVI may react or oxidize in water which results in a decrease in longevity. Therefore, surface coating such as a thin layer of silica or polymer may be solutions to overcome the problem by reducing contact with oxygen, which in turn will improve the reactivity of nZVI. Physical and chemical adsorption of heavy metals can be done efficiently by Fe_3O_4 NPs. Fe_2O_3 NPs have also been used for the removal of a significant amount of CO through direct oxidation, catalytic oxidation, and disproportion reaction from iron carbides. In the case of γ- Fe_2O_3 NPs, electrostatic interaction plays a key role in pollutant removal. The polarization of O_2 atoms on iron oxide surface occurs at various pH values. When it is below the zero points of charge (pH_{zpc}), iron oxide's surface exhibits a positive charge that can attract negatively charged pollutants (Chowdhury et al., 2010).

Magnetic NPs can be synthesized with different compositions and phases, such as γ- Fe_2O_3 and Fe_3O_4, metals such as Fe, CO, spinal-type ferromagnets such as $MgFe_2O_4$, $MnFe_2O_4$, and CO Fe_2O_4, and alloys such as Copt3 and FePt. Several synthesis strategies such as co-precipitation, thermal decomposition and reduction, laser pyrolysis, micelle synthesis, and hydrothermal synthesis can yield high quality magnetic NPs. Co-precipitation is a facile method for synthesis of iron oxides by using aqueous Fe^{2+}/Fe^{3+} salt solution with the addition of base under an inert atmosphere at elevated or room temperatures. Type of salt, reaction temperature, Fe^{2+}/Fe^{3+} ratio pH value, ionic strength of media used in synthesis have significant effects on size, shape, and composition of magnetic NPs. However, this method yields particles with wide size distribution. So, secondary size selection is required sometimes (Li et al., 2006). Another method, thermal decomposition, consists of the decomposition of organometallic compounds in high boiling organic solvents containing stabilizing surfactant. This method comparatively yields monodispersed magnetic NPs. Precursors include mainly metal cupferronates [MxCupx](M = metal ion; Cup = N-nitrosophenylhydroxylamine, C_6H_5N (NO)O-), metal acetylacetonates, [M(acac)n], (M = Fe, Mn, Co, Ni, Cr; $n = 2$ or 3, acac- acetylacetonate), or fatty acids, carbonyls, oleic acid, and hexadecylamine. Reaction temperature, reaction time, as well as aging period, ratios of organometallic compounds, surfactants, and solvents control the size and morphology. Although this method has the advantage of yielding monodispersed particles, it has a limitation that produces a NP which gets dissolved only in nonpolar solvents. In water-in-oil microemulsions, the monolayer of the surfactant molecule in continuous hydrocarbon phase surrounds the aqueous phase, which is present as microdroplets. The precipitate can be obtained by the addition of a solvent such as acetone or ethanol to microemulsions, which later can be extracted by filtration or centrifugation of the mixture. This method can yield magnetic NPs in a controlled manner but it gives particle size and shape over a relative broad range, with low yield as compared to other methods. Also, this method requires a large amount of solvents to synthesize the necessary amount of material. So, this is not an efficient method and difficult to apply on large scale (Hyeon et al., 2001). Microemulsion and thermal decomposition methods usually include complicated processes and require a relatively high temperature. Hydrothermal synthesis includes a presence or absence of specific surfactants in synthesis. For example, high crystalline Fe_3O_4 nanocrystals can be synthesized by a one-step hydrothermal process without using surfactants (Chin et al., 2007) On the other hand, it is reported that Fe_3O_4 NPs can be obtained by the hydrothermal route in the presence of surfactant sodium bis (2-ethyl hexyl) sulphosuccinate. This method can yield unusual nanostructures such as iron oxide nanotubes, iron oxide hollow spheres, etc. (Wang et al., 2003). It can be observed that out of all synthesis strategies, co-precipitation is a simple and convenient method, while to obtain NPs with controlled morphology thermal decomposition is the best method. Microemulsion is also used for producing monodispersed NPs with different morphologies. Hydrothermal synthesis is a comparatively unexplored method but gives high quality NPs. The magnetic properties and nanometre size have attracted attention in the field of biomedical science (Bohara et al., 2014).

Among other synthesis methods, a simple, cost-effective, ecofriendly, and non-toxic method that that uses a "green" route would be more reliable. Matinisea et al. synthesized zinc ferrite by using *Moringa oleifera* extract that played the role of both chelating and reducing agents (Gurunathan et al., 2014). Cobalt oxide NPs can be synthesized by using aqueous leaf extract of *Sageretia thea* that acts as a chelating agent. These NPs can successfully be applied as an antibacterial agent against *Staphylococcus aureus* and *Escherichia coli* (Matinisea et al., 2008).

Other NPs. Along with the use of magnetic NPs some other NPs also can be used for environmental remediation. It is reported that silver NPs possess significant antibacterial, antifungal, and antiviral activity, thus they can act as a potential agent for water disinfectants. AgNPs with size less than 10 nm were found to be toxic against *E. coli* and *Pseudomonas aeroginosa*. Organisms have a biodiverse impact on the natural environment as parasites and symbionts (Bohara et al., 2015b). They also inhibit the binding of the virus to host cells by preferential binding to glycoproteins of the virus. The synthesis of AgNPs is carried out by using three different approaches, including physical, chemical, and biological methods. In physical methods, NPs are prepared by evaporation–condensation using a tube furnace at atmospheric pressure. Chemical methods include use of techniques such as cryochemical synthesis, laser ablation, lithography, electrochemical reduction, laser irradiation, sono-decomposition, thermal decomposition, and chemical reduction. Biologically-mediated synthesis of NPs are simple, cost-effective, and environmentally friendly approaches by which AgNPs of defined size can be produced using various biological systems including bacteria, fungi, plant extracts, and small biomolecules such as vitamins and amino acids which may serve as an alternative method to the chemical method (Diallo et al., 2017). Another widely used metal-based material for environmental remediation is titanium oxides. TiO_2 NPs have been extensively used for waste treatment, air purification, self-cleaning of surfaces, and as a photocatalyst in water treatment application due to their different properties such as low-cost, nontoxicity, semiconducting, photocatalytic, electronic, gas sensing, and energy converting properties. TiO_2 NPs produce highly reactive oxidants such as hydroxyl radicals that act as a disinfectant for microorganisms such as fungi, bacteria, viruses, and algae. Since TiO_2 exhibits a rather limited photocatalytic capability, its activity can be enhanced if the material is typically doped with another transition metal ion to increase performance. Therefore, several studies have investigated metal-doped TiO_2 NPs. The synthesis can be done by the sol–gel method, micelle and inverse micelle methods, sol method, hydrothermal method, solvothermal method, direct oxidation method, chemical vapor deposition, physical vapor deposition, electro deposition, sonochemical method, and microwave method (Mohamed et al., 2018; Xiaobo Chen et al., 2007).

Different types of NPs can be successfully employed for a variety of environmental remediation applications. Selection of the best nanomaterial for remediation of a particular pollutant in a specific environment needs a full analysis of the type of contaminant to be removed, the accessibility to the remediation site, the amount of material needed to implement efficient remediation, and whether it is advantageous to recover the remediation nanomaterial (recycling). In that, each material has its advantages and issues related to its applicability, Table 2 shows the different nanomaterials that have been utilized for environmental remediation (Shen et al., 2009).

Use of magnetic particles and types in environmental remediation. Magnetic NPs consist of magnetic elements, such as iron, nickel, cobalt, chromium, manganese, and gadolinium, and chemical compounds. Generally, NPs are divided into four types, such as zero-dimensional nanostructures, one-dimensional nanostructures, two-dimensional nanostructures, and three-dimensional nanostructures (Ekta Roy et al., 2017). Nanoscale zero-valent particles are widely used in environmental remediation. Magnetic NPs are super paramagnetic and offer great potentials in a variety of applications in their bare form or coated with a surface coating, and functional groups chosen for specific uses. Ferrite NPs are the most explored magnetic NPs, which can be greatly increased by clustering of several individual super-paramagnetic NPs into clusters to form magnetic beads (Mohammad Faraji, 2016). To prevent aggregation and minimize the interaction of the particles with the system environment, surface coating may be required. The surface of ferrite NPs is often modified by surfactants, silica, silicones, or phosphoric acid derivatives to increase their stability in solution.

Removal of heavy metals. Due to the development in industrialization and urbanization, toxic metal contamination has become a serious environmental problem. Heavy metal ions such as Cd(II), Pb(II), Ni(II), and Hg(II) are very hazardous and carcinogenic to living organisms even at low concentrations. So, heavy metals play a vital role in the pollution of the environment. These heavy metals are introduced into the environment through mining activities, automobile emissions, fossil fuels, battery industry, electronic industry, and metal plating with different routes. From various methods such as reverse osmosis, precipitation, and ion exchange, heavy metals can be removed from the environment. But recently adsorbent heavy metals from magnetic NPs gained much more attention because it applies a magnetic field with readily removal ability upon the incorporation of pollutants from the natural environment (Bohara et al., 2015a). Furthermore, magnetic NPs have many additional usages in the fields of environmental protection, medicine, and biotechnology. The magnetic chelating resin has been effectively used for removal of Ni(II), Co(II), and Cu(II) heavy metals. From magnetic hydrogels based on 2-methyl-2-acrylamine and 1-propansulfonic acid several heavy metals ions are removed, such as Fe (II), Cd(II), Pb(II), Co(II), Cu(II), and Ni(II) with repeated water cycles. The magnetite with acrylate-based polymer composite should be used in selective heavy metal removal from water. Double layered hydroxides synthesized from Ni^{2+} and Fe^{3+} show excellent adsorption of heavy metal. The zeolite composite magnetics are used in water for heavy metals' decontamination. It has been reported that Fe_3O_4 magnetic NPs were prepared by using the co-precipitation method with an average size of 8 nm, 12 nm, and 35 nm, and it was revealed that an 8 nm magnetic nanoparticle can adsorb the four different kinds of toxic metal ions from the waste water (Bohara et al., 2015b). Heavy metals can be utilized by microbes for their metabolic process. Several microbes form a magnetic material such as ferrous sulfides; therefore, merging microbes with Fe ions can be used for removal of heavy metals (Bohara et al., 2016b).

Future prospectus of magnetic NPs

Today nanotechnology is one of the new fields of research, incorporating knowledge from the different areas of science and technology such as health, environment, industry, etc. it is an emerging technology for producing novel materials with totally new properties and functions. The manufactured products have different physiochemical, optical, and electronic properties to solve different problems that cannot be solved by using conventional technology (Bohara et al., 2016a; Oliveira et al., 2004). The use of NPs in environmental remediation is still in the first stage. The use of

Table 2. Nanomaterials that have been utilized for environmental remediation.

Serial number	Nanoparticles	Synthesis method	Size of nanoparticle (NP)	Removal target	Remark	Reference
1.	Magnetic iron oxide (Fe_2O_3) functionalized of activated carbons with magnetic Fe_2O_3 NPs	Co-precipitation method	30 nm	Copper ions	Copper ions were effectively removed from aqueous solution	Si-Yong Gu et al, (2019)
2.	Surface engineered magnetic NPs with carboxyl, amine, and thiol	Facile soft chemical approach	6–40 nm	Toxic metal ions (Cr_3+, Co_2+, Ni_2+, Cu_2+, Cd_2+, Pb_2+ and As_3+) and bacterial pathogens (*Escherichia coli*) from water	Surface engineered magnetic NPs have strong affinity for the simultaneous adsorption of Cr_3+, Co_2+, Ni_2+, Cu_2+, Cd_2+, Pb_2+ and As_3+ from waste-water	Moussavi et al. (2009)
3.	Carbon stabilized iron NPs	Mild temperature annealing process	15 nm	Cr (VI) in waste water	They showed strong ability to remove more than weight 95% of Cr (VI) via carbon shell physical adsorption	Shen et al. (2009)
4.	Fe_3O_4	Co-precipitation method, polyol method	6–8 nm, 18–35 nm	Metal ions Ni(II), Cu(II), Cd (II) and Cr(VI)	It is found that the adsorption capacity of Fe_3O_4 particles increased with decreasing the particle size or increasing the surface area	Bystrzejewska-piotrowska et al. (2009)
5.	Polyvinylpyrrolidone (PVP)-coated magnetic NPs	Hydrothermal method	11–48 nm	Carcinogenic dye malachite green and Congo red in water	These NPs were found to be suitable for 85–100% of oil removal	Seyyedali Mirshahghassemi et al. (2018)
6.	Superparamagnetic maghemite (γ-Fe_2O_3) NPs	Flame spray pyrolysis	3.6–15.7 nm	Lead (Pb_2+) and copper (Cu_2+)	These NPs successfully removed lead and copper	Shalini Rajput et al. (2017)
7.	Iron oxide (Fe_3O_4) NPs	Green synthesis from two seaweeds *Padina pavonica* (Linnaeus) Thivy and *Sargassum acinarium* (Linnaeus)	10–19.5 nm and 21.6–27.4 nm	Lead	It was observed that biosynthesized Fe_3O_4 -NPs alginate beads via *P. pavonica* had high capacity for bioremoval of Pb (91%) while that of *S. acinarium* had a capacity of (78%) after 75 minutes	El-kassas hala et al. (2016)

NPs in the environment needs to be a better understood in terms of mobility, bioavailability, and toxicity. Synthesis and surface engineering involves multiple interactions and it is a challenge to understand the basic synthetic mechanisms, but the magnetic properties, the function of MNPs depends on the physical properties (size, structure, etc.); therefore, we need knowledge regarding how we can improve the availability and stability of functionalized NPs in an extreme environment (Mohammad Faraji, 2016). The property of magnetism in the NPs simplifies and improves the separation process and rate. However, the development of new magnetic NPs increases the stability, life span physiochemical activity, etc. (Wei Wu et al., 2008). It is clear that MNPs can provide enormous benefits and improve the quality of the environment. The majority of the research is based only on the treatment of waste water and dye degradation (Jiri Kudr et al., 2017). The development of many MNPs with chemo-sensing molecules shows great promise for providing rapid and accurate readings of contamination levels. According to the Project on Emerging Nanotechnologies (established in 2005 as a partnership between the Woodrow Wilson International Center for Scholars and the Pew Charitable Trusts), more than 1600 nanotechnology-based consumer products are currently on the market, a number that has approximately doubled in the last five years. The source of magnetic NPs introduction may be direct, for example, through controlled injection at a contamination site or accidental release, or indirect as occurs at sewage and waste treatment plants and landfill sites (Snousy et al., 2017). "Green" synthesis techniques that reduce and recycle waste with room temperature processing are required for sustainability. Other, less mature fields that could provide environmental benefits are beginning to explore the use of magnetic NPs, for example, energy and catalytic technologies. After some very recent and exciting studies, these developments can be expected to multiply. Treatments of less common environmental and geopolitical incidents such as oceanic oil spills or chemical weapon contamination may be further demonstrated. A noteworthy use of magnetic NPs is in the removal of radionuclides such as uranium from soil and water systems, and following the 2011 Fukushima Daiichi nuclear disaster, it is timely to wonder if a similar approach could in some way help in the environmental clean-up which is expected to take decades to complete (Patil et al., 2016).

Conclusion

From the above discussion, the authors conclude that the persistent and safe techniques for management of biomedical waste are of great importance. Minimization of waste at source will improve the management of biomedical waste. Executing and managing of biomedical wastes is one of the most important collective responsibilities of publics, state officials, and governments. Due to lack of understanding and awareness, there is the inappropriate management of biomedical waste. Therefore, training must be given in society; the public must be educated regarding the health hazard which are associated with biomedical waste. The innovative and ecofriendly methods must be developed for the treatment of biomedical waste. NPs play a vital role in the management of waste, waste water, and effluent water. NPs look very promising because they provide means to remove organic contaminants from water and wastewater, and pollutants from other contaminated media. NPs are widely used in the degradation, treatment, and remediation of aqueous environmental pollutants to remove heavy metals, metalloids, anionic and cationic dyes, phenols, pharmaceuticals, and organic pollutants from wastewater before their discharge into the nearby water bodies. The advantages of synthesis of NPs are achieving tremendous importance in various fields of technology and science that are focused on producing an ecofriendly environment. Eventually, for the improvement of the environment and for our own wellbeing, sensitizing ourselves is most significant. Hence the awareness regarding waste management, minimization of waste at source, segregation of waste, proper transportation of waste, and proper treatment is of great interest not only for the community but also for associated employees. This will help to ensure the preservation of ecological stability and biodiversity, as well as the health of the global population as a whole.

Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

ORCID iD

Raghvendra A. Bohara https://orcid.org/0000-0001-6654-9627

References

Abd El-Salam MM (2010) Hospital waste management in El-Beheira Governorate, Egypt. *Journal of Environmental Management* 91: 618–629.

Ajo P, Preis S, Vornamo T, et al. (2018) Hospital wastewater treatment with pilot-scale pulsed corona discharge for removal of pharmaceutical residues. *Journal of Environmental Chemical Engineering* 6: 1569–1577.

Aigbe UO, Ho WH, Maity A, et al. (2018) Removal of hexavalent chromium from wastewater using PPy/Fe_3O_4 magnetic nanocomposite influenced by rotating magnetic field from two pole three-phase induction motor. *Journal of Physics: Conference Series* 984: 012008.

Ali M, Wang W, Chaudhry N, et al. (2017) Hospital waste management in developing countries: A mini review. *Waste Management & Research* 35: 581–592.

Anitha J and Jayraaj I (2012) Isolation and identification of bacteria from biomedical waste. *International Journal of Pharmacy and Pharmaceutical Sciences* 4: 386–388.

Arora T, Broglia E, Thomas GN, et al. (2014) Associations between specific technologies and adolescent sleep quantity, sleep quality, and parasomnias. *Sleep Medecine* 15: 240–247.

Azuma T, Arima N, Tsukada A, et al. (2016) Detection of pharmaceuticals and phytochemicals together with their metabolites in hospital effluents in Japan, and their contribution to sewage treatment plant influents. *Science of the Total Environment* 548–549: 189–197.

Babu BR, Parande AK, Rajalakshmi R, et al. (2009) Management of biomedical waste in India and other countries: A review. *Journal of International Environmental Application & Science* 4: 65–78.

Baguma D (2016) Public health safety and environment in inadequate hospital and healthcare settings: A review. *Public Health* 144: 23–31.

Balasubramanian J, Sabumon PC, Lazar JU, et al. (2006) Reuse of textile effluent treatment plant sludge in building materials. *Waste Management (New York, N.Y.)* 26: 22–28.

Bhatt AK, Bhatia RK, Thakur S, et al. (2018) Fuel from waste: A review on scientific solution for waste management and environment conservation. In: Singh A, Agarwal R, Agarwal A, et al. (eds) *Prospects of Alternative Transportation Fuels Energy, Environment, and Sustainability*. Singapore: Springer, 205–233.

Bohara RA and Pawar RA (2015) Innovative developments in bacterial detection with magnetic nanoparticles. *Applied Biochemistry and Biotechnology* 176: 1044–1058.

Bohara RA, Thorat ND and Pawar SH (2015a) Immobilization of cellulase on functionalized cobalt ferrite nanoparticles. *Korean Journal of Chemical Engineering* 33: 216–222.

Bohara RA, Thorat ND and Pawar SH (2016a) Review article: Role of functionalization: Strategies to explore potential nano-bio applications of magnetic nanoparticles. *RSC Advances* 6: 43989–44012.

Bohara RA, Thorat ND, Mulla NA, et al. (2016b) Surface modified cobalt ferrite nanoparticles for rapid capture, detection and removal of pathogens: A potential material for water purification. *Applied Biochemistry and Biotechnology* 182: 598–608.

Bohara RA, Thorat ND, Yadav HM, et al. (2014) One-step synthesis of uniform and biocompatible amine functionalized cobalt ferrite nanoparticles: A potential carrier for biomedical applications. *New Journal of Chemistry* 38: 2979.

Bohara RA, Yadav HM, Thorat ND, et al. (2015b) Synthesis of functionalized Co 0.5 Zn 0.5 Fe 2 O 4 nanoparticles for biomedical applications. *Journal of Magnetism and Magnetic Materials* 378: 397–401.

Bystrzejewska-piotrowska G, Golimowski J and Urban PL (2009) Nanoparticles: Their potential toxicity, waste and environmental management. *Waste Management* 29: 2587–2595.

Çalıs S and Arkan B (2014) The views of the nursing students about the medical wastes and their effects on the environmental and human health. *Procedia – Social and Behavioral Sciences* 116: 1472–1476.

Capoor MR and Bhowmik KT (2017) Current perspectives on biomedical waste management: Rules, conventions and treatment technologies. *Indian Journal of Medical Microbiology* 35: 157–164.

Carraro E, Bonetta S, Bertino C, et al. (2016) Hospital effluents management: Chemical, physical, microbiological risks and legislation in different countries. *Journal of Environmental Management* 168: 185–199.

Chakraborty S (2014) Biomedical waste management. *Advances in Animal and Veterinary Sciences* 2: 67–72.

Chandra R, Bharagava RN, Kapley A, et al. (2011) Bacterial diversity, organic pollutants and their metabolites in two aeration lagoons of common effluent treatment plant (CETP) during the degradation and detoxification of tannery wastewater. *Bioresource Technology* 102: 2333–2341.

Chen X and Mao SS (2007) Titanium dioxide nanomaterials: Synthesis, properties, modifications, and applications. *Chemical Review* 107: 2891–2959.

Chin AB and Yaacob II (2007) Synthesis and characterization of magnetic iron oxide nanoparticles via w/o microemulsion and Massart's procedure. *Journal of Materials Processing Technology* 191: 235–237.

Chitnis V, Chitnis S, Vaidya K, et al. (2004) Bacterial population changes in hospital effluent treatment plant in central India. *Water Research* 38: 441–447.

Chonova T, Keck F, Labanowski J, et al. (2016) Separate treatment of hospital and urban wastewaters: A real scale comparison of effluents and their effect on microbial communities. *Science of The Total Environment* 542: 965–975.

Chowdhury SR and Yanful EK (2010) Arsenic and chromium removal by mixed magnetite-maghemite nanoparticles and the effect of phosphate on removal. *Journal of Environmental Management* 91: 2238–2247.

Chudasama RK, Rangoonwala M, Sheth A, et al. (2013) Biomedical waste management: A study of knowledge, attitude and practice among health care personnel at tertiary care hospital in Rajkot. *Journal of Research in Medical and Dental Science* 1: 17–22.

Datta P, Mohi G and Chander J (2018) Biomedical waste management in India: Critical appraisal. *Journal of Laboratory Physicians* 10: 006–014.

Deb A, Gajbhiye S and Raut S (2017) Awareness about biomedical waste management amongst medical interns – An interventional study from Central India. *Journal of Evolution of Medical and Dental Sciences* 6: 1256–1259.

de Godoy Delmonico DV, dos Santos HH, Pinheiro MA, et al. (2018) Waste management barriers in developing country hospitals: Case study and AHP analysis. *Waste Management & Research* 36: 48–58.

Devatha CP, Jagadeesh K and Patil M (2018) Effect of green synthesized iron nanoparticles by *Azardirachta indica* in different proportions on antibacterial activity. *Environmental Nanotechnology, Monitoring & Management* 9: 85–94.

Devatha CP, Thalla AK and Katte SY (2016) Green synthesis of iron nanoparticles using different leaf extracts for treatment of domestic waste water. *Journal of Cleaner Production* 139: 1425–1435.

Diallo A, Doyle TB, Mothudi BM, et al. (2017) Magnetic behavior of biosynthesized CO_3O_4 nanoparticles. *Journal of Magnetism and Magnetic Materials* 424: 251–255.

Ehtesham H, Safdari R and Tahmasebian S (2017) Big data in health: New challenges and new solutions in data management (a lifecycle review) *Indian Journal of Science and Technology* 10: 1–9.

El-Fadel M, Findikakis AN and Leckie JO (1997) Environmental impacts of solid waste landfilling. *Journal of Environmental Management* 50: 1–25.

El-kassas HY, Aly-Eldeen MA and Gharib SM (2016) Green synthesis of iron oxide (Fe_3O_4) nanoparticles using two selected brown seaweeds: Characterization and application for lead bioremediation. *Acta Oceanologica Sinica* 35: 89–98.

Faraji M (2016) Recent analytical applications of magnetic nanoparticles. *Nanochemistry Research* 1: 264–290.

Franchini M, Rial M, Buiatti E, et al. (2004) Health effects of exposure to waste incinerator emissions: A review of epidemiological studies. *Annali dell'Istituto Superiore di Sanità* 40: 101–115.

Geetha M and Fulekar MH (2008) Bioremediation of pesticides in surface soil treatment unit usingmicrobial consortia. *African Journal of Environmental Science and Technology* 2: 036–045.

Gupta S and Boojh R (2006) Report: Biomedical waste management practices at Balrampur Hospital, Lucknow, India. *Waste Management & Research* 24: 584–591.

Gupta S, Boojh R, Mishra A, et al. (2009) Rules and management of biomedical waste at Vivekananda Polyclinic: A case study. *Waste Management* 29: 812–819.

Gurunathan S, Han J, Park JH, et al. (2014) A green chemistry approach for synthesizing biocompatible gold nanoparticles. *Nanoscale Research Letters* 9: 1–11.

Gu SY, Hsieh CT, Gandomi YA, et al. (2019) Functionalization of activated carbons with magnetic Iron oxide nanoparticles for removal of copper ions from aqueous solution. *Journal of Molecular Liquids* 277: 499–505.

Hyeon T, Lee SS, Park J, et al. (2001) Synthesis of highly crystalline and monodisperse maghemite nanocrystallites without a size-selection process. *Journal of the American Chemical Society* 123: 12798–12801.

Hong J, Zhan S, Yu Z, et al. (2018) Life-cycle environmental and economic assessment of medical waste treatment. *Journal of Cleaner Production* 174: 65–73.

Haylamicheal ID, Dalvie MA, Yirsaw BD, et al. (2011) Assessing the management of healthcare waste in Hawassa city, Ethiopia. *Waste Management & Research* 29: 854–862.

INCLEN Program Evaluation Network (IPEN) study group (2014) Biomedical waste management: Situational analysis & predictors of performances in 25 districts across 20 indian states. *Indian Journal of Medical Research* 139: 141–153.

Jang YC (2011) Infectious/medical/hospital waste: General characteristics. In: Nriagu JO, Kacew S, Kawamoto T, et al. (eds) *Encyclopedia of Environmental Health*. Amsterdam: Elsevier, 227–231.

Jayanthi S and Sarojini E (2010) Destruction of pathogens in infectious BMW using lime and neem (*Azadirchta indica*). *Asian Journal of Microbiology, Biotechnology and Environmental Sciences* 12: 599–602.

Kajitvichyanukul P and Suntronvipart N (2006) Evaluation of biodegradability and oxidation degree of hospital wastewater using photo-Fenton process as the pretreatment method. *Journal of Hazardous Materials* 138: 384–391.

Kharat M, Zheyuan D, Guodong Z, et al. (2017) Physical and chemical stability of curcumin in aqueous solutions and emulsions: Impact of pH, temperature, and molecular environment. *Journal of Agricultural and Food Chemistry* 65: 1525–1532.

Komilis D, Fouki A and Papadopoulos D (2012) Hazardous medical waste generation rates of different categories of health-care facilities. *Waste Management* 32: 1434–1441.

Kotasthane DS, Kotasthane VD, Shanmugasamy K, et al. (2017) Impact of intervention on awareness of biomedical waste disposal among medical students. *Annals of Pathology and Laboratory Medicine* 4: A195–A202.

Kritidis P, Florou H, Eleftheriadis K, et al. (2012) Radioactive pollution in Athens, Greece due to the Fukushima nuclear accident. *Journal of Environmental Radioactivity* 114: 100–104.

Krug HF (2009) Book Review Nanotechnology, volume 2: Environmental aspects. *Environmental Engineering and Management Journal* 81: 191–194.

Kudr J, Haddad Y, Richtera L, et al. (2017) Magnetic nanoparticles: From design and synthesis to real world applications. *Nanomaterials* 7: 243.

Kumar A and Samadder SR (2017) A review on technological options of waste to energy for effective management of municipal solid waste. *Waste Management* 69: 407–422.

Kumari R, Srivastava K, Wakhlu A, et al. (2013) Establishing biomedical waste management system in Medical University of India – A successful practical approach. *Clinical Epidemiology and Global Health* 1: 131–136.

Larsson DGJ, de Pedro C and Paxeus N (2007) Effluent from drug manufactures contains extremely high levels of pharmaceuticals. *Journal of Hazardous Materials* 148: 751–755.

Lee S, Vaccari M and Tudor T (2016) Considerations for choosing appropriate healthcare waste management treatment technologies: A case study from an East Midlands NHS Trust, in England. *Journal of Cleaner Production* 135: 139–147.

Li CS and Jenq FT (1993) Physical and chemical composition of hospital waste. *Infection Control & Hospital Epidemiology* 14: 145–150.

Li Y, Afzaal M and O'Brien P (2006) The synthesis of amine-capped magnetic (Fe, Mn, Co, Ni) oxide nanocrystals and their surface modification for aqueous dispersibility. *Journal of Materials Chemistry* 16: 2175.

Mackuľak T, Mosný M, Škubák J, et al. (2015) Fate of psychoactive compounds in wastewater treatment plant and the possibility of their degradation using aquatic plants. *Environmental Toxicology and Pharmacology* 39: 969–973.

Madras T (2014) A case study of biomedical waste management in hospitals.

Mahamuni PP, Patil PM, Dhanavade MJ, et al. (2019) Synthesis and characterization of zinc oxide nanoparticles by using polyol chemistry for their antimicrobial and antibiofilm activity, *Biochemistry and Biophysics Reports* 17: 71–80.

Makajic-Nikolic D, Petrovic N, Belic A, et al. (2016) The fault tree analysis of infectious medical waste management. *Journal of Cleaner Production* 113: 365–373.

Mak SY and Chen DH (2004) Fast absorbtion of mythylene blue on polyacrylic acid-bound iron oxide magnetic nanoparticles. *Dyes and Pigments* 61: 93–98.

Manga VE, Forton OT, Mofor LA, et al. (2011) Health care waste management in Cameroon: A case study from the Southwestern Region. *Resources, Conservation and Recycling* 57: 108–116.

Manoj Kumar N and Chaithanya Sudha M (2018) Characterization of leachate and groundwater in and around saduperi municipal solid waste open dump site, Vellore District, Tamil Nadu, India. *Energy, Environment, and Sustainability* 15: 279–299..

Marinković N, Vitale K, Holcer NJ, et al. (2008) Management of hazardous medical waste in Croatia. *Waste Management* 28: 1049–1056.

Martínez F, Molina R, Rodríguez I, et al. (2018) Techno-economical assessment of coupling Fenton/biological processes for the treatment of a pharmaceutical wastewater. *Journal of Environmental Chemical Engineering* 6: 485–494.

Mata-Alvarez J, Macé S and Llabrés P (2000) Anaerobic digestion of organic solid wastes. An overview of research achievements and *perspectives. Bioresource Technology* 74: 3–16.

Matinisea N, Kaviyarasua K, Mongwaketsia N, et al. (2018) Green synthesis of novel zinc iron oxide (ZnFe2O4) nanocomposite via *Moringa oleifera* natural extract for electrochemical applications, *Applied Surface Science* 446: 66–73.

Mathur P, Patan S and Shobhawat AS (2012) Need of biomedical waste management system in hospitals – An emerging issue – A review. *Current World Environment* 7: 117–124.

Matsuo H, Sakamoto H, Arizono K, et al. (2011) Behavior of pharmaceuticals in waste water treatment plant in Japan. *Bulletin of Environmental Contamination and Toxicology* 87: 31–35.

Mattiello A, Chiodini P and Bianco E (2013) Health effects associated with the disposal of solid waste in landfills and incinerators in populations living in surrounding areas : A systematic review. *International Journal of Public Health* 58: 725–735.

Ministry of Environment, Forest and Climate Change: Government of India (2016) Bio-Medical Waste Management Rules, 2016. Gaz. India, Extraordinary, Part II, Sect. 3, Sub-section 1–37. Available at: https://dhr.gov.in/sites/default/files/Bio-medical_Waste_Management_Rules_2016.pdf (accessed 28 March 2016).

Mirshahghassemi S, Ebner A, Cai B, et al. (2018) Application of high gradient magnetic separation for oil remediation using polymer-coated magnetic nanoparticles. *Separation and Purification Technology* 179: 328–334.

Mohamed MA, Hussein HA and Ali AAM (2018) Antifungal activity of different size controlled stable silver nanoparticles biosynthesized by the endophytic fungus Aspergillus terreus. *Journal Phytopathology Pest Management* 5: 88–107.

Moussavi G and Mahmoudi M (2009) Nanoparticles: Their potential toxicity, waste and environmental management. *Journal of Hazardous Materials* 168: 806–812.

Tabish SA and Pandit N (2007) Biomedical waste management in a large teaching hospital. *JK-Practitioner* 14: 57–59.

Narang RS, Manchanda A, Singh S, et al. (2012) Awareness of biomedical waste management among dental professionals and auxiliary staff in Amritsar, India. *Oral Health and Dental Management* 11: 162–168.

Nema A, Pathak A, Bajaj P, et al. (2011) A case study: Biomedical waste management practices at city hospital in Himachal Pradesh. *Waste Management & Research* 29: 669–673.

Nkwonta OI and Ochieng GM (2010) Total dissolved solids removal in wastewater using roughing filters. *Journal of Chemical Sciences* 6: 1–6.

Nurm JT, Tratnyek PG, Sarathy V, et al. (2005) Characterization and properties of metallic iron nanoparticles: Spectroscopy, electrochemistry, and kinetics. *Environmental Science and Technology*. 39: 1221–1230.

Oli AN, Ekejindu CC, Adje DU, et al. (2016) Healthcare waste management in selected government and private hospitals in Southeast Nigeria. *Asian Pacific Journal of Tropical Biomedicine* 6: 84–89.

Oliveira LC, Petkowicz DI, Smaniotto A, et al. (2004) Magnetic zeolites: A new adsorbent for removal of metallic contaminants from water. *Water Research* 38: 3699–3704.

Oweis R, Al-Widyan M and Al-Limoon O (2005) Medical waste management in Jordan: A study at the King Hussein Medical Center. *Waste Management* 25: 622–625.

Padmanabhan KK and Barik D (2018) Health hazards of medical waste and its disposal. *Energy from Toxic Organic Waste for Heat and Power Generation*, Woodhead Publishing, pp. 99–118.

Pandey A and Gundevia HS (2008) Role of the fungus – *Periconiella* sp. in destruction of biomedical waste. *Journal of Environmental Science and Engineering* 50: 239–240.

Patil PM, Mahamuni PP, Abdel-Daim MM, et al. (2019a) Conversion of organic biomedical waste into potential fertilizer using isolated organisms from cow dung for a cleaner environment. *Environmental Science and Pollution Research International* 26: 27897–27904.

Patil PM, Mahamuni PP, Shadija PG, et al. (2019b) Conversion of organic biomedical waste into value added products using green approach. *Environmental science and pollution research international* 26: 6696–6705.

Patil SS, Shedbalkar UU, Truskewycz A, et al. (2016) Nanoparticles for environmental clean-up: A review of potential risks and emerging solutions. *Environmental Technology & Innovation* 5: 10–21.

Paulraj CRKJ, Bernard MA, Raju J, et al. (2019) Sustainable waste management through waste to energy technologies in India - opportunities and environmental impacts. *International Journal of Renewable Energy Research* 9: 309–342.

Pauwels B and Verstraete W (2006) The treatment of hospital wastewater: An appraisal. *Journal of Water and Health* 4: 405–416.

Puri A and Kumar M (2012) A review of permissible limits of drinking water. *Indian Journal of Occupational and Environmental Medicine* 16: 40.

Rajakannan C, Govindaradjane S and Sundararajan T (2013) Bio-medical waste management in Pondicherry region: A case study. *Chest* 80: 124.

Rajan R Robin DT and MV (2018) Biomedical waste management in Ayurveda hospitals – current practices and future prospectives. *Journal of Ayurveda and Integrative Medicine* 10: 214–221.

Rajasulochana P and Preethy V (2016) Comparison on efficiency of various techniques in treatment of waste and sewage water – A comprehensive review. *Resource-Efficient Technologies* 2: 175–184.

Rajor A, Xaxa M and Mehta R (2012) An overview on characterization, utilization and leachate analysis of biomedical waste incinerator ash. *Journal of Environmental Management* 108: 36–41.

Rajput S, Singh L, Pittman CU Jr, et al. (2017) Lead (Pb_2+) and copper (Cu_2+) remediation from water using superparamagnetic maghemite (γ-Fe_2O_3) nanoparticles synthesized by Flame Spray Pyrolysis (FSP). *Journal of Colloid and Interface Science* 492: 176–190.

Randhawa GK and Kullar JS (2011) Bioremediation of pharmaceuticals, pesticides, and petrochemicals with Gomeya/cow dung. *ISRN Pharmacology* 2011: 1–7.

Ranzi A, Fano V, Erspamer L, et al. (2011) Mortality and morbidity among people living close to incinerators: A cohort study based on dispersion modeling for exposure assessment. *Environmental Health* 10: 1–12.

Rao SKM, Ranyal RK, Bhatia SS, et al. (2004) Biomedical waste management: An infrastructural survey of hospitals. *Medical Journal Armed Forces India* 60: 379–382.

Reddy BS, Rao JN and Subrahmanyam BV (2014) Awareness and knowledge practices about the bio medical waste management at tertiary care teaching hospital. *International Journal of Scientific and Research Publications* 9: 1–11.

Rengaraj S and Li XZ (2006) Enhanced photocatalytic activity of TiO_2 by doping with Ag for degradation of 2,4,6-trichlorophenol in aqueous suspension. *Journal of Molecular Catalysis A: Chemical* 243: 60–67.

Roy E, Patra S, Karfa P, et al. (2017) Sharma role of magnetic nanoparticles in providing safe and clean water to each individual. In: Sharma SK (ed.) *Complex Magnetic Nanostructures*. Cham, Switzerland: Springer Nature, 281–316.

Rudraswamy S, Sampath N and Doggalli N (2012) Staff's attitude regarding hospital waste management in the dental college hospitals of Bangalore city, India. *Indian Journal of Occupational and Environmental Medicine* 16: 75.

Sahoo RC, Sahoo D, Sahoo J, et al. (2013) Biomedical waste management in the district of Balasore, Odisha: A critical survey. *International Journal of Life Science & Pharma Research* 3: 10–14.

Saliba PD and Von Sperling M (2017) Performance evaluation of a large sewage treatment plant in Brazil, consisting of an upflow anaerobic sludge blanket reactor followed by activated sludge. *Water Science and Technology* 76: 2003–2014.

Sanjeev R, Kuruvilla S, Subramaniam R, et al. (2014) Knowledge, attitude, and practices about biomedical waste management among dental healthcare personnel in dental colleges in Kothamangalam: A cross-sectional study. *Health Science* 13: 1–12.

Sapkota B, Gupta GK and Mainali D (2014) Impact of intervention on healthcare waste management practices in a tertiary care governmental hospital of Nepal. *BMC Public Health* 14: 1005.

Sharma P, Kumar M, Mathur N, et al. (2013) Health care industries: Potential generators of genotoxic waste. *Environmental Science and Pollution Research* 20: 5160–5167.

Sharma SK and Gupta S (2017) Healthcare waste management scenario: A case of Himachal Pradesh (India). *Clinical Epidemiology and Global Health* 5: 169–172.

Shen YF, Tang J, Nie ZH, et al. (2009) Tailoring size and structural distortion of Fe_3O_4 nanoparticles for the purification of contaminated water, *Bioresource Technology* 100: 4139–4146.

Singh A, Joshi HS, Katyal R, et al. (2017) Biomedical waste management rules, 2016: A brief review. *International Journal of Advanced and Integrated Medical Sciences* 2: 201–204.

Singh A, Zaidi J, Ganesh S, et al. (2011) Research article status of biomedical waste and their possible public health risks with controlling measures in the Jhansi city, Bundelkhand region, India: A case study. *International Journal of Current Research* 3: 80–86.

Singh RD, Jurel SK, Tripathi S, et al. (2014) Mercury and other biomedical waste management practices among dental practitioners in India. *BioMed Research International* 2014: 1–6.

Singhal L, Tuli AK and Gautam V (2017) Biomedical waste management guidelines 2016: What 's done and what needs to be done. *Indian Journal of Medical Microbiology* 35: 194–198.

Sivashankar R, Sathya AB, Vasantharaj K, et al. (2014). Magnetic composite an environmental super adsorbent for dye sequestration – A review. *Environmental Nanotechnology, Monitoring & Management* 1–2: 36–49.

Snousy MG and Zawrah MF (2017) Nanoparticles restrictions in environmental cleanup. *Nano Research and Application* 3: 1–5

Sonune A and Ghate R (2004) Developments in wastewater treatment methods. *Desalination* 167: 55–63.

Suarez S, Lema JM and Omil F (2009) Pre-treatment of hospital wastewater by coagulation–flocculation and flotation. *Bioresource Technology* 100: 2138–2146.

Thakur V and Ramesh A (2015) Healthcare waste management research: A structured analysis and review (2005–2014). *Waste Management & Research* 33: 855–870.

Tudor TL, Noonan CL and Jenkin LET (2005) Healthcare waste management: A case study from the National Health Service in Cornwall, United Kingdom. *Waste Management* 25: 606–615.

Vasistha P, Ganguly R and Gupta AK (2018) Biomedical waste generation and management in public sector hospital in Shimla City. In: Singh V, Yadav S and Yadava R (eds) *Environmental Pollution. Water Science and Technology Library, Volume 77*. Singapore: Springer, 225–232.

Wang J, Sun J, Sun Q, et al. (2003) One-step hydrothermal process to prepare highly crystalline Fe_3O_4 nanoparticles with improved magnetic properties. *Materials Research Bulletin* 38: 1113–1118.

Wang Q, Awasthi MK, Ren X, et al. (2018) Recent advances in composting of organic and hazardous waste: A road map to safer environment. In: Varjani S, Parameswaran B, Kumar S, et al. (eds) *Biosynthetic Technology and Environmental Challenges. Energy, Environment, and Sustainability*. Singapore: Springer, 307–329.

Wu W, He Q and Jiang C (2008) Magnetic iron oxide nanoparticles: Synthesis and surface functionalization strategies. *Nanoscale Research Letters* 11: 397–415.

Windfeld ES and Brooks MS (2015) Medical waste management – A review. *Journal of Environmental Management* 163: 98–108.

Yadvika, Yadav AK, Sreekrishnan TR, Satya S, et al. (2006) A modified method for estimation of chemical oxygen demand for samples having high suspended solids. *Bioresource Technology* 97: 721–726.

Zhang D, Wei S, Kaila C, et al. (2010) Carbon-stabilized iron nanoparticles for environmental remediation. *Nanoscale* 2: 917–919.

Zhang Y, Geißen SU and Gal C (2008) Carbamazepine and diclofenac: Removal in wastewater treatment plants and occurrence in water bodies. *Chemosphere* 73: 1151–1161.

Zimmermann K (2017) Microwave as an emerging technology for the treatment of biohazardous waste: A mini-review. *Waste Management & Research* 35: 471–479.

Environmental Science and Pollution Research
https://doi.org/10.1007/s11356-018-4001-z

RESEARCH ARTICLE

Conversion of organic biomedical waste into value added product using green approach

Pooja M. Patil[1] · Pranjali P. Mahamuni[1] · Prem G. Shadija[2] · Raghvendra A. Bohara[1,3]

Received: 17 August 2018 / Accepted: 13 December 2018

Abstract

Sustainable organic biomedical waste management is a difficult challenge as this has become one of the serious hazardous wastes. Improper disposal of organic biomedical waste can lead to direct and indirect transmission of diseases. In the present research, the organic biomedical waste samples (32 g blood swabs, 12 g dressing swabs, and 6 g used cotton) were treated with *Azadirachta indica* ("Neem") and *Nicotiana tabacum* ("Tobacco") extracts at various concentrations and kept for 96-h degradation, followed by evaluation of physicochemical parameters. The physicochemical results of organic biomedical waste like pH of the experimental sets were within the optimum range and there was 63.33% of decrease of TDS, 86.15% and 95.30% reduction of BOD and COD, respectively was observed at the end of 96 h. The residues were mixed with 1000 g soil to confirm their role as a potential fertilizer. The physicochemical parameters of soil sample $\mathbf{F_6}$ (neem+tobacco) show an excellent result among all. The phytochemical parameters of a plant were also enhanced as compared to control. The soil samples and the tomato plants were also not polluted by the heavy metals, they are within the limit given by WHO. The present study deals with the conversion of organic biomedical waste into potential fertilizer by using plant extracts which can purely be financially profitable to the farmer.

Keywords Biomedical waste · Total dissolved solids · Chemical oxygen demand · Dissolved oxygen · Electric conductivity · Distilled water · *Azadirachta indica* · *Nicotiana tabacum*

Introduction

Organic biomedical waste is defined as the waste generated during the diagnosis, treatment, or immunization of human beings, animals, or research activities. If biomedical waste not treated properly, it can cause serious environmental problems and health hazards (Anitha and Jayaaj 2012). The biomedical waste invites insects, flies, rodents, dogs, and cats that are liable for the spread of infectious diseases (Kotasthane et al. 2017). Contact with contaminated materials and exposure to infected body fluids while handling biomedical waste have a high risk of blood-borne infections (Jacob et al. 2017). The total generation of biomedical waste by the hospitals in India is about 397 kg/day. Indian cities generate 0.115 million metric tons of waste per day and 42 million metric tons annually (Narang et al. 2012). Most of the hospitals in India include traditional methods; herbal medicines are used for patient's treatment (Peltzer et al. 2016). Approximately 10–25% of biomedical waste is hazardous and infectious while 75–90% of biomedical waste is non-hazardous; if these two wastes were mixed, then whole waste becomes hazardous and infectious waste (Deb et al. 2017).

Incineration is used as most current method for disposal of biomedical waste (Vasistha et al. 2017 and Ghanimeh et al. 2012). Incineration leads to huge amount of air pollution and exposure to harmful gasses like polychlorinated dibenzofurans and polychlorinated dibenzo p-dioxins that damage reproductive system, and also cause the respiratory diseases, hormonal imbalance, and cancer (Prakash et al. 2017). In cities, the organic biomedical waste is disposed of in open dumps. Due to open dumping, there is a risk of soil and groundwater contamination, as well as a decline in air quality (Ali and Yasmin 2014), (Mor et al. 2006).

Responsible editor: Philippe Garrigues

✉ Raghvendra A. Bohara
raghvendrabohara@gmail.com

1 Centre for Interdisciplinary Research, D.Y., Patil University, Kolhapur, India

2 Department of Microbiology, Dr D.Y.Patil Medical College, D.Y.Patil University, Kolhapur, India

3 CURAM, Center for Research in Medical Devices, National University of Ireland Galway, Galway, Ireland

Published online: 10 January 2019

Mismanagement of biomedical waste affects the whole society and negative environmental impacts are observed (Ramesh Babu et al. 2009). The organic biomedical waste may be disposed of in the open and mixed with municipal solid waste and disposed at dumping sites near the city which also affects living beings (Gupta and Boojh 2006). Hence, there is a need to improve work safety, collection, transport, handling, and management of biomedical waste (Chaudhuri et al. 2017).

Hence, the focus of present research is to treat organic biomedical waste using an eco-friendly method as the existing method causes a huge amount of pollution and also disturbs the ecosystem of an environment. Analysis of physico chemical parameters of experimental sets was done to evaluate the performance of neem and tobacco extract. Physico-chemical parameters of soil were also analyzed so as to confirm the role as a potential fertilizer. Contamination of heavy metals in soil and plants may pose hazards and risks to living organisms and to the environment so the analysis of heavy metal in plant and soil was also studied.

The detail of this is work highlighted by a schematic diagram in Fig. 1.

Materials and methods

Recently, green approach for biomedical waste management was tried by few authors by giving treatment of *Periconiella* species of fungus isolated from cow dung which shows excellent degradation of organic biomedical waste (Pandey et al. 2011). Rajakannan et al. have used herbal extracts for decomposition of organic biomedical waste but the study was restricted to decomposition and further parameters were not studied (Rajakannan et al. 2013). Looking toward the eco-friendly and organic approach, we have developed an innovative method for degradation of organic biomedical waste by using the extract of herbal Neem and Tobacco. The experiment sets were prepared and kept for degradation for the specified time interval. After degradation of organic biomedical waste, equal proportions of residues were mixed with soil and physicochemical chemical parameters of soil were studied to confirm the role as a potential fertilizer. The phytochemical parameters of plants were studied and it was revealed that the organic biomedical was converted into potential fertilizer.

This study has been approved by the Institutional Ethical Committee (IEC), D. Y. Patil University, Kolhapur.

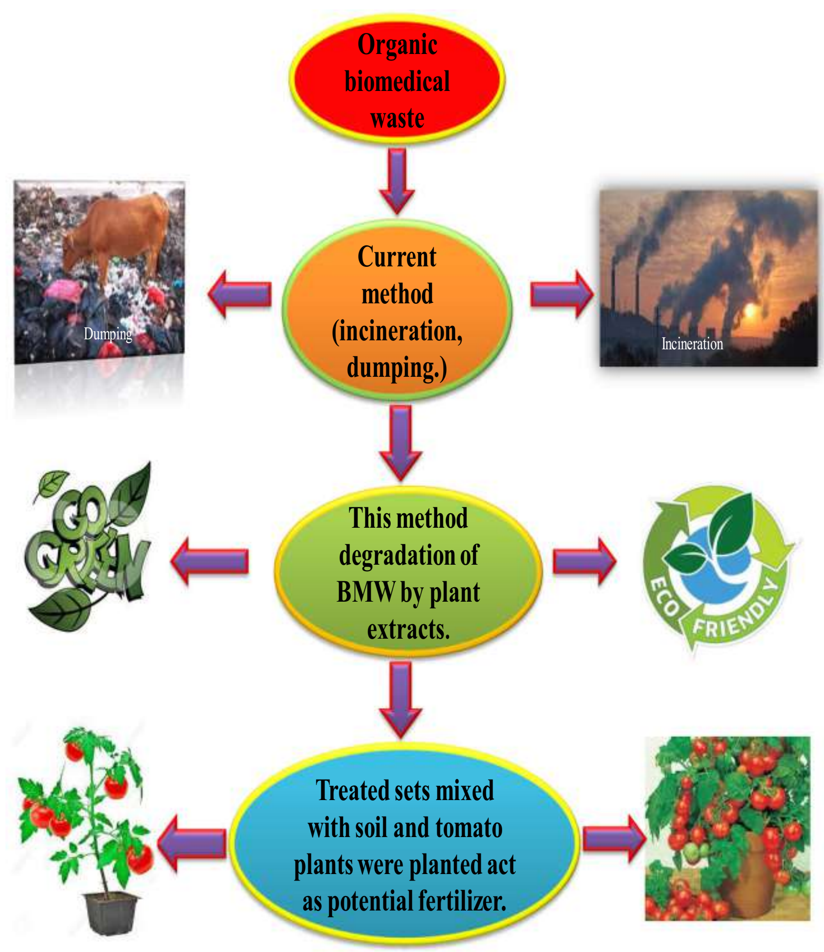


Fig. 1 Graphical representation of the degradation of organic biomedical waste by plant extracts used as potential fertilizer

Collection of samples (for each set)

The 50 g of organic biomedical waste samples (32 g blood swabs, 12 g dressing swabs, and 6 g used cotton) were collected from D. Y. Patil Medical College Hospital and Research Institute, Kolhapur. The biomedical sets are autoclaved at 121 °C for 2 h which are in the form of solid state and prior to use. The sets of an experiment are shown in Table 1 and Fig. 2.

Preparation of neem and tobacco extract

Forty grams of two *Nicotiana tabacum* (Tobacco) leaves which are 45–60 cm long are collected, washed, and dried and followed by 30 ml of d/w addition and then grounded with mortar and pestle and from that 70 ml of extract was collected and in the same way 40 g of 85 to 90 *Azadirachta indica* (Neem) leaves which are 25–40 cm long are collected and 30 ml of d/w was added and ground with mortar and pestle and from that 70 ml of the extract was collected.

Preparation of experimental sets

After collection of a sample, the experimental sets were prepared and kept in airtight containers for 96 h anaerobic degradation.

Mixing of experimental sets into soil

After degradation, the 35 g of residues were mixed with 1000 g soil to confirm their role as a potential fertilizer as shown in Table 2.

Plant selection for the experiment

The tomato plants of 2-weeks species *S. lycopersium* were selected for plantation because it has a short lifespan.

Physicochemical characterization of sample

The physicochemical parameters of the sample were studied like pH, total dissolved solids (TDS) and chemical oxygen demand (COD).

Fig. 2 Preparation of experimental sets

Physicochemical characterization of soil

The physicochemical characteristics of a soil sample were studied like pH, EC, organic carbon, organic matter, total nitrogen, potassium, calcium, magnesium, water holding capacity, and phosphorus.

Phytochemical analysis of plants

The phytochemical parameters of tomato plants were analyzed like estimation of chlorophyll content, polyphenol content, and protein content.

Results and discussions

Physicochemical parameters of experimental sets

pH

Generally, it has been observed that neutral pH favors the degradation rate of biomedical waste, the key challenge is to maintain the pH in the system because the rate of degradation of organic matter is more superior in the pH controlled system than that of without (Nakasaki et al. 1993).

Table 3 shows that the results of pH of experimental sets were analyzed at different time intervals. As Nakasaki et al. reported that neutral pH value can avoid the retardation of the reaction and at its earlier stage also significantly raise the rate of reaction. This will efficiently avoid the problem of odor

Table 1 Preparation of experimental sets

Sr. no.	Name of set	Composition
1	**A**	(Untreated) 50 g of BMW + 40 ml d/w
1	**B**	Tobacco extract 20 ml + 50 g of BMW + 40 ml d/w
2	**C**	Tobacco extract 25 ml + 50 g of BMW + 40 ml d/w
3	**D**	Neem extract 20 ml + 50 g of BMW + 40 ml d/w
4	**E**	Neem extract 25 ml + 50 g of BMW + 40 ml d/w
5	**F**	Tobacco extract 20 ml + Neem extract 20 ml + 50 g of BMW + 40 ml d/w

d/w distilled water, *BMW* biomedical waste

Table 2 Mixing of experimental sets into soil

Sr. no.	Name of set	Composition
1	$\mathbf{A_1}$	(Control)1000 g of soil
2	$\mathbf{B_2}$	35 g set a mixed with 1000 g of soil
3	$\mathbf{C_3}$	35 g set b mixed with 1000 g of soil
4	$\mathbf{D_4}$	35 g set c mixed with 1000 g of soil
5	$\mathbf{E_5}$	35 g set d mixed with 1000 g of soil
6	$\mathbf{F_6}$	35 g set e mixed with 1000 g of soil

which is caused due to retardation and this will also proficiently shorten the required time (Nakasaki et al. 1993). D. Sivakumar also reported that maximum removal of COD and TDS from the waste occurred at optimum pH 7 (Sivakumar 2013). So under well-controlled conditions, the pH of experimental sets were maintained and it was in the optimum range. There were no significant changes in pH; therefore, the degradation rates of experimental sets were superior.

Total dissolved solids (TDS)

All organic and inorganic substances present in a sample and a micro-granular suspended form were considered TDS. The TDS consists of salts like calcium and sodium chloride and iron sulfates (Kasam et al. 2016). The change in climatic condition; an age of the waste, organic, and inorganic materials in the solid waste; and other properties of solid waste are the chief factors for changing the TDS and COD concentration. TDS of samples were measured by standard gravimetric method by evaporating all the water and considering the known volume of water as the weight of the residue (mg) (Atekwana et al. 2004).

Total dissolved solids (TDS) are the expression used to explain the inorganic salts and minute amount of organic matter in solution. The technique of determining TDS in waste provisions mainly used is the measurement of definite conductivity with a conductivity probe that identifies the occurrence of ions in waste. Conductivity measurements are transformed into TDS values by a factor that varies with the type of waste. The TDS of different sets with the different time interval are shown in Table 4. There is a progressive decrease in TDS except for control at the end of 96 h while in the case of sample f the value of TDS was decreased drastically from 1200 to 330 mg/l; this value is far superior to that of required value for fertilizer.

Chemical oxygen demand (COD)

The total concentration of organic waste present in the sample is estimated by COD and BOD because they are one of the most important parameters in the determination of organic waste present in the sample. If the level of COD is high then the greater amount of oxidizable organic material is present in the sample and that decreases dissolved oxygen (DO) levels (Mata-Alvarez et al. 2000). The most general application of COD is to find out the amount of oxidizable pollutants in water (Khwairakpam and Bhargava 2009). Table 5 shows the COD values of experimental sets at various concentrations (mg/l).

The COD of experimental sets were analyzed at various time intervals; from these results we can conclude that the COD range of samples was more in initial readings and as time increases the COD level decreases. At the end of 96 h, there was a superior decrease in COD in all the samples except control and better results are shown by sample **f** among all. This result shows an important role of presence of tobacco and neem and conversion of organic biomedical waste into potential fertilizer. The reduction of COD from the biomedical waste will help to add the value to the end product. C. Rajakannan et al. reported that after 120 h, 90% of COD has been reduced when biomedical waste was treated with neem extract but further parameters are not studied only, it is restricted up to decomposition (Rajakannan et al. 2013).

Biological oxygen demand (BOD)

To determine the qualified oxygen necessities in waste, effluents, and in contaminated water, biochemical oxygen demand (BOD) is an essential environmental index (Khwairakpam and Bhargava 2009). It determines the molecular oxygen utilized during a specific incubation time for the degradation of organic matter and the oxygen used to oxidize inorganic matter (Mohabansi et al. 2011; Trujillo et al. 2006). The significant aspect of compost quality is recognized by the proportion

Table 3 pH of experimental sets at various time intervals

Sr. no	Name of set	Initial reading	After 48 h	After 96 h	After 168 h
1	**a**	6.6 ± 0.12	6.4 ± 0.22	6.2 ± 0.22	6.2 ± 0.34
2	**b**	6.6 ± 0.42	7.1 ± 0.44	6.7 ± 0.13	6.7 ± 0.22
3	**c**	6.7 ± 0.23	7.2 ± 0.22	7.3 ± 0.35	7.5 ± 0.18
4	**d**	6.7 ± 0.11	7.3 ± 0.35	7.4 ± 0.22	7.3 ± 0.32
5	**e**	6.6 ± 0.23	7.8 ± 0.21	7.2 ± 0.40	7.7 ± 0.24
6	**f**	6.4 ± 0.14	7.3 ± 0.13	7.3 ± 0.21	7.0 ± 0.22

Table 4 TDS (mg/l) of experimental sets at various time intervals

Sr. no	Name of set	Initial reading	After 24 h	After 48 h	After 96 h
1	**a**	1200 ± 1.20	1220 ± 1.24	1200 ± 2.53	1230 ± 1.32
2	**b**	1200 ± 1.35	920 ± 2.46	590 ± 1.35	430 ± 1.54
3	**c**	1200 ± 2.19	830 ± 1.80	480 ± 1.53	390 ± 1.69
4	**d**	1200 ± 1.17	980 ± 2.61	770 ± 1.21	490 ± 2.41
5	**e**	1200 ± 1.48	810 ± 1.32	680 ± 2.53	440 ± 2.55
6	**f**	1200 ± 1.44	770 ± 1.64	490 ± 1.30	330 ± 1.29

of readily biodegradable organic material (Rastogi et al. 2003). After applying compost to the soil for crop use, biological processes will continue, so care should be taken because after stabilization of compost soil nutrients can strip (Kalamdhad 2013) (Table 6).

At different time intervals, the BOD of experimental sets was analyzed. The initial reading of BOD was more, as time increases the BOD level decreases. At the end of 96 h, except control, all the sample shows a significant decrease in BOD while in the case of sample **f** the value of BOD was decreased drastically from 130 to 18 mg/l. This value was far superior to that of the required value for fertilizer.

Physicochemical parameters of the soil sample

Physicochemical parameters of the soil sample such as pH, electrical conductivity (EC), organic carbon, organic matter, phosphorus, potassium, nitrogen, calcium, magnesium, and water holding capacity are essential factors and should present in an optimum range. These parameters play a vital role in the growth and development of plants. The details of each parameter are shown in Table 7. Physiochemical parameters of soil before and after the addition of residues are shown in Tables 8 and 9.

The ranges of pH in the soil should be within the tolerable limit (5.5–9.0) to microorganisms, bacteria and fungi. Most of the crops grow in the neutral range of pH and other parameters of soil also affect the pH range (Steiner et al. 2007). After addition of residues, the A_1 soil has slightly acidic pH whereas other soils have neutral pH value which reduces soil crusting, increases soil microbial activity. Electrical conductivity (EC) of soil is a measurement that correlates the properties of soil which affect the productivity of crop, including of soil, drainage conditions, cation exchange capacity, salinity, organic matter, and sub soil properties (Grisso and Engineer 2009). The A_1 soil has less EC content as compared to other soil and F_6 soil has more content of EC. To assimilate and treat organic wastes, soil has a substantial capacity. Using waste land at agronomic rates for fertilizer and plant nutrient supply has been the waste management by the traditional mean. Applying of solid waste, either for fertilizer or for disposal purpose increases the organic carbon and organic matter content of the soil. An increase in organic carbon and organic matter content of the soil increases water holding capacity, increases aggregation and hydraulic conductivity, and decreases bulk density (Carolina 1981 and Jakobsen 1995). After addition of residues to the soil, the organic matter and organic carbon were enhanced as compared to control and they are in the optimized range. To determine soil water holding capacity, soil organic matter and texture are the key components. The main way to improve water holding capacity is designing of management practices to develop soil structure (Evanylo et al. 2008). Therefore, the addition of residues increases the water holding capacity as well as enhanced all the physico chemical parameters of soil as compared to control. The soil sample $\mathbf{F_6}$ (neem+tobacco) shows an excellent result among all.

The use of waste as mannure is increased due to the rise in the price of conventional ferilizers in the recent year. In the recent year's utilization of waste as manure is becoming widespread, as a consequence of conventional fertilizers rises in price. The well-known problem is of disposal of waste so the agricultural use of waste contributes to minimize waste; however, it is suggested that treatments with moderate doses of waste as a fertilizer can be adequate to maintain superior levels of available potassium and phosphorus content in soils and to improve crop yields (Lynch 2011). In soil, the major source of nitrogen

Table 5 COD (mg/l) of experimental sets at various time intervals

Sr. no.	Name of set	Initial reading	After 24 h	After 48 h	After 96 h
1	**a**	4232 ± 2.02	4241 ± 5.03	4220 ± 3.08	4232 ± 1.01
2	**b**	4232 ± 2.04	3134 ± 3.00	1394 ± 2.01	233 ± 1.74
3	**c**	4232 ± 3.00	2634 ± 2.02	857 ± 1.00	192 ± 1.01
4	**d**	4232 ± 2.12	3310 ± 3.04	1045 ± 2.03	432 ± 1.81
5	**e**	4232 ± 4.06	3106 ± 2.02	927 ± 1.02	319 ± 1.90
6	**f**	4432 ± 5.03	2113 ± 2.03	826 ± 2.04	208 ± 1.03

Table 6 BOD (mg/l) of experimental sets at various time intervals

Sr. no.	Name of set	Initial reading	After 24 h	After 48 h	After 96 h
1	**A**	130 ± 2.12	123 ± 2.12	119 ± 1.10	112 ± 1.51
2	**B**	130 ± 1.10	102 ± 2.12	73 ± 1.10	28 ± 1.10
3	**C**	130 ± 1.09	92 ± 1.10	53 ± 1.09	22 ± 1.09
4	**D**	130 ± 1.15	118 ± 1.09	64 ± 1.15	34 ± 1.15
5	**E**	130 ± 1.32	109 ± 1.15	57 ± 1.32	28 ± 1.32
6	**F**	130 ± 1.22	84 ± 1.32	49 ± 1.22	18 ± 1.22

is atmospheric nitrogen. Ninety-five to 99% nitrogen available in the soil is in organic forms, moreover in animal and plant residues, in the comparatively stable soil organic matter, or in soil microorganisms. The large quantity of nitrogen is required for the growth of a plant and to get better crop yield. Magnesium and calcium have several nutrients which can meet the plant demand. Plants with sufficient calcium and magnesium have a greater number of fruits and it also increases the root growth of the plant. Calcium and magnesium are important in the cell wall and cell membrane stability of fruit (Cole et al. 2016). So after adding the residue, there is a huge difference in all the parameters. The results of nitrogen calcium and magnesium are also enhanced as evaluate to A_1 (control). The soil sample $\mathbf{F_6}$ (neem+tobacco) shows an excellent result among all (Table 10 and 11).

Heavy metals of the soil sample

The biodegradation of organic contaminants can be severely inhibited by the existence of toxic metals in soil (Mihailovic and Gajic 2008). Contamination of heavy

Table 7 Details of physicochemical parameters of the soil

Sr. no.	Name of parameter	Importance of parameter in soil	Reference
1	pH	The pH of soil will have a considerable effect on the biochemical process present in the soil. The pH of soil will affect the chemical form, availability, and concentration of substrate	Nicol et al. (2008)
2	Electrical conductivity (EC)	EC (electrical conductivity) is a measure of the salts present in the soil. EC affects crop suitability and plant nutrient present in the soil	Brevik et al. (2006)
3	Organic carbon	Soil microorganisms are a source of energy of soil organic carbon. Total organic carbon forms are derived from the decomposition of plants and animals. They are able to decompose. They have organic compounds like oxygen, carbon, nitrogen, and hydrogen, therefore bicarbonates, carbonates, and elementary carbon such as graphite are not organic carbon	Six et al. (2002) Edwards et al. 1992 and Holtan et al. 1988
4	Organic matter	Soil organic matter decreases erosion and helps to stabilize soil particles. Organic matter is diverse to organic carbon in that it consists of every element (oxygen, nitrogen, hydrogen, etc.) that are components of organic matter, not just carbon	Six et al. (2002)
5	Phosphorus	Phosphorus is the eleventh rich element available in the earth crust. If there is a lack of phosphorous then there will be reduction in yield and the plant's growth are also stunted	Bennett et al. (2001)
6	Potassium	The availability of potassium range is less, plants accumulate more quantity of this element The accessibility of potassium goes on varying due to complex soil dynamics	Ashley et al. (2006); Sindhu and Comfield (1967)
7	Nitrogen	Most of the nitrogen in the soil is organically bound but a small amount of nitrogen is present in the inorganic form; however, the inorganic form of nitrogen which is available in the soil is directly absorbed by plants	Bodelier and Laanbroek (2004)
8	Calcium	Calcium is an essential nutrient for plant growth. The calcium is called as a secondary nutrient because in smaller quantity plants require calcium. To give structural support to cell walls is the principal function of calcium	Maathuis (2009)
9	Magnesium	Magnesium is also known as a secondary nutrient because in smaller quantity plants require magnesium, but on the other hand, the micronutrient plants require these nutrients in a larger amount	Van Raij et al. (1986)
10	Water holding capacity	To grow mediums ability to hold water is referred to as water holding capacity. The water holding capacity is controlled by the composition, quantity of organic matter, and by its texture	Karhu et al. (2011)

Table 8 Physicochemical parameters of the soil sample

Sr. no	Sample	pH	EC	Organic carbon	Organic matter	Water holding capacity
1	**A_1**	5.8 ± 0.14	0.58 ± 0.04	7.06 ± 0.18	12.10 ± 1.22	45.23 ± 3.02
2	**B_2**	7.6 ± 0.13	0.76 ± 0.06	8.10 ± 0.13	15.17 ± 1.03	56.21 ± 4.13
3	**C_3**	7.8 ± 0.12	0.79 ± 0.09	11.11 ± 0.15	17.18 ± 1.32	67.35 ± 3.22
4	**D_4**	8.2 ± 0.06	0.63 ± 0.02	13.07 ± 0.13	19.12 ± 1.51	73.44 ± 4.01
5	**E_5**	7.9 ± 0.08	0.68 ± 0.04	14.09 ± 0.16	23.15 ± 1.02	79.53 ± 2.12
6	**F_6**	7.6 ± 0.13	0.89 ± 0.06	17.14 ± 0.17	28.24 ± 1.04	87.81 ± 3.13

All values are in percentage. Unit of EC is in μ

Table 9 Physicochemical parameters of the soil sample

Sr. no.	Sample	Potassium	Phosphorus	Total nitrogen	Magnesium	Calcium
1	**A_1**	0.08 ± 0.01	0.47 ± 0.02	0.12 ± 0.02	0.03 ± 0.02	0.54 ± 0.03
2	**B_2**	0.22 ± 0.01	0.52 ± 0.03	0.23 ± 0.02	0.13 ± 0.01	0.57 ± 0.01
3	**C_3**	0.36 ± 0.03	0.61 ± 0.05	0.35 ± 0.04	0.16 ± 0.03	0.64 ± 0.02
4	**D_4**	0.51 ± 0.02	0.72 ± 0.12	0.44 ± 0.01	0.23 ± 0.04	0.77 ± 0.05
5	**E_5**	0.73 ± 0.06	0.83 ± 0.06	0.54 ± 0.03	0.33 ± 0.03	0.84 ± 0.02
6	**F_6**	0.96 ± 0.04	1.02 ± 0.05	0.82 ± 0.02	0.46 ± 0.01	0.92 ± 0.05

All values are in percentage; calcium and magnesium are in mg/lit

metals in soil may pose hazards and risks to living organisms and to the environment by direct intake or through contact with contaminated water, soil, food chain etc. In all living organisms, heavy metals have the multiplicity of biochemical functions and they are essential micronutrients (Wuana and Okieimen 2011; Abdel-daim 2018). Though they are necessary to living organisms, they can be harmful and toxic when they are above the limit and they could also cause pollution when they are beyond the limit; both necessity and toxicity differ from species to species. Knowledge of the basic environment, chemistry, and health effects of heavy metals is required in understanding their bioavailability, speciation, and remedial options (Liu et al. 2013 and Li et al. 2011). Homeostatic mechanisms are possessed by plants which keep the heavy metals in the accurate concentrations in cellular compartments of essential metal ions and minimize the harmful effects of an excess of unnecessary ones (Chibuike and Obiora 2014). The soil samples and tomato plants were analyzed to determine the presence of heavy metals (Mn, manganese; Cd, cadmium; Fe, iron; Ni, nickel; Co, cobalt; Zn, zink; Cu, copper; Cr, chromium). From Table 9, we can conclude that the soil samples and the tomato plants are not polluted by the heavy metals; they are within the limit given by WHO. So there is no risk to living organisms and to the environment as there is no contamination of toxic metals in the soil samples and in the tomato plants.

Phytochemical parameters of (tomato plant)

The tomato plants were grown in treated and non-treated soil to confirm the role as a potential fertilizer. Phenols are derived from secondary plant metabolism of the shikimic acid pathway, malic acid pathway or both

Table 10 Heavy metals of soil

Sr. no.	Sample	Mn	Cd	Fe	Ni	Co	Zn	Cu	Cr
1	**A_1**	− 0.11	0.29	0.73	0.76	0.77	2.34	1.83	− 0.23
2	**B_2**	− 0. 30	0.14	0.36	− 0.68	0.73	1.25	1.24	− 0.32
3	**C_3**	− 0.45	0.15	0.54	− 0.65	0.34	1.09	0.83	− 0.34
4	**D_4**	− 0.12	0.12	− 0.11	− 0.43	0.65	1.23	1.04	− 0.58
5	**E_5**	− 0.16	0.14	0.12	− 0.28	0.81	1.33	0.94	− 0.32
6	**F_6**	− 0.53	0.08	0.13	− 0.74	0.23	0.43	0.23	− 0.61

Table 11 Heavy metals of tomato leaves

Sr. no.	Sample	Mn	Cd	Fe	Ni	Co	Zn	Cu	Cr
1	$\mathbf{A_1}$	− 0.14	0.09	0.79	0.61	0.89	2.31	1.32	− 0.03
2	$\mathbf{B_2}$	− 0.32	0.03	0.41	− 0.57	0.69	1.18	1.34	− 0.09
3	$\mathbf{C_3}$	− 0.39	0.04	0.49	− 0.68	0.44	1.34	0.93	− 0.21
4	$\mathbf{D_4}$	− 0.15	0.05	− 0.13	− 0.47	0.67	1.03	1.64	− 0.56
5	$\mathbf{E_5}$	− 0.18	0.02	0.42	− 0.34	0.79	1.02	0.89	− 0.43
6	$\mathbf{F_6}$	− 0.54	0.03	0.19	− 0.71	0.27	0.59	0.61	− 0.56

phenylalanines are the precursors for phenolic compounds. Phenolics have different functions in plants (Hartmut and Ursula 1988). The proteins are derived from smaller molecules called amino acids. Proteins play a crucial role in the growth and development of plants (Waters et al. 1996). The estimation of protein content was done by Lowry's method. The chlorophyll content of leaf extract was conducted by the standard method reported by sadasivam and manickam, and by Folin–Ciocalteu procedure total polyphenols were determined (Xu et al. 2006). From Table 10, let us conclude that the plant F_6 has higher chlorophyll contents than that of other plants. So it indicates tomato plant F_6 was healthier than other plants. There was maximum polyphenol content in sample $\mathbf{F_6}$ (neem+tobacco) followed that of *Azadirachta indica* (Neem). This indicates that the plant $\mathbf{F_6}$ has more protein and amino acid content. Similarly, the growth and development were also good.

Morphological parameters of tomato plant

Plant height: (Tomato plant)—Plant $\mathbf{F_6}$ has the highest plant growth than that of other plants. Required nutrients for plant growth were provided by experimental sample **f** (neem+tobacco). The EC, organic carbon, organic matter, potassium, phosphorus, nitrogen, calcium, and magnesium of soil sample $\mathbf{F_6}$ were high. The F_6 (neem+tobacco) tomato plant has high chlorophyll, polyphenol, and protein content followed by individual tobacco (c, b) and individual neem (e, f). Hence, the highest plant growth was seen in sample **f**. The results are shown in Table 12.

Mechanisms of action

The existences of polyphenol content in herbal extracts are responsible for degradation of any organic matter present in the waste sample. Huge research is approved out on extensive range of herbal extracts and its chemical components. The polyphenol content is used as a green approach for biodegradation and for treatment purpose (Devatha et al. 2018). Herbal extracts were preferred based on the existence of polyphenols, neem shows 82.35% reduction of chemical oxygen demand. Neem shows the satisfactory reduction of organic matter present in waste samples as compared to other herbal extracts. On the 11th day, there is a huge reduction in COD of the waste sample due to polyphenol content in leaf extracts (Table 13). The study proved that the exploitation of herbal extracts for the degradation of organic waste is an agreeable, cost-effective, and ecofriendly method (Devatha et al. 2016). The treatment of herbal extract is a natural and traditional method available. It has been reported that neem and tobacco extract shows antifungal, antibacterial, and antiviral, activites due to existences of polyphenols content (Ravva and Korn 2015).

Table 12 Phytochemical parameters of (tomato plant)

Sr. no.	Sample	Chlorophyll (mg/100 g)	Polyphenol (mg/1000 g)	Protein (mg/g)
1	$\mathbf{A_1}$	103.72 ± 1.01	19,600 ± 7.01	0.37 ± 0.07
2	$\mathbf{B_2}$	165.40 ± 1.43	46,000 ± 6.01	1.25 ± 0.05
3	$\mathbf{C_3}$	184.31 ± 3.95	44,800 ± 7.04	1.38 ± 0.06
4	$\mathbf{D_4}$	118.54 ± 2.70	28,400 ± 8.00	0.86 ± 0.00
5	$\mathbf{E_5}$	123.45 ± 1.62	24,500 ± 5.03	1.18 ± 0.02
6	$\mathbf{F_6}$	225.55 ± 1.04	52,000 ± 5.04	1.45 ± 0.01
7	Neem extract	156.23 ± 0.84	32,000 ± 6.14	1.96 ± 0.03
8	Tobacco extract	283.47 ± 0.96	54,000 ± 8.04	2.01 ± 0.05

Table 13 Height of the plants

Sr. no.	Treatment	20 days	40 days	60 days
1	A_1	12 ± 1.08	26 ± 0.13	39 ± 0.21
2	B_2	31 ± 0.14	42 ± 0.09	54 ± 0.14
3	$\mathbf{C_3}$	34 ± 1.12	53 ± 0.12	67 ± 0.33
4	$\mathbf{D_4}$	19 ± 0.18	26 ± 1.14	42 ± 1.13
5	$\mathbf{E_5}$	26 ± 0.03	41 ± 0.24	52 ± 1.21
6	$\mathbf{F_6}$	43 ± 1.09	68 ± 1.13	92 ± 1.13

Conclusion

The present research proves conversion of organic biomedical waste into potential fertilizer by using the extracts of neem and tobacco and which can be turned financially profitable to a farmer as neem and tobacco extracts show excellent results in degradation of organic biomedical waste. 63.33% decrease of TDS, and 86.15% and 95.30% reduction of BOD and COD, respectively were observed at the end of 96 h. The physicochemical and phytochemical parameters of soil and plant are also enhanced as compared to control. The soil samples and the tomato plants are also not polluted by the heavy metals. They are within the limit given by WHO so the final treated waste is good source of fertilizer as there is no risk to living organisms and to the environment as there is no contamination of toxic metals in the soil samples and in the tomato plants. So the use of plant extracts for conversion of organic biomedical waste into potential fertilizer on the basis of nutrient content is imperative indication that this method will reduce a load of synthetic fertilizer.

Acknowledgements The funding agencies are highly acknowledged. Authors are also grateful to the district soil survey and soil testing office Kolhapur, Common effluent plant of Kagal five-star MIDC Kolhapur for their kind support for the completion of the article.

Funding information The corresponding author is thankful for D. Y. Patil University for financial support (DYPU/R&D/190) and financial support from the Irish Research Council under the Government of Ireland Postdoctoral fellowship Grant GOIPD/2017/1283.

References

Abdel-daim MM (2018) Lycopene attenuates tulathromycin and diclofenac sodium-induced cardiotoxicity in mice. Int J Mol Sci:1–15

Ali SM, Yasmin A (2014) Open dumping of municipal solid waste and its hazardous impacts on soil and vegetation diversity at waste dumping sites of Islamabad city. J King Saud Univ Sci 26:59–65

Anitha J, Jayaaj I (2012) Isolation and identification of bacteria from biomedical waste. Int J Pharm Pharm Sci 4:10–12

Ashley MK, Grant M, Grabov A (2006) Plant responses to potassium deficiencies: a role for potassium transport proteins. J Exp Bot 57: 425–436

Atekwana EA, Atekwana EA, Rowe RS, Werkema DD, Legall FD (2004) The relationship of total dissolved solids measurements to bulk electrical conductivity in an aquifer contaminated with hydrocarbon. J Appl Geochem 56:281–294

Bennett EM, Carpenter SR, Caraco NF (2001) Human impact on erodable phosphorus and eutrophication: a global perspective. BioScience 51:227–234

Bodelier PLE, Laanbroek HJ (2004) Nitrogen as a regulatory factor of methane oxidation in soils and sediments. FEMS Microbiol Ecol 47: 265–277. https://doi.org/10.1016/S0168-6496(03)00304-0

Brevik EC, Fenton TE, Lazari A (2006) Soil electrical conductivity as a function of soil water content and implications for soil mapping. Precis Agric 7:393–404

Carolina N (1981) Changes in soil physical properties due to organic waste applications: a review. J Environ Qual 10:133–141

Chaudhuri A, Chattopadhyay S, Siddalingaiah HS (2017) Rationality in handling biomedical waste: a study on the sanitary workers from a tertiary care hospital in West Bengal. Int J Community Med Public Health 4:2327–2332

Chibuike GU, Obiora SC (2014) Heavy metal polluted soils: effect on plants and bioremediation methods. Appl Environ Soil Sci 752708: 12

Cole JC, Smith MW, Penn CJ, Associate F, Cheary BS, Agriculturist S, Conaghan KJ (2016) Scientia horticulturae nitrogen, phosphorus, calcium, and magnesium applied individually or as a slow release or controlled release fertilizer increase growth and yield and affect macronutrient and micronutrient concentration and content of field-grown tomato plants. Sci Hortic (Amsterdam) 211:420–430

Deb A, Gajbhiye S, Raut S (2017) Awareness about biomedical waste management amongst medical interns- an interventional study from Central India. J Evol Med Dent Sci 6(16):1256–1259

Devatha CP, Thalla AK, Katte SY (2016) Green synthesis of iron nanoparticles using different leaf extracts for treatment of domestic waste water. J Clean Prod 139:1425–1435

Devatha CP, Jagadeesh K, Patil M (2018) Effect of green synthesized iron nanoparticles by Azardirachta Indica in different proportions on antibacterial activity. Environ. Nanotechnology, Monit Manag 9:85–94

Edwards JH, Wood CW, Thurlow DL, Ruf ME (1992) Tillage and crop-rotation effects on fertility status of a hapludult soil. Soil Sci Soc Am J 56:1577–1582

Evanylo G, Sherony C, Spargo J, Starner D, Brosius M, Haering K (2008) Agriculture, ecosystems and environment soil and water environmental effects of fertilizer-, manure-, and compost-based fertility practices in an organic vegetable cropping system. Agric Ecosyst Environ 127:50–58

Ghanimeh S, El M, Saikaly P (2012) Bioresource technology mixing effect on thermophilic anaerobic digestion of source-sorted organic fraction of municipal solid waste. Bioresour Technol 117:63–71

Grisso R, Wysor WG, Holshouser D, Thomason W (2009) Precision farming tools: soil electrical conductivity. Virginia cooperative extension. Publication 442–508

Gupta S, Boojh R (2006) Report: biomedical waste management practices at Balrampur Hospital, Lucknow, India. Waste Manag Res 24: 584–591

Hartmut KL, Ursula R (1988) C R C critical reviews in analytical chemistry the role of chlorophyll fluorescence in the detection of stress conditions in plants. Crit Rev Anal Chem 19:37–41

Holtan H, Kamp-Nielsen L, Stuanes AO (1988) Phosphorus in soil, water and sediment: an overview. Hydrobiologia 170:19–34

Jacob SR, Bhaskar A, Varkey R, Harikrishnan (2017) Safety concerns over biomedical waste management in a tertiary care centre of North Kerala. Int J Public Health Res 4:24–29

Jakobsen ST (1995) Aerobic decomposition of organic wastes 2. Value of compost as a fertilizer. Resour Conserv Recycl 13:57–71

Kalamdhad AS (2013) Stability analysis of dewatered sludge of pulp and paper mill during vermicomposting. Waste Biomass Valor 5:19–26. https://doi.org/10.1007/s12649-013-9225-z

Karhu K, Mattila T, Bergström I, Regina K (2011) Agriculture, ecosystems and environment biochar addition to agricultural soil increased CH 4 uptake and water holding capacity – results from a short-term pilot field study. Agric Ecosyst Environ 140:309–313

Kasam S, Syamsiah S, Prasetya A (2016) Pattern of characteristics of leachate generation from municipal solid waste landfill by Lysimeter experiment. Int J Environ Sci Dev 7:768–771

Khwairakpam M, Bhargava R (2009) Vermitechnology for sewage sludge recycling. J Hazard Mater 161:948–954

Kotasthane DS, Kotasthane VD, Shanmugasamy K, Ancy A (2017) Impact of intervention on awareness of biomedical waste disposal among medical students. Ann Pathol Lab Med 4:A195–A202

Li J, Jha AK, He J, Ban Q, Chang S (2011) Assessment of the effects of dry anaerobic co- digestion of cow dung with waste water sludge on biogas yield and biodegradability. Bioresour Bioprocess 6:3723–3732

Liu X, Song Q, Tang Y, Li W, Xu J, Wu J, Wang F, Charles P (2013) Science of the Total environment human health risk assessment of heavy metals in soil – vegetable system: a multi-medium analysis. Sci Total Environ 463–464:530–540

Lynch JP (2011) Root phenes for enhanced soil exploration and phosphorus acquisition: tools for future crops. Plant Physiol 156:1041–1049

Maathuis FJM (2009) Physiological functions of mineral macronutrients. Current Opinion in Plant Biology 12:250–258. https://doi.org/10.1016/j.pbi.2009.04.003

Mata-Alvarez J, Macé S, Llabrés P (2000) Anaerobic digestion of organic solid wastes. An overview of research achievements and perspectives. Bioresour Technol 74:3–16

Mihailovic N, Gajic B (2008) Chemosphere heavy metals in soils: distribution, relationship with soil characteristics and radionuclides and multivariate assessment of contamination sources. Chemosphere 72: 491–495

Mohabansi NP, Tekade PV, Bawankar SV (2011) Study of physico-chemical properties of effluents from soap industry in wardha. RASAYAN J Chem 4(2):461–465

Mor S, Ravindra K, Dahiya RP, Chandra A (2006) Leachate characterization and assessment of groundwater pollution near municipal solid waste landfill site. Environ Monit Assess 118(1-3):435–456 1–31

Nakasaki K, Yaguchi H, Sasaki Y, Kubota H (1993) Effects of pH control on composting of garbage. Waste Manag Res 11:117–125

Narang RS, Manchanda A, Singh S, Verma N, Padda S (2012) Awareness of biomedical waste management among dental professionals and auxiliary staff in Amritsar, India. Oral Health Dent Manag 11:162–168

Nicol GW, Leininger S, Schleper C, Prosser JI (2008) The influence of soil pH on the diversity, abundance and transcriptional activity of ammonia oxidizing archaea and bacteria. Environ Microbiol 10: 2966–2978

Pandey A, Ara F, Tiwari SK (2011) Isolation and characterization of multi drug resistance cultures from waste water. J Pharm Biomed Sci 13: 1–7

Peltzer K, Pengpid S, Puckpinyo A, Yi S, Anh LV (2016) The utilization of traditional, complementary and alternative medicine for non-communicable diseases and mental disorders in health care patients in. BMC Complement Altern Med:1–11

Prakash S, Selvaraju M, Ravikumar K, Punnagaiarasi A (2017) Bioremediation and sustainable technologies for cleaner environment. Springer International Publishing, Berlin, pp 177–183. https://doi.org/10.1007/978-3-319-48439-6

Rajakannan C, Govindaradjane S, Sundararajan T (2013) Bio – medical waste management in Pondicherry region: a case study. Int J Eng Adv Technol 2:75–79

Ramesh Babu B, Parande AK, Rajalakshmi R, Suriyakala P, Volga M (2009) Management of biomedical waste in India and other countries: a review. J Int Environ Appl Sci 4:65–78

Rastogi S, Rathee P, Saxena TK, Mehra NK, Kumar R (2003) BOD analysis of industrial effluents: 5 days to 5 min. Curr Appl Phys 3: 191–194

Ravva SV, Korn A (2015) Effect of neem (Azadirachta indica) on the survival of Escherichia coli O157: H7 in dairy manure. Int J Environ Res Public Health 12:7794–7803

Sindhu MA, Comfield AH (1967) Comparative effects of varying levels of chlorides and Sulphates of sodium, potassium, calcium, and magnesium on ammonification and nitrification during incubation of soil. Plant Soil 27:468–472

Sivakumar D (2013) Adsorption study on municipal solid waste leachate using Moringa oleifera seed. Int J Environ Sci Technol 10:113–124

Six J, Conant RT, Paul EA, Paustian K (2002) Stabilization mechanisms of soil organic matter: implications for C-saturation of soils. Plant Soil 241:155–176

Steiner C, Teixeira WG, Lehmann J, Nehls T, Luis J, De Macêdo V, Blum WEH, Zech W (2007) Long term e V ects of manure, charcoal and mineral fertilization on crop production and fertility on a highly weathered central Amazonian upland soil. Plant Soil 291:275–290. https://doi.org/10.1007/s11104-007-9193-9

Trujillo D, Font X, Antoni S (2006) Use of Fenton reaction for the treatment of leachate from composting of different wastes. J Hazard Mater 138:201–204

Van Raij B, Quaggio JA, Silva NM (1986) Communications in soil science and plant analysis extraction of phosphorus, potassium, calcium, and magnesium from soils by an ion - exchange resin procedure. Commun Soil Sci. Plant Anal 17:547–566. https://doi.org/10.1080/00103628609367733

Vasistha P, Ganguly R, Gupta AK (2017) Biomedical waste generation and management in Public Sector Hospital in Shimla City. Environ Pollut:225–232

Waters ER, Lee GJ, Vierling E (1996) Evolution, structure and function of the small heat shock proteins in plants. J Exp Bot 47:325–338. https://doi.org/10.1093/jxb/47.3.325

Wuana RA, Okieimen FE (2011) Heavy metals in contaminated soils: a review of sources, chemistry, risks and best available strategies for remediation. ISRN Ecol 2011:1–20. https://doi.org/10.5402/2011/402647

Xu P, Zhang Y, Kang L, Roossinck MJ, Mysore KS, Division PB, Samuel T, Noble R (2006) Computational estimation and experimental verification of off-target silencing during posttranscriptional gene silencing in plants. Plant Physiol 142:429–440

APPRAISING THE ROLE OF UNIVERSITY EDUCATION AND FAMILY IN SHAPING STUDENTS PERCEPTION OF ENTREPRENEURSHIP

3 authors:

Anuradha Gaikwad
CHHATRAPATI SHAHU INSTITUTE OF BUSINESS EDUCATION AND RESEARCH

Madhura Mane
Chh. Shahu Institute of Business Education & Research

Bindu Nandakumar Menon
CHHATRAPATI SHAHU INSTITUTE OF BUSINESS EDUCATION AND RESEARCH

APPRAISING THE ROLE OF UNIVERSITY EDUCATION AND FAMILY IN SHAPING STUDENTS PERCEPTION OF ENTREPRENEURSHIP

Ms. Anuradha Gaikwad, *Chhatrapati Shahu Institute of Business Education and Research, Kolhapur*
augaikwad@siberindia.edu.in
Dr Bindu Menon, *Chhatrapati Shahu Institute of Business Education and Research, Kolhapur,*
bindumenon@siberindia.edu.in
Mrs. Madhura Mane, *Chhatrapati Shahu Institute of Business Education and Research, Kolhapur*
mkmane@siberindia.edu.in

ABSTRACT

Entrepreneurship is the creation of business. It is viewed as change that involves risk-taking. In academic context, entrepreneurship accommodates different schools of thought. Previous research shows that *Entrepreneurship* is influenced by *factors such as education, culture,* economic development, family and technological development. In fact, in areas where there is strong presence of the above factors, it is observed that entrepreneurship has flourished. Previous researches have shown that family has influence on perception about entrepreneurship of individuals. It is also seen today that both developed and developing countries are focussing attention in developing and promoting entrepreneurs through education.

In the present paper, the researchers have collected data through structured questionnaire from 201 management students in Kolhapur city. The paper aims to assess perception of students on having entrepreneurship intention (EI). This empirical study further examines the role of family and education in influencing student perception about entrepreneurship in Kolhapur city.

Keywords: Entrepreneurship, entrepreneurship intention, Family influence, University education

Introduction

Entrepreneurship has become a major buzz word in today's world. There exists a deficiency in terms of a widely recognized and agreed concept of entrepreneurship, there is no generally accepted definition. The wealth creation and economic growth component of entrepreneurship has been the subject of most definitions (Tilley and Young 2009). Entrepreneurship as a matter of fact is a state of mind that may refer to an individual's capacity and effectiveness to identify an opportunity and take advantage of it for the purpose of economic transformation and wealth creation, and it also defined as an academic area that seeks to understand how opportunities turn into reality and potential goods and services are created.

Entrepreneurs qualities have been defined as ambitious and innovators, considering the process in which entrepreneurs discovers opportunities and facilitate economic development. Different literatures have highlighted that entrepreneur as an individual with great vision, imaginations innovativeness, creativeness and adaptability; someone who is vigorous and good for conceptual thinking and always who searches a change as a potential opportunity for business [Richards (1999); Kao, Kao and Kao, (2002); Timmons and Bygrave (1997); Venesaar, Kolbre and Piliste, (2007)].

Lack of entrepreneurship can become a major constraint in the overall economic growth of the country (Leff 1979). In fact the importance of entrepreneurship and its role in economic development has been widely acknowledged through academic books on entrepreneurship as well as economic development. The Government of India has special emphasis on entrepreneurship development in its policy decision making as envisaged in various schemes like Start up India, Make in India, Self-reliant India. (Chowdhury 2017) has studied a broad spectrum of factors that include personal, environmental-situational, judicial, economic and political factors which have a significant impact on growth and

 ISSN: 2249-6661
Vol-44 No.-01(VIII) : 2021

development of entrepreneurship in a country. The seeds of Entrepreneurship can be sown through formal education. ------- discusses in his paper that entrepreneurship education can promote innovation, application of business idea, improve imagination and creativity, use skills such as communication, problem solving, team work to improve successes in entrepreneurship. The impact of education in general on entrepreneurship has been studied by (Sluis & Praag, 2008) where it is concluded that higher the level of education higher are the chances of success in entrepreneurship.

In this study we have decided to study the impact of management education specifically on inclination of students towards entrepreneurship. The role played by family as well as education and its combined impact on entrepreneurship inclination would give valuable insights as to how one can shape curriculum in order to promote and motivate more and more students to take up entrepreneurship.

Literature Review

A comprehensive literature review was carried out in order to formulate the objective of this paper which is given below. Entrepreneurship is directly impacted by variety of factors including family influence as well as currriculaum presecribed by the university (Mazalina & Maitilee 2015). The institutions of family and business are interconnected and the ‘family embeddedness perspective’ implies that its study would be illuminating to find out the origins of new business ventures or opportunities (Aldricha & Cliff 2003) with respect to role of family. The family can act as a resource provider, encourage new ideas of entrepreneurship, affect the process of entrepreneurship, create emotional pressures, favour a culture of entrepreneurship (Discua et al). Researchers (Dyer & Handler, 1994; Sirmon & Hitt, 2003 have stated in the past that family provides support and required resources to entrepreneurs. This has the potential to influence both, an individual entrepreneur as well as a family business.

Many successfully run companies around the world are found to be family-run (Villalonga & Amit, 2009). Ruef (2010) has stated that family happens to be the most common form of an entrepreneurial team.

Heck (2003) has stated that entrepreneurs are strongly interlinked with their families to get support from their family members to achieve entrepreneurial dreams. In fact, scholars have opined that the family and the business are so strongly interlinked that it is denoted as family influence (Dyer, 2006; König, Kammerlander, & Enders, 2013).

A study by L. Altinay et al. developed a holistic framework by demonstrating the relationship between both psychological traits and socio-demographic variables and intention to start up a business (L. Altinay et al. 2012) According to the research carried out by (Bilić & G. Vidović, 2011) there exists a low co-relation between students undertaking a formal course on entrprenuership and the inclination of students to actually start a entrepreneurial venture. (Jan NabI , Albert PilotI , S. BrinkkemperII, Hanne ten BergeI , 2005) state that experiential learning should be adopted in entrepreneurship course as it may increase the inclination of students to take up entrepreneurship. A real life experience would be more likely to prepare them for their roles as entrepreneurs. The research carried out by (Bilić & G. Vidović, 2011) shows that there exists a low co-relation between students undertaking a formal course on entrprenuership and the inclination of students to actually start an entrepreneurial venture. (Luthje et.al) state in their study that the number of students having entrepreneurial ventures during their graduate program was very low almost insignificant. However some proportion of students do feel that they would start their own businesses sometime in future. Zhang et. al. (2013) attempted to uncover the relationship between education and perceived desirability and feasibility of the students about entrepreneurship, entrepreneurial exposure, and entrepreneurial intentions (EI). They analysed data collected from about 500 university students from 10 universities found that prior exposure to entrepreneurship had negative impact on students’ entrepreneurial intentions, while entrepreneurial education had positive impact on entrepreneurial intentions.

 ISSN: 2249-6661
Vol-44 No.-01(VIII) : 2021

Entrepreneurial intentions. Hattab (2014) conducted a study the objective of which was to know the impact of education on the entrepreneurial intentions of university students in Egypt. The findings of the study show that there is positive relationship between entrepreneurship education and entrepreneurial intentions to start new venture.

In another research by Wu (2008), in which the purpose of the study was also to investigate the relationship between Chinese university students' higher educational background and their entrepreneurial intentions. In this study, the researchers adopted the TPB model and attempted to uncover the formation of entrepreneurial intentions of Chinese students using structural equation modelling. Diversity in higher education influences EI of students and was linked with the difference in EI of the students.

Objectives of the study:-

1) To assess the students perception on entrepreneurship as career
2) To examine the role of Institutes influencing the perception of students on entrepreneurship
3) To examine the role of Family influencing the perception of students on entrepreneurship.

Methodology

The study was conducted among the management students of different institutes located at Kolhapur City and affiliated to Shivaji University, Kolhapur. Data was collected from primary source by using questionnaire method. A valid questionnaire was adopted from Asika Aktar (2018) and a modified form of questionnaire was distributed among the students through e-mail and whatsapp groups. A Google form was prepared for the same which helped us collect the data in times of Corona pandemic. The questionnaire was developed by using five point scale. The reliability of questionnaire was measured by using Cornbach's Alpha. 201 students responded to the questionnaire and therefore 50% of population was used for study by using convenience sampling method.

Reliability of Questionnaire:- The students perceptions on entrepreneurship was measured with the help of five questions, the reliability score is .848; the role of institutes are measured with the help of nine questions where the reliability score is 0.848 and the role of family was measure with the help of four questions where the reliability score is 0.854. This indicates that all items in the questionnaire are having high reliability value.

From the review of literature the following **hypothesis** are formed:-

1) The University/Institute plays a significant role in influencing students perception on entrepreneurship
2) Family plays a significant role in influencing student's perception on entrepreneurship.

Linear regression is used to assess the role of institutes and Family in influencing student's perception on entrepreneurship.

Relationship between Role of Institutes and student's perception on Entrepreneurship

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	RUT[b]	.	Enter

a. Dependent Variable: SP
b. All requested variables entered.

Model Summary

ISSN: 2249-6661
Vol-44 No.-01(VIII) : 2021

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.216[a]	.047	.042	.63355

a. Predictors: (Constant), RUT

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.926	1	3.926	9.781	.002[b]
	Residual	79.875	199	.401		
	Total	83.801	200			

a. Dependent Variable: SP
b. Predictors: (Constant), RUT

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.574	.314		8.187	.000
	RUT	.244	.078	.216	3.127	.002

a. Dependent Variable: SP

The above table indicates that r^2 value of the predictor Role of university is .047; it shows that 4.7% variances are explained by the Role of Universities in influencing student's perception on entrepreneurship.

The results of entire multiple linear regression analyses are shown in above table in prediction of Students Perception (SP), Role of University/Institutes (RUT) component made significant contributions, accounting 4.7% of variance. It is to be noted here that it still leaves 95.3 % (100% -4.7 %) unexplained variables in this study. Those may be other factors that the influence the Students Perceptions towards entrepreneurship.

The difference between R and adjusted R2 is very small. The actual discrepancy between these two values is .005 or .05%. This means that it would account for around .05% less variation in the result if the model were extracted from the population rather than a sample.

F Value is 9.781, which is meaningful at $p < 0.005$. This ANOVA test result shows us that if the null hypothesis is valid, researchers can also assume that the latter regression model results in a slightly improved Students Perceptions on Entrepreneurship. The b-values tell us about the relationship between Students perception (SP) on entrepreneurship and Role of University/Institutes (RUT) predictor. Here all b-values are positive hence researchers can say that there is positive relationship between the predictor and outcome. For above data, one predictor has positive b-value indicating positive relationships with Students Perception on entrepreneurship and Role of University significant is at $p< 0.05$.

Linear regression is used to find out the impact of role of University on students perception on entrepreneurship. In linear regression analysis, the model is:

$Y=a+bx$

Y= dependent variable

ISSN: 2249-6661
Vol-44 No.-01(VIII) : 2021

X= independent variable
Hypothesis are,
Hyp. No.I :-
H_0: b=0
H_1: b≠0

1) H_0: β_1=0 i.e. There is no role of University/Institute in influencing students perception on entrepreneurship
1) H_1: $\beta_1 \neq 0$ i.e. The University/Institute Plays a significant role in influencing students perception on entrepreneurship

Role of University (RUT) (b = 0.078): This value indicates that the Role of University has increased by one unit, students perception on entrepreneurship (SP) increases by 0.078 units.
It can be explained by the following regression equation:
Y = a + b1*X1 + b2*X2 + ... + bp*Xp
Y= a + bX + e
Y= Students Perception on Entrepreneurship (SP)
a = constant
X1 = Role of University (RUT)
b = regression of coefficient of X
e = an error term, normally distributed of mean 0 (usually e is assumed to be 0)
Y (Students Perception on Entrepreneurship) = 2.574+ 0.078 (Role of University)
It is concluded that:
The University/Institute Plays a significant role in influencing student's perception on entrepreneurship

Relationship between Role of Family and student's perception on Entrepreneurship

Variables Entered/ Removed[a]

Model	Variables Entered	Variables Removed	Method
1	RFam[b]	.	Enter

a. Dependent Variable: SP
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.202[a]	.041	.036	.63553

a. Predictors: (Constant), RFam

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.425	1	3.425	8.479	.004[b]
	Residual	80.376	199	.404		
	Total	83.801	200			

a. Dependent Variable: SP

ISSN: 2249-6661
Vol-44 No.-01(VIII) : 2021

b. Predictors: (Constant), RFam

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.598	.329		7.898	.000
	RFam	.237	.081	.202	2.912	.004

a. Dependent Variable: SP

The above table indicates that r^2 value of the predictor Role of Family is .041; it shows that 4.1% variances are explained by the Role of Families in influencing student's perception on entrepreneurship. The results of entire multiple linear regression analyses are shown in above table in prediction of Students Perception (SP), Role of Families (RFam) component made significant contributions, accounting 4.1% of variance. It is to be noted here that it still leaves 95.9 % (100% -4.1 %) unexplained variables in this study. Those may be other factors that the influence the Students Perceptions towards entrepreneurship

The difference between R and adjusted R2 is very small. The actual discrepancy between these two values is .005 or .05%. This means that it would account for around .05% less variation in the result is the model were extracted from the population rather than a sample.

F Value is 8.479, which is meaningful at $p < 0.005$. This ANOVA test result shows us that if the null hypothesis is valid, Researchers can also assume that the latter regression model results in a slightly improved Students Perceptions on Entrepreneurship The b-value tell us about the relationship between Students perception (SP) on entrepreneurship and Role of Family. Here all b-values are positive hence researcher can say that there is positive relationship between the predictor and outcome. For above data, one predictor has positive b-values indicating positive relationships with Students Perception on entrepreneurship and Role of Family significant at $p< 0.05$.

Linear regression is used to find out the impact of Role of Family on students perception on entrepreneurship.

In linear regression analysis, the model is

Y=a+bx

Y= dependent variable

X= independent variable

Hypothesis are,

Hyp. No.I :-

H_0: b=0

H_1: b$\neq$0

2) H_0: β_1=0 i.e. There is no role of Family in influencing students perception on entrepreneurship
2) H_1: $\beta_1 \neq 0$ i.e. The Family Plays a significant role in influencing students perception on entrepreneurship

Role of Family (RFam) (b = 0.081): This value indicates that the Role of Family as increased by one unit, students perception on entrepreneurship (SP) increases 0.081 units.

It can be explained by the following regression equation:

Y = a + b1*X1 + b2*X2 + ... + bp*Xp

Y= a + bX + e

Y= Students Perception on Entrepreneurship (SP)

a = constant

X1 = Role of Family (RUT)
b = regression of coefficient of X
e = an error term, normally distributed of mean 0 (usually e is assumed to be 0)
Y (Students Perception on Entrepreneurship) = 2.598+ 0.081 (Role of Family)
It is concluded that:
Family plays a significant role in influencing student's perception on entrepreneurship

Findings

Overall the study conducted is in resonance with the literature review wherein both family as an institution as well as University/College have a profound influence on shaping up the perceptions of student's towards their intention of going in for entrepreneurship. The study also emphasizes the fact that apart from the influence of family and university/college there could be a host of other factors have an impact of student's perception towards entrepreneurship. Our findings support previous studies which have found out that social, economic, political, technological, legal and cultural factors greatly influence student's perception towards entrepreneurship.

Practical implications and suggestions

It is thus essential for educators to understand that implementing course based on entrepreneurship would greatly influence the students' perceptions towards entrepreneurship at an undergraduate level also. Universities/ institutes should develop incubation centers so as to encourage and support students to initiate startups during their education. Universities can play an important role enacting as a link between the industry mentors and students. Sessions should be oragnised to make students aware about various schemes introduced by the government to promote entrepreneurship. It is found that family has great influence in shaping the student's perception towards entrepreneurship. The socio-cultural and economic environment of the family plays a major role in supporting entrepreneurial endevours of the students.

References

1. Aldrich, H. E., & Cliff, J. E. (2003). The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective. *Journal of Business Venturing*, *18*(5), 573–596. https://doi.org/10.1016/S0883-9026(03)00011-9
2. Altinay, L., Madanoglu, M., Daniele, R., & Lashley, C. (2012). The influence of family tradition and psychological traits on entrepreneurial intention. *International Journal of Hospitality Management*, *31*(2), 489–499. https://doi.org/10.1016/j.ijhm.2011.07.007
3. Arregle, J. L., Hitt, M. S., Sirmon, D. G., & Very, P. (2007). The development of organizational social capital: attributes of family firms. Journal of Management Studies 44(1), 73-95.
4. Asikha Aktar Rita *Influencing Students Perceptions of Entrepreneurship : Role of*. (2018). *December*.
5. Bilić, I., Prka, A., & Vidović, G. (2011). How does education influence entrepreneurship orientation? Case study of Croatia. *How Does Education Influence Entrepreneurship Orientation? Case Study of Croatia*, *16*(1), 115–128.
6. Dunlap, J., & Lowenthal, P. (2014). The power of presence: Our quest for the right mix of social presence in online courses. *Real Life Distance Education: Case …*, *JANUARY 2014*. http://patricklowenthal.com/publications/The_power_of_presence--our_quest_for_the_right_mix_of_social_presence_in_online_courses.pdf
7. Dyer, G. W., & Handler, W. (1994). Entrepreneurship and family business: Exploring the connections. Entrepreneurship Theory and Practice 19(1): 71-83.
8. Dyer, W. G. (2006). Examining the 'family effect' on firm performance. Family Business 47 Review, 19(4), 253-273.
9. Hala W. Hattab, Impact of Entrepreneurship Education on Entrepreneurial Intentions of University Students in Egypt, Journal of Entrepreneurship, Sage Journals, First published January 29, 2014.
10. Hartog, C. S. (2009). Elements of effective communication-Rediscoveries from homeopathy. *Patient Education and Counseling*, *77*(2), 172–178. https://doi.org/10.1016/j.pec.2009.03.021

11. Lüthje, C., & Franke, N. (2002). Fostering entrepreneurship through university education and training: Lessons from Massachusetts Institute of Technology. *Management*, *January*, 13.
12. Kellermanns, F.W., Eddleston, K.A., Sarathy, R. *et al.* Innovativeness in family firms: a family influence perspective. *Small Bus Econ* **38,** 85–101 (2012). https://doi.org/10.1007/s11187-010-9268-5
13. König, A., Kammerlander, N., & Enders, A. (2013). The family innovator's dilemma: How family influence affects the adoption of discontinuous technologies by incumbent firms. Academy of Management Review, 38(3), 418-441.
14. Leff, N. H. (2015). *Entrepreneurship Economic Development : The Problem Revisited*. *17*(1), 46–64.
15. Mustapha, M., & Selvaraju, M. (2015). Personal attributes, family influences, entrepreneurship education and entrepreneurship inclination among university students. *Kajian Malaysia*, *33*(February), 155–172.
16. Nab, J., Pilot, A., Brinkkemper, S., & Berge, H. Ten. (2010). Authentic competence-based learning in university education in entrepreneurship. *International Journal of Entrepreneurship and Small Business*, *9*(1), 20–35. https://doi.org/10.1504/IJESB.2010.029502
17. Pant, S. K. (2016). Role of The Family in Entrepreneurship Develoment in Nepali Society. *Journal of Nepalese Business Studies*, *9*(1), 37–47. https://doi.org/10.3126/jnbs.v9i1.14592
18. Richard J Deanna and Gladwin N Thomas (1999), Sustainability metrics for the business enterprise, Environmental Quality Management, 14.03.2007
19. Rogof, E. G., & Heck, R. (2003). Evolving research in entrepreneurship and family business: Recognizing family as the oxygen that feeds the fire of entrepreneurship. Journal of Business Venturing, 18(5), 559-566.
20. Ruef, M. (2010). The entrepreneurial group: Social identities, relations, and collective action. Princeton and Oxford: Princeton University Press.
21. Tilley and Young 2009,Sustainability Entrepreneurs - Could they be the True Wealth Generators of the Future?, Greener Management International 55(55):79-9
22. Timmons and Bygrave (1997); Timmons, J. A. 1999.New venture creation: Entrepreneurship for the 21st 5th ed. Boston, ma: Irwin McGraw-Hill
23. Van Der Sluis, J., Van Praag, M., & Vijverberg, W. (2008). Education and entrepreneurship selection and performance: A review of the empirical literature. *Journal of Economic Surveys*, *22*(5), 795–841. https://doi.org/10.1111/j.1467-6419.2008.00550.x
24. Venesaar, U. (2014). Students' Attitudes and Intentions toward Entrepreneurship at Tallinn University of Technology TUTWPE No 154 Students ' Attitudes and Intentions toward Entrepreneurship at Tallinn University of Technology Urve Venesaar Ene Kolbre Toomas Piliste. February 2006.
25. Villalonga, B., & Amit, R. (2009). How are U.S. family firms controlled? The Review of Financial Studie , 22(8), 3047-3091.
26. Wilkinson, G.S. , & Robertson, G.J. (2005). Wide Range Achievement Test Fourth Edition. Lutz, FL: Psychological Assessment Resources.
27. Wu, S. and Wu, L. (2008), "The impact of higher education on entrepreneurial intentions of university students in China", *Journal of Small Business and Enterprise Development*, Vol. 15 No. 4, pp. 752-774.
28. Zhang, Y., Duysters, G. & Cloodt, M. The role of entrepreneurship education as a predictor of university students' entrepreneurial intention. *Int Entrep Manag J* **10,** 623–641 (2014).

AN INVESTIGATION INTO THE RELATIONSHIP BETWEEN COLLABORATIVE LEARNING AND STUDENT SATISFACTION IN VIRTUAL LEARNING ENVIRONMENT (VLE) USING CASE STUDY APPROACH

3 authors:

Bindu Nandakumar Menon
CHHATRAPATI SHAHU INSTITUTE OF BUSINESS EDUCATION AND RESEARCH

Anuradha Gaikwad
CHHATRAPATI SHAHU INSTITUTE OF BUSINESS EDUCATION AND RESEARCH

Madhura Mane
Chh. Shahu Institute of Business Education & Research

AN INVESTIGATION INTO THE RELATIONSHIP BETWEEN COLLABORATIVE LEARNING AND STUDENT SATISFACTION IN VIRTUAL LEARNING ENVIRONMENT (VLE) USING CASE STUDY APPROACH

Mrs. Madhura Mane*, Asst. Professor, CSIBER, Kolhapur.* mkmane@siberindia.edu.in
Dr. Bindu Menon*, Associate Professor, CSIBER, Kolhapur.* bindumenon@siberindia.edu.in
Ms. Anuradha Gaikwad*, Asst. Professor, CSIBER, Kolhapur.* augaikwad@siberindia.edu.in

ABSTRACT

The COVID-19 pandemic has become a global health issue and has had a major impact on education. Consequently, half way through the academic year, teaching-learning happened in online mode using Virtual Learning Environment (VLE). This transition was challenging for both, students as well as faculty. A *VLE* is an online platform used for educational purposes. It consists of online *environment* that acts as supplement to the course, whether they are online courses, reading resources and informational sites with stand-alone skill assessments. There are several factors that influence student satisfaction in virtual mode. Collaborative learning is also another aspect in Virtual learning Environment that is found important by students.
This empirical paper, in which the researchers have collected data from 115 management students aims to study the relationship between students' level of collaborative learning and the level of satisfaction. The study also aims to uncover factors that influence collaborative learning among students in online mode. This study will help Faculty to design and deliver courses that will enable collaborative learning and thus lead to higher satisfaction level of students.

Keywords:Virtual learning environment, Collaborative learning, student satisfaction, gamification.

Introduction:

Learning can be said to be a process of acquiring new knowledge. It also includes acquiring of skills, values, attitudes etc. a variety of teaching methodologies have been in use to impart knowledge to students so as to improve their ability to learn. One of the methodologies fast gaining a lot of attention is the concept of Collaborative learning (CL). Collaborative learning can be said to be an amalgamation of ways in which groups of teachers and students or groups of students come together to learn (Smith & Mac Gregor 1992). The basic assumption in CL is that group members cooperate with each other to arrive at a consensus (Laal & Ghodsi 2011) for performing a task and thereby adding to their knowledge. According to (Laal & Laal 2011) it is an approach towards education wherein groups of students come together to create product, or to complete an activity or search a solution for a problem. A habit of thinking critically can be inculcated amongst students by applying the methodology of CL during the teaching learning process (Poornesh M et. al 2021). In the post pandemic scenario CL had to be used in association with technological aids. Thus CL can be converted into a tool for aiding learning as well as instruction by use of appropriate technology (Fatimah et.al 2020).

Virtual Learning is a type of distributed learning (Stiles 2000) in the normal framework where in face-to-face learning and virtual learning are a part of the entire teaching process. However, in the post-pandemic period it has become the only form of learning for most of the educational institutions. Dillenbourg and Schneider (1995) have given four aspects of virtual learning. According to them the virtual learning environment consist of a designed information space, a social space, representation of this space can vary from text to 3D and students are active as well as actors in this space.
Chow, Liu (2005) say that Technology-mediated virtual learning environment (TVLE) is a system where computer based systems work as open systems that allow wide range of interactions and knowledge sharing with other participants with an access to a wide range of resources. Koskela et.al (2005) state that in a blended learning environment virtual learning can act as an effective component. (Jenny Barker and Peter Gossman 2013) state that virtual learning produces improvement in learning and motivation as reported by students.

 ISSN: 2249-6661
Vol-44 No.-01(VIII) : 2021

Literature Review:

Dillenbourg and Schneider (1995) have made a distinction between cooperative and collaborative learning, in which they have stated that Collaborative learning involves situations in which two or more subjects build synchronously and interactively a joint solution to some problem. Verdejo (1996) emphasizes collaborative learning as a "conversation or dialogue paradigm". (Pressley & McCormick, 1995) have stated that an important element of collaboration is the discussion that takes place between the participants while completing a given task. This is because the cognitive benefits of collaborative learning can be achieved by enabling verbal exchanges among the learners. Henri and Rigault (1996), in addition to the shared approach to tasks and student interdependence, also refer to greater student autonomy as characteristics of collaborative learning. Some studies conducted earlier (Jung, Choi, Lim, & Leem, 2002) have found that there was greater level of satisfaction among students who participated in online collaborative activities as compared to students who did not take part in such tasks. Studies by (Angeli, Valanides, & Bonk, 2003) also confirm that the level of involvement of students in learning is more and also well distributed in case of online learning than face-to-face learning. A study by Young, 2008, found that there is student learning achievement is more in online collaboration like asynchronous discussions. It is obvious that the level of student satisfaction in a virtual learning environment plays an important role in the adoption of e-learning or blended learning. Students/ Learners' satisfaction definitely influence if they will like to use the platform or not and also if they would work together in collaboration. (Guuawardena, Nola, Wilson, Lopez-Islas, Ramirez-Angel, & Megchun-Alpizar, 2001). According to study by (Dewiyanti et al., 2007), in web-based collaborative learning, the satisfaction of students can be described as the degree to which the learner feels positive association with their collaborative learning experiences. In a study by Shen et. al. (2006), in which the researchers studied around five hundred students indicated that interactions and the sense of an online learning community was enhanced in collaborative examinations significantly that that in turn led to significantly higher levels of perceived learning.

The advancement in Information Technology has led to a sea change in the design and delivery of courses around the world. According to Dolence and Norrice, 1995, the learning characteristics in industrial age have changed drastically in information age. Learning was instructor-centric in industrial age but has become learner-centric in information age. There was more rigidity in terms of time and place of learning in industrial age but in information age there is more flexibility where learner can have 'self-paced' and 'anytime anywhere' learning. The authors have said that in information age, learning was fragmented but in information age, it is more integrated. Virtual learning *is defined as learning that can functionally and effectively occur in the absence of traditional classroom environments (Simonson & Schlosser, 2006).* Virtual Learning Environment (VLE) uses web-based platform to provide the digital aspects of courses of study. The platforms present different resources on the platform. It also enables conducting of different activities like assignments, quizzes etc. and enable interactions between the Faculty and students and among students like discussion forums and creation of blogs. The platforms provide faculty tolls to carry out assessment of every student as required. The VLE can also be integrated with other institutional systems.[3][4]

Bates (2003) has proposed 12 golden rules for the use of technology in educations. One of the golden rules states that developing and delivering a course to be offered in virtual mode is teamwork where instructional design experts, IT experts and media specialists need to be involved. A research by Arbaugh J. (2000) examined the effect pedagogical and technological factors on student satisfaction. The study was conducted for internet-based MBA courses. The study concluded that perceived usefulness and flexibility of the course software, efforts of the instructor to create an interactive environment strongly impacted student satisfaction. Previous research highlights two interesting results. One that instructor presence is important for student satisfaction. And two that too much interaction and posting by the instructor during the course may lead to decreased participation and posting by the students (Wang and Liang, 2011).

According to previous research (Richardson & Swan, 2003; Shea, Li, & Pickett, 2006; Blau, 2009) students show higher level of satisfaction in courses in which the instructor has higher level of presence through regular interaction with them and is also available to students. According to (Rourke

& Anderson, 2002), the students perceive the instructor as an authoritarian figure and studies have found that if the instructor has frequently posted in the discussion forums, then it is found that there is lesser frequent and shorter were the posts by the students (Dennen, 2005, Mazzolini & Maddison, 2003). According to (Wang and Liang, 2011), it was found that students need time to feel confident in sharing their views and opinions with each other before the instructor begins to interact with them, otherwise they will just reply to the instructor, and not to each other. Another research by (Zhang, Zigurs 2009) found that students' perceived social presence was significantly related to their perceived interaction and learning satisfaction. Research by Da-Silva et.al. found that User Satisfaction construct had 89% of variance explained by Information Quality and Service Quality.

Chow, Liu (2005) found that a framework that outlines relationships between learner control and learning effectiveness is absent and conducted study to fill this gap. They focussed on the effectiveness of a technology-mediated virtual learning environment (TVLE) in the context of basic information technology skills training. Data were collected from respondents from a junior high school of Taiwan. From the analysis of 210 usable responses, they found that students in the TVLE environment achieve better learning performance than their counterparts in the traditional environment; higher levels of computer self-efficacy, satisfaction and learning climate than their counterparts in the traditional environment. Small et.al. (2012) studied student satisfaction with different tools used in virtual learning. The aim of this study was to measure students' expectations and perceived importance of, and satisfaction with, a range of tools available in a virtual learning environment. From the data collected from 396 students, it was found that student's satisfaction depends greatly on use of tools that enable students to interact with their peers and faculty.

Based on the overall literature review it is obvious that most of the studies conducted are in a blended teaching methodology. There are very few research studies where the entire learning has taken place through online mode. As such the researchers decided to conduct a research study finding out the satisfaction of students in an exclusive online mode of teaching learning process with a special emphasis on collaborative learning.

Objectives of the study:

1. To identify the collaborative activities conducted in virtual learning environment (VLE).
2. To uncover the relationship between collaborative learning and satisfaction in virtual learning environment.
3. To find out if there exists differences between gender and student's satisfaction in a virtual learning environment.
4. To find out if there is difference between location and students satisfaction in a virtual learning environment.

Methodology

The study was conducted on the management students of Chhatrapati Shahu Institute of Business Education and Research (CSIBER) an A+ Institute with College with Potential for Excellence Status in Kolhapur city. Data was collected from primary source by using questionnaire method. A modified version of questionnaire was adopted from Hyo-Jeong So, Thomas A. Brush (2007). A Google form was prepared for the same which helped us collect the data in times of Corona pandemic. The questionnaire was developed by using a five point scale. The reliability of questionnaire was measured by using Cornbach's Alpha. Out of a population of 180, 115 responses were complete. These 115 responses were used for the study.

Reliability of Questionnaire: The satisfaction of students was measured with 10 items, collaborative learning was measured with 9 items, where the reliability score of Cronbach's alpha is 0.92. This indicates that all items in the questionnaire are having high reliability value.

Hypothesis:

From the review of literature, the following hypothesis are formed:-

1) There is a relationship between level of satisfaction of students and level of collaborative learning in virtual environment.

 ISSN: 2249-6661
Vol-44 No.-01(VIII) : 2021

2) There is a significant difference between gender and students satisfaction in virtual learning environment.
3) There is a significant difference between location and students satisfaction in virtual learning environment.

Data Analysis:

Regression and ANOVA are used to test the hypothesis. Regression is used to assess the relationship between level of satisfaction of students and level of collaborative learning in virtual environment. ANOVA is used to find out the differences between demographic factors (Gender and Place) and level of satisfaction of students in a virtual learning environment.

TYPES OF COLLBORATIVE ACTIVITIES IN VIRTUAL LEARNING ENVIRONMENT (VLE)

Sr. No.	Types	Responses
1	Group Discussion	115
2	Case Study	114
3	Project	109
4	Management Games	62

From the above data it is seen that out of 115 respondents, 100% have taken part in Group discussion and case study activity. There is a fairly large number of respondents have also taken part in Project activity, as a component of Virtual Learning, while only a little less than 50% of the respondents have taken part in Management Games.

RELATIONSHIP BETWEEN COLLABORATIVE LEARNING AND SATISFACTION

In linear regression analysis, the model is
Y= a+bx
Y= dependent variable
X= independent variable
Hypothesis are,

Hypothesis No. I :-

H_0: b=0
H_1: b≠0

Hypothesis 1:

1. **H_0: β_1=0 i.e. There is no relationship between level of satisfaction of students and level of collaborative learning in virtual environment**
   H_1: β_1≠0 i.e. There is a relationship between level of satisfaction of students and level of collaborative learning in virtual environment

In this study r^2 value of the predictor collaborative learning is .223, it shows that 22.3% variances are explained by collaborative learning on satisfaction among students in virtual learning environment.
The results of entire multiple linear regression analyses are shown in Table shows that collaborative learning on satisfaction among students in virtual learning environment is made any significant contributions, Here 22.3% are noted here. It is to be noted here that there is still leave 77.7 % (100% - 22.3 %) unexplained variables in this study. Those may be other factors that the influence satisfaction among the students in virtual learning environment.
The difference between R and adjusted R2 is very small. The actual discrepancy between these two values is .006 or .06%. This means that it would account for around .06% less variation in the result is the model were extracted from the population rather than a sample.
F Value is 32.506, which is meaningful at $p < 0.005$. This ANOVA test result shows us that if the null hypothesis is valid, Researchers can also assume that the latter regression model results in a relationship between collaborative learning on satisfaction. The b-values tell us about the relationship collaborative learning on satisfaction. Here all b-values are positive hence researcher can say that there

is positive relationship between the predictor and outcome. For above data, one predictor has positive b-values indicating positive relationships with collaborative learning on satisfaction in a virtual environment at p< 0.01.

RELATIONSHIP BETWEEN GENDER AND SATISFACTION OF STUDENTS

Hypothesis 2:

There is a significant difference among gender and students satisfaction in virtual learning environment

One-way Anova test is used to test the significance of difference between sample means, where two or more groups are compared. 115 students from one reputed management instuties of Kolhapur is considered.

Levene's test shows that test values (.204) is not significant (ie with P>0.05) indicates that variance patterns across the groups are not significantly different to satisfaction in virtual learning environment .

F statistic value is .155 shows is not significant value is (.695). Welch's F statistic value is .967 which is also not significant.

Here Anova F statistic of .155 respectively related students satisfaction and gender is not significant. Here we can conculude that there is no significant difference among the gender and Students satisfaction in virtual learning environment

RELATIONSHIP BETWEEN LOCATION AND SATISFACTION OF STUDENTS

Hypothesis 3:

There is a difference between location of students and their satisfaction in a virtual learning environment

One-way Anova test is used to test the significance of difference between sample means, where two or more groups are compared. 115 students (52 from rural area and 63 from urban area) from one reputed management instuties of Kolhapur is considered.

Levene's test shows that test values (1.553) is not significant (ie with P>0.05) indicates that variance patterns across the groups are not significantly different to satisfaction in virtual learning environment and location . Welch's F statistic value is .772 which is also not significant (.382>0.05).

Here Anova F statistic of ..793 respectively related students satisfaction and location of student is not significant. Here we can conculude that there is no significant difference among the location and Students satisfaction in virtual learning environment

Findings of the study:

1. The various activities used in collaborative learning were group discussions, case studies and projects.
2. While management games was the least used activity in VLE.
3. The most important finding of this study was that there exists significant relationship between collaborative learning and student satisfaction in virtual learning environment. This finding is in line with previous research studies on this topic.
4. No significant relationship was found between gender and satisfaction.
5. No significant relationship was found between location of the student and level satisfaction in VLE.

Practical implications and suggestions:

Management games is one of the most effective methods in management education. But due to the non-availability of feasible options, it was not commonly used. The researchers strongly feel that excellent management games can be conceptualised, designed and adopted in VLE. This is a team effort and faculty should work alongside with IT professionals like media specialists and graphic designers for proper development of management games.

Gamification should be used by faculty to award badges, stars to high-performing students to motivate them to take part in collaborative learning in VLE.

Faculty must use various methods to promote collaborative learning among students as it is directly impacting the level of satisfaction among students. Regular discussion and feedback among peers and faculty will enhance the cognitive benefits that can be derived from collaborative learning.

References:

1) Adha, M. M. (2020). *The Effectiveness of Online Collaborative Learning during Covid-19 Pandemic*. *513*, 256–262.
2) Angeli, C., Valanides, N., & Bonk, C. (2003). Communication in a web-based conferencing system: The quality of computer-mediated interactions. British Journal of Educational Technology 34(1), 31–43.
3) Arbaugh J. B. Virtual Classroom Characteristics and Student Satisfaction with Internet-Based MBA Courses", Journal of Management Education, February 2000.
4) Barker , Jenny and Gossman, P. ter. (2013). *The learning impact of a virtual learning environment : students' views. Teacher Education Advancement Network Journal*. *5*(2).
5) Britain, Sandy; Liber, Oleg (1999). "A Framework for Pedagogical Evaluation of Virtual Learning Environments"(PDF). JISC Technology Applications Programme (Report 41). Archived from the original (PDF) on 9 July 2014. Retrieved 1 February 2015.
6) Chou, S. W., & Liu, C. H. (2005). Learning effectiveness in a Web-based virtual learning environment: A learner control perspective. *Journal of Computer Assisted Learning*, *21*(1), 65–76. https://doi.org/10.1111/j.1365-2729.2005.00114.x
7) Dennen, V. P. (2005). From message posting to learning dialogues: Factors affecting learner participation in asynchronous discussion. *Distance Educatio*n, 26(1), 127-148.
8) Dewiyanti, S., Brand-Gruwel, S., Jochems, W., & Broers, N. J. (2007). Students' experiences with collaborative learning in asynchronous computer-supported collaborative learning environments. Computers in Human Behavior, 23, 496–514.
9) Dillenbourg, P., & Schneider, D. (1995). Collaborative learning and the internet, [http://tecfa.unige.ch/tecfa/research/CMC/colla/iccai95_1.html [1998, 18 August].
10) Dillenbourg, P., Schneider, D., Synteta, P., Dillenbourg, P., Schneider, D., Synteta, P., Learning, V., Hellenic, E., Dillenbourg, P., Schneider, D., & Synteta, P. (2007). *Virtual Learning Environments To cite this version : HAL Id : hal-00190701*.
11) Dolence, M. G., & Norris, D. M. (1995). Transforming Higher Education: A Vision for Learning in the Twenty-First Century. Ann Arbor, Mich.: Society for College and University Planning.
12) Fatimah, F., Rajiani, S. I., & Abbas, E. W. (2021). Cultural and individual characteristics in adopting computer-supported collaborative learning during covid-19 outbreak: Willingness or obligatory to accept technology? *Management Science Letters*, *11*, 373–378. https://doi.org/10.5267/j.msl.2020.9.032
13) Guuawardena, N. C., Nola, A. C., Wilson, P. L., Lopez-Islas, J. R., Ramirez-Angel, N., & Megchun-Alpizar, R. M. (2001). A cross cultural study of group process and development in online conferences. Distance Education, 22, 85–121.
14) Henri, F., & Rigault, C. R. (1996). Collaborative distance learning and computer conferencing. In T. T. Liao (Ed.), Advanced educational technology: Research issues and future technologies (pp. 45-76). Berlin: Springer-Verlag.
15) J. Shen, S. R. Hiltz and M. Bieber, "Collaborative Online Examinations: Impacts on Interaction, Learning, and Student Satisfaction," in *IEEE Transactions on Systems, Man, and Cybernetics - Part A: Systems and Humans*, vol. 36, no. 6, pp. 1045-1053, Nov. 2006, doi: 10.1109/TSMCA.2006.883180.
16) Jung I, Choi S., Lim C., & Leem J. (2002). Effects of different types of interaction on learning achievement, satisfaction, and participation in web-based instruction. Innovations in Education and Teaching International 39(2), pp. 153–162.
17) Koskela, M., Kiltti, P., Vilpola, I., & Tervonen, J. (2005). Suitability of a Virtual Learning Environment for Higher Education. *Electronic Journal of E-Learning*, *3*(1), 23–32.
18) Laal, M., & Ghodsi, S. M. (2012). Benefits of collaborative learning. *Procedia - Social and Behavioral Sciences*, *31*(2011), 486–490. https://doi.org/10.1016/j.sbspro.2011.12.091

19) Laal, M., & Laal, M. (2012). Collaborative learning: What is it? *Procedia - Social and Behavioral Sciences*, *31*(2011), 491–495. https://doi.org/10.1016/j.sbspro.2011.12.092
20) Machado-da-sılva, F, Meırelles, F, Fılenga, D, Fılho, M. (2014). Student Satisfaction Process In Virtual Learning System: Considerations Based In Information And Service Quality From Brazil's Experience. Turkish Online Journal of Distance Education, 15 (3), 122-142. DOI: 10.17718/tojde.52605.
21) Massolini, M., & Maddison, S. (2007). When to jump in: The role of the instructor in online discussion forums. *Computers Education*, 49(2), 193-213.
22) Poornesh, M., Bhat, S., Souza, R. D., Suresh, E. S. M., & Bhat, V. S. (2021). *Comprehensive Strategy to Inculcate Professional Skills among First- Year Students : A Collaborative Learning Approach*. *34*(January), 599–606.
23) Pressley, M., & McCormick, C. B. (1995). Advanced educational psychology for educators, researchers, and policymakers. New York: Harper Collins. 25.
24) Resta, P., & Laferrière, T. (2007). Technology in support of collaborative learning. *Educational Psychology Review*, *19*(1), 65–83. https://doi.org/10.1007/s10648-007-9042-7
25) Rourke, L., & Anderson, T. (2002). Exploring social interaction in computer conferencing. Interactive Learning Research, 13(3), 257-273.
26) Schlosser, A., & Simonson, M. (2006). Distance education: Definition and glossary of terms, 2nd ed. Greenwich, CO: Information Age Publishing.
27) Scientific Research Committee (Poland), & Politechnika Poznańska. Instytut Informatyki. (2000). *EUNIS 2000 : towards virtual universities : conference proceedings.* 247.
28) Shih-Wei Chou, Department of Information Management, National Kaohsiung First University of Science of Technology 2 Juoyue Rd, Nantz District, Kaohsiung 811.
29) Small F., Dowell D., Simmons P., "Teacher communication preferred over peer interaction: Student satisfaction with different tools in a virtual learning environment", Journal of International Education in Business, Volume 5, Number 2, 2012, pp. 114-128(15), Emerald Group Publishing Limited
30) Smith, L., & Macgregor, J. T. (1992). What is Collaborative Learning ? *Assessment*, *117*(5), 10–30. http://learningcommons.evergreen.edu/pdf/collab.pdf
31) Stricker, D., Weibel, D., & Wissmath, B. (2011). Efficient learning using a virtual learning environment in a university class. *Computers and Education*, *56*(2), 495–504. https://doi.org/10.1016/j.compedu.2010.09.012
32) Van Raaij, E. M., & Schepers, J. J. L. (2008). The acceptance and use of a virtual learning environment in China. *Computers and Education*, *50*(3), 838–852. https://doi.org/10.1016/j.compedu.2006.09.001
33) Verdejo, M. F. (1996). Interaction and collaboration in distance learning through computer mediated technologies. In T. T. Liao (Ed.), Advanced educational technology: Research issues and future technologies (pp. 77-88). Berlin: Springer-Verlag.
34) Wang, Y. M., & Chen, D. V. (2011). Overcoming the dilemma of instructor presence in student-centered online discussions. Journal of Educational Multimedia and Hypermedia (2011), 20(4), 425-438.
35) Weller, Martin (2007). Virtual learning environments: using, choosing and developing your VLE. London: Routledge. pp. 4–5. ISBN 9780415414302.
36) Young, A. (2008). Structuring asynchronous discussions to incorporate learning principles in an online class: One professor's course analysis, MERLOT Journal of Online Learning and Teaching, 4(2), 218–224.
37) Zhang, Chi and Zigurs, Ilze, "An Exploratory Study of the Impact of a Virtual World Learning Environment on Student Interaction and Learning Satisfaction" (2009). *AMCIS 2009 Proceedings*. 424.

Vol.-24 No.-2-2021 RNI No. -46269/87 ISSN-0975-4520 वर्ष-24-संख्या-2

कला एवं धर्म शोध संस्थान, लोक कल्याणकारी ट्रस्ट, वाराणसी

Kala Sarovar Quarterly Journal Approved by UGC Care List

कला सरोवर
KALA SAROVAR

(भारतीय कला एवं संस्कृति की विशिष्ट शोध पत्रिका)

प्रधान सम्पादक डॉ० प्रेमशंकर द्विवेदी

RNI No. -46269/87 ISSN-0975-4520 वर्ष-24-संख्या-2-2021
Vol.-24 No.-2-2021

Covid-19 and its Prospective Impact on India's Banking Segment

★ Dr. Amardeep D. Jadhav

Abstract:

The Indian economy wasn't in great shape even before the COVID-19 outbreak, which has only made matters worse. The report by the Reserve Bank of India's (RBI) expert committee on a resolution framework, headed by former ICICI Bank chief K V Kamath, brings this out clearly. The report notes that the pandemic "has affected the best of companies" and businesses that were otherwise viable before the outbreak. Experts believe that banks may be more risk-averse to restructuring loans this time around, having already suffered big losses in previous restructuring efforts. COVID-19 is undoubtedly one of the biggest global events of our lifetimes, presenting unprecedented challenges to many industries, governments and people all over the world. The pandemic remains a health and humanitarian crisis, and the business and economic impact has been deep and far reaching. Financial services firms, in particular, have the opportunity to help consumers and businesses weather the economic downturn and navigate the current storm.

A lot had been done already. Banks in India have paying attention on maintaining critical staff at branches and have temporarily redeployed staff to administer online or phone enquiries from customers. They have also deployed mobile ATMs and implemented doorstep banking for senior citizens and other customers that need additional attention. We expect financial firms to implement video collaboration tools, new chat and messaging software and other fintech innovations to continue live interactions with customers who have been coping with social distancing norms, with some already making use of common consumer apps to that end.

Key words: COVID-19, Bank, Economy, Pandemic , Cost Elasticity, Financial Institutions

Introduction:

Several banks have made investments in technology and digital transformation over the past couple of years. A lot of them, however, are still heavily reliant on face-to-face interactions, supported by paper processes. Therefore, we expect to see renewed dynamism in the Indian financial services industry with banks making a rigorous effort to up their digital diversion. This will be critical as COVID-19 is likely to have a stretched impact, and banking touches every part of our economy.

Most banks have addressed the direct challenges of COVID-19, related to protecting staff and providing much desirable services to customers. They now have the chance to be active participants to help alleviate this crisis, and there are four key areas they can focus on to help navigate the present circumstances:

1. **Customer Service and Advice:**

Because of social distancing, an increasing number of consumers are using online banking services to manage their money. This is likely to result in a more everlasting shift in customer preferences to digital channels and an increased demand for digital services. It's important for banks to be accessible to all consumers, including the elderly or those not familiar with digital banking, providing education on how to use digital tools, keeping ATMs stocked and operational. As customers seek help and advice on short-term cash

★ **Chhatrapati Shahu Institute of Business Education and Research (SIBER) (An Autonomous Institute) Kolhapur.**

GOVT. OF INDIA RNI NO. UPBIL/2015/62096

ISSN 2229-3620

UGC Approved
Care Listed Journal

SHODH SANCHAR Bulletin

Certificate of Publication

Ref. No.: SSB/2021/SIX28

Date: 13-03-2021

Authored by

Santosh Vilas Hasure
Neville Wadia Institute of Management Studies & Research, Pune,India
Dr. Milind Arun Peshave
Professor
AISSMS College of HMCT, Pune, India

for the Research Paper titled as

"IMPACT OF WORKING CONDITIONS ON WORK LIFE BALANCE OF BUS DRIVERS IN KOLHAPUR DIVISION OF MSRTC"

Published in

Shodh Sanchar Bulletin, Volume 11, Issue 41, January to March 2021

PUBLISHED BY

sanchar
Educational & Research Foundation

Chief Editorial Office
448/119/76, Kalyanpuri, Thakurganj Chowk,
Lucknow, Uttar Pradesh - 226003
+91-94155 78129 | +91-79051 90645
serfoundation123@gmail.com | seresearchfoundation.in

SHODH SANCHAR BULLETIN ★ DR VINAY KUMAR SHARMA ★ EDITOR IN CHIEF

Dr. Vinay Kumar Sharma
Editor in Chief
M.A., Ph. D., D.Litt. – Gold Medalist
Awarded by The President of India 'Rajbhasha Gaurav Samman'

Peer reviewed Journal Impact Factor: 5.13 ISSN-2230-9578

Journal of Research and Development

A Multidisciplinary International Level Referred Journal

April-2021 Volume-11 Issue-8

Recent Trends in Social Sciences

Address
'Ravichandram' Survey No-101/1, Plot, No-23,
Mundada Nagar, Jalgaon (M.S.) 425102

Journal of Research and Development

A Multidisciplinary International Level Referred and Peer Reviewed Journal

April-2021 Volume-11 Issue-8

On

Recent Trends in Social Sciences

Published by- Principal, Kankavli College, Kankavli (Maharashtra)

CONTENTS

Significance of ICT in Teacher Education

Dr. S. Tephillah Vasantham

Assistant Professor, Department of Business Administration, The American college, Madurai

Abstract

Dynamic ICT is a logical, innovative and designing order and the board strategy utilized in taking care of data, its application and relationship with social, monetary and social issue (UNESCO, 2002). ICT represents Information and Communication Technologies. ICT is a piece of our lives throughout the previous few decades influencing our general public just as individual life. ICT which is currently comprehensively utilized in educational world. Teacher, Student, manager and each individual identified with education are prevalently utilized ICT. Teacher use ICT for making showing learning measure simple and fascinating. An able teacher has a few abilities and strategies for giving fruitful instructing. So improvement and increment of abilities and skills of teacher required information on ICT and Science and Technology. Presently – a-days ICT"s are changing schools and study halls another look by acquiring new educational plan dependent on certifiable issues, projects, giving devices to upgrading getting the hang of, giving teachers and understudies more offices and openings for criticism. ICT likewise helps teachers, understudies and guardians to meet up. Nonstop and Comprehensive Evaluation (CCE) assists understudies with welling teachers to utilize more innovation for making showing learning more alluring for the improvement of our group of people yet to come. Teachers should know the utilization of ICT in their branches of knowledge to help the students for learning all the more successfully. In this way, the information on ICT is a lot of fundamental for the both planned teachers just as in-administration teachers moreover. This will assist teachers to know incorporated innovation with homeroom instructing. This paper examined about the job of ICT in 21st Century's teacher education.

Keywords: *ICT, innovation, pre-administration, in–administration, understudy teacher, teacher preparing.*

Introduction

Today's time of 21st Century and it is likewise the time of data and innovation (IT). Each part of life are identified with science and innovation. Gigantic progression of data is arising on the whole fields all through the world. Presently data and innovation is prominently utilizing in educational field for making showing learning measure fruitful and intriguing for understudies and teacher both. In 1998, UNESCO World Education report alludes about understudy and teachers should have adequate admittance to improve computerized innovation and the web in their homeroom, schools, teacher educational organizations. Teachers should have the information and abilities to utilize new advanced instruments to assist all understudies with accomplishing scholarly norm. The nature of expert improvement of teacher education relies upon the degree of ICT mix in teacher education program. As per UNESCO (2002) "ICT is a logical, mechanical and designing order and the board method utilized in taking care of data, its application and relationship with social, monetary and social issue". Teachers are at the center of any living society. Advances assume a significant part in preparing project of teachers. Students" gets to information and data through TV, advanced media, link organization, web and online media I. e. Facebook, Twitter, Whatsapp, Linkedinn, Igo, Line, Wechat and so forth ICT is vital for Pre-administration teacher education program in the 21st Century. Without legitimate information on ICT teacher can't act in his/her study hall and it couldn't be supposed to be a finished one.

Use ICT in Teacher Education

The study hall is presently changing its look from the customary one I. e. from one approach to two way correspondence. Presently teachers just as understudies take an interest in homeroom conversation. Presently Education depends on youngster driven education. So the teacher ought to plan to adapt up to various innovation for utilizing them in the study hall for making showing learning intrigued. For successful execution of certain understudy driven systems, for example, project-based realizing which places the understudies in the part of dynamic explores and innovation turns into the fitting apparatus. ICT has empowered better and swifter correspondence; introduction of thoughts more viable and applicable way. It is a viable apparatus for data getting accordingly understudies are urged to search for data from numerous sources and they are presently more educated than previously. So hence ICT is a lot of essential for Teacher Education.

Ongoing Trends in Teacher Education

In view of different changing requirements of our general public now accentuation is additionally given to the different educational hypothesis and educational practices. As indicated by these hypotheses and practices changes are additionally go through in teacher education moreover. It is normal that teacher education should incorporate new innovation. Teachers ought to likewise know the correct perspectives and qualities, other than being capable in abilities identified with educating. As we probably are aware the base necessity of any preparation program is that it should assist the learner with securing the essential abilities and skills of a decent teacher. Presently a-days new patterns in teacher education are Inter-disciplinary Approach, Correspondence courses, direction courses and so on Reproduced Teaching, Micro Teaching, Programmed Instruction, Team Teaching are additionally utilized in teacher education. Presently a-day Action Research likewise executed in Teacher Education. ICT goes about as the doorway to the universe of data and encourages teachers to be refreshed. It makes consciousness of inventive patterns in instructional techniques, assessment system and so on for proficient turn of events.

Various Strategies for Applying ICT in Teacher Education

1.Providing satisfactory framework and specialized help. 2. Applying ICT taking all things together subjects. 3.Applying new Pre-administration teacher Education educational program. 4. By utilizing application programming, utilizing interactive media, Internet email, networks, understanding framework programming.

Part of ICT In 21st Century's Teacher Education

ICT helps teachers in both pre-administration and in-Service teachers preparing. ICT causes teachers to communicate with understudies. It causes them in readiness their educating, give input. ICT likewise encourages teachers to access with organizations and Universities, NCERT, NAAC NCTE and UGC and so on It additionally helps in viable utilization of ICT programming and equipment for instructing – learning measure. It helps in improve Teaching expertise, helps in inventive Teaching. It helps in viability of study hall. It additionally helps in improving proficient Development and Educational administration just as upgrades Active Learning of teacher Trainees. It is presently supplanting the antiquated innovation. As we probably are aware now-a day‟s understudies are consistently have serious psyche. So teacher should have the information regarding the matter. This should be possible through ICT. ICT helps teachers in anticipation of educating. To present ICT in pre-administration teacher education various techniques and procedures are applied. Various devices are utilized, for example, word preparing, Database, Spreadsheet and so forth Different innovation based plans are utilized to help the teachers for their work on instructing. ICT gets ready teacher for the utilization of their abilities in the genuine homeroom circumstance and furthermore make understudies for their future occupation and public activity. ICT utilized as a „assisting tool‟ for instance while making tasks, conveying, gathering information and documentation, and leading examination. Commonly, ICT is utilized autonomously from the topic. ICT as a vehicle for instructing and learning. It is a device for educating and learning itself, the medium through which teachers can instruct and students can learn. It shows up in various structures, for example, drill and practice works out, in reenactments and educational organizations. ICT as a famous device for association and the board in Institutions. Teachers should offer mechanical help to master utilizing film, liveliness, reenactment preparing which encouraged understudy teachers to give model introduction. On the off chance that the teacher is profoundly furnished with innovation, the understudy will likewise be outfitted with innovation. It eliminates the customary strategy for educating and get ready teacher to apply present day technique for instructing. ICT is assumes a significant part in understudy assessment. ICT is storage facility of educational organization since all educational data can securely store through ICT. ICT causes Teacher to discuss appropriately with their understudies. So ICT overcome any barrier among teacher and understudies. ICT causes Teacher to pass data to understudies inside an almost no time. ICT causes Teacher to plan educational climate. ICT encourages Teacher to distinguish inventive kid in educational foundation.

ICT encourages Teacher to inspire understudies and developing revenue in learning. ICT helps Teacher for authoritative preconditions (vision, strategy and culture). It is likewise helps Teacher for their staff uphold (information, disposition, and abilities). ICT supportive for specialized preconditions (foundation). ICT supportive for planned learning circumstances which are required for both professional education and the preparation of future teachers (in the teacher preparing organizations). Teacher preparing establishments can build up their educational plan utilizing ICT. With the assistance of ICT Teacher preparing foundations can create correspondence organization. Teachers gain most from their own organizations (gaining from others) with the assistance of ICT.

Conclusion

Teaching possesses a noteworthy situation in the general public. ICT causes the teacher to refresh the new information, abilities to utilize the new advanced devices and assets. By utilizing and secure the information on ICT, understudy teacher will become successful teachers. ICT is one of the major factors for producing the rapid changes in our society. It can change the nature of education and roles of students and teacher in teaching learning process. Teachers in India now started using technology in the class room. Laptops, LCD projector, Desktop, EDUCOM, Smart classes, Memory sticks are becoming the common media for teacher education institutions. So we should use information & communication Technology in Teacher Education in 21st Century as because now teachers only can create a bright future for students.

References

1. *Chauhan, S. S. (1992). Innovations in Teaching and Learning process. New Delhi: Vikas Publication House Pvt. Ltd.*
2. *Dash, K. M. (2009) ICT in Teacher Development, Neelkamal Publication Pvt. Ltd. Educational Publishers, New Delhi. 3. UNESCO (2002). Information and Communication Technologies in Teacher Education, A Planning Guide. Paris: UNESCO*
3. *NCTE (2002). ICT initiatives of the NCTE Discussion Document. New Delhi : National Council For Teacher Education.*
4. *Dahiya, S. S. (2005). ICT-Enabled Teacher Educator, University News, 43 page 109-114 May 2-8. 6. Bharadwaj, A. P. (2005). "Assuring Quality in Teacher Education", University News, Vol. 43. No. 18.*

'Journal of Research & Development'
A Multidisciplinary International Level Referred and Peer Reviewed Journal, Impact Factor 5.13, ISSN: 2230-9578, April-2021,
Volume-11, Issue-8 "Recent Trends in Social Sciences"

The Geographical Analysis of Rural Settlements Name Associated with Physical and Cultural factors in Daund Tahsil, Pune District (M.S.)

Mr. Parkhe Sakharam Baban[1] Dr. Chimangunde Vishavraj S.[2]

1Ph.D.Research Student & Dept. of Geography, S.C.S. Mahavidyalaya, Shrigonda, Dist- Ahmednagar.(M.S.)

[2]Dept. of Geography, Shri Sant Janabai, Mahavidyalaya, Gangakhed- 431514. Dist- Parbhani. (M.S.)

Abstract

The rural settlement is a essential part of India and the overall World. The household and settlement is a chief basic of humanoid life. All rural settlement part is vigorous in the country. The each rural settlement has a designation. Sant Tukaram and Ramdas, the two designers of the social - cultural life of Maharashtra, get up in the space of Shivaji, Ramdas located the foundation of the spiritual and national society of Maharashtra by giving it a gospel of 'Maratha Tituka Melawawa' (union of all Marathas) and 'Maharashtra Dharma'. Place-names are therefore of chief social significance. The Daund Tahsil is a energetic part of the Deccan Plateau of Maharashtra, geographically and historically. Its independence and diversity of scenery are simulated in rural settlement place-names, including composed physical and cultural features. In the paper outcomes show that over all rural settlements place-name are associated with the physical and cultural factors in the study area. Physical and cultural elements, which affect settlements in rural areas. Though the physical factor is dominant in rural settlement but the cultural factor also plays an associative role.

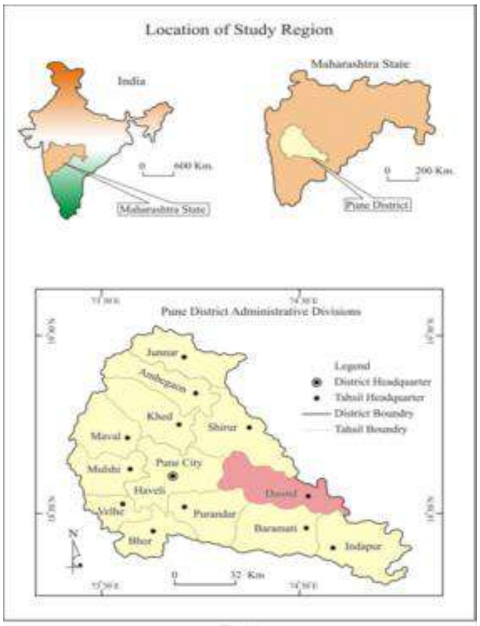
Keyword - *Rural Settlements Place Name associated with Physical and Cultural Factors; Daund Tahsil Revenue Circle; Physical Factors- Flora, Fauna, Topography, Water bodies (Drainage System); Cultural Factors- Gods, Deities, Cast, Religion, Person, Surname, Historical, Cultural etc.*

Introduction

All rural settlements place has a designation. The rural villages study of the name of is very stimulating. It give ideas and suggestions about the origin of rural settlements . "The study of rural place names is of excessive help as the names bear recognizable relations with physical and social- cultural characteristics of the area and help as a basic of information about geographical surroundings." (Mandal, 1978). The rural place names is of rural villages, thus distant, we have studied the sequent occupancies of the villages in the study region. The numerous ancient times, an effort has been complete to study the place names and their meaning the various physical, social, historical, cultural, behavior and economic conditions of the study area. The place names are identical rank, since they deliver the basis of material to rebuild the physical geography of several past ages. They also deliver appreciated data for the study of development and being of social and cultural landscape. In India S.M.Singh (1962), S.S.Padhye (1967) have worked in detailed on place names of rural settlements. The rural settlements system growth is currently one of the basic objectives in terrestrial usage planning, which is important for Daund Tahsil. India is the most urbanized and population nation in the asian region. Historical, cultural, social, cast, religion, flora, fauna, water system, topography factors analysis is the greatest real approach for reviewing the transformational variations in rural settlements name in study area.

Study Area

Daund Tahsil is situated in the western Maharashtra, in Pune District. The geographical locality of the Tahsil is between 18^0 18'' to 18^0 40'' North latitudes and 74^0 06'' to 74^0 50'' East longitude. Tahsil total area is 1288.04 Sq. Km. and the total of 13 Tahsil in the Pune district. The Tahsil total 102 villages and one city (Daund) and Six revenue circle. The study area elevation is 500 to 600 mt in MSL. The space is divided by numerous river basin like Bhima and its tributary Mula-Mutha. The certain lake are available in study region Warvand, Kasurdi etc. The area experienced semi arid weather and rain shadow zone with light rainfall. In this area black soil founded. The Sugarcane, Bajara, Jawar, Onoion, Groundnut crop taking study area. According to 2011 census, The Daund tahsil total population is 3,82,535 (Male-1,98,269 & Female- 1,84,266). The Daund tehsil density is 297 persons per Sq. km. The study area irrigated land is 74,463 hectares (58.05%). The Transport & communication system very good developed in study area. Daund railway junction, Solapur Pune National highway, other major state roads are obtainable in region. The Kurkumbh is a industrial area.



Objectives

1. The collect rural settlements place name associated with physical and cultural factors in the study area;

2. To understand the rural settlements place name associated with physical and cultural factors, revenue circle wise distribution in Daund Tahsil.

Materials and Methods

1. Census of India, (2011), "Registrar General of Census Report", Government of India, New Delhi.(Daund Tahsil, Pune district, Maharashtra.)
2. Data for analysis of the rural settlements name of Daund Tahsil has been collected from District Census Handbook. (1991, 2001, 2011)
3. The data is split up in major six groups in rural settlements name associated with flora, fauna, water bodies, topography, cast, religion, surname, historical in Daund Tahsil.
4. This six group categorize the revenue circle- Rahu, Yavat, Kedgaon, Patas, Daund, Ravangaon etc.
5. The comparison study of these six revenue circle in physical and cultural factors.
6. The Daund Tahsil revenue circle wise rural settlements place name associated with physical and cultural factors, use excel and draw a chart.

The Rural Settlements Names Associated with Physical and Cultural factors

Sr. No	Circle Name	Physical Factors				Cultural Factors				Total Villages
		Flora	Fauna	Water Bodies	Topography	Gods / Deities	Cast /Religion	Person /Surname	Cultural / Historic	
1.	**Rahu**	03	02	01	04	02	-	03	02	**17**
2.	**Yawat**	06	03	-	02	01	01	04	04	**21**
3.	**Kedgaon**	01	02	01	01	02	01	03	05	**16**
4.	**Patas**	03	02	03	04	02	-	01	01	**16**
5.	**Daund**	03	03	-	01	02	01	02	05	**17**
6.	**Ravangaon**	03	-	02	03	02	-	02	03	**15**
Total Village		**19**	**12**	**07**	**15**	**11**	**03**	**15**	**20**	**102**
Percentage%		**18.62**	**11.76**	**6.86**	**14.70**	**10.78**	**2.94**	**14.70**	**19.60**	**100%**
		51.96%				**48.04**				**100%**

Resource- Computed by researcher.

Results and Discussion

The study region is a large number of instances the Rural settlements place name are connected with physical feature like a forest, tree, vegetables, fruits, fauna, animal, human body, nala, odha, river, tributary, plain area, mountain, peak, plateau and pond (tank). The cultural feature like cast, religion, gods, deities, person names, surnames, historical etc. affect the villages name in the study area.

I. Rural settlements place name associated with Physical (Natural) factors-

The study region understanding of physical and cultural landmarks invites pre requisites of place orientation and geographical correlations . This is true in the case of settlements , since settlements bear a definite relationship to space . The Place names are good indicators of such relationship to space . The place names bear recognizable associations with the physical (natural) and cultural (cultural) characteristics of the area and serve as basic source of information about geographical surroundings. The physical factors are like land features, rocks (Topography), soils, vegetation (Flora), animal (fauna) and hydrological (water bodies) features are reflected in a large number of place names in the Daund tahsil total numbers of such place names are 53 and its contribution is 51.96 % to the total rural settlements place names. The study region was completely covered with dense forest in the past period, so there are many settlements named related to vegetation (Tree), Such villages as like Takali, Naygaon, Pimpalgaon, Pimpalachiwadi, Boribel, Boriaindi, Boripardhi , Boribhadak, Vadgaon Bande, Nangaon Alegaon, Roti, Chincholi, Wadgaon Dearekar, Hingni Berdi, Hingnigada etc. In the Daund tahsil total numbers of such place names are 19 and its contribution is 18.62 % to the total rural settlements place name. In the study area Yawat circle higher place names are 6 and its contribution is 5.88 % to the total rural place names and lowest is kedgaon circle place names are 1 and its contribution is 0.98 % to the total rural place name. In Rahu, Patas, Daund and Ravangaon circle same place names are 3 and each circle contribution is 2.94 % to total rural settlements place name. In the area some place names are related to the various types of animals and their products, parts act such as Dahitane, Padvi, Kangaon, Pilanwadi, Hatwalan, Khor etc. In the Daund tahsil total numbers of such place names are 12 and its contribution is 11.76 % to the total rural place names. In the study area Yawat and Daund circle higher place name are 3 and each circle contribution is 2.94 % to the total rural place names and lowest is Ravangaon circle place names is zero and its contribution is 0.00 % to the total rural place name. In Rahu and Kedgaon circle same place names are 2 and each cercal contribution is 1.96 % to total rural place names. The Patas circle place name is 1 and its contribution is 0.98 % of the total rural place name.

The study region some place names occur after the names of water bodies like Panwali, Jiregaon, Kasurdi , Pargaon, Gar, Navingar, Khanote etc. In the Daund Tahsil total numbers of such place names are 7 and its contribution is 6.86 % to the total rural place names. In the study area Patas circle higher place name are 3 and its contribution is 2.94 % to the total rural place names, The lowest is Yawat and Daund circle place names is zero and each circle contribution is 0.00 % to the total rural place name. In Ravangaon circle place names are 2 and its contribution is 1.96 % to total rural place names. The Rahu and Kedgaon circle same place name is 1 and each circle contribution is 0.98 % of the total rural settlements place name. A scrutiny of the place names and the place names after miscellaneous geographical features including various landforms having suffixes or prefixes. In the study region some hill or plateau type settlement like Patethan, Koregaon Bhiwar, Telewadi, Kadethanwadi, Malthan, Kauthadi, Malwadi, Amoni Mal etc. The some place names occur as Kusegaon, Khopodi , Dapodi, Khorodi, (at the foot slope or on the gentle slope), Undavadi, Mirwadi (on plateau area). The Village name is contain a component to denote a rock i.e. khadaki . In the Daund tahsil total numbers of such place names are 15 and its contribution is 14.70 % to the total rural place names. In the study area Patas circle higher place name are 5 and its contribution is 4.90 % to the total rural place names and lowest is kedgaon and Daund circle place names is 1 and each circle contribution is 0.98 % to the total rural place name. In Rahu circle place names are 4 and its contribution is 3.94 % to total rural place names. The Ravangaon circle place names are 3 and its contribution is 2.94 % to total rural place names and Yawat circle place names are 2 and its contribution is 1.96 % to total rural place names.

II. Rural settlements place name associated with Cultural (Human) factors-

The Place names is also the influence of cultural (Human) factors and may easily be co related with the period and culture throw which they might have developed. According to Savita (1981)"place names are suggestive to cultural heritage, cultural diffusion and cultural borrowing. As such, they help in reconstructing a chronicle of settlement processes and they associated cultures and thereby facilities and analysis of cultural geography of an area". The some place names are named after God, deities, persons, surname, castes, religion, ethnic groups, culture, historical, size and settlement process. In the Daund tahsil total numbers of such place names are 49 and its contribution is 48.03% to the total rural place names. The Place names show, also the Influence of cultural factor and it easily co related with the period and culture, through which they must have evolved. The some place names are named after Gods and Deities. The study area have also been found as Rahu, Nathachiwadi, Jawaje buwachiwadi, Ganesh Road, Deulgaon Gada, Virobawadi, Kurkumbh, Lingali, Deulgaon Raje, Ravangaon, Nandadevi etc. In the Daund tahsil total numbers of such place names are 11 and its contribution is 10.78 % to the total rural place names. In the study area only Yawat circle lower place name is 1 and its contribution is 0.98 % to the total rural place names. The Rahu, Kedgaon, Patas, Daund and Ravangaon circle place names are same 2 and each circle contribution is 1.96 % to the total rural place name. The place names is many instances depict Caste elements, Religion, predominating at present or the past in a village, such place names are like Gopalwadi, Boripardhi, Yawat etc. In the Daund tahsil total numbers of such place names are 3 and its contribution is 2.94 % to the total rural place names. In the study area only Yawat , Kedgaon and Daund circle place name is 1 and each cercal contribution is 0.98 % to the total rural place names. The Rahu, Patas and Ravangaon circle place names are same, zero and each circle contribution is 0.00 % to the total rural place name.

The some villages are named after individuals, who were important persons or saints like Bharatgaon, Mirwadi etc. The study area most of the place names are followed by suffixes as 'wadi'. These 'wadi' settlements are mostly named after individuals name or surname, such as Devkarwadi, Ladkatwadi, Boratewadi, Tamhanwadi, Galandwadi, Handalwadi, Nimbalkar Vasti, Pandharewadi, Kalewadi, Kadamwasti, Gadewadi, Gadebagade Wasti etc. In the Daund tahsil total numbers of such place names are 15 and its contribution is 14.70 % to the total rural place names. In the study area Yawat circle higher place name are 4 and its contribution is 3.94 % to the total rural place names and lowest is Patas circle place names is 1 and its contribution is 0.98 % to the total rural place name. In Rahu and Kedgaon circle same place names are 3 and each cercal contribution is 2.94 % to total rural place names. In Daund and Ravangaon circle same place names are 2 and each circle contribution is 1.96 % to total rural settlements place name.In the study region some place names are cultural history, cultural area ,historical land, size of settlements, space and function of settlements related. Such place name like Dahitane, Valki, Yawat Station, Kamthwadi , Sahajpurwadi, Bhandgaon, Kedgaon Station, Deshmukh Mala, Dapodi, Kedgaon, Dhumalicha Mala, Wasunde, Nanwij, Sonwadi, Girim , Pedgaon, Maladpatas, Watluj, Rajegaon etc. In the Daund tahsil total numbers of such place names are 20 and its contribution is 19.60 % to the total rural place names. In the study area Kedgaon and Daund circle higher same place name are 5 and each circle contribution is 4.90 % to the total rural place names and lowest is Patas circle place names is 1 and its contribution is 0.98 % to the total rural place name. In Yawat circle place names are 4 and its contribution is 3.94 % to total rural place names. In Ravangaon circle place names are 3 and its contribution is 2.94 % to total rural place names. In Rahu circle place names are 2 and its contribution is 1.96 % to total rural place names.

Conclusion

The overhead conversation has accepted out clearly the social, historical, political, religion, personality and cultural development of Maharashtra and its sub-regions meanwhile ancient periods. The geographical diversity characterizing sub-regions of Maharashtra located the foundation of sub-sequent social and cultural development. The Diplomatically conscious history of Maharashtra from ancient periods to modern period, trendy on the basis of geographical diversity has clear the future system of social and cultural growth. The above study, it can be concluded that the place names associate with physical factors that are Flora (18.62 %), Fauna (12.76%), Water bodies (Drainage system) (6.86 %), Topography (14.70 %) contributed 51.96 % of the total place names. The place names associated with human / cultural factor This is followed by God and Deity (10.78 %), Personality and Surname (14.70 %), Cast and Community (Religion) (2.94 %), Cultural History, Cultural Area and Settlements Process and Historical (19.60 %) The Human/ Cultural factors contributed 48.04 %. This means that plants, birds, animals, deities, personality, community, cultural history play vital role in determining the place names of the rural settlement of the Daund tahsil. This study is most valuable information to the subject and study region. The investigation certainly perform the basic function of identification and present study may be used to the various aspects of human and natural past.

References

1. *Dr.Mrs.I Karve, (1968), Maharashtra, Land and Its People. Maharashtra State Gazetteers General Series*
2. *Winterton, Rachel and Jenny Warburton. 2012. "Ageing in the Bush: The Role of Rural Places in Maintaining Identity for Long Term Rural Residents and Retirement Migrants in North-East Victoria, Australia." Journal of Rural Studies 28(4):329–37.*
3. *Rajapurohit, B.B & Katti, Madhav. N, (1984), Studies In Indian Place Names, Vol. IV. Geetha Book House*
4. *Himangsu Sarmah, June 2020. A Study of Biodiversity in the Light of Place Names of Nagaon District, Vol. VI, Issue 1.*
5. *Dr. Chimangunde V. S. & Assit. Prof.Parkhe S.B, (2021 January), the Geographical Analysis of Rural Settlements History with Prefix- Suffix in Daund Tahsil, Pune District. (M.S.) Vol. III. Akshar Wangmay*
6. *Topo sheets of Daund Tahsil, Pune District, Maharashtra.(Survey of India)*
7. *Census of India, (2011), "Registrar General of Census Report", Government of India, New Delhi. (Daund Tahsil, Pune district, Maharashtra.)*
8. *District census Handbook. (Pune District - 2011, 2001, 1991. Maharashtra.)*
9. *Socio-Economics review and District statistical Abstract of Daund Tahsil, Pune District. (2011, M.S.).*

Global Climate Change and It's Social, Economic and Environmental Consequences

Sunil S. Gavit
Assistant Professor, Department of Geography, Padma Bhushan Dr. Vasantraodada Patil Mahavidyalaya, Tasgaon. Dist- Sangli (M.S.)

Abstract:
Climate change is one of the foremost challenges of our time and adds significant stress to our society and the atmosphere. From variable weather patterns that pressure food production, to growing sea levels that boost the risk of terrible flood, the impact of climate change are global in capacity and unique in balance. Without severe action now, adapt to these impacts in the potential will be more hard and rich. This outline deals with the thought of Global Climate Change, the related conditions, causes, consequences, solutions, and its possible fitness impact. It shows the want to proceed directly if we are to let alone a permanent build-up of greenhouse gases and global warming at a potentially vast cost to the wealth and civilization global. Therefore, address climate change require a "unique altitude of collaboration, not only among country but also between unusual levels of government, secret segment, and persons.

Keywords*: greenhouse gases Global; Climate Change*

Introduction:

Climate change is a severe risk to scarcity decline and could open decades of progress efforts. While climate change is universal, its harmful impacts are more strictly felt by poor citizens and poor countries. They are more helpless because of their high confidence in natural wealth and partial ability to get by with climate changeability and extreme. Restore and maintain key ecosystems can help a community in their adjustment hard work and hold up livelihoods that depend ahead on the services of these ecosystems. Affecting towards low-carbon society can help decrease greenhouse gas emission, civilizing human fitness, and well-being and create the green job. Climate change is an actuality of days. We need to act immediately if we are to let alone a permanent build-up of greenhouse gases and global warming at a potentially vast cost to the financial system and humanity universal. Society for financial assistance and growth study suggests that if we act at present, we have ten to fifteen years of breathing space through which act is potential at a rather diffident charge. But each year of delay reduces this breathing space, while require ever more severe events to create a distinction. Present financial confusion is not a motive to wait. Its macro-financial penalty will be determined in a relatively short point, after which increase will begin again, while the penalty of functional on global warming will maintain to cultivate more and more dear over point. This study presents a summary of Global Climate Change intending to help value the idea, its pressure and to give a coming to the ways it affects civilization and the natural situation and proffering solution

Objectives:

1. To understand concept of greenhouse effect
2. To study social, economic and environmentalconsequences of global climate change

Methodology and Data sources:

The present research article is theoretical in nature. The data collected from various published and unpublished articles, newspapers, journalsand books.

Greenhouse Effect

A normal structure is known as the "greenhouse effect" which regulates temperature in the world. Just as wineglass in a greenhouse keeps heat in, our feeling traps the sun's heat near the earth's plane, above all during heat-trapping properties of confident "greenhouse gases". Earth is fiery by daylight. The majority of the sun's force passes during the atmosphere, to temperate the earth's plane, oceans, and atmosphere. The normal process is well-known as the greenhouse effect. Devoid of greenhouse gases, Earth's regular hotness would be −19˚C in its place of +14˚C, or 33˚C colder. Above the history ten thousand years, the quantity of greenhouse gases in our atmosphere has been rather steady. Then little centuries ago, their concentration begins to rise due to the growing requirement for energy caused by industrialization and growing populations, and due to shifting land use and human being settlement patterns.

Greenhouse Gases

The greenhouse gases and their sources are as below:

Water vapor is the main general greenhouse gas but others are especially important too. Some occur obviously and some approach from human being activity.

CO_2: is the most significant greenhouse gas released by human activities, mostly through the burning of fossil fuels. It is the main contributor to climate change.

CH_4: is formed when vegetation is burned, digested, or rotted with no O_2 present. Compost dumps, rice paddies, and grazing cows and other livestock release lots of methane

N_2O: can be found naturally in the environment but human being activities are growing the amounts. Nitrous oxide is at large when chemical fertilizers. Nitrous oxide is released when chemical fertilizers and measures are used in crop growing.

Halocarbons are a family of chemicals that comprise CFCs (which also harm the ozone cover), and other human-made chemicals that include chlorine and fluorine.

Causes of Global Climate Change

Earth's climate changes in nature. Changes in the power of sunshine reaching the earth cause cycles of warming and cooling that have been a normal feature of the Earth's climatic history.Some of these astrophysical cycles, like the four glacial-interglacial swings during the past four lac years. Extend over very long time scales and can have large amplitudes of 5˚C to 6˚C. For the past ten thousand years, the globe has been in the temperate interglacial segment of such a cycle. Other planetary cycles are a lot shorter, with the direction being the eleven-year sunspot phase. Hotness and the stability of heat-trapping greenhouse gases have remained just correct for humans, vegetation, and flora to stay alive. But today we're having trouble trust this stability.

Consequences of Global Climate Change

While the penalty of climate change could be discussed under several different categories, the extent of this dialogue confines it to together natural and economic consequences.

Natural Consequences

At present already the consequences are verifiable and most likely they will only augment in extent and regularity in the potential.

The IPCC predicts that climate change will grow to be apparent in the following main ways:

By around 2100 global temperature will have risen by between 1.1 degree Celsius and 6.4˚degree Celsius. The accurate increase depends on the potential emission of greenhouse gases and other pollutants and the collective action of physical and chemical processes in the environment. Several parts of the world will obtain more rainfall, with others attractive drier. This is because heater water occupies more freedom than frosty water and because of the runaway of glaciers and Antarctic ice sheets. Our considerate of the melting of Greenland and polar ice sheets are still partial. These both with the fact that there may be big area variation in maritime height increase, income that in some parts of the world the consequences may be even more theatrical than predicted by IPCC.

Economic Consequences

Avoid excessive climate change is also significant if the ***"Millennium Development Goals"*** are to be achieved, formulated by the U N as follows:

Destroy excessive scarcity and famine. Realize worldwide prime learning. Encourage sexual category equality and empower women. Reduce kid humanity. Get better motherly physical condition. Combat HIV, Malaria, and other diseases. Make certain ecological sustainability. Develop a universal partnership for growth. Etc

Potential Health Impacts of Climate Change

Global climate change would influence human being health via the pathway of varying difficulty, amount, and sincerity and with different timing. Equally, impacts would vary in nature as a function together with of environment and geography and the weakness of the local population. The impact would be both positive and negative. This is no surprise while the climatic change would disturb or otherwise alter a large range of natural environmental and physical systems that are an integral part of Earth's life hold structure. Via climate change, humans are causative to a change in the situation of life in the world.

For vector-borne infection, the division and profusion of vector organisms and in-between hosts are affected by various physical and biotic factors.

Mitigation Solutions

In many of the world's regions and countries, the government has introduced the policy to decrease the emission of Carbon dioxide and other greenhouse gases. These are frequently referred to as mitigation strategies. A container in point is the Kyoto Protocol, under which manufacturing countries have faithful themselves to a sure cut in emissions. This has not been ratifying by Australia or the United States, however. The European Union has a further strategy aim of falling its Carbon dioxide emissions by 20 to 30 percent by the year 2020 comparative to 1990

Adaptation Solutions

The IPCC defines adaptation as 'adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities (IPCC, 2009). The consequences of climate change can be seen all over humanity. Maritime height increase, flood, severe summers, and wetted winters are the depiction of present and potential.

We have to become aware of the fact that we will not always be safe anymore but we must get used to ourselves to the changes:

Sea level rising/floods/water nuisance.

When allowing for the increasing of the maritime height and the augmented opportunity of flood in a country, the Netherlands for example, present are two courses to an explanation. On the one side, the Dutch can protect their country even better by raising the dikes and reinforcing the coastal areas. But by doing this, the consequences in case of a failure will only be worse.

Drought and Desertification.

The UN-plan that was passed in 1994 underlines a ***"bottom-up"***-approach, with which one hungers to find mostly native results to prevent desertification organized with the native societies. One attempts to find the explanation in sustainable development, undertaking societal, economic, and ecologic difficulties at one time. A related insolence requires quite a co-ordination and close teamwork between local, national, and international bodies, but conservationists are not converted that the party-political will to take events is solid sufficient to crack the current.

Conclusion:

Climate change is fashionable and it is caused largely by anthropological motion. Its impacts are establishment to be touched and will be degraded in the periods onward except we take action. The growing rate of global warming consideration of co2 and other greenhouse gas releases from social activities have run to climatic changes and environmental deprivation, which in crack have caused great experiments concerning diseases and social health. Many sicknesses which were before nameless in convinced climatic zones are now conclusion their way to such areas, due to variations in the climate situations. Extra, many sicknesses that had been thought destroyed are resurfacing in areas with altered weather situations that favor their retaliation. It is then essential that backers and decision-makers at manufacturing, government, and international plan levels come up with severe and practical means of critical down on greenhouse gases emission to fight the feast of global warming belongings, and the subsequent climate change, which has fashioned shocking impacts especially among minor nations. More, there should be bigger funding of version and handling programs and schemes in affected zones to minimalize the influences on social health and decrease the feast of sicknesses.

References:

1. *Abbasi, Daniel R. (2005) "Americans and Climate Change, A Summary of Insights and Recommendations from the 2005 Yale University Forestry and Environmental Science Conference on Climate Change."*
2. *Academies of Science for the G-8+5 Countries.Joint Science Academies Statement on Climate Change. Retrieved from: http://royalsociety.org/document.asp?tip=0&id=7821*
3. *Associated Press. (2001, Nov. 16) Solar Cycle Drives Ocean Temps. Study Says. USA Today. Retrieved from: http://www.usatoday.com/news/science/climate/2001-11- 16-ocean-warming-solar-cycle.htm*
4. *Dyson, Freeman J. Freeman Dyson. Retrieved from: http://www.sns.ias.edu/~dyson/*
5. *National Science Teachers Association. (January, 2008). U.S. Students Science Scores Lag Behind Other Developed Nations. NSTA Reports 19 (5) p. 1*
6. *Singer, S. Fred, and Avery, Dennis T. (2007) Unstoppable Global Warming-Every 1,500 Years Lanham, Maryland: Rowman and Littlefield Publishing Group, Inc.*
7. *Soon, W. (2005) Variable Solar Irradiance as a Plausible Agent for Multidecadal Variations in the Arctic-Wide Surface Air Temperatures of the Past 130 Years. Geophysical Research Letters, No. 32, American Geophysical Union*
8. *International Panel on Climate Change.Fourth Report of the International Panel on Climate Change. Retrieved from: http://www.ipcc.ch/ipccreports/ar4-syr.htm*

A Brief Study on Dalit Feminism in Baby Kamble's *The Prison We Broke*

Dr. Bharat Arvind Tupere
Assistant Professor and Head, Department of English, S. R. M. College, Kudal, Dist. Sindhudurg
Email: milind.tupere9999@gmail.com

Abstract
Dalit Literature has so many aims, one of them is to reveal to the readers thr injustice, oppression, struggle and helplessness as well as the subordinate place for them in Indian society. Dalit feminism immerged as unique in Indian context. Orthodox Indian society beguiled Dalit women toward exploitation and suppression. Dalit feminist like other Dalit writers follow the ideology of Dr Babasaheb Ambedkar- 'Educate, agitate and organize'.Baby Kamble's The Prison We Broke deals with her life experiences as Dalit Community's struggle for life and against Upper Caste people, rituals and customs. The book also focuses on the exploitation of Dalit women by their own community. Especially daughters-in-law were easy prey for such oppression. The book is full with the exploitation of Dalit women. In those days, it was custom to keep women at home, behind the threshold. The honour enjoyed by a family was in proportion to the restrictions imposed on the women of the house. (p.05) If no one see the nail of the woman thus confined within the four walls of the house. Then this honour became talk of the town. Writer's father had locked her mother in the house, like a bird in a cage. This incident shows that the women were treated like a personal property of their husbands. They locked them in the cage like the birds.This research paper brings the Dalit feminist elements from the autobiography The Prison We Broke. Dalit women were as subaltern, this book became the voice for their doubly margined exploitation.

Key Words: *Dalit Feminism, Exploitation, Slavery*

Baby Kamble born in Socially Backward community or Scheduled Caste- Mahar Community. She wrote her life experiences and story as the representation of whole Mahar community; it is just not only about the community but caste structure of Maharashtra or India in her autobiography *The Prisons We Broke.* She also depicted that how these entire folks have converted or embraced Buddhism under the leadership of the Greatest person, Dr Babasaheb Ambedkar on 14 October 1956. The book reveals the cries, lives, struggle, helplessness, cries and sufferings of the people of Mahar community. The book is a voice of subaltern women of this down trodden community. The women from Mahar community have doubly suppressed due her femaleness and that they belong to Mahar caste of Maharashtra. In our country, women are thought to be things of show, beauty or things which satisfy hunger of lust, love etc. As patriarchal Indian Society, most of the women stay at home to do domestic works and men got more freedom to earn from outside. This makes them more powerful than women and thrust on women their superiority. Hence, women got their subordinate status because Men subjugated women by limiting their space to hearth and children's cradle.Women were denied freedom and separate existence. The society created separates codes of conduct for women. The result of this, women barely get any opportunity to understand their true self. They did not live free life as men enjoyed.Simone De Beauvoir criticized patriarchy as, "man defines himself as man and woman as other. Woman describes not in herself but as relative to him. She is not regarded as an autonomous being. Man is the subject; he is the absolute. She is the other. He sets himself up as essential as oppressed to the other, the inessential, the object." (Beauvoir, p.16). The main theme of the autobiography is to bring forward the struggle of Mahar people with the upper caste society. But the book is an excellent example of Dalit Feminism. Baby Kamble who experienced the patriarchal social codes of conduct, wrote this book when she was alone, and kept it hidden from her family members. This autobiography portrays exploitation of women in Mahar community. Baby Kamble has depicted the suffering and cries of Mahar people; but she recreates the sufferings of women through the pages of her book. Women suffered because of the mentality of the people that they should enslave others or exploit them as they were slaves of Upper Castes people. Therefore, they enslaved their daughters-in-law.

The autobiography begins with pre-independence of India. Indian society had a big family system. Children grew up at their grandparents' home under the shelter of love because they often born at their maternal grandparents' home. Baby Kamble was born at her grandparents' home at Veergaon, a village in the Purander Taluka in Pune district, Maharashtra. Mahar people were considered as untouchables. Therefore, they had to live in the village at some distance. The place of any village, where these folks lived, called as Maharwada. The Maharwada was so small because the village was too small.

Then the book covers types restrictions for Mahar folks as untouchables. They had only one right that is to serve upper castes. They always get leftover food instead of payment of their works for people from Upper Castes. They were physical as well as psychological slaves of Upper Caste people. The book also elaborates how Dr. Babasaheb Ambedkar shattered the prison of slavery. At the other hand the book is the voice of those suppressed and oppressed Mahar women who were doubly exploited as women and as Mahar women by men of Upper Caste and their own caste. The autobiography illustrated the people of Maharwada who were poor but they were very affectionate, simple and large-hearted.

The book is full with the exploitation of Dalit women. In those days, it was custom to keep women at home, behind the threshold. The honour enjoyed by a family was in proportion to the restrictions imposed on the women of the house. (p.05) If no one see the nail of the woman thus confined within the four walls of the house.

Then this honour became talk of the town. Writer's father had locked her mother in the house, like a bird in a cage. This incident shows that the women were treated like a personal property of their husbands. They locked them in the cage like the birds.

Baby Kamble witnessed the heinous acts of untouchability from her childhood. She has written various incidents that they had to keep some distance from the upper castes people. In the month of Ashad, women had to buy some things from the shop. When they entered the courtyard of the shop, they had to stand at some distance and asked things which they want to buy. Shopkeeper's children were playing there. Shopkeeper's wife shouted at her children who played in courtyard, "Chabu, hey you, can't you see the dirty Mahar woman standing there? Now don't you touch her. Keep your distance." (p.14) then shopkeeper throw things from a distance. He took money which did not pollute him. The mere touch of the Mahar woman could pollute the high caste shopkeeper but on the contrary, the money of the untouchable would not pollute him. Through this incident, it is clear that the high castes people were giving their children the lessons in social conducts. Untouchables were denied education, knowledge and access of the sources like land, water and social involvement. The book lights on the very important aspects of Mahar community. According to Jacques Rousseau, "Man is born free, but he is everywhere in chains" (Rousseau, P. 49). They were slaves of high castes people. But they were also human beings. It has become the habit of us to dominate and exploit someone. We enjoyed by giving trouble to others. Mahar folks also found their slaves. As they suffered their subordinate status in the society, they made their daughters-in-law suffer from oppression. They had to work so hard at homes. Then they had to go outside for work with their mothers-in-law. In our society, there was a tradition to get marry girls and boys in very young age. At the dinner or lunch time, men had served the meal first then women could eat. Mahar people were very hungry people whatever they get children first eat it. Then other men could get to eat and if something remained then women could eat. Baby has described the incident as, "At homes, children jumped and snatched the food from their parents' hands. Poor hungry daughters-in-law were helplessly waiting for their turn without saying a single word. They looked at the food. Sasu noticed this and threw a piece of morsel at her and said, "Push that down your throat, you shameless hussy! Aren't you ashamed to stare so at a child who's eating? At least let the food get down his throat! Your evil eye will make the child choke. Don't you know how to behave like a good daughter-in-law?" (p.30). Baby writes, "There is saying that a black cow has survive even on thrones. Our women were like that proverbial black cow. Even one occasions when they had a right to be indulged a bit, they had to fill their stomachs with thrones to stay alive." (p.57) Smita Patil writes, "Dalits have been victimized through the structural hierarchy of caste that perpetuates the ethos of inequality and maintains the segregation of power. Dalits are oppressed, exploited and discriminated against, and are being methodically erased through graded inequality at every level. So, there is hardly any space for Dalit women in either the public or private sphere. Subjugation of Dalit women persists through the obnoxious linkages of caste, gender and class." (Patil, p.11-12)

To conclude, The Prison We Broke by Baby Kamble is incredible example of Dalit Feminism. The book describes not only the physical and psychological atrocities inflicted on Mahar women in public and domestic spheres but it emerges as a reliable testimony of the counter revolution brought up by Dr. Ambedkar and further effectively practiced by Mahar community in Phaltan and entire Maharashtra and India. The book gives a number of references of how Mahars rejected the high caste culture, festivals, and leadership. It depicted that they formed their own culture of equality and humanity. The autobiography is very important because it focuses upon the progress of Mahar community from pre-Ambedkar days to its rapid transformation through education and mass conversion to Buddhism.

References:

1. *Kamble, Baby, Maya Pandit. The Prisons We Broke. Hyderabad: Orient Blackswan Private Limited, 2009. ISBN: 97888125033905.*
2. *Beauvoir, Simone D. The Second Sex. Trans. H. M. Parsley. London: Picador Classic, 1988.*
3. *Marx, Karl and Fedrick Engels. German Ideology. Moscow: Progress Publishers, 1976.*
4. *Rousseau, Jean Jacques. Social Contract and Discourses. New York: E. P. Dutton and Co., 1913. 2010.*
5. *Smita M. Patil. Revitalizing Dalit Feminism Towards Reflexive, Anti-caste agency of Mang and Mahar Women in Maharashtra. Economic and Political Weekly, Vol. XLVII No. 18, 04 May 2013, p. 11-13.*

Women Empowerment: An Essential Way to Achieve the Goal of Social Development

Mr. Sachin Kumar[1] Ms. Chetna Suri[2] Ms. Poonam Pandita[3]

[1]Teacher Educator, Department - Educational Studies University - Central University of Jammu, Samba (J&K), Vijaypur, Samba J&K

[2]Teacher Educator, Department - Educational Studies, University - Central University Of Jammu, Samba (J&K) Vijaypur, Samba J&K

3designation-Teachereducator, Department-Educationalstudies University-Centraluniversity of jammu, Samba (J&K), Vijaypur,Samba J&K

Abstract

Women are the primary foundations for building a progressive society. They play a key role for strengthening and developing our nation. But in some parts of our country, their role is still limited to the household chores and still they become the victim of domestic violence and social evils. Their freedom is still restricted and they lack the opportunity to put their ideas before others. So there is the great need of women empowerment which doesn't only mean to educate the female child but it also means to uplift and improve women social, economic and political life and involving them in decision making, recognizing their potential, raising their status and developing their skills through technical and Vocational education. Women empowerment means boosting the self-esteem and self-confidence of women by incorporating their equal participation in every sphere. But the gender stereotype thinking is the biggest challenge in the way of women empowerment. Our society underestimates the role of women and denies their participation in many aspects. This attitude of society restricts the capacities of women and thus leads to the exploitation of women and their rights. For the social development of our country, it is necessary to elevate the women and to recognize her contributions. The progress of any society can be reflected through the status of the women of that society. This is the need of the hour to overcome from the challenges that are restricting the women development and empowerment. This paper explores the scenario of women empowerment especially in India. Additionally this paper also throws light on the different challenges coming in the way of women empowerment and the ways to overcome it.

Keywords: *Women Empowerment, Social Development, Equal Participation, Self Esteem.*

Introduction

Women are the key pillars of the society. They are bestowed with the same abilities, capacities, strengths, and power, as the men is bestowed. Nowadays Women are performing multiple tasks simultaneously. They are handling household work, their children, their professional life as well as they are also contributing allot towards our country. Although maximum of the men are also multitaskers and multitalented as they believe there should be no division of work on the name of their gender. But still we can see a large number of men are still stocked in the thinking that their work is only to handle their professional life. It's the reason that compels us to talk about women empowerment. Because this thinking leads to gender inequality, domestic violence, Abusive behaviour towards women, social evils, stereotype thinking and prejudice. If we talk about the era of deities, we can see the women holding a great position of power, respect, knowledge and strength. But gradually, the role of women started deteriorating in our society. In Vedic age itself, we can see the prevalent gender inequality, when there is no right to education to women. They were denied to have education from the gurus. They didn't get admission in the Ashrams. So the tradition of gender inequality or discrimination against women had started from the ancient era.

If we step into next era, there were different rules for men and women, like sati pratha, where the women had to burn herself to death on the funeral of her husband. And in some societies, there were a tradition, where women have to shave her head after the death of her husband. So these were the rules that were made only for women, that is the key reason of gender inequality and girl feticide. Because due to these traditions, parents got scared to give birth to their girl child as they didn't wanted that their girl child would suffer due to these social evils. Dowry system is also one of the significant reasons of gender inequality and discrimination against women. Dowry system commenced, when our rich Indian rulers started to give gifts to their son-in-law on the occasion of their daughter's marriage. But gradually this tradition of giving gifts on the marriage became a curse for the people who were still struggling to fulfill their basic needs. So they started to treat their girl child as a burden and they used to kill her in the womb of her mother. So discrimination against women is not a new issue. It has its foundation in ancient era and knowledge is the only key that can help us to overcome this issue. But if we talk about India, now it's becoming the knowledge enriched society, literacy rate is also increasing and now there is a great awareness among people regarding the rights of women. But even then, we need to talk about women empowerment because only decreasing the rate of girl feticide or increasing women literacy are not the sign of gender equality but there are many grounds on which our society rates the women.

Our society always underestimates the women capacities that lower their self confidence and self esteem. Women have the great role to play for our nation as she can imbibe cultural values and build strong character of the children. It is well known saying that if you educate a man, you educate an individual. But if you educate a woman, you educate a nation. Similarly if we channelize women abilities properly and give opportunities for nourishing her talents, we can develop and strengthen our nation.

Women Empowerment In India

Women empowerment doesn't only limit to stop the female feticide or to end the dowry system. But it has a broad meaning. Women empowerment means to uplift the women in all aspects be it is social, economic, political, professional or domestic. Women empowerment means to end up gender stereotyping and treating everyone as a human. In India there is generally one notion among people about women empowerment, they think women empowerment only means to educate the girl child and to stop female feticide. So basically there are three categories of families in India in relation to the awareness of gender empowerment:

a. The families who still believe that there is no need to teach girl child as they have to marry and leave their homes. So they deprive them from education which becomes the reason of their deteriorating position in the society. These category of families are orthodox and they believe that, women should not raise their voice and do whatever told by their elders or husbands.
b. The second category belongs to those people, who believe educating their girl child means women empowerment whereas at home they are still denied of the various opportunities on the ground of their gender. So these category of families need to understand that only education the girl child doesn't lead to women empowerment but they should be treated as the male child of the family. They should be given the opportunity to put their points before their family .They should be given equal freedom to make their decisions and they should be given equal chance to help their family economically.
c. And third category belongs to the family, who understands the real concept of women empowerment. And these types of families are often criticized by our Indian society as they give open space to the women to nourish their talents. And these families are very less in number.

In present times, if we talk about women empowerment in India, the scenario is very much changed nowadays. Because now women know their rights, the media and other nongovernmental organizations are spreading awareness regarding women rights and they are also supporting the women. And most of the women are working nowadays; they are handling their professional life and household chores smoothly. But even then there are certain regions in our country that have still stenotype thinking about women, who still think that the women only work is to handle their household work, who still consider them inferior and who still don't consider women decisions important. There is a great need to uplift women economically, socially, politically and emotionally. We need to change our perspective and stop looking humans into fragments, treating everyone as a human is the only way to achieve the women empowerment in India.

Women Empowerment And Social Development

Women empowerment and social development are interconnected with each other. No society can develop without the contribution and participation of women. Many scholars believed that if we want to judge the progress or worth of a society, look at the progress and status of their women. Only well empowered women can make the well empowered society. When we uplift women and provide them equal roles in every sphere, they can create a conducive environment in society. As we know that what we sow, so shall we reap , if we give the opportunities to women that they deserve, i believe they can give more healthy outputs , they can preserve the social values if the society and thus can transform it to the next generation. Only the well empowered women can raise the voice against social evils and can critically evaluate the social processes.

Challenges Coming In The Way Of Women Empowerment

1. Resistance to accept the women as superior.
2. Stereotype thinking and prejudice against women is also one of the important challenges in the way of women empowerment.
3. The psychology of the society is the biggest hindrance in the way of women empowerment.
4. Sexual harassment is also the challenge that compels parents to restrict their female child.
5. Labeling the works on the basis of gender.
6. Narrow minded thinking of the society creates a bridge on the way of women empowerment.
7. Underestimating the role of women is the also the biggest challenge in the upliftment of women.
8. Resistance to appreciate the women roles in society.
9. Lack of skill education for women is also the hindrance in the way of women empowerment.
10. Looking humans into fragmenents is also the cause that restricts the women empowerment.

Suggestions

1. We should consider household works as life skills and not to label the household work on the basis of gender.
2. We should not only try to build character and values among women but we should also focus to build these values among men, so that the fear of sexual harrasment doesn't restrict the female child freedom.
3. We should perceive every human as a human; we should not see the humans into fragments. This will also change our stereotype thinking related to women.
4. Start empowering the women from your home itself doesn't wait for others to take a step.
5. Understanding the fact that women also share the equal burden as men shares.

6. Don't restrict the women thinking, their voices. Even from the childhood, teach your female child to speak and to raise their voice when it's necessary.
7. Don't hesitate to appreciate the women and to listen to their voice.
8. Providing skill and technical education to women.
9. Welcoming the economic participation of women.
10. Don't validate her on the basis of their colour or background.
11. Try to aware people about gender issues and about the importance of women empowerment

Conclusion

In nutshell, we can say that the women empowerment doesn't only refer to educating the girl child but it's a broad term with a broad meaning. It means treating them in the way that they don't need to feel about their empowerment. It means to respect their decisions, to give them equal opportunities, to enhance their skills and to involve their participation in every sphere. In India, women empowerment can be seen differently on the basis of various factors like geographical factors, socio-economic factors, and cultural factors and so on. In India, every region is on the different ladder on the way of women empowerment. India is a developing country and is trying to overcome from various problems. So if we talk about women empowerment, India is still struggling to overcome from the challenges of women empowerment. There is the need of some time to achieve the complete goal of women empowerment. There is the need to change the attitude of people regarding women empowerment because women empowerment is the only way which can lead our country to greater heights.

References

1. *Sethuraman, Kavita. (2008) . The role of women's empowerment & domestic violence in child growth and undernutrition in a tribal & rural community in south India, United Nations University: world institute for development economics research, Research paper no. 2018/15.*
2. *Nayak, P. , & Mahanta,B.(2009) . Women empowerment in India, Article in SSRN electronic journal - February 2009*
3. *Amphora, A.,J.,Patel, P. & Petesch, P. (2009).Innovation for women empowerment & gender equality, The international culture for research on women*
4. *Duflo E. (2011) Women's Empowerment and Economic Development, National Bureau of Economic Research, Cambridge.*
5. *Goswami, L. (2013). Education for Women Empowerment. ABHIBYAKTI: Annual Journal, 1, 17-18.*
6. *Suguna, M., (2011). Education and Women Empowerment in India. ZENITH: International Journal of Multidisciplinary Research, 1(8), 19-21.*

Impact of COVID 19 On E Commerce in India

Dr. C. S. Kale
Asst. Professor, CSIBER Kolhapur

Abstract:
The Indian E commerce has been one of the biggest beneficiaries of the pandemic, Many Indians were introduced to online shopping during the pandemic for the first time and found it to be convenient. Large number of users and increasing use of broadband spread the e commerce activities to smaller towns and villages. This paper studies about how Covid 19 impacted e-commerce business and discusses some of the strategies adopted by e commerce players. Trends observed in e commerce are also discussed The paper is based on secondary data. The articles in journals and business magazine are referred to study the im-pact of Covid 19 on E Commerce.

Key words: *E Commerce, non-contact format, first time users, Unified Commerce, Digital transactions*

Introduction:

The worldwide spread of the COVID-19 pandemic has disrupted how people buy products and services and how they perceive e-commerce. The standardized lockdown rules across India and the growing hesitation among consumers to go outside and shop for essential goods have tilted the nation towards e-commerce.

Consumers have switched from shops, supermarkets, and shopping malls to online portals for the purchase of products, ranging from basic commodities to branded goods. Work from home increased the demand for laptops, headphones, furniture consumer electronics items etc. there was a rise in the demand for personal grooming products , masks, sanitizers etc. Learning from home was the trend this year for school and college students. The e commerce companies had the initial problem in completing the deliveries in the initial lockdown as transportation and men movement stopped. The challenges which the pandemic brought to life for various companies and service providers were majorly those of manpower as people were back home, transportation as making products available across borders became a problem, cost which skyrocketed during this time and supply chain..Apart from posing challenges, Covid-19 was as a blessing for many platforms as it resonated the message of 'Digital is the way to go', promoted contextual buying and helped create more content as demand grew manifolds.Digital wallets (40 per cent) followed by credit cards (15 per cent) and debit cards (15 per cent) were the most popular payment methods online in 2020. E Commerce capability is no longer limited to just traditional websites, and physical retail has blended with the digital world. The shop floor is now in the palm of our hands and consumers expect the same hassle free and convenient shopping experience whether they are purchasing in app, through their social feeds or in the real world. The Indian E commerce has been one of the biggest beneficiaries of the pandemic, Many Indians were introduced to online shopping during the pandemic for the first time and found it be convenient. Large number of users and increasing use of broadband spread the e commerce activities to smaller towns and villages.

Trends in E commerce: The trends in e commerce observed during the lockdown are discussed below

64% were first time shoppers: Among all the new users on its platform about 64% were first time shoppers and completely new to e commerce platform.

Online commerce in India are expected to touch $200 billion by 2026 Amazingly, the performance of the ecommerce industry surpassed all expectations. Red Seer in its report said the gross ecommerce sale starting from mid-October till November 2020, touched $8.3 billion as compared to $5 billion in 2019. It had earlier estimated that the festive season would bring in $7 billion in gross sales. In a similar vein, Unicommerce, an ecommerce focused SaaS company, said the industry had reported 56 percent growth in order volume as compared to the festive season last year. The increasing order volume also led to a 50 percent growth in gross merchandise value (GMV), as compared to last year's festive season.

China is the largest e-commerce market in the world, with a value of around $672 billion. According to IBEF, the market opportunities for online commerce in India are expected to touch $200 billion by 2026 from $30 billion in 2017. The report also states that the Indian e-commerce industry is expected to overtake its US counterpart to become the second-largest market for e-commerce in the world by 2034.

Boost from Tier-II cities and beyond: The festive season also saw increased participation from consumers belonging to Tier-II cities and beyond, a view shared by many observers across the industry. Flipkart, at the conclusion of this year's festive season sale, said the company recorded over 666 million visits during the Big Billion Days sale, and 52 percent of these were from the Tier-III cities and beyond. Even RedSeer Consulting noted that the festive season for this year saw 88 percent customer growth from last year, driven by about 40 million shoppers from Tier-II+ cities.

Emergence of Direct to Consumer (D2C) brands: This trend shows that smaller companies with its own range of products do not depend on large online marketplaces anymore for reach or access to customers. By Smart positioning of products along with innovative marketing campaigns the organizations are able to build their own customer base

Use of voice assistant and vernacular interface in multiple languages to assist online buyers: Flipkart witnessed the growth of 50% soon after the lock down with Tier 3 region and beyond registering 65% growth during the unlock period of June to Sept 2020. Flipkart had the voice assistant and vernacular interface in multiple languages to help the customers during buying online. Flipkart app is now accessible in six major languages: English, Hindi, Marathi, Tamil, Telugu and Kannada.

Tying up with local grocery stores : Online delivery platforms such as Jiomart, Swiggy and Zomato were able to meet consumer demands at a faster pace by making hyperlocal deliveries after tying up with local grocery stores.

Need for use of newer technologies and non contact formats :

There is a structural shift in the shopping behavior with increasing reliance on e commerce platforms. The outbreak has necessitated the need for use of newer technologies and non contact formats. There is a need for social distancing and safety of the customers which has made the consumers to look to e commerce platform.

Sudden shift towards health, hygiene and wellness products : Consumer habits have always been evolving over the years. Given the infection's threat, part of the transition saw the sudden shift towards health, hygiene and wellness products. Moreover, as market disruptions and uncertainties led to job losses and salary cuts, discretionary spends dropped.

Contactless mode of digital transactions ; Restrictions and social distancing norms meant buying from brick-and-mortar outlets was not possible or safe, the contactless mode of digital transactions offered a safe way to purchase daily essentials and other items

Direct Deliveries and Consumer Satisfaction;

The supply chain problems during COVID-19 have prompted many companies to deploy new-age channels. New alliances are also being formed in ensuring last-mile delivery, which was a major barrier during the nationwide lockdown in March-April-May2019. They have expanded delivery footprints into rural regions, which has seen a rise in online orders.The experience of zero-touch shopping should be personalized as best possible, taking into consideration the customers' latest preferences, including various digital modes of payment.

BOPIS (Buy Online Pickup In-Store) model. : Customers may continue shopping online, even as physical sales keep rising. These trends will lead to the BOPIS (buy online pickup in-store) model.

D**eploying AI, machine learning and other digital tools.** For driving greater customer satisfaction, companies have been deploying AI, machine learning. Many brands have now created their portals for joining the revolution**.** Direct interactions with online customers help them in creating a repository of customer data

Use of unified commerce : Unified Commerce is used to give customers a consistent & real-time view of data about products, pricing, and availability. A unified commerce approach is about creating a harmony between important customer touch points by syncing the sales channels and consolidating the backend operations, A customer today is very specific in terms of her/his requirements and looks for a fulfilling shopping experience. They also expect their favorite brands to offer a frictionless experience, allowing them to see the products and fulfil purchases across channels.

Apart from Ease of Product Discovery, Availability of Product and wider assortment, customers in the current situation will also seek deeper Product information and Contactless buying options that includes contactless discovery, flexible payment and flexible delivery as well.

Hence, retailers and brands need to evolve in terms of revamping how customers interact with the stores and how engagement tactics with customers need to change. Technology needs to play a crucial role here. The decisive factor in choosing a solution lies in how close the new innovation is to the already existing seamless experience that customers expect from the brand. The experience needs to be consistent whether the customer is at the store or at home. The various phases of retail including Product discovery, payment, customer interaction and delivery needs to be built on the convenience factor that provides multiple options to customers. Deeper product information, real-time tracking of product availability, flexibility in payment and delivery options will be the key game changers. Not only will these innovations help in greater customer engagement, it will also help in stabilizing the growth and boost sales for brands as it will involve smart optimization of inventory across various stock points including physical stores.

Strategies for E commerce Business Today:

- Offer niche products that aren't available on other online platforms
- There has to be an established inventory blueprint to cope up with the sudden increase in the demand for products and services in the country.
- All online payment methods to be made available.
- About 60% of e-commerce orders in India are processed through cash-on-delivery payments. Customer today prefers to pay only on arrival of the goods ordered at the destination.
- With the help of an AI engine, e-commerce businesses can identify and profile risky orders with ease . There is a increase in impulse purchases and unexpectedly large number of cancelled orders. It has to be minimized to increase the profits. It will increase the expenses and cost and reduce the profits. .

Opinion about E commerce from experts :

- Shauravi Malik, Co-founder, Slurrp Farm commented that "What we would have wanted to do in a decade, **happened in a span of almost 6 months**. E-commerce which was earlier associated with young, disruptive and innovative brands has now become a major focus area for MNC's and other big companies.
- Mansi Zaveri, Founder, Kids Stop Pess Media said , "Very **crucial pillars** determining how the consumer will buy would be in form of a triangle with **trust** at its epicenter and its three vertices being **community, connect, creation and convenience**. Coupled with this, the role of digital and social will have to mirror the sentiment and thought of the consumer in indulge the consumer to buy their product."
- Deep Bajaj, Founder, Sirona Hygiene said , "We saw a lot of new shoppers who came from Tier 2 and Tier 3 cities along with many elderlies and this trend is here to stay. The pandemic also posed newer hygienic requirements for the brand, which led to the **birth of various new products**. Further, cost, transportation, material and labor posed major challenges during the pandemic."
- Chinu Kala- Founder, Rubans said, "For a country like India, with a huge population where people want to see more, dress up more, buy more, the opportunities are large. But the challenge here is to create a niche, to bring in innovation at its best. If you're able to create a niche, India has potential for any segment."
- Aditi Handa -Chef & Director the Baker's Dozen said ,"There is a **huge potential for younger companies** to come together and bring about discoverability for new and small-scale businesses."
- In order to remain agile with what one has learnt as one moves up the ladder Abhinav Jain, Co-Founder & CEO, Almond commented "the process that I follow is fail fast, where we take up a project as a small one and then find out where we fail and how fast we can revamp it up which creates the real balance between the legacy management and the new age agility**. I'd also like to add listening to your customers is key, but listening to your people is the bigger key, which can crack bigger locks"**
- With a rapid pace, ever widening scope for newer ideas and platforms the e-commerce sector in the next couple for years sure to boom
- Kazim Rizvi, Founding Director, The Dialogue told The Sunday Guardian: "E-commerce platforms have realized that they have to shelf all kinds of products on their platforms to serve the needs of the people. The surge in demand and the preference to buy from the online platforms meant **that people will not only be looking for branded products, but also what they expect from local shops or Make in India products**. To do so, e-commerce companies have to ensure that sellers are available on their platforms who can cater to such needs. At the same time, the companies will also have to cater to the people who have the buying capacity and expect branded products."

Despite the economic impact of the Covid-19 pandemic, several Indian start-ups, including Unacademy and Nykaa, crossed the $1 billion mark in valuation and entered into unicorn tag. Vaibhav Lall, Founder, Khojdeal, told The Sunday Guardian: "During the initials days of the nationwide lockdown imposed by the Central Government, e-commerce companies had a tough time ensuring timely deliveries. This had a negative impact on customer loyalty too. Consumers have embraced online ordering for goods, services, and food during the Covid-19 pandemic, and many are unlikely to revert to their old ways. Many late adopters are also discovering the benefits of the online experience for home delivery or in-store pickup options, and may not look back. Over the last 5 years, the Indian e-Commerce industry has witnessed has an upsurge and there is significant headroom for future growth too. This growth will be spurred by an increase in internet usage, smartphone penetration & the pandemic, and will propel **the Gross Merchandise Value (GMV) of the Indian e-commerce industry to grow to $100-120 billion at a CAGR of 30%."**

Future of E Commerce

The future seems both promising and challenging for the Indian ecommerce industry. The year 2021 is likely to see the sector be more watchful about policy pronouncements, especially new ecommerce policies. Also, the industry will try to onboard more small players to enable a deeper reach into the country. Competition is sure to be heightened, The market opportunity is huge and competition is going to be intense for the Indian ecommerce industry.The only winner out of this will be the consumer at the end.

India's e-commerce industry will grow 84 per cent to $111 billion by 2024 as it gains from demand created by the coronavirus pandemic's impact. The 2021 Global Payments Report by Worldpay FIS, a financial technology product and services provider, tracked trends in 41 countries to find that digital commerce accelerated during the pandemic.The report said India's e-commerce market will be driven by mobile shopping, projecting it to grow 21 per cent annually .

Conclusion :

This pandemic seems to be a "blessing" as it bought a lot of positive impact on the e-commerce sector. "Though the initial few weeks of the lockdown were testing for e-commerce players, they were eventually able to emerge as winners. The pandemic brought a lot of positive impact on the e-commerce sector. Many e-commerce players have started assessing consumer preferences and have started aligning product categories and offer accordingly. In the long-term, being highly responsive towards consumer trends will be critical. Organizations have also started adapting their supply chain to ensure adequate supplies are on hand to meet demand along with a "buffer" stock of essential items. E-tailers are also working towards creating a frictionless digital experience for their customers with a focus on innovative and personalized customer engagement strategies,

E-commerce emerged as an ideal solution providing delivery services without compromising social distancing practice. When everything came to a standstill, e-commerce/ virtual shopping ensured continuity in the country's economic operations. Enjoying comprehensive outreach e-commerce can generate demand and likewise contribute to the country's revenue model. Incidentally, this creates the opportunity for distributors, manufacturers, and small sellers. Masses adopted online shopping mode with alacrity, even essential goods saw a fillip in purchase through e-commerce platforms. Customers enjoyed a personalized experience. It highly eliminated the hassle of visiting various shops, reducing the possibilities of contracting the disease

References:

1. *https://yourstory.com/2020/12/indian-ecommerce-industry-triumphs-against-pandemic?utm_pageloadtype=scroll*
2. *Chanana Nisha , Sangeeta, "Future of e-commerce in India", International Journal of Computing & Business Research, ISSN (Online): 2229-6166*
3. *Kajol Taneja Impact of Covid-19 on the E-commerce Industry_ Business world*
4. *Pandemic will lead to rise in e-commerce, digital payments'- Sushmia Panda Sunday Guardian Jan 9 2021*
5. *Srivastava, S, Barmola, Kailash. (2010). The Role of Consumer Behavior in Present Marketing Management Scenario. Pp. 105-116.*
6. *Thimmaya Poojary, Indian Ecommerce Industry triumphs against the odds in a pandemic 8 Dec 2020*

Trends in Balance Sheet of Fish Processing Industry in Maharashtra

Dr. R. V. Thoke
Assistant Professor in Economics, Athalye -Sapre - Pitre College, Devrukh, Dist- Ratnagiri

Abstract

This paper aims to study trends in balance sheet of fish processing industry in Maharashtra state. components of total assets such as current investment, inventories, trade receivables, cash and bank balance, short-term loans, fixed tangible assets, fixed intangible assets, non-current investments, deferred tax assets (Net), long term loans and advances components of total liabilities like short term borrowings, long term borrowings, trade payables, Short term provision, etc. are studied. Also attempt has been made to explain the profile of fish processing industry such as the various types of units, year of establishment, location of units, suppliers of raw material, and type of fish products. Problems like Inadequate raw material supply, Lower utilization of Production capacity, Low efficiency of labour, etc. are found to be major ones.

Key words: *Total Assets, Total Liabilities, Fish processing, etc.*

Trends in Balance Sheet Of Fish Processing Industry In Maharashtra

Introduction

Maharashtra has 720 Km. long coastal line along with the Arabian sea. However there are only 48 EU approved fish processing units in Maharashtra. (EIA) Out of them, 16 units were closed due to various problems related to finance, raw material, marketing etc. To utilize marine resources at optimum level, there is need to establish more units so that fisheries products could be exported after processing. Processed fisheries products like agriculture products, last long period as well as could receive good prices.

Importance of the study

Substantial research about social and economic aspects has not been done compared to the fundamental research in fisheries. Social scientists have not paid attention, particularly, towards modern fish processing units. The industrial sector in India assimilates with various problems regarding production, marketing, infrastructure facilities, finance, competition, etc. The fish processing industry is an important part of India's industrial sector. This industry, also, continues various problems. This study has made for the sake of seeking some suggestions which would become assistive in the future for the progress of the fish processing industry and thereby the betterment of fishermen as well as people living in the coastal part of Maharashtra, especially, Konkan region.

Objectives of the study

Following are the objectives of this study

1. To study the overall fish processing industry in Maharashtra.
2. To find out trends in assets and liabilities of fish processing Industry
3. To find out the problems faced by fish processing Industry.
4. To suggest measures for progress of fish processing industry.

Hypotheses

The hypotheses of this study are as follows

1. Fish processing industry does not significantly generate direct as well as indirect employment opportunities.
2. Fish processing industry does not play a significant role in India's foreign trade.

Sampling design

Research area for this study was Fish processing units in Maharashtra state. EU approved fish processing units in Maharashtra are very few i.e. 48 (EIA Mumbai), therefore both EU approved and non approved units were selected for the study. In order to draw the sample, a multi stage sampling technique was used. At the first stage, Maharashtra state was selected which has most of the processing units within five districts. i.e. Mumbai,Thane, Raigad, Ratnagiri and Sindhudurg. Therefore at the second stage, these five districts were selected. At the third stage (32 EU units and 16 non EU units) 48 units were selected randomly for sample.

Data sources

The present study is based on both primary and secondary data. Survey and Interview methods was used to collect primary data. Secondary data was collected from various sources, such as books, journals and reports of various government departments and research centres.

Methods of data analysis

For the analysis of the quantitative data collected through the interview, various statistical tools such as Percentage, Range, Mean, were used. ANOVA and F test were applied for testing the various hypothesis. The Garrett ranking technique was used to identify the major problems of fish processing units.

Profile of units in the study area

1. Out of 48 sample units, 34 were freezing and cold storage plants, 5 were surimi plants and 9 were value added product plants.
2. Only after 1960, modern fish processing industry has been developed in India. almost 67 % of sample units were established after 1991. this is because of globalisation, fishery industry has got free access into foreign markets.

3. Marine fish processing units are located only in the coastal districts of Maharashtra.
4. 23 units purchased fish from fisherman by taking part in auctions at nearby landing centres, 20 units from traders and only 5 units have their own farm land.
5. About 49 varieties of fish are found in the sea-water of the State. Fish units are producing both ordinary and value added products such as Frozen shrimp - 41%, Cuttlefish - 45%, Frozen squids, octopus, Frozen fish - 79%, dried fish, surimi and Ready to eat products -28 %.

Analysis of balance sheet

Balance sheet is a statement that consists of assets and liabilities, which reflects the financial soundness of a business concern at a given date (Periasamy P., 2009 p.7)

Share Capital and Reserve funds

Mean of Authorized share capital in terms of value was Rs.5 Crore. Mean of Paid up capital in terms of value was Rs.4 crore. 11 units had negative reserves with an average of Rs.-15 crore, while 37 units had positive reserves with an average of Rs.32 crore,

Total Liabilities and assets

The analysis of total liabilities of units shows that short term borrowings are the dominant and constitute the maximum share i.e. 34.08 per cent of the total liabilities. The other components like trade payables, Short term provisions are found a minor component of the total liabilities. In all together short term liabilities constitute 85.21 per cent, whereas long term constitute 14.79 per cent of the total liabilities.

One way ANOVA was used to describe the relationship between type of units and their total liability. The average of total liability of surumi plants was Rs.130 crore whereas it was Rs.124 crore of value added product plants. It was observed to be no significant difference in the total liabilities of Freezing plants, surumi plants and value added product plants. Type of units does not influence their total liabilities.

The analysis of total assets of units shows that inventories and Trade receivables constitute the maximum share 20.93 and 22.53 per cent of the total assets respectively. The other components i.e.Cash, bank balance and other current asset are found a minor component of the total assets.

In all together, short term assets constitute 55.20 per cent, whereas long term assets constitute 44.80 per cent of the total assets.

Total assets of all units ranges from Rs.25 lacs to Rs. 876 crore. It was found to be significant difference in the total assets of Freezing plants, surumi plants and value added product plants. Surimi plants and value added product plants had more assets than Freezing plants.

Problems of fish processing units

Among the all problems of fish processing units, Inadequate raw material supply has a highest Garrett mean score 56.23. which means 56.23 per cent fish processing units were facing this problem in the study area. As supply of raw-material is less than demand for it, prices of raw material is showing increasing trend. Next 55.90 per cent of units were facing the problem of lower utilization of Production capacity. 52.85 per cent units had the problem of low efficiency of labour. 47.42 per cent of units could not procure loans adequately. 45.69 and 44.33 per cent of units were facing the problem of high competition in foreign market and low quality of products respectively. Small firms can not purchase and use of modern machineries in production activities. Therefore they can not produce high quality products. Low quality products have low demand in the markets. Only 33.17 per cent units said that they are affected by tariff and Non-Tariff barriers imposed by buyer country.

Recommendations for improving and strengthening of marine Fish processing industry

1. There should be coordination between, Department of Agriculture of the Union Government, Fishery department of state Government and other public organizations.
2. The raw material base could be widened through exploitation of deep sea resources, Mari culture, utilisation of brackish water aquaculture resources to minimize the gap between actual fish production and potential of production.
3. There is need to strengthen State Departments to collect reliable data of marine fishery resources for effective management and policy making.
4. Marine Fishermen Cooperatives should be strengthen by providing adequate technical and financial support for their efficiency improvement.
5. Utilization of deep sea resources to develop new value added fish products should be encouraged.
6. There should be restriction free import of raw material and machineries for fish industry.

References

1. CSO, Manual on fishery statistics (MFS) 2011, Government of India Ministry of Statistics and Programme Implementation.
2. Department of Animal Husbandry, Dairying and Fisheries (DAHDF),Ministry of Agriculture, Government of India, Handbook On fisheries Statistics 2014.
3. EIA Mumbai, List of EU approved Fish & Fishery Products units. h**ttp://eicindia.gov.in/eicold/eic/units/fish-eu-mumbai.htmh**
4. Marine Fisheries census 2010, Part I, India, Central Marine Fisheries Research Institute (CMFRI).

5. **The Associated Chambers of Commerce & Industry of India***(ASSOCHAM), study on 'Fisheries in India: Potential & prospects'.*
6. Industrial State Profile of Maharashtra – 2016-17, MSME development institute, Mumbai, Ministry of MSME, Government of India
7. Economic Survey of Maharashtra 2017-18
8. State of Environment Report Maharashtra (Final Draft), Indira Gandhi Institute of Development Research, Mumbai
9. Website :*www.moef.nic.in/soer/state/SoE%20report%20of%20Maharashtra.pdf*
10. Fish production report 2017-18, Part – I, Maharashtra state fishery department.
11. Periasamy P., (2009), "Financial Management", Second Edition, The McGraw-Hill Education Private Limited, New Delhi.

'Journal of Research & Development'
A Multidisciplinary International Level Referred and Peer Reviewed Journal, Impact Factor 5.13, ISSN: 2230-9578, April-2021, Volume-11, Issue-8 "Recent Trends in Social Sciences"

Rural Development through SGSY in Sindhudurg District

Prof. B. H. Chaugule
S. K. Patil Sindhudurg College, Malvan

Abstract:
Rural Development is the development of rural poor. Rural poor means below poverty line people especially from SC, ST, Farmers, Landless labour, Laborer Artisan, etc. category residing in rural area. The Government of India has launched various rural development schemes before and after independence period. These schemes have contributed rural development process by and large. These schemes includes employment generation schemes, poverty alleviation schemes, agricultural schemes, entrepreneurship schemes, supply of food grain, medical & health facilities & fulfillment of basic minimum needs of rural poor people. Implementation of these schemes is a hard task & needs continuous and joint efforts by the government, NGOs, Banks, & beneficiaries of the schemes. Further above mentioned agencies are facing numerous problems & challenges. This research paper is an attempt to highlight these problems & challenges.

Introduction:

International Labour Organization (ILO-1978) has defined "It is a strategy designed to improve the Economic & Social Life of a specific group of people-the rural poor. It involves extending the benefits of development to the poorest among those who seek a livelihood in the rural area." **Today, Inclusive rural development is more specific concept than the concept of rural development of earlier. In broader terms, inclusive rural development is about improving the quality of life of all rural people. More specifically, inclusive rural development covers three different but interrelated dimensions: Economic dimension, Social dimension & Political dimension. Economic dimension** refers to providing both capacity and opportunities for the poor and low-income households in particular, benefit from the economic growth. **Social dimension** supports social development of poor and low-income households, promotes gender equality and women's empowerment and provides social safety nets for vulnerable groups. **Political dimension** improves the opportunities for the poor and low income people in rural areas to effectively and equally participate the political processes at the village level.

Swarnjayanti Gram Swarojgar Yojana (SGSY) –

The SGSY Launched on 1^{st} April 1999 after restructuring IRDP & other 6 Rural Development Programs including TRYSEM, DWCRA, SITRA, GKY & MWS.The objective of SGSY is to bring the assisted poor families (Swarojgaries) above poverty line by providing them income generating assets through a mix of Bank Credit & Government Subsidy. The program aims at establishing a larger number of micro enterprises in Rural Area based on the ability of the poor & potential of each area.

Objectives of the study: The following are objectives of this research.

1. To understand Socio-Economic background the SGSY Beneficiaries.
2. To study the Employment & Income generated by the SGSY Projects.
3. To study the Government officers procedure of implementation of the SGSY Projects.

Data Collection:

Primary Data:

Primary data includes data regarding Socio-economic background employment & Income generated by SGSY Beneficiaries collected through Questionnaires.

Secondary Data: The Secondary data is used for this research work and is collected from Reference books, Research articles & Internet.

Sample Design

Sr. No.	Name of Taluka/ Block	Total Beneficiaries	No. of Sample Beneficiaries	Block Wise Sample Percentage	Proportionate Sample Size
1	Vaibhavwadi	198	42	28.38	10.00
2	Kankavli	220	48	21.81	11.43
3	Devgad	310	74	23.87	17.62
4	Malvan	415	94	22.65	22.38
5	Kudal	247	40	16.19	9.52
6	Sawantwadi	256	47	18.36	11.20
7	Vengurla	351	50	14.25	11.90
8	Dodamarg	189	25	13.23	5.95
	Total	**2186**	**420**	**19.21**	**100**

II. Implementation of SGSY in Sindhudurg District:

Sr. No.	Particulars	Percentage
1.	Selection of Beneficiaries on Cast Criteria General Category Reserve Category	 65.95 % 34.04 %
2.	Selection of Beneficiaries on Gender Criteria Male Female	 4.52 % 95.47 %
3.	Selection of Beneficiaries on Age Criteria Young Adult	 7.61 % 79.04 %
4.	Selection of Beneficiaries on Occupation Criteria Farmer Labour Artisan	 61.19 % 18.83 % 1.42 %
5.	Selection of Beneficiaries on Income Criteria Low Income Middle Income	 67.14 % 27.14 %
6.	Employment Generated Self-Employment Workers Employment	 100 % 23.81 %
7.	Way of Selection of Beneficiaries Personal Relation Income Survey Cast	 34.76 % 23.80 % 1.90 %
8.	Guidance from Government Officers Yes No	 83.57 % 16.42 %
9.	Feedback by Government Agencies Yes No	 68.33 % 31.67 %
10.	Loan Disbursement by Banks Up to 3 Months Up to 6 Months Up to 1 Year	 66.19 % 21.19 % 6.19 %
11.	Income Improvement Low Income Group (Up to Rs. 25,000) Middle Income Group (Rs. 25001 to 50,000)	 26.19 % 45.48 %

III. Conclusions of Study:

1. **Identification of Beneficiaries** - Age & Gender Criteria is followed but cast & occupation criteria is not followed while identification of SGSY beneficiaries in Sindhudurg District
2. **Government Officers Procedure –** The Supervision, Guidance, Feedback & co-operation by Government officers in implementing SGSY in Sindhudurg District is good.
3. **Role of Banking Agencies –** In some cases Banks have delayed disbursement **of** loan amount to SGSY beneficiaries.
4. **Employment & Income Generation –** The SGSY has generated self-employment as well as employment for external people. It has also improve income of low & middle income SGSY beneficiaries.

Overall Conclusion: Apart from strengthening the agricultural sector, rural entrepreneurship plays a vital role in the economic development of India, particularly in the rural economy. It helps in generating employment opportunities in the rural areas with low capital, raising the real income of the people, contributing in reducing disguised unemployment, under employment, unemployment, poverty, migration and economic disparity. Government should go for appraisal of various rural development schemes and programmes in order to uplift rural areas. Rural entrepreneurship finds it difficult to take off is due to lack of capital accumulation, risk taking and innovation. Monitoring rural development programmes by supplying right information at the right time, providing timely and adequate credit and continuous motivation by the Government, bankers, Village Panchayat and NGOs will lead to the development of rural entrepreneurship and in turn rural development.

References:

1) International Labour Organization, Human Resource Development, Objective problems & Policies, Geneva, P. 56, 1968.
2) Mahi Pal: 'Swarnjayanti Gram Swarojgar Yojana (SGSY)', Evolution, Assessment & Future Prospects, Kurukshetra, June 2002, P. 29.

An overview of Open Access e-Resources: An academic Perspective

***Sanjay Deoram Mahajan*[1] *Sambaji Pundalik Vyalij*[2]**
[1]*Librarian, Mahatma Gandhi Vidyamandir's, Arts, Science and Commerce College, Surgana Dist. Nashik*
[2]*Librarian, Mahatma Gandhi Vidyamandir's, Loknete Vyankatrao Hiray Mahavidyalay Panchvati, Nashik*

Abstract:

Information explosion and advancement in Information and communication technology has brought changes in various sector and library is not an exception. However, many library professionals are coming up new ideas and trying to deploy innovative tools to attract the users and provided information as per user interest. This paper presents an overview of open access e-resources in India like Repositories, Open access journal, etc.

Keywords: *Open access, e-resources, DOAJ, e-journal, e-book*

Introduction:

Internet and its endless possibilities for information processing and distribution been acting as catalyst for the development of the open access initiatives. Paul Ginsparg started the first free scientific online archive for physicists. During 1998 American scientists open access forum was launched, but really gained momentum in 2001. First global OA initiative was in 2002 at Budapest and during 2003 the Berlin Declaration on Open Access to discovery and knowledge in the Sciences and Humanities was published. Open access means something that is free. However, it is not only free but available online and in an unrestricted manner. Open access scholarly communication process is changing, open access is clearly beginning to impact traditional publishing models but the issues like quality assurance and peer review, copyright, plagiarism, time constraints, undermining of tried and tested system status of open archive publications have been the concern of academics to the adoption of OA. Many of the open access e-resources are scholarly journals that are available on internet to the user without financial, legal or technical barriers. This paper is discussed about some open access resources as e-journal, e-books, e-databases etc. which are available online for free.

Review of Literature:

Surendar kumar sahu (2013) studied their paper about open access practices in India. Stanton and liew (2012) studied awareness of open access and the concept of institutional repository, publishing behavior and perceptions of benefit and risks of open access publishing were explored. S. Baskaran (2013) discussed about open access resources available on internet. Ajay Kumar (2011) studies and stated that in his paper that internet promoted the revolutionary movement to free access to scholarly journals. He has highlighted some open access journal in the area of geography.

Objective of the Study:

To identify the various types of Resources
To know the Open Access E-resources
To create awareness to use of Open access e-resources

Some Open Access E- Resources

- **National Digital Library (NDL):** is a pilot undertaking to build up a structure of virtual store of learning assets with a solitary window search feature. It incorporates Educational materials going from essential to post-graguate level. To make accessible to the students' community learning assets through a solitary window, National Mission on Education through Information and Communication Technology (NMEICT) has supported the National Digital Library of India (NDLI) project and orchestrated financing through Ministry of Education.
- **e-PG Pathashala:** National Mission on Education through ICT and UGC activity: An educational program based, intelligent substance in various subjects across all orders is being created under this activity.
- **e-Adhyayan (e-books)**: e-Adhyayan is a stage to give 700+ e- books to the Post-Graduate Courses. All the e-books are gotten from e-PG Pathshala courses.
- **UGC MOOCs (Online Courses):** (University Grant Commission): UGC-MOOCs is one of vertical to create seminar on Post Graduate subjects in SWAYAM (Online Courses, A MHRD activities). UGC is one of the National organizer of SWAYAM and INFLIBNET is technical partner for UGC-MOOCs.
- **e-Pathya (Offline Access**): e-Pathya is one the verticals of e-PG Pathshala which is software driven course/content bundle that encourages understudies seeking after advanced education (PG level) in distance learning just as campus learning mode

- **CEC advanced media library:** It is central archive (repository) of all instructive video programs created by EMRC centers.
- **NPTEL (National programmer on Technology Enhanced Learning):** Provides E-learning through online web and video courses for stream of Engineering, Science and Humanities.
- **Swayam:** This is a programme started by Government of India. The objective of this exertion is to take the best showing learning assets to all. This stage gives every one of the courses, instructed in homerooms from ninth class till post-graduation and it is gotten to by anybody, anyplace whenever.
- **DOAJ (Directory of Open Access Journals)** under this initiatives user can accesses Free, full text, quality controlled scientific and scholarly journals, covering numerous subjects and many languages.
- **NISCAIR Online Periodicals Repository:** User can get to full content articles from research journals published by CSIR-NISCAIR! Full text access is accommodated nineteen Research journal under this project.
- **Journal of Ayurveda and Integrative Medicine (J-AIM):** J-AIM is an open-access, peer reviewed journal published together by The Institute of Trans-Disciplinary Health Sciences and Technology (TDU) and The World Ayurveda Foundation (WAF), and published on Elsevier. It provides trans-disciplinary platform for publishing on integrative health sciences. J-AIM publishes articles that investigate and explore the relationship between Ayurveda, biomedicine, science and other contemporary normal and sociologies. All compositions added to J-AIM are assessed by master analysts for inventiveness and development. This journal is published quarterly and accessible in both print and electronic arrangements.
- **PLOS:** Public Library of Science is a not-for-profit open access scientific publishing project pointed toward making a library of open-access journal of medication and so forth field.
- **Open Access Library (OALIB):** Open Access Library provides academic research papers. under this initiative more than 263,388 papers are freely available presently in digital format.
- **Google Scholar**: Google Scholar is an uninhibitedly search engine that indexes the full text metadata of insightful writing across variety of publishing format and disciplines.
- **Online library and publication platform:** OAPEN advances and supports the progress to open access for scholastic books by providing open framework administrations to stakeholders in academic correspondence. publisher to construct a quality-controlled collection of open access resource and provide services for publishers, libraries and researchers in the areas of deposit, hosting dissemination and digital preservation.
- **Internet Archive:** Internet Archive is a non-benefit library of millions of free books, motion pictures, programming, software's, music, websites and more resources are available in this initiative.
- **Project Gutenberg:** Project Gutenberg Choose among free e-publication and Kindle e-Books, download them or read them on the web. user will brows the world's good literature here, with center around more established works for which U.S. copyright has expired. A large number of volunteers digitized and constantly edit the eBooks under this project.
- **Springer Nature:** Springer nature publishes open access (OA) books and Chapter under its Springer, Palgrave Macmillan and Press imprints. springer assisted with pioneer open access book publishing, first directing open access publication and distribution for books in 2011. Springer distribute open access books across a wide scope of stream in science, technology, medicine, Social Sciences and Humanities.
- **Open Access and Academic Monographs**
- Oxford University Press (OUP): is mission-headed to support the expansive dissemination of top Quality Professional Research. OUP accept that open access (OA) can increase the value of the insightful publishing measure by augmenting discoverability and circulation of research materials online through an unmistakable structure for reuse. This project has a demonstrated history around there fruitful journals open access program started in 2004.
- **Intech Open:** under this initiative Intech open has available 5200+ open access e-book on internet. Users can access this book through their website.
- **MDPI' Books:** In accordance with MDPI's qualities, MDPI Publish all substance in open access, Promoting to the exchange of thoughts, ideas and knowledge in a universalized world. MDPI Books incorporates every one of the advantages of open access—high accessibility, as well as wide and quick dissemination. MDPI Books are published and distributed under the terms and condition of the Creative Commons Attribution

License as a writer (author), user can hold the copyright for their work. In addition, with MDPI Books, author can complement the digital version of your work with a high-quality printed counterpart.

- **Shodhganga:** INFLIBNET (Information and Library Network) Center provides a platform for researcher to submitted their Ph.D. theses and make it accessible to the whole academic communities in full text open access. A repository has archive, capture, index and disseminate ETDs submitted by the researchers.
- **Shodhgangotri:** Researchers/research guide in university and colleges are requested to upload their approved synopsis under project called "ShodhGangotri" by the INFLIBNET. The repository on reveal the trends and directions of research being conducted in Indian universities, on the other hand it would avoid duplication of research.

Summing up:

The web based resources are to contribute to the economy and welfare for user. Open access Scholarly literature, e-journals, e-books are providing highest number of free access to the user across the world. Academic Librarians have a critical role in the in the use an advantages of open access. To aware the students, researchers and faculty by the way of conducting orientation programme, workshop, awareness programme is essential. This paper is one of the try to create awareness among user by this paper as discussed some open access initiatives.

References:

1. *Surendar kumar sahu and satish kumar arya (2013) studied their paper about open access practices in India, Library Hitech News Vol,30 No4 pp6-12*
2. *S. Baskaran and others (2013): Open Access Resources: Indian Perspective; Open access scholarly communication A futuristic Approach, pp 123*
3. *Ajay Kumar S (2011) Open Access Journals in the Field of Geography with Special Reference to DOAJ : L. A. Study Gyankosh The jouranal of Library and information Management 2(2) pp1-14.*
4. *Tamizhchelvan M and Dhanvandan S (2013): Accessing Indian Jouranls through open Access: A study; Open access scholarly communication A futuristic Approach, pp 60*
5. *https://ndl.iitkgp.ac.in/*
6. *http://epgp.inflibnet.ac.in/*
7. *http://cec.nic.in/cec/*
8. *https://nptel.ac.in/*
9. *https://swayam.gov.in/*
10. *https://www.doaj.org/*
11. *http://jaim.in/*
12. *https://plos.org/*
13. *https://en.wikipedia.org/wiki/Google_Scholar*
14. *https://archive.org/*
15. *http://www.gutenberg.org/*
16. *http://lib.unipune.ac.in:8002/*
17. *https://www.springernature.com/gp/open-research/journals-books/books*
18. *https://global.oup.com/academic/open-access/?cc=us&lang=en&*
19. *https://www.intechopen.com/books*
20. *https://www.mdpi.com/books*
21. *https://shodhganga.inflibnet.ac.in/*
22. *https://shodhgangotri.inflibnet.ac.in/*

Economics of Information

Dr. Santosh M. Motegaonkar[1] DR. Shivaji N.Thoke[2]
[1]Assist. Prof. & Hod of Economics department, Abashaheb Garware Arts, Science College, Karve Road Pune.
[2]Assist. Prof. Dept. of Economics, Dr. D.Y.Patil, ACS, College, Thatwade, jeavan, Nagar Pune

Abstract-

This Research paper shows how to use economic theories, statistical and econometric methods for conducting research to find answers to puzzling issues in modern economies. How to test predications of models based on theoretical analysis from optimizing models in micro or macro, finance or business related fields of economics using empirical evidence using basic econometric or statistical or applied general equilibrium or strategic analyses is discussed and illustrated. It is argued that a researcher needs to be more open and comprehensive while thinking about alternative research techniques applicable to analysis of a particular issue under consideration. Aim of this workbook is to complement to the programmer in order to achieve an excellence in research methods required for various fields including economics, finance, business, marketing or management in the academic environment of a Business School. Home-works and assignments are integral part of this study programmer.

Introduction-

Knowledge has many branches and economics is an important and useful branch of knowledge In recent years, the science of economics has assumed greater significance in view of the fact that knowledge of economics is being used for initiating and accelerating growth in the economics of the world and thus for eradicating want, poverty and unemployment from the human race. Besides, the nature of so many other problems such as inflation, food, stagnation and recession population explosion, adverse balance of payments and so on that confront the economics of today cannot be understood and solution for them cannot be provided without the adequate knowledge of the science of economics.

But before we start the study of the principles of modern economics, it will be desirable to explain to the students what economics is about or what we study in economics, or, in other words, what the subject matter of economics is. Every science or a branch of knowledge is concerned with a particular subject. Thus, the science of physics deals with the properties of matter and energy, the science of chemistry deals with the constitution or composition of matter. Political science studies the nature of State and Government In biology we study the constituent and evolution of living organisms. Therefore, the question which a beginner is likely to ask is: "What is the subject matter of economics? Therefore, economists have also tried to define the subject matter of economics.

Theme or idea-

By defining the subject matter of economics they have tried to deliver the scope of economics and to distinguish it from other branches of knowledge Perhaps there is no other science or a Body of knowledge in regard to which there has been such a great controversy about its subject matter or its proper definition as about economics.

J.N. Keynes is night when he says that "Political Economy is said to have strangled itself with definitions. "Economics has been variously defined by different economists from time to time. This is partly because economics is an unfinished science. With the passage of time there have been significant developments in economic theory and new subjects have been included in it. It is still in The process of growth and development. Therefore, the old definitions of economics have become irrelevant.

The definition of a science or a body of knowledge delimits its subject matter that is already in existence. But in a science like economics that is growing and developing its correct and satisfice tory definition can be given only after it has sufficiently developed and grown. Now that the science of economies has sufficiently developed, we can provide an adequate and satisfactory definition of economics after discussing some old famous definitions of economics, we shall give some modern.

Methodology of Economics-

Ecommerce's that is plaice of statistical methods to test economic hypotheses have popularity is these different methods will be explained below the other aspect of the method or techniqueof economic analysis is whether it should be effect nature of static.

Comparative statics or dynamics. These methods along with the concept of tequila rim all are explained in the next chapter Nature of a Scientific Theory a scientific theory sets up a relationship between fates, in other words, it describes cause and effect relationship between vanes variables. The variables with which economists are concert are prices quantities demanded and supplied the money supply, national income, employment wipes, profits, etc. Every theory is based upon a set of assumptions, often called premises or post late.

Methods of Economic Analysis-

After having explained the scientific nature of economic theory we are now in a position to explain in detail how the generalizations in economics are derived and to clearly bring out the nature of economic reasoning. Economic generalizations describe the laws or statements of tendencies in various branches of economies such as production, consumption, exchange and distribution of income. In the view of Robbins, economic generalizations or laws are statements of uniformities which describe human behavior in the allocation of scarce resources between alternative ends. The generalizations of economics like the laws of other sciences, state cause and effect relationships between variables and describe those economic hypotheses which have been found consistent with facts or, in other words, have been found to be true by empirical evidence.

But a distinction may be drawn between a generalization (law) and a theory.

Deductive Method –

Generalizations in economies have been derived in two ways:

(1) Deductive Method.

(2) Indicative Method.

We shall first explain the deductive method of deriving economic generalizations. The deductive method is also called abstract, analytical and a priori method and represents an abstract "approach to the derivation of economic generalizations and theories. to be inquired into defining precisely the technical terms and making appropriate

cap padding that des them t to the of local And the Problem in the way of the drive realizations The next step in the diving memo ration is to define eely and ambits the tem in the analysis as well as rally the one he makes Deductive method, assumes may be behavioral pertaining to the ha Endowment Thermos are made on the basis of derivation of the variables or their technological relating to the state of technology Al that have times that consumers try to maximize and try to me their polis kewpies it is assumed that invest is worthwhile to note that in denying analytically sound hypotheses, one should guard age committing logical fall in the process of logical deduction For instance,

a) Perception of the problem-

It is inappropriate conclude that must be the cause of happens to precede B. Further, it is logically fallacy here the best over problem is by means an easy machine the expected rate of their profess be quite realize the actual economic wale quite complex astral of details in which numerous factors play a part and act and interact one when the introduction of complying assumption is quite necessary in order to bring out importance of really significant factors havinga bearing on the problem under investigations.

b) Definition of terms and making assumption-

Prof. Houlis, economic theory represents just a map of the real world phenomenon Boater picture of it.t expect a map to show every tree, even bind of grass in a landscape, so we should not expect economic analysis to take into account detail and quick of real economies behavior. Therefore, follows that each and every assumed made by a theory may not be relate. The crucial factor in building up a valid theory is whether predictions are corroborated by the facts in the world correct scientific theory or generalization must be expressed in the form of a hypothesis that is conceivably refutable.

As mentioned above Professor Friedman in his now well-known article. "The Methodology of Positive Economics expressed the view that under importance should not be given to the realism of assumption to predict things accurately what matter mast from the viewpoint of scientific theory, according to him, is whether it enables.

c) Deducing hypotheses through logical Deduction.

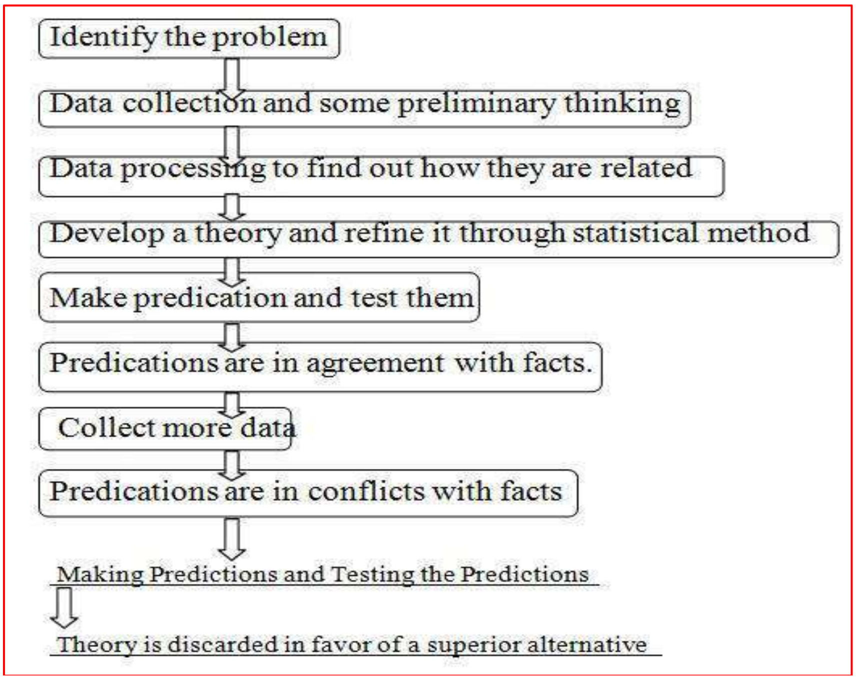
The next step in deriving generalization through deductive lop is deducing hypotheses from the assumptions or premises taken. , through logical process hypothesis is deduced from the assumptions made. This logical reasoning may be carried out verbal or it may be conducted in symbolic terms using the language of what is known as symbolic lope .The geometric or graphic technique is also usually employed to deduce the hypotheses about the relationship between factors besides, the process logical deduction may be done with the help of more formal mathematics.

These days in almost all branches of modem economics, mathematics tool of analysis for deriving economic theories and generalizations is being increasingly used.

The derivation of economic hypotheses more rigorous and exact the analysis more complicated to comprehend. Besides, the use of mathematical method makes the

Followed information of economies theories and generalizations through deductive amassed as given below fig1.

Various Steps in Deductive Method



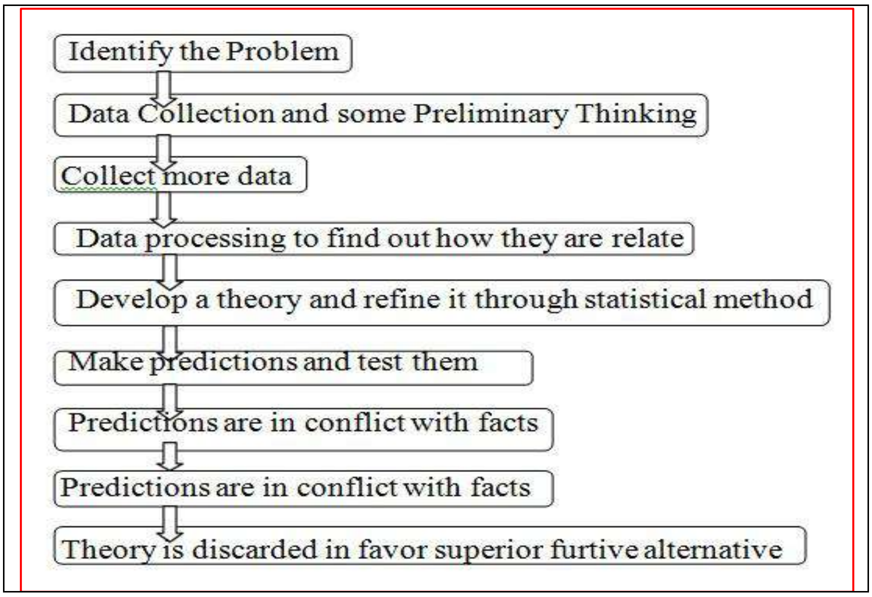
d) Merit and Demerits of Deductive Method –

The deductive approach to establish economic generalizations was extensively used by Classical and Neo - Classical economists such as Ricardo, Malthus, Senior, J. S. Mill, Marx, and Marshall.It still remains popular with modem economists as it has several merits

First, useful math ethical techniques can be employed to derive laws and theories of economics. With the aid of rigorous mathematical logic, economic theories can be developed through the process of deduction which can successfully explain economic phenomena. Secondly, through deductive logic useful economic theories can be derived without the tenuous and detailed collection and analysis of data which are required under the inductive method. Thus, as compared to inductive method, deduction less time - consuming and less expensive Thirdly, in view of the limited scope for controlled experimentation in economics, the method of deduction is extremely useful method of constructing economic theories.

The various steps in the construction and development of economic theories through inductive method are illustrated in Figure 2.

Various Steps in Inductive Method-



Evaluation of Inductive Method-

As has been explained above, observations of facts through collection of detailed data and the One of what how the art or collecting. The inductive upon and exchange of wealth by bodies economic laws are also once mil also they well as that create a developing me the andtheoretic a guide to the selection of data are quite useless. the national product poise be the levelof come and even national of the develop de reweave who are Clues Integration of the first through the press of logical the statistical etic method Marshall rightly www walk Empirical stats made through statistical or inductive method this one of genies through the approach of Deductive loge without hen there in dative method is about quite proper. Empirical studies made in perch also bring to light giant factor phenomena which require on deductive la France Farm Management Studies in India is led to the desert of a face per eaten on the smelled farms is higher than that farms. This led to the various themes lavations of the phenomenon observed in the studies on the other hand they or hypnosis is first developed through desiccative lost miens and the prices heel the hypothesis are tested through indo apical method the predicted to be constant with fact, the hypothesis rejected proved and if the price of the theory are found to be inconsistent with facto the

Conclusion-

We have discussed the subject of economics and have seen that it is very comprehensive. Economics other sciences it also has its laws But are also known as per prime The come laws describe man behaves as a producer and access the economics we are also concerned with come system well and operates Most come life produces wealth consumes exchanges it with other Therefore, we have to use this tools while study economics and related things. Deductive method is known as the analytical abstract a priori method. Here we start with certain formal data and assumptions.

Reference-

1) K.E. Bounding- Economics analysis, Hamish Hamilton, New York, 1956, p.11.
2) Milton Friedman- Essaying Positive Economics, Chicago, 1953, p.13.
3) Gunnar Myrdal- Value in Social Theory, Rutledge and Kegan Paul Ltd., London, 1958, p.233.
4) Micro Economics- Veranda Publication New Delhi, M.L. Zingan, p.08.
5) Modern Economics- S. Chand Publication, H.L. Abuja, New Delhi, p.26-30.
6) Indian economy- v.k. puri & s. k misra- Himalaya publishing house, New Delhi's. no.131-134.

Problems of Tourism Development in Sindhudurg

Prof. Dr. Babasaheb Vithoba Mali
Head & Associate Professor, Department of Commerce Kankavali College, Kankavali Dist. Sindhudurg

Abstract:
Today tourism has became one of the most significant forces for changes and also biggest industry in the world. It has became one of the important sectors and plays an important role in the overall development of the nation. In India , Sindhudurg (Maharashtra) plays very important role in the development of tourism. Sindhudurg is declared as first Tourism District in Maharashtra (India). In Sindhudurg district there are many places where tourism will flourish. Though there are some limitations on tourism development, environment and natural resources in Sindhudurg district are helpful for tourists.

Introduction:

Tourism is a highly developed economic activity and good source of income for many countries. Tourism is the fastest growing service sector which has a unique and phenomenal ability to bring about socio-economic changes. It provides opportunities for employment in different tourism related activities and has a great social contribution by way of bringing people together who belong to different cultural, social and economic background. Today every country in the world is looking to tourism as an important factor in the growth of national prosperity. Tourism is not only a means of enjoyment but it is a novel way to know the culture and to understand local life style.

Sindhudurg is declared as first Tourism District in Maharashtra (India) in 1997. It is situated along with the west coast and south part of the Konkan covering an area about 5207 sq.km with having 848868 as total population according to 2011 Census. It covers 748 inhabited villages and 8 Tahasils. Sindhudurg has a coast line of about 121 km. It is also one of the important maritime district in Maharashtra. Natural resources in Sindhudurg includes activities like climate, natural beauty, wild life, hills, rocks and lakes, ponds, rivers, waterfalls and hot springs. Sindhudurg has lush and mist covered mountains and cascading waterfalls in the rainy season with green paddy fields and coconut groves interspersed with enchanting waterways, golden beaches, sparkling reefs attracting sun seekers, divers, spot fishermen and Romantic couples. Adventurous traveller's and holiday makers are drawn to this beautiful paradise for many reasons. In Sindhudurg district there are many places where tourism will flourish. Environment and natural resources in Sindhudurg district are helpful for tourists. Sindhudurg has become one of the most popular tourist destination at National and International level. .

Definition:

According to Bukart and Medlik, Tourism denotes the temporary and short-term movement of people to destinations outside the places where they normally live and work and their activities at those destinations'

Objectives:

The primary purpose of the presenting this paper is to highlight the tourist attractions and problems of tourism development in Sindhudurg District.

Hypotheses:

Tourism helps to create additional employment opportunities and increase the income of local people.

Methodology:

In the present study, use of secondary resources is made to evaluate the problems of tourism development in Sindhudurg.

Significance Of The Study::

This paper brings to light valuable analysis pertaining to tourist attractions and problems of tourism development in Sindhudurg.

Tourist Attractions In The District:

1. Vaibhavwadi Taluka:

By dividing 37 villages in Gaganbawada Taluka, a separate Vaibhavwadi Taluka came to exist before 25 years. With natural beauty, Napane (Sharpe) waterfall, outburst (Umala) at Nadhavade and a mountain pass roads are the main tourist attractions in this Taluka. Aaynari caves from the time of Pandawas, is also the main tourist attraction. Hotel M.R. Paradise at Sharpe is providing rappelling and river crossing facilities to tourists.
There are many waterfalls on Gaganbawada – Karul – Vaibhavwadi Road during the rainy season which attract the tourists in large scale from all over Maharashtra. Some another important tourist attractions in this area are Napane Waterfall, Shri Rameshwar Temple, Shri Kurladevi Temple and Aaynari Caves.

2. Deogad Taluka:

Deogad is the tahasil place where world famous 'Deogad Alphonso' mangoes are available here during the season. Deogad is famous for its temples, forts, fisheries, natural port and a beach. Among the places of interest in Deogad include Gajbadevi, Vimleshwar and Shiva temple, Deogad beach, ruins of the Deogad fort and modern Wind Mills. In the South, between Deogad and Kunkeshwar is the Tara Mumbri beach. Some important tourist attractions in this area includes natural port Devgad , Vijaydurg fort, Sadanandgad,. Saitavade Waterfall and famous Kunkeshwar Temple.

3.Kankavali Taluka:

Kankavli is the central place of Sindhudurg district on Mumbai – Panajim National Highway (NH-66). It is also one major rail head of Konkan railway. Due to Bhalchandra Maharaj Mutt, Kankavli is known as a place of pilgrimage. Konkan Gandhi's (Appasaheb Patwardhan) Gopuri Ashram is located at Gopuri (Wagade), just 1 km. away from Kankavli. Kankavli Town Council has been organizing 'Tourist Festival' since 2004 in the month of April every year to attract foreign as well as domestic tourists on large scale. Some important tourist attractions in this areas are: Bhalchandra Maharaj Mutt, Gopuri Ashram, Shri Rameshwar Temple at Bhirwande, Ramgad and Shivgad etc.

4.Kudal Taluka:

On the Mumbai - Goa National Highway, Kudal is a scenic town on the Bhangsal river side. Places of interest include the Agro Research Center and Kudaleshwar temple. Kudal is a birth place of great litterateur Shri. C.T. Khanolkar. A temple of Kudaleshwar is scenic place for tourists. Kudal was the capital place during the period of king Chandraditya. Historical Kudal Kot, Gadi and Wada, Shri. Macchindranath temple at Pavasi are the main tourist places in this area. Some other important tourist attractions are: Mahalaxmi Temple , Rawool Maharaj mutt, Manohar –Mansantoshgad , Ranganagad and Datt Temple.

5. Malavan Taluka:

Malvan city situated approximately 6 km. away north of Tarkarli, is the prominent settlement of Malvan, virtually hidden by Palm trees. Once a maritime trading center, the place is famous for its Salt – pan.

A beautifully developed coastline, Malvan is famous for the Sindhudurg Fort which was built by Chhatrapati Shivaji. The journey from the coast to fort takes just ten minutes. Also Malvani cuisine is well known all over India. The Marine sanctuary here covers an area of 9.25 square km. and is rich in coral and other sea life. Some important tourist attractions in this area includes Sindhudurg fort, Rajkot Fort and Shivrajeshwar Temple. Beautiful beaches at Tarkarli , Tondavali, Devbaug, Achara, & Dhamampur Lake. Famous shri Bharadeedevi Temple and Laxminarayan Temple is also located in this area. Scuba Diving and Snorkelling facilities are also available at Tarkarli side.

6. Vengurla Taluka:

Vengurla is a seaside town. Vengurla's coast line is dotted with some of the exotic and virgin beaches in Maharashtra. Places of interest in Vengurla are Light House, Fruit Research Center, Vengurla's market, Devi Sateri Temple, Shri. Rameshwar Temple, Hanuman Temple, Sagareshwar Beach, Vayangani Beach, Mochemad fishing village and Beach, Vengurla port and Duch Warehouse , Nivati, Sagartirtha, Mochemad, Shiroda,Khavana etc. Temples like Vetoba, Navdurga, Ganesh and Natural port Vengurla are attracting local as well as foreign tourists.

7.Sawantwadi Taluka:

Rich, artistic and cultural heritage of Sawantwadi is the lifeline of it's economy. Colourful wooden toys which are seen in most parts of India are manufactured in Sawantwadi. These local tradition going back to seven decades using simple raw material such as timber, paper-mache and laqour. The artisans of Sawantwadi create colourful toys painted with natural dyes. The local artisans are skilled in the art of painting of playing card (Ganjifa), wooden and slay artifacts, jewellary and other embellishments. Some important tourist attractions includes Palace Sawantwadi, Raghunath market, Wooden toys & Fruits, Shipgram, Nangartas and other many waterfalls at Amboli roadside.

8.Dodamarg Taluka:

Variety of birds, wild animals, babbles of hills gorges, rivers and beautiful scenic nature is the gift available to Daudamarg Taluka. Different activities are undertaken to develop tourism in this area. Tilari's natural beauty is the main attraction of the tourists. Hilly area at both sides and origin of Tilari river is beautiful scenic place for the tourists. The work of Tilari project, one of the major irrigation project in the district, is going on this river since last 20 years. Maharashtra and Goa are the main beneficiaries of this project. A garden at Tilari is going to develop like Saint Dnyaneshwar garden, Mysore. Kasainath hill also attract tourists due to availability of wild animals and birds. A temple of Shri Shankar, constructed during the period of Pandavas is also attracting tourists on large scale. During rainy season, many tourists visit and enjoy this beautiful place. The main areas like Talkat, Sasoli, Kumbral, Kolzer and Zolambe are the famous for horticulture. Some important tourist attractions in the areas includes Chorla Waterfall and Pargad for Adventure Sports, also some other famous places for Hand-Gliding and Rope climbing.

Agro-Tourism:

In Sindhudurg, to attract tourists in low investment through local people is possible with the help of agro-tourism. Every village in Konkan is a good tourist center. Cleanliness, safety and affectionate minds are the main characteristics of the people in Konkan. Tourists can spend their leisure time in farming activities such as tree plantation, a harb, scented plants, bamboo plantation, preservation of mango, cashew, coconut, eraca trees, a clove, cinnamon, nutmeg, black pepper etc. By way of agricultural tourism farmers would be encouraged to host those people keen on a Week-end or a day-long getaway and spend some leisure time with their families in rural surroundings.

Now a days farmers in villages are ready to play host to people from the city. Many farmers have been hosting people at their farms for a few days who initially started it as a social activity, whose farms are lying close to a pond and who have sown green there.. Tourists can relay and enjoy natural surrounding i.e. trilling of birds, heighten trees (high and high) and water streams with fresh coconut water , a village deities and livelihood, rural life, tour by bullock-cart, move in garden, Malvani cusine, night journey and horticulture. Tourists can take deep interest in swimming in ponds, 'Hurda Party', Watching birds and Tame animals like buffalo, bullock, cat, coney, cow, dog, goat, rabbit and ram etc. Tourists can also enjoy the night with moon light games, singing poems, folk dances like Koli and Dhangar (Gaj) etc. Tourists can purchase fresh agro-products in reasonable prices.

Problems Of Tourism Development In Sindhudurg District:

* Important problems of tourism development in Sindhudurg District are as follows:
* Problem of accommodation facilities mainly non- availability of Star facilities
* Air and Water transport problems
* Parking problems at various tourists places
* Sanitation problems and changing rooms
* Narrow and star roads
* Problem of tourism literature and hoardings
* Problem of cleanliness at beaches
* Prohibition on drinking liquor
* Problem of tourist vehicles and guide services
* Non-availability of currency exchange facility
* Wayside amenities
* Police security on beaches
* load shedding
* Waste management

Major Findings Of The Stufy:

* Tourists visiting from western Europe, Central, South and North America
* Professional and Middle income group tourists are travelling with their family'
* Majority of tourists prefer to stay at Goa instead of Sindhudurg
* Tourists are unsatisfied with guide, shopping and toilet blocks
* Tourists are appreciated with the natural beauty of Sindhudurg

Suggestions:

A) Suggestions To M.T.D.C:

* Prepare well designed guide book for tourists
* Training facilities to local job seekers
* Regular meetings with tourism industrialists
* Use of social media for tourism related facilities
* Wide publicity for Bed and Breakfast Scheme
* Permission to tourist vehicles

B) Suggestions To Government:

* Special incentives to film makers
* Use of social media for tourism publicity
* Single window system for tourism related industries
* Development of infrastructure facilities

C) Suggestions To Tourism Co-Operative Societies:

* Provide incentives to members for agro and nature tourism
* Training programme for tour management
* Tourism awareness among members
* Support for temporary stalls in tourism festivals
* Timely granting loan proposals

D) General Suggestions:

* Arrange regularly tourism festivals
* Proper plan of village tourism
* Planning for Collection of parking and other taxes
* Special trains and reservation facilities
* Availability of Guide facilities
* Development of tourists places on B. O .T principles
* To succeed in agro-tourism, farmers must be aware of different languages, first aid facilities, habits of good conduct and knowledge of nature.

Conclusion :

Spots of scenic beauty, Beaches, waterfalls, cultural heritage, scuba diving and snorkelling, wide scope for Marine, Adventure , Village , Agro, Eco, Spiritual, wildlife and Medical tourism , Chipi airport and celebration of tourism festivals will be helpful for better prospects of tourism in Sindhudurg. The promotion of tourism can be a great encouragement to economic development of Sindhudurg and especially huge employment opportunities for local people.

References

1. Chopra Suhita : *Tourism And Development In India,* Ashish Publishing house, New Delhi,1991 Chawala Romila : *Impacts Of Tourism,* Sonali Publications, New Delhi,2006
2. Bhatt Harish / Badan B.S. : *Leisure And Tourism,* Crescent Publishing Corporation N.Delhi,2006
3. Kumar Maneet : *Tourism Today – An Indian Perspective,* Kanishka Publishing House, Delhi,1992
4. 5 .Dicholkar Dwarkanand : *Paradise Sindhudurg,*Lion Printing Press, Kolhapur, 2002-2003
5. Punia Bijender K. : *Tourism Management* Ashish Publishing House, New Delhi, 1994
6. Jayapalan N. : *An Introduction To Tourism* Atlantic Publishers and Distributors, N. Delhi,2001
7. Batra G.S. and Chawala A.S. : *Tourism Management - A Global Perspective* Deep and Deep Publications, New Delhi, 1995
8. D'souza Mario : *Tourism Development And Management* , Mangal Deep Publications Jaipur (India) ,1998
9. WWW.unwto.org
10. www.kokanparyatan.com
11. www.sindhudurgtourism.com
12. www.maharastratourism.gov.in
13. www.itdc.gov.in
14. www.yoytravel.com/konkan

Study of Changing Customer Behaviour in Palus Taluka

Dr. Pravinkumar Bharatkumar Lupane1 & Mr. Sunil Rajaram Jadhav2
1Asst. Professor, Krantiagrani G. D. Bapu Lad Mahavidyalaya, Kundal
2.Asst. Professor, Krantiagrani G. D. Bapu Lad Mahavidyalaya, Kundal

Abstract

India is among one of the fastest growing economies with an impressive average growth of over 7.4% Gross Domestic Product (GDP) for the last five years. Over the next two decades, India is going to become fifth largest customer market from its present twelfth position and overtakes Germany to be behind the US, Japan, China and the UK. The noticeable structural shifts in consumption pattern, changing lifestyles, eating and food habits have also immensely contributed to the growth and development of Indian retailing. According to A T Kearney's Global Retail Development Index (GRDI) Report -2015, the Indian retailing is estimated at USD $ 410 billion in 2015, which grew from $ 120 billion in 2010. Customer is that basic foundation of every business. Customer behaviour refers to the act of individuals who are directly involved in obtaining and using goods and services. It also includes the decision-making process which leads to the act of purchase. The main purpose of the study is to find out the current performance of the Kirana shops in and around Plaus taluka of Sangli district (Maharashtra). An attempt is made to find out the impact of organized retailing such as local bazaars, supermarkets on unorganized retailers who deals with food and grocery and to what extend they provide customer satisfaction.

Key Words: *Rural, Retailing, Customer Behaviour, Kirana Shops, Bazaars*

Introduction:

The Indian economy has witnessed phenomenal growth during the last decade. The country posted positive growth even during the recent economic slowdown. India is among one of the fastest growing economies with an impressive average growth of over 7.4% Gross Domestic Product (GDP) for the last five years. The real Gross Domestic Product (GDP) stood at 6.9% in 2009- 2010. Over the next two decades, India is going to become fifth largest customer market from its present twelfth position and overtakes Germany to be behind the US, Japan, China and the UK. That real consumption would grow from current Rs 17 trillion to Rs 70 trillion by 2025. The noticeable structural shifts in consumption pattern, changing lifestyles, eating and food habits have also immensely contributed to the growth and development of Indian retailing. The fastest growing retail sector in Indian economy is expected to be dynamic and sales are expected to follow an upward trajectory with 8% constant value CAGR (Compound Average Growth Rate). According to A T Kearney's Global Retail Development Index (GRDI) Report -2015, the Indian retailing is estimated at USD $ 410 billion in 2015, which grew from $ 120 billion in 2010. It reveals that the growth in the retail sector has grown by around 4 times. Similarly the organized retail is estimated at USD 20 billion in 2015 which has grown about 35 times from USD 0.6 billion in 2010.Customer is that basic foundation of every business. What customer sees, thinks, prefers and buys is of great importance to marketers to fine tune their marketing offers and achieve high level of customer acceptance and satisfaction. Customer behaviour refers to the act of individuals who are directly involved in obtaining and using goods and services. It also includes the decision-making process which leads to the act of purchase. Customer behaviour is not only the study of what people consume but also 'where', 'how often' and 'under what conditions'. Customer behaviour has no history or body of research of its own.

Objectives:

1. To study the growth and development of Kirana Shops and Supermarkets in Palus taluka in Sangli district (Maharashtra).
2. To examine the effect visit, monthly income, purchase volume and various reasons affected on changing customer behaviour.

Research Methodology:

Researcher has taken 5 villages according to direction in the study area and 100 customers in those 5 villages randomly. 'Descriptive Research Method' has been used in the present study. Descriptive studies are designed to obtain pertinent and precise information concerning the current status of phenomena and whenever possible, to draw valid general conclusions from the facts discussed. The main purpose of the study is to find out the current performance of the Kirana shops in and around Palus taluka of Sangli district. An attempt is made to find out the impact of organized retailing such as local bazaars, supermarkets on unorganized retailers who deals with food and grocery and to what extend they provide customer satisfaction.

Table No. 1: Number of Kirana shop, Bazaars, Population and Samples selected

Village	Direction	No. of Kirana shops	No. of Bazaars	Population	No. of customers taken
Palus Taluka		**396**	**133**	**351,506**	**100**
Chinchani	East	28	04	8,383	17
Ankalkhop	South	34	05	10,477	22
Kundal	Central	25	03	11,328	24
Takari	West	29	07	13,581	28
Borgaon	North	12	07	4,088	09
Total		**128**	**26**	**47,857**	**100**

(***Source:*** APMC, Islampur and Daily 'Pudhari' dated on 20th Sept. 2013.)

From the above table No. 1 showing that number of kirana shops and number of bazaars and population in the Palus taluka. The customers have been taken proportionately according to the population of villages to total population of Palus taluka. There are 396 licensed/registered kirana shops and 133 local and co-operative bazaars in the Palus taluka. The population of Palus taluka is 351,506. The total number of kirana shops in selected 5 villages is 128 and bazaars are 26. The total population of respected villages is 47,857. There are 28 kirana shops and 04 bazaars in Chinchani village which is situated in east side of the taluka place i. e. Palus. The population of Chinchani village is 8,383 and 17customers has selected. The village Kundal is situated near to Palus taluka. So, it is considered as central. In village Kundal, there are 25 and 03 kirana shops and bazaars respectively. The population of that village is 11,328 and customers are selected 24. Borgaon is situated on north side of the Palus. There are 12 kirana shops and 7 bazaars in Borgaon. The population of Borgaon is 4,088 and 09 customers are selected.

Table No. 2: General information about the customers in Palus Taluka

Sr. No.	Particulars	Frequency
1	Occupation: Agriculture	47
2	Monthly Income: Less than Rs. 10,000	43
3	Monthly Expenses of Kirana goods: Rs. 2,501-3,000	28
4	Effect of location, Advertisement and convenience	55
5	Increasing Purchasing power due to Bazaar: More than 30%	37
6	Comparative excess prices in: Kirana Shops	42
7	Satisfied about the services provided by the Kirana Shopkeeper: 21-40%	29
8	Bazaars are compotator to Kirana Shops: Yes	72

Sources: Field Work

From the table No. 2 has showing that general information about the customers in the Palus taluka. Agriculture is the main occupation in Palus taluka have said by the customers. 43 customers have told that their monthly income is less than Rs. 10,000. The monthly expenses of kirana goods Rs. 2,501-3,000 have argued by 28 customers. 55 respondents have told that they have affected location, advertisement and convenience, while they purchased kirana goods. 37 customers have told that their purchasing power is increased more than 30% due to bazaars. 42 respondents have answered that the prices are high in kirana shops as compared to bazaars. Only 29 customers have satisfied upto 21-40% about the services is provided by kirana shopkeepers. 72 customers have told that bazaars are compotator to kirana shops in Palus taluka.

It has interpreted that the expenses are high to purchase kirana goods as compared to average monthly income which is very less than Rs. 10,000. In the modern world, customers are very much aware about the location, advertisement and convenience. They are purchased kirana goods which they feel more convenient and comfort. Bazaars are provided convenience to purchase kirana goods. Customers are touching the goods in bazaars and then they purchased. That's why their purchasing power is increased upto 30% due to bazaars. The prices of kirana goods are high as compared to bazaars. So, customers have purchased kirana goods in bazaars. Kirana shopkeepers have not provided sufficient and needy services to customers. They are provided very few services. So, customers are diverted to bazaars for purchasing kirana goods.

Table No. 3: Frequency of purchases in kirana shops and Bazaars

Sr. No.	Sources / Frequency	Kirana Shops	Bazaars	Total
1	Daily	33	09	42
2	Weekly	07	22	29
3	Biweekly	02	06	08
4	Monthly	06	15	21
	Total	**48**	**52**	**100**

Sources: Field Work

From table No. 3 has showed frequency of purchases kirana goods either in Kirana Shops or Bazaars. 33 customers have purchased kirana goods daily from kirana shops and only 09 customers have purchased from bazaars. 22 customers have purchased kirana goods weekly from bazaars and 07 customers from kirana shops. Only 2 and 6 customers have purchased kirana goods biweekly from kirana shops and bazaars respectively. As well as 15 customers have purchased kirana goods from bazaars and only 6 customers have purchased kirana goods from kirana shops monthly. 42 customers have purchased kirana goods daily from kirana shops and bazaars. 29 customers have purchased kirana goods weekly from kirana shops and bazaars. 21 customers have purchased kirana goods monthly from the sources like kirana shops and bazaars. On the contrary, only 8 customers have purchased biweekly kirana goods from the kirana shops and bazaars. The occupation of customers in Palus taluka is agriculture. So, most of the customers are either farmers and farm workers. The farm workers are earns daily wages and purchased necessity goods daily. Researcher has observed that the customers are chosen kirana shops for credit purchases of kirana goods and they went to bazaars for cash purchasing. Those who are salaried persons have purchased kirana goods monthly from bazaars. The customers have chosen kirana shops for daily purchases and also they have chosen bazaars for monthly purchases. The overall view of the table, it has interrelated that 48 persons have purchased kirana goods from kirana shops and 52 customers have purchased kirana goods from bazaars. It has clearly depicted that customers behaviour is shifted from kirana shops to bazaars in the sample area.

Table No. 4: Reasons for purchasing kirana goods from the sources

Sr. No.	Reasons	Kirana Shop	Bazaar
1	Near to Home	74	26
2	Getting Qualitative Goods	12	88
3	Getting Goods on Credit	86	14
4	Handling of Goods	15	85
5	Reasonable Rates	28	72
6	Telling the information about the Goods	38	62
7	Good Business relations	65	35
8	Attractive Schemes & Incentives	17	83
9	Getting goods in a single roof	08	92

Source: Field Work

Graph No. 1: Reasons for purchasing kirana goods from the sources

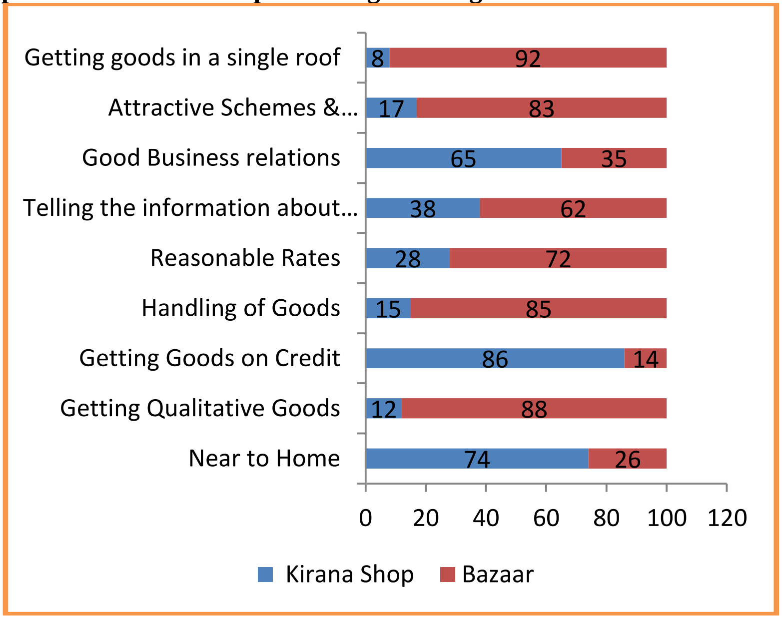


Table No. 4 and graph No. 1 showing that the selected reasons for purchasing kirana goods from the two sources i.e. kirana shops and bazaars. The reasons are affected to customers for purchasing the kirana goods either from kirana shops or bazaars. Location plays an important role while purchasing the kirana goods. In rural areas, Customers are purchased kirana goods as and when they needed. So, they preferred kirana shops which are located nearby the home or corner of the street. 74 customers have purchased kirana goods in kirana shops because it is near to home. There is the custom that kirana shops are not provided good qualitative goods. So, 88 customers have purchased kirana goods in bazaars because of bazaars are provided qualitative goods. Kirana shopkeepers are provided credit facilities to their customers. So, 86 customers are purchased kirana goods in kirana shops because of kirana shopkeepers have given goods on credit basis. Bazaars are provided the services like to handle the goods and to choose the goods those they needed. So, 85 respondents have purchased kirana goods in bazaars due to bazaars are provided to handle the goods. 72 customers are purchased kirana goods in bazaars because of reasonable rates. 62 respondents have purchased kirana goods in bazaars because they have told the necessary information about the goods. The customers are very well known to kirana shopkeepers and maintain good business relations with them. So, 65 customers have purchased kirana goods in kirana shops because of goods business relations. Bazaars have provided attractive schemes and incentives, that's why 83 customers have purchased kirana goods from bazaars. 92 customers have purchased kirana goods from bazaars because of they are getting goods in a single roof.

Conclusion:

The new retail formats changed the total concept of shopping and shopper's buying behaviour, ushering a revolution in shopping in India. As there is high growth being registered in the retail sector in the developed countries and the developing countries such as India which is almost on the verge of a retail revolution, there is a high research interest in this area. In addition to the high growth in the organized retail in the recent times, the retail format choice becomes an area of concern for a retailer as well as customer. Indian food and grocery retailing has witnessed a rapid transformation in many areas of the business by setting scalable and profitable retail formats across categories.

References:

1. *Prof. M. V. Kulkarni, (2010), "Marketing Management", Everest Publishing House, Pune, Tenth Edition.*
2. *S. A. Sherlekar, (2008), "Marketing Management", Himalaya Publishing House, Mumbai, Fourteenth Edition.*
3. *Dr. K. Karunakaran, (2011), "Marketing Management", Himalaya Publishing House, Mumbai, Second Edition.*
4. *C. S. G. Krishnamacharyulu and Lalitha Ramakrishnana, (2009), "Rural Marketing", Dorling Kindersley (India) Pvt. Ltd., New Delhi, Second Edition.*
5. *Census of India-2011.*
6. *APMC, Islampur.*
7. *Daily 'Pudhari' dated on 20th Sept. 2013*

Roles of Extension in Krishi Vigyan Kendra (KVK)

Dr. Rahul N. Surve
Associate Professor, Dept. of Extension Education, Smt. Ratnaprabhadvi Mohite Patil College of Home Science for women, Akluj Tal- MalshirasDist- Solapur

ABSTRACT

The Krishi Vigyan Kendra (KVK) plays an important role in transferring new agricultural technologies and enhancing the productivity of crops through trainings and FLDs. The consistent effort of KVK Subject Matter Specialists have helped to develop farmers' faith on the Krishi Vigyan Kendra (KVK) for technology demonstration and transfer at the door step with use of various field extension and information and communication technologies (ICTs) tools. Regarding technology transfer, it is essential to adopt and upgrade the technologies according to changing needs of farming community. This article is about how KVK is upgrading its role to cater the changing needs of farming community.

Key words: *KVK, role of extension, transfer of technology etc*.

Introduction:

The concept of Krishi Vigyan Kendra was framed by Professor Swaminathan, Father of Agriculture Research of India. Professor M S Swaminathan convinced Government of India that there is absolute necessity to develop Krishi Viigyan Kendra in each district of India with an objective to cater following Mandate and Activities for the farming community of the District. The world economy is largely dominated by agriculture, which has played a vital role in the economic development of many agriculture-based countries. However, the Agriculture sector has experienced a phase of crises that need to be dispensed with in order to attain sustainable economic development (Mariappan et al. 2019). Indian Council of Agricultural Research (ICAR) introduced Krishi Vigyan Kendras (KVKs) as a grass-root training center for providing vocational training to needy persons. KVKs has been appeared as the one stop shop for transfer of various agri and allied technologies through various activities like Technology adaptation OFT (On-farm testing), FLD (Frontline demonstration), capacity building of stakeholders, regular updating knowledge & skills of extension personnel and farmers. KVKs are grass-roots level organizations meant for application of technology through assessment, refinement, and demonstration of proven technologies under different 'micro-farming' situations in a district (Das, 2007). KVK witnessed its mandate in the form of Technology Assessment followed by Demonstration for its Application it field level and Capacity Development of various stakeholders.

Objective of the study:

1. To study the structure & purpose of KVK.
2. To understand the role of Extension in KVK.

Methodology:

Secondary data has been used for the purpose of study collected from various reputed research journals, books, magazines, internet on KVK.

Mandate of KVK:

- The mandate of the KVK includes technology assessment, refinement and demonstration of technology product.

Activities of KVK:

- On-farm testing to identify the location specificity of agricultural technologies under various farming systems.
- Organize Frontline Demonstrations to establish production potential of technologies on the farmers' fields.
- Training of farmers to update their knowledge and skills in modern agricultural technologies.
- Training of extension personnel to orient them in the frontier areas of technology development.
- To work as resource and knowledge centre of agricultural technology for supporting initiatives of public, private and voluntary sector for improving the agricultural economy of the district.

New Initiatives in transfer of technology (ToT):

Sustainable agricultural future technologies will require systemic approaches to design, local solutions which will be capable of contributing to larger-scale solutions that will be enriched with knowledge of the local context, needs and culture while also involving a range of actors and local user communities (Pigford et al., 2018.) Technological empowerment of farmers needs to be assessed in the form of regular training and handholding support for entrepreneurship development. The priority areas need to be focused on Floriculture (Chrysanthemum, tuberose, and marigold production), development of protected cultivation technologies (Polyhouse, Shadenet etc.), Input and resource-saving (Balance use of fertilizer, Drip irrigation) and resource sharing, demonstrating and promoting crop and livestock models for one acre of land. Climate-smart agricultural technologies need to be promoted to overcome the vulnerability due to climate change. Farmers' knowledge should enriched with scientific knowledge (Use of leaf color chart, INM, IPM) and Mobile Applications. Different up scaling strategies needs to be developed for successful innovations and technologies. For better functioning at grass root level there is need to develop linkages with other departments on the convergence model (public-private partnership Mode).

Knowledge Management:

ICAR institutes developed technologies for the benefits of farming community and these technologies used by various institutions. There is always a need to update technology inventory as per changing climatic scenario of different farming systems and creation of relevant content for technology dissemination. Similarly there is need to provide personalized advisory and Real-time knowledge sharing through smartphones (weekly twice weather data based agro-advisories under NMRWFS) through different Communication strategy through the media mix. Database management is necessary for available technologies, beneficiaries, activities, and achievements. Regular refresher training of Programme Coordinators and Subject Matter Specialists of KVKs for up-scaling of agricultural technologies, training methodologies, competencies, sensitivity to gender, participatory approaches and leadership skills. Linkages and Convergence KVKs need to have strong linkages with ICAR institutes/line departments/corporations/ rural development institutes/ banks working for the development of knowledge and resource sharing. There is need to link Producer Organizations/Associations/Groups to supply chains/value chains through KVKs. KVKs should developing linkage with line departments for promoting social entrepreneurship and encourage youth to adopt the models in agriculture and allied sectors.

Enhancing the visibility of KVK :
- A storehouse of knowledge through instructional farms
- Training center for specialized solutions for sustainable agriculture
- Active demonstration units at KVK to serve as good models for training farmers
- Intensive fieldwork in selected Taluka of new KVK
- Serving as knowledge dissemination center for all line departments of district

Field Extension Work:
- Sensitizing farmers about new technologies
- Conducting benchmark surveys for problem identification through Agro-ecosystem analysis
- Prioritizing research and extension targets
- Conducting on-farm trials on selected technologies
- Impact assessment of technologies
- Quality seed production of important crops, seedlings
- Livestock development and demonstration center

Capacity Building:
- Training of farmers on Resource conservation technologies
- Organizing farmers into groups – farmer clubs, clusters, and FPOs
- Forming farmers group for common property resource management
- Training of Para Extension Trainers
- Training women on post-harvest and value addition processing technologies for microenterprise development
- Training of extension functionaries for updating their knowledge
- Training of youths on entrepreneurial motivation and enterprise development

Harnessing ICT as a viable option:
- Establish a web interface with social media and networking platform
- Developing crop-specific mobile apps (Diagnostic purposes)
- Maintaining a knowledge repository (Database management) in coordination with ATARI
- Developing video modules for different farming practices
- Maintaining the KVK website with new technologies and success stories
- Developing online ferti-meter for the proper combination of fertilizers use based on soil health cards
- Linking of market and crop insurance information on the website with agmarknet / eNAM

Role of ATARI:

The Indian Council of Agricultural Research has established 11 Agricultural Technology Application Research Institutes (ATARIs) for performing monitoring, review and coordinating activities of the KVK system. The prime mandate is to coordinate and monitoring of technology application and frontline extension programs for strengthening agricultural extension research and knowledge management. ATARI performs major Activities such as Planning, monitoring and reviewing of KVK activities in the zone; to identify, prioritize and implement various activities related to technology integration and dissemination. ATARI establish coordinating with SAUs, ICAR institutes/organizations, line departments and voluntary organizations in the zone for implementation of KVK mandated activities and facilitating financial and infrastructural support to KVKs for effective functioning. ATARI is an important institutional innovation. It has to provide much-needed leadership role at zonal level in respective areas of their operation as far as applied research in agricultural extension is concerned.

Conclusion:

While drawing conclusions from the various issues, views and facts discussed above with a pointed focus of strengthening agricultural extension through Krishi Vigyan Kendras in the Indian context, it may be said that as the agricultural extension is the most guiding and determinant factor of stimulating agricultural development, the KVK, is the most vibrant, efficient and apt component of agricultural extension instrument. KVK can enhance the visibility of extension research, methodologies, approaches and outcome for the benefits of the farming community. KVK can provide capacity development of different stakeholders in effective decision making in production, post-production and marketing by large scale adoption of technologies. Similarly, there is a need for the development of commodity, region and situation-specific innovative extension models/approaches for effective outreach. KVK should develop the sustainable rural livelihood models, augmented farm income for inclusive clientele (including smallholder farm families). Database Management Information System for KVK is needed for future technological research and outreach for effective clientele services. For effective functioning of KVKs, Regular monitoring and review workshops should be conducted. As a future hub of technologies KVKs would emerge as a well equipped institution for serving farmers and working as a link in the technology generation and dissemination system. This will leads the KVKs to generate funds for self-sustaining.

References:

1. *Mariappan, K., & Zhou, D. (2019). A Threat of Farmers' Suicide and the Opportunity in Organic Farming for Sustainable Agricultural Development in India. Sustainability, 11(8), 2400.*
2. *Das, P. (2007). As quoted from: 'Proceedings of the Meeting of DDG (AE), ICAR, with Officials of State Departments, ICAR Institutes and Agricultural Universities, NRC Mithun, Jharnapani on 5th October 2007, Zonal Coordinating Unit, Zone-III, Barapani, Meghalaya, India.*
3. *Pigford, A.-A.E., Hickey, G.M., Klerkx, L., (2018). Beyond agricultural innovation systems? Exploring an agricultural innovation ecosystems approach for niche design and development in sustainability transitions. Agric. Syst. 164, 116– 121.*
4. *Singh, A.K., Singh, L., Burman R. R. (2016). Dimensions of Agricultural Extension 2nd edn (PB). Bio-Green, New Delhi.*

Eradication of Female Foeticide and Infanticide Through Cradle Baby Scheme in Villupuram District

***Dr.Hameed Basha.B*[1] *Ms.S.Subitha*[2]**

[1]Assistant professor, Department of History, Arignar Anna Government Arts College, Villupuram, Tamil Nadu
[2]P.G in History, Department of History, Arignar Anna Government Arts College, Villupuram, Tamil Nadu

Abstract

This article mainly focused on how the cradle baby scheme helps to protect the girls against feticide and infanticide. India has been renowned as 'mother country' where women were highly affected in the society. Patriarchal form of society dominated and suppressed women always. Being women, they are facing lot of difficulties to survive this society. Perhaps, births to death women have faced several obstacles only because of being on women. Not only have they struggled to survive the life, even feticide and infanticide. A women's position is measuring stick of the nation's pride. Without safeguard women a nation will not get top position. Hence, a country or Government plan to protect women and given tremendous schemes and programmes for the same. On the great consequences, to protect the baby in the womb and infant time, a unique scheme was planned and executed by the State Government of Tamil Nadu, even before Central Government of India and other States from India. The lack of awareness, illiteracy, rural background, social stigma leads the scheme to fail.

Keywords: *Feticide, infanticide, cradle baby scheme, mother country, Illiteracy, Lack of Awareness*

Introduction

India has been renowned as 'mother country' where women were highly affected in the society. Patriarchal form of society dominated and suppressed women always. Being women, they are facing lot of difficulties to survive this society. Perhaps, births to death women have faced several obstacles only because of being on women. Not only have they struggled to survive the life, even feticide and infanticide. Perhaps, women continue to be the victims of exploration, discrimination, subjugation and abuse in home as well as outside. India has special and most inhuman and unethical killing methods-dowry deaths, rape leading to suicide or homicide, female feticide and human sacrifice. [1] Though number of laws has been passed to ameliorate their condition, significant improvement can come in their status only when women become aware of their social, economic, economic and political rights. The prevention of Female infanticide bill, 2014 has to to prevent female infanticide, and care of child [2]. Apart from legal protection, some of the unique schemes and programmes planned by the Central and State Government of Tamil Nadu to save girl child and women. On the great path, Cradle baby scheme may lead in the front in Tamil Nadu which helps to protect the child against feticide and infanticide. This article mainly focused on how the cradle baby scheme helps to protect the girls against feticide and infanticide.

Villupuram District

Villupuram district has been bifurcated from erstwhile South Arcot District having highest population which ranked 6th place in Tamil Nadu. It lies between 110^0 38' 25" and 120.20'44" (Latitude) , 78^0 15' oo" and 79^0 42'55"(Longitude).[3] According to 2011 census, Villupuram districts comprises the population around 34,58,873 people, included 17,40,819 males and 17,18,054. The urban population is 5,19,088 and rural population is 29,39,785.[4] Being a low literacy in entire Tamil Nadu, Villupuram has competitive other districts in education and economy.

Female feticide

Both India and State of Tamil Nadu, girl babies are killed, aborted and abandoned simply for being girls. Unfortunately girl children might be the target of attack on before to see the world[5] The modern technologies should be the important social hazard which identify the child using ultrasound technology to proceed foeticide.[6]

Female infanticide, an act of killing a female child within one year of its birth either directly by utilizing poisonous inorganic and organic chemicals, both directly or indirectly , both parents or other family persons. Unfortunately, the killing of baby girls happen might be the pressure of their husbands. Mostly, the husbands would beat up their wives and force them to kill the female child because she is an economic burden. [7] In particular India china Pakistan and Nepal have deep-rooted preference of sons over daughters[8] Because of various religious cultural social and economical reason which continue to make males more socially and economically valuable than female. Religious lore in these countries for instance promotes son preference.The cradle baby scheme was planned to save the female child against feticide and infanticide. However, the repots says that both female and male children were identified in the cradle. From 2001 to 2021 around 30 male babies and 47 female babies rescued by the department of Welfare in Villupuram district.

Female infanticide

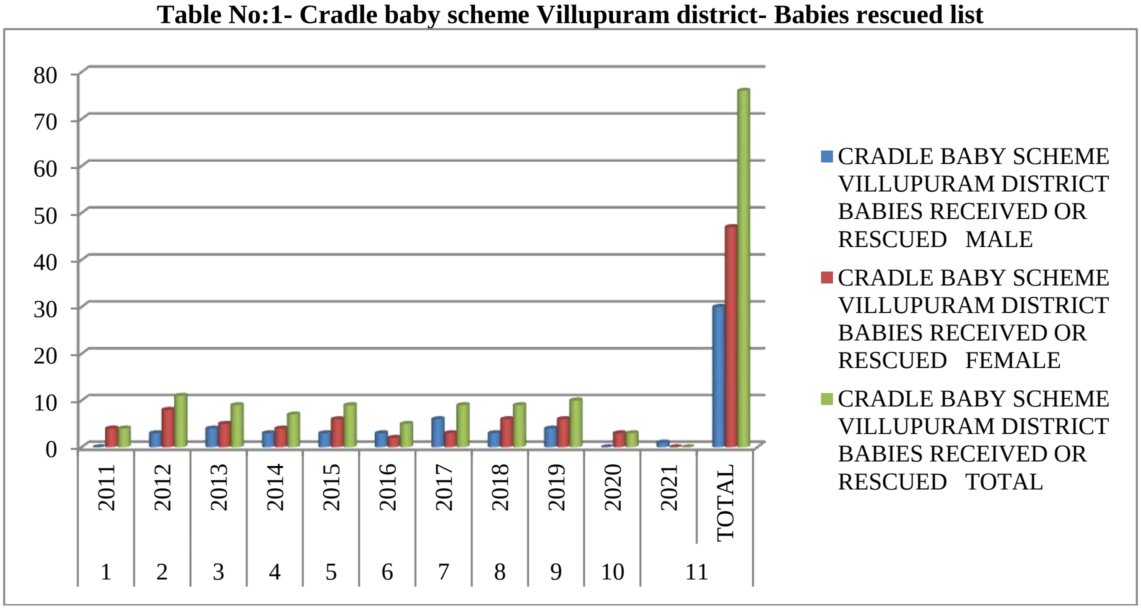
Female infanticide is an indicator of Women's position in India. The girl babies were killed the only because of girl. According to the traditional view female infanticide is considered a general pattern in the community which has now become part of the customs has spread throughout the state. The cruel methods were followed to eliminate girl babies while born. By using poison, starvation, throat splitting, drowning the water bodies, also throw the streets or dustbin..[9] further, the evidence surfaced that people were poisoning their girl children; they began to adopt methods such as starving the baby to death. [10]

Cradle baby scheme

The cradle Baby scheme was a brainchild of chief minister Jayalalitha alias AMMA. Her dream project has to safeguard girl child for first time in the State and country. The Cradle Baby Scheme (CBS) was initiated from Government of Tamil Badu on 1992 in outbreak of cruel practice of female infanticide. Suprisingly, the Non-Governmental organizations were agitate the scheme, and told it might be the against the civil society and affected human rights.The State Government of Tamil Nadu introduced this scheme to aims to providing a safety space to receive babies unwanted by parents. To counter the menace of female infanticide in certain parts of Tamil Nadu a unique scheme called the "Cradle Baby Scheme" extended other districts too.. [11] Perhaps, Cradle baby scheme might be the first scheme to product new born babies. Later Government of India has initiated the important scheme to product the girl babies as "Bati Bachao". However, Cradle baby scheme rocks on two decades ago.

This scheme extended to Cuddalore, Ariyalur, Perambalur, Villupuram and Tiruvannamalai district in 2011., after the census report of 2011, bringout the sex ratiot in thsese districts.The cradle baby scheme was earlier launched at Salem District with unique objective to eradicated female infanticide even foeticide. Later, it would be extended the other districts like Theni, Madurai, Dharmapuri, Dindigul, Namakkal and Erode. Perhaps, Jaylaitha took the charge as chief minister in second time will be extended the scheme all over Tamil Nadu. Till 2019, more than 5200 infants were rescued from abandoned, of which more than 4000 were girls. [12]Each year the around 10 babies were rescued by the official of Cradle baby Scheme. The report says that around 76 (Table No;1) babies were rescued last 10 years.

Table No:1- Cradle baby scheme Villupuram district- Babies rescued list



***SOURCE: Directorate of Social Welfare, Villupuram district (2001-2021)**

Cradle were placed

Under this scheme, cradles were placed in important places such as Hospitals, Primary Health Centres, Orphanages and Children runs 25 Orphanages[13] throughout the State of Tamil Nadu by providing food, education, clothing, shelter, and health care completely free of cost. Most of time babies were found in garbage pits, temple , ditches in sometimes alive or dead.Nowadays, parents without any hesitation simply giving the new born to officer as easy. This could be a great success of Cradle baby scheme. A medical superintend and an Assistant Nurse would be posted in those centers and a stock of necessary goods including milk powder and medicines will be maintained there. The centre will be set up at a budget of Rs.47.45 lakh in 2011.[14]

Absorption

Those family doesn't have a baby including better medical treatment are eligible to adopt a child. They are adopting a child in orphanage or from parents. Parents willing give their child to adoption to other couples may be very easy. But for getting a child into an orphanage would be long process. The parents were registered their name in the orphanage for adoption and receive the adoption deed. As per the seniority the child will be given to adoption for couples later. The cradle baby schemes babies were sent to orphanage and given adoption as per the law. The Hindus adoptions and maintenance act, 1956 and Guardians and wards Act, 1890 were followed at present. Moreover, the Guidelines Governing Adoption of Children, 2015 , Juvenile Justice(Care and Protection of Children) Act, 2000, Hague convention on the protection of Children and Co-operation in Respect of Inter-country Adoption Act, 1993 are given protection to the adopted child.

Conclusion

A women's position is key factor of the nation's pride. Without safeguard women a nation will not get top position. Hence, a country or Government plan to protect women and given tremendous schemes and programmes for the same. On the great consequences, to protect the baby in the womb and infant time, a unique scheme was planned and executed by the State Government of Tamil Nadu, even before Central Government of India and other States from India. The impact of Cradle baby scheme resulted the positive approach, will change sex ratio 942/1000 into 943/1000 between 2001 and 2011 (10 Years) in Tamil Nadu. Similarly, child sex ratio in Villupuram district was 941/1000 in 2011, has risen to 987/1000. last 10 years of success this scheme gradually diluted. The lack of awareness, illiteracy, rural background, social stigma leads the scheme to fail. However, lot of souls were rescued under this scheme should be great success. Hence, it will protect the babies against feticide and infanticide directly or indirectly always. This scheme will move on the primary concept of "Without girls no society".

References

1. *Kishore, J, Gender: the vanishing Girl Child, New Delhi, Century publication, 2005. pp.1-2*
2. *Bill No.108 of 2014*
3. *District Human Development Report, 2017, VIllupuram District, State Planning Commission, Tamil Nadu*
4. *Census of India 2011, Tamil Nadu, Series - 34, Part XII - B, District Census Handbook, Villupuram, Village and Town Primary Census Abstract (PCA), Directorate of Census Operations, Tamil Nadu.*
5. *Diaz, A.A., Born to die, The Indian post , 7th October, 1988, Bombay*
6. *Samsunnessa Khatun and Aznarul islam, "Death before birth- A study on female feticide in India, MS academic, vol.1, issue.3, 2011, pp.94-99*
7. *Sneh Lata Tandon and Renu Sharma, "Female Foeticide and Infanticide in India: An Analysis of crimes against girl children", International Journal of criminal Justice Sciences, Vol.1, Issue 1, January 2006, pp.5-10*
8. *K.J.Shah, B.Gyawalii and A.R.Aro, "Ending discrimination at the womb: Ethical perspectives on tracking female feticide in Asian countries", Ethics , medicine and public health, Vol. 6, 2018, pp.52-58*
9. *Gendercide Watch, Female infanticide , 2000, pp.1-9*
10. *Nelson, Lijiestrand, Hadegard British Medical Journal, 1997, 24 May , Vol. 314:1521*
11. *Enakshi Ganguly Thukral, Still out of focus: status of India's children, HAQ centre for child rights, 2008, P.224*
12. *DT NEXT, (e-paper), Apr 06, 2021*
13. *The Mint, the English magazine, o3, Dec 2013*
14. *Outlook, 24th July 2011S*

Biodiversiy in the Western Ghats of Karnataka

Dr. Prakash B. Holer
Assistant Professor and Head, Department of Geography, Shri Kumareshwar Arts & Commerce College, Hangal, Dist: Haveri (Karnataka)

Abstract
Its ecological resource base is under threat, with extensive destruction of natural habitats, widespread degradation of ecosystems and a growing burden of air and water pollution. Simultaneously, knowledge base of uses of biodiversity is also being eroded, with the present generation becoming increasingly alienated from the natural world.We need to carefully plan on conserving, sustainably using and restoring the biological diversity of the Western Ghats. We also need to conserve and benefit from the knowledge of uses and the traditions of conservation of this biological diversity. Also, we must ensure that benefits flowing from our heritage of biodiversity and related folk knowledge percolate down to the people at the grass-roots.

Introduction :

Karnataka, one of the Southern states of India has 3.83 Million ha of recorded forest area which is around 20 percent of its geographical area. Karnataka is endowed with most magnificent forests in the country ranging from majestic evergreen forests of the Western Ghats to the scrub jungles of the plains. The Western Ghats of Karnataka are one of the 25 global priority hotspots for conservation and one of the two on the Indian subcontinent. Several economically important species such as Sandalwood, Rosewood, Teak, White cedar grow naturally in these forests. Karnataka forest is endowed with rich wildlife, harbors 25 percent of the elephant population of India, 10% of the Tiger population. The state has 5 National parks and 21 sanctuaries comprising about 17.3% of total forest area as protected area for wildlife and biodiversity. The state ranks 4th among all the state and union territories in respect of area under tree cover.

1. Karnataka Forest

The State of Karnataka is a part of highly biodiversity rich regions of India. The Western Ghats of Karnataka is one of the mega biodiversities of the world. The State is endowed with great diversity of climate, topography and soil. Karnataka has great diversity of species, including the human being which has co evolved since centuries. Geographically the State can be divided into three major zones. With the Western Ghats (Sahyadri) forming a major water divide, there are short and swift flowing rivers in the west draining into the Arabian sea. Notable among them are Sharavati, Kali, Netravati, Bedthi/Gangavalli, Aghanashini, Varahi and Chakra. To the east of the major divide, flow the river Krishna and Cauvery. A major part of the upstream of river Krishna and its tributaries Tungabhadra, Ghataprabha, Malaprabha, Bhima and Vedavati flow through northern Karnataka, pass through Andhra Pradesh before joining the Bay of Bengal. The Cauvery river in the south flows down the eastern slopes of the ghats, passes through Tamil Nadu before joining the Bay of Bengal. The main tributaries are Hemavathi, Kabini, Arkavati, Shimsha, Palar, Uttara and Dakshina Pinakini, Manjira and Karanja are the only tributaries of river Godavary found within the State boundary.

Karnataka consists of 3 regions- 1. Coastal Zone, 2. The Western Ghats, 3. The Eastern Plains. In the present paper we discussed about only Karnataka's Western Ghats.

2. The Western Ghats Biodiversity Hotspot :

The Western Ghats one of the 34 biodiversity hotspots of the world is a chain of mountain ranges stretching North- South along the western peninsular India for about 1600 Kms. Western Ghats are the habitats for the elephants and endangered lion tailed macaque. Western Ghats are also known as Sahyadri mountain ranges in Karnataka. It runs North to South along the Western edge of Deccan Plateau. 60% of Western Ghats are located in Karnataka. The average elevation is about 1200 meters MSL and receives rainfall between 3000 and 4000mm. the average annual temperature is around 15°C. The monsoon season runs between June and September.

BIODIVERSITY OF KARNATAKA

1. Number of Species…	1.2 lakhs
2. Flowering plants…	4500 species
3. Birds…	508 species
4. Mammals…	150 species
5. Reptiles…	156 species
6. Amphibians	135 species

7. Fishes (marine & brackish water)…	405 species
8. Fishes (fresh water)…	289 species
9. Butterflies…	330 speices
10. Medicinal plants…	1493 species which

Includes 300 species in commercial use.

Forest types found are tropical evergreen, moist and dry deciduous, high altitude sholas, savannas and scrubs. There are over 4500 species of flowering plants (38% endemic) 330 butterflies (11% endemic), 156 reptiles (62% endemics) 508 species birds (4% endemics) 150 mammals (12% endemics) 289 fishes (41% endemics) 135 amphibians (75% endemics) are among the known biodiversity of Western Ghats. Forest types ound are tropical evergreen, moist and dry deciduous, high altitude sholas, savannas and scrubs. There are over 4500 species of flowering plants (38% endemic) 330 butterflies (11% endemic), 156 reptiles (62% endemics) 508 species birds (4% endemics) 150 mammals (12% endemics) 289 fishes (41% endemics) 135 amphibians (75% endemics) are among the known biodiversity of Western Ghats.The rich biodiversity coupled with higher endemism can be attributed to the humid tropical climate, topographical and geographical characters. Western Ghats form an important watershed for the entire peninsular India, and is a source of west flowing rivers and three major east flowing rivers. The Western Ghats belong to one of the oldest mountain ranges of the planet; harbor numerous elements of flora and fauna having linage to the Gondavana land. The important endemic tree species of the region are Dipterocarpus indicus, Hopea parivflora, Myristica fauna, Gymnacranthera canarica, Vateria indica, Pinanga dicksonal Semi carpus Kathalekanensis is one of the lofty evergreen trees which have been discovered for the first time in the Myristica swamps of Western Ghats. Western Ghats.

The Western Ghats some highlights:

- One of the biologically richest regions of the world.
- Of the 13,000 species of flowering plants found in India, some 4,500 are found in the Western Ghats. Of these, some 1,500 are unique to the region.
- Wild relatives of many economically valuable plants, like pepper, cardamom ginger, mango, jackfruit, millets, rice, etc. originate in the Western Ghats.
- The Western Ghats is the 'hotspot' of natural evolution.
- The evergreen forest dominated by trees of Cullenia, persea, Dipterocarpus, Diosphyros, Holigarna and Memcylon found only in the Western Ghats.
- The deciduous forests – dominated by Terminalia, Largerstroemia, preterocarpus, Xylia, Tectona and Anogeissus species are some of the most valuable commercial timber on earth.
- The Western Ghats is a valuable source of bamboo/cane.
- It is home of wildlife in the sub-continent–the last remnant habitat of major animals such as the tiger, leopard, elephant, gaur, lion tailed macaque etc.
- The region is rich in species of birds, amphibians and reptiles.

The Western Ghats some highlights:

3. Wildlife:

The State of Karnataka located in South India has a rich diversity of flora and fauna. The forests support 25% of the elephant population and 10% of the tiger population of India. Many regions are yet unexplored and new species of flora and fauna are found periodically. The Niligiri biosphere was established reserve in 1986, The Bandipur and Nagarhole National parks were included in the reserve. In Karnataka there are 5 National Parks and 21 wildlife sanctuaries.The faunal species found in various forests in Western Ghats region of Karnataka among others includes. Elephant, Gaur, Sambar, Chital Bonnet, Common giant, Tiger, Leopard, Sloth bear, Striped hyena, Indian Pangolin, Indian Chameleon, Geckos, Russell's viper, Common Krait and Indian Python.The animals in the forest of dry districts include Wolf, Leopard and Pangolin etc. The Blackbucks are found in Ranebennur. Peacocks are being protected in Bankapur Sanctuary and Daroji Wild life sanctuary is famous for Sloth Bears.

Wildlife population in Karnataka

Tiger	Elephant	Panther	Bear	Wild bear	Deer	Bison	Sambar	Fox
395	**6185**	**817**	**2324**	**15760**	**25850**	**8484**	**4998**	**957**

4. **National Parks :**

Name of the National parks	Area (sq.km)	son to Visit
Anshi National park	250.00	Nov-jun
Bandipur National Park	874.20	Jun-oct
Bannergatta NationalPark	104.27	All seasons
Kudremukha National Park	600.32	Dec-May
Nagarahole NationalPark	643.39	Sept.-Mar

5. Sanctuaries :

Name of the Sanctuary	Area (sq.km)	Season toVisit
Adichuchanagiri Peacock Sanctuary	0.84	All seasons
Arabithittu WildlifeSanctuary	13.50	Dec-Feb
Attiveri Bird Sanctuary	2.23	Oct.-Dec
BRT Wildlife Sanctuary	539.58	Oct.-May
Bhadra Wildlife Sanctuary	492.46	Sept.-Mar
Brahmagiri WildlifeSanctuary	181.80	Jan-Mar
Cauvery Wildlife Sanctuary	102.59	May-Nov
Dandeli Wildlife Sanctuary	475.02	Sept.-May
Doraji Bear Sanctuary	55.87	Sept.-jan
Ghataprabha Wildlife Sanctuary	20.78	Oct.-Dec
Gudavi Bird Sanctuary	0.73	Jun-Nov
Melukote WildlifeSanctuary	45.82	Oct-Apr.
Mookambika WildlifeSanctuary	247.00	Nov-Apr
Nugu Wildlife Sanctuary	30.32	Oct-Apr
Pushpagiri Wildlife Sanctuary	102.59	Jan.-Mar
Ranganathittu BirdSanctuary	0.67	All seasons
Ranibennur Blackbuck Sanctuary	119.0	May-Jan
Sharavathi WildlifeSanctuary	431.23	Nov-may
Shettihalla Wildlife Sanctuary	395.60	Nov-May
Someshwara WildlifeSanctuary	88.40	Nov-May
Thalakaveri WildlifeSanctuary	105.00	May-Jun Oct-Jan

6. Tiger Reserves

Name of the Tiger Reserve	Area (Sq. kms)	Year of Establishment
Bandipur	874	1973
Bhadra	492	1998

7. Biosphere Reserve :

Name of the Reserve	Area (Sq. kms)	Year of Establishment
Nilgiri	5520	1986

8. Endangered species

Karnataka is the home of few critically endangered species of flora that include evergreen trees like Dipterocarpus bourdilloni, Hopea erosa and Hopea jacobi Croton lawianus (a small tree) and Pinnatella limbata (a type of moss). Some of the critically endangered species of fauna found in Karnataka include Gyps indicus (the Indian vulture) and two species of frogs, Indirana gundia (found only in Gundia range, Sakleshpur) and Micrixalus Kottigeharensis (found only near Kottigehara, Chikkamagaluru district).

Some of the endangered species of flora include evergreen trees like Cynometra bourdillonii, Cynometra travancorica, Hopea glabra, Hopea parviflora, Hopea ponga, Hopea racophloea, Hopea wightinana, shored roxburghii and Tarenna agumbensis and flowering plants like Glochidion pauciflorum, Glochidion tomentosum, Ixora lawsoni and Syszgium stocksii. Other endangered trees found in Karnataka include Isonandra stocksii, Kingiodendron Pinnatum, Maesa velutina, Myristica magnifica, Rapanea striata and xylosma latifolium.

Endangered species of fauna found in Karnataka include the tiger, Indian Elephant, Lion- tailed macaque, turtle and dhole, the Indian wild dog. Many endangered species of amphibians are found here including frogs, Indirana brachytarsus, Microhyla sholigari, Minervarya sahyadris, Nyctibatrachus aliciae, Nyctibatrachus hussaini, Nyctibatrachus sanctipalustris, philautus charius, philautus wyaadensis, Ramanells mormorata and Rhycophorus laterals and a toad, Bufo Beddomii. Other endangered species of fauna include Hipposideros hypophyllus (the Kolar leaf-nosed bat) and Pseudomulleria dalyi (a molluse)

9. Richness and uniqueness of Western ghat of Karnataka

- The Western Ghats comprises the mountain range that runs along the west coast of India from the Vindhya-Satpura ranges in the north to the southern tip. The ecosystems of the Western Ghats include the tropical wet evergreen forests, the montane evergreen forests, moist deciduous force etc. The Shola grassland ecosystems found in the higher reaches of Western Ghats are unique to this region and harbour a number of endemic species.
- World Conservation Monitoring Centre (WCMC) has identified Western Ghats region as one of the important

areas of biodiversity.

- The varied topographic, climatic and geological factors have made significant contribution to biodiversity. Almost one-third of all the flowering plant species in India are found in this region.
- The Nilgiri BR spread over three states in Western Ghats was the first BR to be set up in the country.

Threat status

- In the past, the forests of the Western Ghats had been selectively logged. Large tracts of forests were also converted to agricultural land for monoculture plantations of tea, coffee, rubber, oil palm teak, eucalyptus, building reservoirs, roads and railways.
- Over 20% of the original forest cover remains more or less in pristine condition and the remaining is subject to varying degrees of human pressure including large scale collection of fuel wood and NTFPs, Mass tourism, Grazing and forest fires are other concerns.
- The poverty is rife and economic development is poor in regions adjacent to forests including the PAs. The competing needs of the people residing in the forest fringes lead to frequent human wildlife conflicts.
- Of the total known fauna, 102 species fall under different categories of threat and of these, mammals (30 species, 21.9%) and amphibians (52 species; 33.3%) are the prominent groups.

Conclusion:

Many areas of Karnataka, especially in the forests of Malnad region are unexplored and new species of flora and fauna are discovered from time to time. Some of the new species of flora recently discovered in Karnataka include Paracautleya bhatii (a ginger) and Isachne veldampii (a grass), both of which were discovered near Manipal in Udupi district. Two species of algae, Cosmarium bourrellyi and Cosmarium desikacharyi were discovered in a paddy field in Belgaum. Other new species of flora discovered in Karnataka include Isoetes Udupiensis (a flowering plant) and Pisolithus indicus (a fungus). Some of the new species of fauna discovered include two species of ants, Dilobocondyla bangalorica which was discovered on the campus of Indian Institute of Science, Bangalore and Discothyrea sringerensis which was discovered near Sringeri. Three new species of frogs; Philautus luteolus, Philautus tuberohumerus and Nyctibatrachus petraeus have been discovered in Karnataka. Explorations in the Sharavathi river have yielded new fish species like Batasio sharavatiensis (a bagrid catfish), Schistura nagodiensis and Schinstura Sharavathiensis. Another fish species, puntius coorgensis has been discovered near Bhagamandala in the Kaveri river. Some other species of fauna discovered in Karnataka include two species of whiteflies Distinctaleyrodes setosus and Aleurocanthus arecae and a caecilian, Gegeneophis madhavai. Explorations in the soil around the Linganamakki reservoir have revealed eleven new species of earth worms.

References

1. Anand, M.O., Krishnaswamy, J.,Kumar, A., Bali, A. 2010).Sustaining biodiversity conservation in human modified landscapes in the Western Ghats: remnant forests matter. Biological Conservation. 143:2363–2374.

2) Bawa, K.S.,Karanth, K.U.,Kumar, N.S., Rao, M., Das, A. and Krishnaswamy, J. (2007). Western Ghats & Sri Lanka biodiversity hotspot CEPF Report. pp: 1–100.

3) Bhagwat, S. and Rutte, C. (2006). Sacred groves: potential for biodiversity management. Front. Ecol. Environ. 4(10):519–524.

4) Cincotta ,R.P., Wisnewski,J., and Engelman,R. (2000). Human population in the biodiversity hotspots.Nature. 404: 990–992.

5) Gadgil, M. and Vartak, V.D. (1975). Sacred groves of India – A plea for continued conservation. Journal of Bombay Natural History Society. 72:314-321

Social Study of Baby Kambles 'Prison We Broke'

Dr.R.B.Chougule
I/c principal, Kankavli College,kankavli

Extract :

" The prisons We Broke "is an autobiography by Baby Kamble .It is considered to be the first autobiography written by any dalit woman .It is originally written in Marathi .Entitled as ;Jina Amucha .'It is translated in English by Maya Pandit .The autobiography is significant as it is a part of Ambedkarite literature as well as it highlights the gender discrimination .It also presents the miserable life of dalit women .Who were oppressed by the society on different levels?

Autobiography is a presentation of self .It present the uniqueness of the life led by a particular person and especially, dalit autobiography expresses the oppression, exploitation done to them and their agony, grief . The autobiography "The prisons We Broke "portrays the social, economical cultural condition of the dalit people and specially the dalit women who were treated brutally by the so called 'savarnas '.It highlights the plight of dalit women who are from mahar community of western Maharashtra .The book represents the journey of Mahar women from exploitation to exploration due to Ambedkarite movement.

Keywords : Dalit Women, patriarchy, gender discrimination, Ambedkarite movement, Varna system, untouchability.

Baby Kamble's 'The prisons We Broke 'is different from other autobiographies because it does not celebrate the uniqueness individuality or achievement of the writer but it brings forth the miserable condition of the mahar women, the brutal treatment given to them, the effect of religious practices on their life .The book focuses on the patriarchal social system .The book also focuses on the practice of untouchability prevalent them.

The number of dalit women autobiographets is less than the dalit man writers on account of deprivation of education in the past .The condition slowly changed but then also there is always a difference between a book written by a man and book written by a woman from because a woman writer sees the world from a different point of view than a man .A woman writer brings forth the gender discrimination writer brings forth the gender discrimination and patriarchal issues of the society .Same is the case with 'The Prisons We Broke '.The book is a sociocultural analysis of the contemporary Indian society.

In India, 'Varna 'system from Hindu religion was followed .According to Varna system, Women were considered as 'Shudras 'whichever caste they belong to .Apart from it, Indian community is a patriarchal community where men in the home are considered as the head and women were considered secondary though they take equal responsibility of the family .Due to both these factors, the condition of women was miserable in the past and if you were in from a dalit community, the condition would be worst as dalits were considered as the lower section of Indian society .Dalit women were doubly exploitated; first because of being 'dalits 'and second, because, they were 'women '.So, the dalit women were subjugated because of their gender, caste and thirdly by the societal format i .e .patriarchy .These factors added extra troubles in their lives .They had to struggle hard to fulfill their needs, i.e .food, clothing, water and even education which was not in the scenario them .

Mahars led a very parthetic life .They were the poorest people in the society .They had nothing to eat and were .Their huts were made up of stones, covered by mud .They used utensils made up of day and coconut shell for a cup .Their life was filled with filth and dirt .Upper caste people enjoyed all the privileges but they were the one who were also responsible for the inhuman treatment given to dalits.

Untouchability was deeply rooted in the mind of upper caste people .The practice was followed and transferred from generation to generation .The upper caste young girls would neglect mahar girls with the fear of being polluted .Even if the mahar girls pass from their side, the upper caste girls would cover their noses as if the mahar girls ware not human beings but stingy, foul smelling creatures .As Kamble narrates in her autobiography, one girls also mentions that she had to take bath once she reached home as she sits in the same class with mahar girls .The mahar would serve their masters honestly .They were supposed to fell at the feet of their masters or give way to their masters when the master came across their way .They had to say "The Kamble Mahar women fall at your feet master, This was like a chant, which they had to repear innumerable times …
If a newlywed young girls does not bow down before the upper caste master .It would be made a big issue .He would come to the made a big issue .He would come to the mahar community and shout.

:Who, just tell me, who the hell is that new girl? Doesn't she know that she has to bow down to the master? Shameless bitch !How dare she pass me without showing due respect?"

To which the elderly people would ask request him to forgive her and fall down at the man's feet .Not bowing befre the savarnas 'was considered as a crime .There was a difference between the upper caste and the mahar women regarding the use of cloth and jewellery .Dalit women could not use the same cloth and jewellery as the upper caste women .If the mahar woman would were a saree with border, she had to hide the border of the saree .Higher class women were also treated as slaves by the males but they never showed sympathy to the lower class women.

The treatment that was given to women was and is dual .In the past, they were worshipped as a goddess .They would be the Centre of all supernatural element .The contradiction can be seen in the description of the month of 'Aashadh '.This was the only month that the mahars liked the most .They would take bath, wear clear sarees, visit different places .In this month the women would be on the forefront and they would be possessed by spirit .The whole community would participate .In it at that time, women would be respected, worshipped by people .They would be givenattention .But once it is over the next day, these women used to be treated as earlier .Mahar community was completely encircled with such dreadful superstitions and practices . Nobady came to help them, guide them, noone supported them except Dr .B .R .Ambedkar.

Women were enslaved by the patriarchate socirty .But daughter –in-laws would be the main target . They would be treated inhumanely .By both men and women .Young girls of eight to ten years would be brought to home as daughter-in-laws .They would be enslaved, abused and insulted .They had to endure it .They were beaten .They were considered to be evil presence in the home .As daughter-in-laws, there would be a lot of responsibilities given to them .They had to do all the household chores .The first task they had to do was to prepare 'bhakaris', to show their cooking skill .Instead of striving hard, they would never get any kind word of appreciation .When it comes to rituals, had to plaster the house, clean all the utensils and cloths .They were physically and mentally tortured .They would be given taunts .They were put down .If the daughter-in-laws were not good at household chores, their mother would be abused and cursed .Their mother-in-laws would take the revenge of the treatment given to them by their in-laws.

"What's your aai really? Tell me !Is she a good married women at all? Or does she know only how to run after the pot-maker donkeys? Didn't she teach you anything? I pamper you ……my own sasu was spilfire-A burning coal !Holding a burnig coal in one's palm was easier than liying with her"!

As Kamble has mentioned at least one women in a hundred would have her nose chopped off .They were tortured to nose chopped off .They were tortured to nose limit .If the daughter-in-law runs away, she would be taken book to the in-laws house and thereafter the condition would become worse .The mother-in-law would poison the mind of her son against his wife .She would be called as a disgrace to the family and her nose would be chopped off .Father would encourage his son to be a man and behave like one.

"You are a man .You must behave like one !You must be proud and firm .You must walk tall .Twirf your moustache and show us that you are a man ………Never mind if you have to go to prison for six month".
And the obedient son would follow it .His wife would be left and the mother would arrange second marriage of her son such was the life of the mahar women .Slavery was so much in their mind, that even the mahars wanted to enslave someone else .As they higher class enslave them .They would enslave their daughter-in-laws .Though their husbands would only give them .Path, sufferings, torture & sorrow; for the mahar women, the Kumkam on their foreheads was very precious .Again on their foreheads wasvery precious .Again it means lack of self-respect .Again it means lack of the societal framework .

These mahar women would the collect the leaflover food from the highders household .They would clean their animal pens .They had to work hard to earn their livelihood .Most of the times, they habn't eaten anything .As the writer mentions,

"Having had no breakfast in the morning and no food in the house, hunger gnawed at their empty stomach like wildfire".

While giveng birth to a baby, the condition would be unhygienic .They would never get proper nursing and care .Even the newborns would be cleaned by elder's Saliva .These women were used for sexual object .The contradiction was that, as unlouchables they were not even allowed to come close but for sexual pleasure, they were used .These women would face hardships, do laborious work, sacrifice for the family and yet they were never appreciated, they would only get curses and abuses for what they do.
Baby Kambale brings out the pathetic condition of dalits and she also praises Dr .B .R .Ambedkar because be was the only person who fought for dalits .The condition oof dalits was so pathetic that they were dehumanized . It is because of Dr .B.R .Ambedkar that a revolution took place .She was influenced by Ambedkar's thoughts.
As she mentions.You must remember that it was one man who achieved the impossible task of transforming beasts into human beings .The glorious ray filled millions of lives with brightness.

She also appreciates mahar women who were instrumental in bringing about the change Education developed self-respect among them Thet tried to search their identity .They became independent .They started sending their children to school .They actively participated in the movement and social reform .The society & its framework was just like a prison for these women and so the title is really apt as it is the prison which the women broke

Refrences-

1. *Kamble Baby -The prsons we broke, Translated by Maya Pandit, orient Blackswn, New Delhi, reprint 2011*
2. *Mohd Naggen Ruther –Analysing the painful recuntal of Dalit Women in Baby Kamble's The prisons we Booke American research Journal of English and literature ISSN 2378-9026, Vol 3 issue 2 –www.orijonline-org*

Information Revolution and Changing Character of International Relations

Dr. Badruddin
Professor in Political Science, PES's RSN College of Arts & Science (Goa University)

Abstract:
Information Revolution, an important component of International Relations, earned rich dividends during eighties. Globalization of hi tech culture dramatically changed the traditional outlook of world politics. Several international theories like non-liberalism, neo Marxism and neo-realism, supported the application of Information Revolution. It led major confrontation between classical and modern thinkers. Important parameters of International System like national security, geo-political management, warfare and strategic policy helped to address the cause and effects on international relations which opted new dialogue within the jurisdiction of information revolution to suit the interest of global governance. Information being a promoter of global village supported by smart governance, hi tech culture and cyber security motivator, have grater relevance over International System during digital information age. Data is extensively collected from online access apart of literary sources.

Keywords: *Information Revolution, International System, Security, Digital Age*

Concept of Information Revolution

Information Revolution has traditionally been derived from computer technology which remains a unique machine, an instrument of change and the brain power. The device follows set of systems, coded instructions, software programming, data access, and remains a single solution of problem. Knowingly, the world has experienced phenomenal reformation and changes after the impact of LPG (Liberalization Privatization Globalization) culture in 1990s. In multiple ways, information is an innovation of industrial revolution, scientific discoveries, productive force, technological society, cybernetics, energy, matters, agricultural innovations, capital, labour, business cycle, commodity, design, research and development. Besides, it also includes: distribution of knowledge, writing, printing, mass media, and entertainment alternatives. Thus, Information Revolution has been instrumental in networking management, capacity building, and sustained growth. By a conservative estimate, world's information units have reached to optimum level: say from zero (1970) to 75% (2020). It is expected that Information Revolution will reach to climax by 2030 when the 'U-Turn Process'.

Background

Information Revolution is not a new phenomenon rather it started in late eighties during the early phase of globalization. Computer Revolution is often associated with the pace of technology and machine age. Some critiques believe Information Revolution appeared during the second world war (1939). However, the emergence of UNO and large number of alliances during cold war (1945-1990) added priorities to International System which dramatically changed the structure. These manifested through the emergence of NATO (1949), superpower rivalry (1950-1990), Warsaw Pact (1955), NPT (1968), START (1982), INFT (1987), unification of Berlin Wall (1990), disintegration of USSR (1991) and CTBT (1996) which dramatically and decisively added various priorities. International Relations being an important subject cannot be left lonely without influencing Information Revolution that has entered all streams and disciplines. It briefly include: intelligence system, cyber security, military policy, diplomacy, territorial sovereignty, maritime security, cross border terrorism, international trade, transnational sensitivity, digital intelligence system, uni-polar world order and defense management. There is hardly any aspect of material and moral circle left untouched by Information Revolution, now the need of the hours.

Information Revolution: A Global Scenario

Information is a smart device in international relations which is no more confined to limited boundary rather its influence is global thereby affecting every aspect of global and regional system. Let us have some selected references: neo bio-polar system (USA and China) block politics (East and West Europe), Balance of Power, détente, policy of appeasement, multi-polar world order. Other factors like new state system, regional alliances and common regional security have also worked as alternatives to promote the theory of Information Revolution in international relations. Besides, some important and sensitive issues related to information in international system also include: collective security dilemma (India-Pakistan, Arab-Israel, Syrian Crisis), coup d'état (Myanmar), terrorism (J&K, Afghanistan), oil diplomacy (Gulf Emirs), disarmament policies (USA, Russia Federation, North Korea), Brexit (UK and EU) East-West Matrix (European Union, changing parameter of communism), trade embargo (American policy towards Libya, Iran, Iraq), economic nationalism (China, Taiwan, South Korea), and energy crisis (petroleum and gas price diplomacy) are some interesting cases directly linked with information revolution. Some other areas in international relations are not free from informational revolutions which include: cultural nationalism, policy of extradition, Diaspora, Islamic fundamentalism, insurgency, refugee crisis, genocide, geo-politics, local warfare, nation state, space technology, multi-polar world system, veto power, proxy war, sanctions, peace movements, and green policies. Several regional and global crises are also incorporated under information system. Selected ones include: First world war (1914), second world war (1939), Arab-Israel War (1948, 1953, 1968, 1973), Korean Crisis (1950), USA-Vietnam War (1968-1975), Indo-China War (1962), India-Pakistan War (1947 & 1965), Liberation of Bangladesh (1971), Gulf War (1990 & 2003), Iran-Iraq war (1978-1988), Afghan war (1979-1989), ethnic cleansing in Bosnia- Herzegovina (1995-1999), and Syrian Crisis (2000 till date). In short, 'Information Revolution International System Model' can be beautifully adopted to understand the changing global system.

Information Revolution and its Impact on International Relations

It is a well known fact the Information Revolution has dramatically changed the structure of global politics which works through email, internet services, wahtsApp, satellite TV, WhatsApp, mobile phones and hundreds of other applications. It has actually resulted in speed by saving time, cost, and management services. There is hardly any aspect of global governance which remain untouched from information system, a part of new generation 1-D to 5- D. Emergence of virtual states, new ICT policies and digital based security programmes are more exposed than ever before. Information Revolution is more prone to risk, an easy access and chances of exploration is very high. Powers like USA, UK, Germany, Italy, France, Japan, China, South Korea and even India have developed strong ICT- Security System to assess any risk factor. But China's Economic Model of international politics is cited as the best example whereas Japan's as the original leader of ICT is well known to global politics. In short, international relations have increased transparency which means the states no longer need to protect for unknown potential threat. Information can easily be transmitted in decided time framework with no further delay. One can have access anywhere and anytime. [1]

Information Revolution & Dimensions of International Relations

It is the universal fact that 'Man' is a social creature and centre of knowledge bank who shapes the destiny and control the techniques which affect the dynamic process even beyond the boundary of ICT norms. Various important parameters: national information policies with special reference to Third World or developing countries, the process of globalization, economic transformation, global governance, digital diplomacy, power dynamics, and international economy are increasingly important. But the impact of Information Revolution on social institutions (race, colour, nationality, ethnicity and religion), political culture (leadership, government, democracy, political parties and pressure groups), economic system (trade, business, banking, insurance, monetary system, and industrial management) and environmental issues (migration, refugees, diasporas, human rights and sustainability) are imperatives of international relations. The following table gives an overview of some of these facts.

Table: Information Revolution & International Relations: A Parameter

SL. No.	Events/Ideologies/	Action Lines/ Agencies
1.	1st and 2nd World Wars	October Revolution (1917), League of Nations (1919), Fascism (1919) Nazism (1939)
2.	United Nations	UNSC, UNGA, ECOSOC, UNESCO, UNICEF, ILO, IBRD, UNHRC, UNEP
3.	Major Peace Treaties & Summits	NPT (1968), SALT (1972) INFT (1987), START (1991) and CTBT (1996)
4.	Nation States	First World (Western Powers), Second World (Socialist Blocs), Third World (Asia, Africa, Latin America)
5.	Theories /Approaches	Realism, Idealism, Neo Realisms, Neo Liberalism, Game Theory, Marxism, etc.
6.	Foreign Policy	Diplomacy, Intelligence System, Sovereignty, Trade, Cultural Exchanges, Hi Tech Visa, Counselor Services
7.	Regional Alliances	SAARC, SAFTA, ASEAN, GCC, OPEC, APEC, ADB, EU and OIC
8.	Power Actors	USA, Russia, UK, France, Germany, Japan, China, South Korea, Australia
9.	Non State Actors	Globalization, Multinational, Transnational, NGOs, Greenpeace, Amnesty International
10.	Education	Global Universities, R&D Bodies

Source: Data collected from various online access

Information Revolution: Major Agents

Information Revolution technology enabled, close ally of globalization, scientifically proven, a productive force, post revolutionary notion of development and great advocate of international system often associated Technetronic Society". [2] At the positive scale, Information Revolution has added precision, smartness, time manager, distance saver, quickness, promptness, transparency, economic benefits and portability of management. On the contrary, it has resulted in fiscal crisis in forms of scam, fraudulent practices, black marketing, cyber centric crimes, and even materialistic gains with no moral and ethical support. Active agents like distorted communications, censorship of media, printing technology, corporate minded people, share market, exaggeration of dividends, fraud online messengers, and information managers (labour, capital, resources, market conditions) are serious concerns.[3] Furthermore, the agents of information revolution also helps in market survey, gold appreciation-depreciation, international & local markets, currency value (Dollar, Ponds-Sterling, Euro), exchange valuation, innovative designs, research and development activities. More importantly, info revolution in international system also deals management principles related to structure, policy, programme, implementation, bureaucracy, accountability of civil servants, elite workers, production, distribution, market access, patents and business cycles. In nutshell, information revolution encircles all kinds of communication, intelligence services, international trade, transnational sensitivities, global village, information pollution, digital transformation, business cycle, knowledge revolution, software-hardware services, telecommunication networking, technological capacity building, diplomatic theories & practices and foreign policy mechanisms. There is no doubt that the global technological capacity have gone up many fold since the beginning of new millennium. [4]

Conclusions

Information Revolution is not a new phenomenon rather it travelled long course of history since the development of printing press. However, new ICT is transforming global politics in a more diverse ways. Now more transcontinental channels of contacts are available to more and more people around the world. Its impact on diplomacy, security, foreign policy, and war are more preeminent. Consequences of Information Revolution on global economy, nation states and sovereignty are largely based on environmental debates. To understand international relations, the important parameters like origin of information revolution, globalization of communication, war-peace methods, economic system, global communication, timeline computation, post industrial society, sleeping modernity, and issues and choices; need to be given due consideration. The broad dynamics of Information Revolution needs to be looked into historical realities of International Relations where the interdisciplinary discussion are important to understand the contemporary character information revolution and society. No doubt, information revolution has reduced the distance by 90%, life style is easier by 50%, developments increased by 75% and technological capacity upgraded by 60% through opening 'single window' services and 24x7 Online Services. Life is more luxurious, system is workable through finger tips and multimedia mobile as the best solution of day - today business. On the contrary, life span is reduced dramatically, health conditions are questionable, young generation are the privileged victims of new technology, suicidal-death cases have increased multifold, and hundreds of problems related to socio-economic set ups are unavoidable.

Findings

Let us put together 'Information Revolution Model' based on classical theory, suited to the needs and requirements of common men. Let us make a significant step forward through social revolution to ensure that everyone is happy. Let computer programming be truly 'user friendly' rather than distortion of mind and action. Data and information should be linked with sustainable development, productive rewards, true information, and comfortable enough to go with parity of geometrical and arithmetical development. It should play a mediator as how people behave, interact, work, communicate, learn, and live in prospective world. Flat-screen televisions, ICTs, I-pads, tablets, smart phones and other Smart digital policies, which are being constantly upgraded; need to compensate with the reality of life. While talking about International Relations where security issues is largely confined to information warfare and cyber security, continues to promote greater understanding about language, culture, race, ethnicity, symbols, and images. There is no reason why the scholars of India and the world should try to develop a new theory of digital age security for proper insights to understand the depth of human relations.

REFERENCES

1. Krishnapuram, Raghu (September 2013), "Global trends in information technology and their implication". *2013 1st International Conference on Emerging Trends and Applications in Computer Science*, IEEE: v. doi:10.1109/icetacs.2013.
2. "Information Revolution" https://en.wikipedia.org/wiki/Information_revolution
3. Veneris, Y. (1990), "Modeling the Transition from Industrial to the Information Revolution" *Environment and Planning*, 22 (3): 399-416.
4. Hilbert, M., Lopez, P. (2011), "The World's Technological Capacity to Store, Communicate, and Compute Information". *Science*, 332, 60-65.

Digital Marketing and User Satisfaction: A Research Framework

M. S.Tanawade[1] S.M.Mallade[2]
[1]*Librarian, Vasundhara Kala Mahavidyalaya, Solapur*
[2]*A.R.Burla Mahila Mahavidyalaya,Solapur*

Abstract:
Digital marketing techniques are becoming more common in our advancing technology currently.Some of populardigital marketing techniques such as search engine optimization (SEO), search engine marketing (SEM), content marketing, influencer marketing, content automation, campaign marketing, display advertising, e–books, and optical disks and games. The purpose of this study is to gain the performance of digital marketing regarding to the social media usage in the library environment such as Instagram, YouTube, Facebook and other platforms connectivity and communication related to user satisfaction in library environment. This paper enables librarians and stakeholder of the library to have a better understanding on the social media phenomenon in libraries.

Keywords –*Digital Marketing, Social Media, User Satisfaction, Library 2.0*

Introduction

Nowadays, digital marketing is widely use in the world of business by many people around the globe. It is like a booming in marketing environment. To meet the objectives in mutual exchange and fulfilment of promises, relationship marketing need to identify, establish, maintain and enhance the relationship. Besides , if necessary, marketers can discontinue connection with customers and other stakeholders(Gro ̈nroos, 1994). In this new era, global digital revolution has led to the technological developments. Therefore, information sources have turn resulted in exuberance(Morgan, 1998; Kassel,1999; Wolpert, 1999; Cullen, 2001). Duckers define "Marketing is management". He articulates the strategy as "identical customer needs, company capabilities and management vision. The objectives of strategy want through a sequence of option with long-run survival and profitability" (Webster, 2009).By using marketing principles and techniques, libraries can be better understand their user needs, justify funding, and communicate more effectively. They must identified the needs of their clients International Journal of Academic Research in Business and Social Sciences2017, Vol. 7, No. 12ISSN: 2222-6990516www.hrmars.comwith a variety of extraneous audiences and attain greater efficiency and highest results cover delivering products and services(Spaldingand Wang, 2006a, 2006b).Every user is able to contribute content through Web 2.0 as a set of technologies that offers in academic libraries (Anderson, 2007).The variety of platforms such as Facebook, Instagram and others can spread the information and awareness that occur beyond various channels. The online users and social networks users can easily create content and publish their opinions, experiences and feelings about many topics and products (Damian Ryan, 2014).

Literature Review

Social media application had brought a lot of benefits to the library. This phenomenon can be seen in many aspects as such marketing and promoting library services to the users. Therefore, libraries are using latest trends to market their services in the developed countries. In addition, social media tools and Web 2.0 applications are widely use in USA libraries to connect with the users and to make services accessible in the library programs (ALA, 2001).This paper intended to create a conceptual framework to relate user satisfactions in social media and networking that include Facebook, Twitter, Whatsapp, WeChat and Instagram.

Facebook

Conversation principles could be used to create the number of lover in the Facebook Pages. It is suggested by an examination of university health centre(Waters et al.,2011). The opportunity of using paid advertising is not mention. In academic library, they discussing about the Facebook involvement. Facebook pages are "hard to publicize without paying for Facebook advertisements", said by (Graham et al., 2009). The paid advertisement is not something that many libraries will consider even though they do not imply their statement. Advertising would be expensive if the result of a belief that such this attitude. Facebook fan raises brand awareness and builds customer relationships at a very low cost. This is writing from the perspective of the benefits small businesses(Harris and Rae, 2009). Facebook enables the precise targeting of consumers on advertising at an absolute minimum by advertisers (Anon., 2011).In October 2006, the profile accounts for a library on Facebook began shutting down(e.g. Rutgers University Libraries). The way that librarians used web sites to market their libraries are influenced by the changing of Facebook operation. (Charnigo and Barnett-Ellis, 2007) claiming that profiles had to perform specific people. Librarians started creating individual profiles instead Group Accounts which are "it may be impractical to think that large numbers of undergraduate students would want to count librarians among their Facebook Friends". Therefore, students have been uncertain from receiving any encroachment in their social lives by librarians(Breeding, 2007).Majority of undergraduate students were hesitant about contacting librarians through Facebook. It is revealed by a conducted survey at the University of Michigan(Chapman et al.,2007).International Journal of Academic Research in Business and Social Sciences2017, Vol. 7, No. 12ISSN: 2222-6990517www.hrmars.com

Wechat

WeChat is the most popular social media in China. It is launched by Tencent™in January 2011. It offers a free instant messaging application service for smartphones. It also enables voice, text, pictures, videos and location information exchange via mobile phones(Xu et al., 2015).One of the mobile service platforms developed and personalized by a library is WeChat Library. It is basedon the WeChat platform which uses mobile service functions by connecting with the library management system such as OPAC retrieval,digital resource retrieval,personal library and e-books. There have been several case studies across the library literature in China that covers the extensive and positive uses of WeChat for outreach or virtual services. From its general features such as sending text, videos and images by undergraduates (Mao, 2014) to special features such as "shaking the phone" tofind other nearby users to connect with(Zhang, 2013). (Chen, 2014)said WeChat Library is a library service of new type with the library knowledge as the main content. WeChat embraced as the platform as a WeChat public service platform. It is opened up the API interface and offers the capabilities of interactivities between the WeChat public platform and patrons and all types of possibilities for developing various customized functions. WeChat Library is receiving wide application among libraries in China. (Xu et al., 2015) stated that generally one-third of the top 39 academic libraries in China use WeChat as a marketing tool. It is because, they want to promote their services and collections to users. (Pun, 2015) introduced the use of WeChat as a new virtual reference service in New York University Shanghai. To comprehensively determine the current situation of WeChat Libraries applied in the libraries of Chinese colleges, the present study found that there are 39 "Project 985" (Wikipedia,2015) university libraries as the basis for theinvestigation objectives.

Whatsapp

The Pew Research Center's report on Mobile Messaging and Social Media2015 found that 36 per cent of smartphone owners in the USA report using messaging apps such as WhatsApp, Kik or iMessage (Duggan,2015). An international digital measurement site,SimilarWeb, reports that WhatsApp isthe world leader on Android as the top messaging app in 109 of the 187examined countries, or 55.6 per cent ofthe world (Schwartz, 2016). With one billion users as of February 2016, WhatsApp is a clear leader of the pack that includes Facebook Messenger and WeChat, two other very popular messaging applications with a large numbers of international users (Olson, 2016).The ability to communicate internationally without cost is an extremely important part of MM and a major factor in the creation of what is becoming known as the most popular one, WhatsApp. WhatsApp was developed in 2009 by Jan Koum, a college dropout and self-taught engineer, who came to the USA from the Ukraine as a teenager. He developed the app while working on ways to communicate with international friends. While working at Yahoo, he met Brian Acton who became the cofounder of WhatsApp after assisting with procuring investment money (Olson, 2014).International Journal of Academic Research in Business and Social Sciences2017, Vol. 7, No. 12ISSN: 2222-6990518www.hrmars.comLibraries can providea wide array of services to interested users on Whatsapp. Current Awareness Services (CAS) services assist the library users in keeping up-to-date with latest document additions in the library. A library can use WhatsApp to deliver CAS on themobile of the user in real time. Library staff can take pictures of the book or journal alongwith table of content and send it to the library user. A user will aware about his librarycollection development without going into the library. Selective Dissemination of Information, SDI is a type of CAS which keeps the users in touch with the latest developments in the field of users' interest. A library can create groups of users of different area of interest to provide them specialized information. A library can scan an article and upload it in the group so that, user can easily download them without losing time.A library can offer reference service through WhatsApp. Users can text to reference librarian before reaching library to ask the location of a document or an information source (Ansari, 2016).

Twitter

The social networking platform that grants users to broadcast short messages of no more than 140 characters is a Twitter. This limitation must be informative and on point to the message and need for quick. Twitter allows their users update this platform by mobile phones, e-mail,website and instant messages(Java et al.2007). Even though, it is launched in 2006 as another tool for friends and family to keep in touch (Aharony, 2010). (Holland and Verploeg, 2009) explored the difficulties that library administrators deal with on a daily basis and named free advertising as the main reason behind why libraries turn to Twitter and SNS. The Library Twitter Feed widget was created by one of my colleagues who have a Twitter account. She generated the widget code by using Twitter's widget creation tool. In order to use this tool, she logged into her Twitter account and then selected Settings from the menu and then going to "Widgets" followed by "Create New" and then "Create Widget". She then proceeded to copy the html coding and pasted it into an email which she sent to me. With the code in hand, I could setup a widget in EBSCO Admin for EDS. The process was similar for all the other widgets incorporated into the discovery interface.Our Twitter feed includes postings of trendy information and news as well as important library announcements. Itis primarily geared toward students and library users comfortable with social media. Often, library events, activities or services (e.g. free books, hot chocolate during finals, etc.) that might interest our student patrons will be highlighted in the Twitter Feed (Shapiro, 2014).In particular, (Murray, 2010)argued that Twitter could assist library administration and leadership by promoting a sense of community. This sense of community was also identified by (Verheul, 2011) who argued that Web 2.0 tools help in developing a community around the digital library. Similarly, the importance of libraries reaching out to users through Twitter was also promoted in several studies. Stephens, (2007) argued that libraries could use Twitter to change the way they exchange messages. (Wilson, 2008), (Milstein, 2009) and (Click and Petit, 2010) argued that Twitter could be used to deliver technology news and engage in interaction with library users. Wells and Mason (2010) and Tagtmeier, (2010) recognizedthe use of SNSs, such as Twitter and Facebook, as one more way to reach users.International Journal of Academic Research in Business and Social Sciences2017, Vol. 7, No. 12ISSN: 2222-6990519www.hrmars.comIn particular, (Ovadia, 2009) suggested that, as well as accomplishing user outreach and collecting valuable feedback, Twitter's functionality could assist librarians in behavioral and social sciences. Finally, (Fields, 2010) explored librarian's adoption of Twitter professionally and personally, specifically suggesting that there are differences between the two types of use and questioning the personal adoption of Twitter for promoting reference services or for enhancing his/her professional status. Specifically,(Donahue and Gamtso, 2010) investigated the potential use of Twitter for retrieving information when conducting academic research. Sharing the same views, (Mathews, 2010) explored whether students were using their library Twitter account during theirdaily interaction with Twitter and found that their library's account was regularly usedfor homework and assignments.

Instagram

Bergstrom and Backman (2013) have founded the Instagram platform in 2010.Users can share their photos and videos to their followers through this mobile application (Dubovik, 2013). Dennis (2014) cited the Instagram started off providing functions on editing and sharing photos and then added in the functions of sharing videos and photo messaging directly to another user. Besides, Instagram let users to snap photo or video anywhere 24/7. Users are able to take 15 seconds video and 13 artistic filters that are available for user to edit their photos (Bevins, 2014).Instagram started to develop when Kevin Systrom andMike Kriegerwant to focus on the HTML5 check-in application named Burbn, which let the function of location, earn point upon meeting friends and post photos according to (Systrom, 2010). However, they decided to focus on the application of photo function after some confusion and soon they renamed Burbn to Instagram. The word comes from the combination of "instant" and "telegram" (Maravic, 2013). There are staffs and students Roesch Library serves facultywho decided to sign up for Instagram by a student worker's suggestion at the University of Dayton, located in Dayton, Ohio. Instagram has provided a function known as "hash tags" (#) for the convenience of indicating the relevant photos and video to the products of a business. This allowed the librarian to see how users interacted with one another like (hashtags, etc.) before introducing the library as a user according to (Barnes, 2014) as cited in (Dennis, 2014).They also use Instagramto provide a novel outreach program successfully to their users. Users could explicit their passion in a personalized scavenger hunt on the Instagram and the user can get the directions through Instagram's direct message feature(Tilton, 2014).A small prize of a Howard Tilton pin was waiting at the end of the scavenger hunt. Users write down their success through a reposted photos and specific tag. The reposted photos were publishing on the official library account. This scavenger hunt catersastepto connect social media with teaching students about the physical library. Moreover, Instagram has provided a tool known as direct messaging. This tool could give the VIP customers another step to interact with the organization (Herman, 2014). He added that the direct message tool allows the user to send message that only the specific receiver can view and each message can send out to 15 users each time.International Journal of Academic Research in Business and Social Sciences2017, Vol. 7, No. 12ISSN: 2222-6990520www.hrmars.com2.6

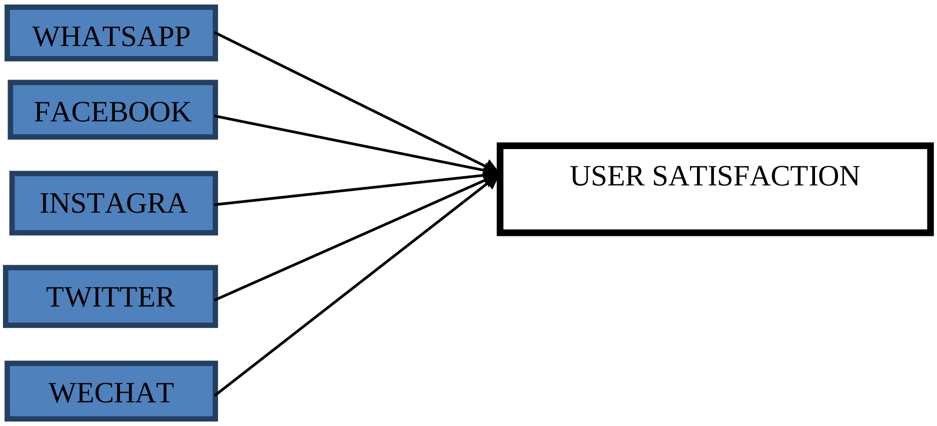
User Satisfaction In Social Media

User satisfaction refers to the user's psychological or affective state resulting from a cognitive appraisal of disconfirmation (Bhattacherjee, 2001). Researchers have investigated user satisfaction from different theoretical perspectives. Another stream of literature investigated user satisfaction through the theoretical lens of EDM (Bhattacherjee, 2001; McKinneyet al., 2002), and suggested that the formation of satisfaction includes three processes:perceptual, evaluative, and psychological.User satisfaction has been extensively studied in different contexts, such as online shopping (Lin and Lekhawipat, 2014; Shih, 2004), mobile services (Koivumäki et al.,2008; San-Martin and López-Catalán, 2013), mobile sites (Zhou, 2013), online games(Huang and Hsieh, 2011), and internet banking (Liébana-Cabanillas et al., 2013). It is recognized as a core factor that determines the continuance use of an information system. For instance, (Sung and Hahn, 2007) found that user satisfaction contributes tothe success of a network service. (Assensoh-Kodua and Lekhanya, 2014) showed that satisfaction is one of the salient determinants of continuance intention in the SNSs context. (Shiau and Chau, 2012) also reported that satisfaction influences bloggers continuance intention to use the blog.The presence of social media has deeply changed people's life style, thus may change their attitude and judgment about life. Extant literatures have examined the effects of socialmedia on people's life satisfaction, but the results are still ambiguous (Ang et al., 2015; Best et al., 2014; Kalpidou et al., 2011). Some scholars contended that using social media could enhance people's life satisfaction (Liu and Yu, Nabi et al., 2013), while some studies proposed negative relationship between using social media and life satisfaction(Brooks, 2015; Chou and Edge, 2012).Satisfaction and gender differences have been recognized as a critical factors influencing information technology use

(Bhattacherjee, 2001; Debrand and Johnson, 2008). Satisfaction determines the continuance intention to use an information system (Bhattacherjee, 2001), whereas gender differences influence the attitudes, beliefs and usage patterns toward an information system (Debrand and Johnson, 2008; Fallows, 2005). Individuals who have higher quality of friendships and extended social group may also have higher well-being about their lives (Best et al., 2014). The usage of social media can bring users a closer relationship and a broader social range, thus their affection is to be fulfilled by the feeling of decreased loneliness and the perception of love, understanding and acceptance (Steverink and Lindenberg, 2006). Likewise, (Ang et al., 2015) examined the relationships between computer-mediated communication and life satisfaction,demonstrating that friendships obtained online and online communication will meet individuals' psychological needs and positively predict life satisfaction.
International Journal of Academic Research in Business and Social Sciences2017, Vol. 7, No. 12ISSN: 2222-6990521www.hrmars.com3.0

Conceptual Framework

This section is a conceptual framework that explains the relationship between the digital marketing through social media in library environment. Furthermore, this framework provides an



Independent Variable (IV)   Dependent Variable (DV)

Figure 1: Conceptual Framework of digital marketing in library environment

Conclusion

In conclusion, this study provides the literature review the most important step is deciding exactly what type of social media and networking is being marketed and to which user group. For example, the marketing of existing and new library services can be carried out directly to existing users via web links. Marketing and technical skills are required to do the digital library services to diverse user groups. The Internet allows LIS professionals to deliver services regardless of time and place. The libraries must keep in mind the users and their information requirement and facilities that available for the production and services. Library must use the latest technology and know library strengths and weaknesses in terms of resources, personnel and expertise. This will help university libraries in providing services/products which are more responsive to the needs of the users. Thus it is on the introduction of the successful marketing mechanism in the libraries Facebook WeChat Whatsapp Twitter Instagram User Satisfaction Social Media and Networking that the survival of libraries depends as non-profit organizations for the supply of services and products at subsidized rates in an era of advancing technology.

References

1. *GrȯNroos, C. (1994), ''Relationship Marketing: Strategic And Tactical Implications'', Management Decision, Vol. 34 No. 3, Pp. 5-14.*
2. *Borchardt, P. (1997),Ein Marketing Konzept Fűr Őffentliche Bibliotheken, DBI, Berlin.*
3. *Facebook (2012), "Registration Statement Under The Securities Act Of 1933", Available At: Http://Sec.Gov/Archives/Edgar/Data/1326801/000119312512034517/D287954ds1.Htm (Accessed 19February 2012).*
4. *Drucker, P.F. (1954), The Practice Of Management, Harpercollins, Kindle Edition, New York, NY,P. 416.Drucker, P.F. (1958), "Marketing And Economic Development", Journal Of Marketing, Vol. 22 No. 3,Pp. 252-9.*
5. *Drucker, P.F. (1959), "Long-Range Planning: Challenge To Management Science", Management Science, Vol. 5 No. 3, Pp. 238-49.*
6. *Drucker, P.F. And Maciariello, J. (2008), Management, Revised Edition, Harpercollins, New York, NY, P. 658.*
7. *Fichter, D. (2003). Why And How To Use Blogs To Promote Your Library. Information Today, 17(6). Retrieved October 15, 2016, From Www.Infotoday.Com/Mls/Nov03/Fichter.*

8. *Sht Ml Jain, P. (2013). Application F Social Media In Marketing Library & Information Services: A Global Perspective. European Journal Of Business, Economics And Accountancy. 1(1), 1-13.*
9. *CIA (2011), "Bangladesh", The World Factbook, Available At: Www.Cia.Gov/Cia/Publications/Factbook/Geos/Bg.Html (Accessed 21 January 2012).*
10. *Trivedi, M. (2010). Blogging For Libraries And Librarians: Library Philosophy And Practice. Retrieved Fromhttp:// Www.Webpages.Uidaho.Edu/~Mbolin/Trivedi-Blog.Pdf*
11. *Green, S.S. (1876), "Personal Relations Between Librarian And Readers", American Library Journal, Cited From Renborg, G. (1997), "Marketing Library Services. How It All Began", 63rd IFLA General Conference, Vol. 1, Pp. 74-81, Available At: Www. Ifla.Org/IV/Ifla63/ 63reng.Htm(Accessed 25 January 2012).*
12. *Xia, Z.D. (2009), "Marketing Library Services Through Facebook Groups", Library Management ,Vol. 27 Nos 6/7, Pp. 336-343.*
13. *Chen, Y.S. (2014), "Thinking On The Construction Of Wechat Library", Information Studies: Theory & Application, Vol. 37 No. 7, Pp. 86-89.*
14. *Moore, K. (2011), 71% Of Online Adults Now Use Video-Sharing Sites, Available At: Http://Pewinternet.Org/Reports/2011/Video-Sharing-Sites.Aspx (Accessed 11 April 2012).*
15. *Rowley, J. (2003), "Information Marketing: Seven Questions", Library Management, Vol. 24Nos 1/2, Pp. 13-19.*
16. *Yi, Z., Lodge, D. And Mccausland, S. (2013), "Australian Academic Librarians' Perceptions Of Marketing Services And Resources", Library Management, Vol. 34 Nos 8/9, Pp. 2-2.*

The Rise of Reformation towards Journals and Literature in Tamil Nadu

Dr. A. Rajaram
Assistant professor, Department of History, Periyar Arts College, Cuddalore,Tamil Nadu.

Abstract

This article mainly focused how the journals and literature helps to communicate the people on reformative ideas and thoughts. Yesteryear, journals and literature might be important medium to communicate the ideas on people in Tamil Nadu. On the great consequence, some of the journal and literature raise the reformative ideas to the people. Perhaps, there is no option for the contemporary leaders. So they chose to communicate the ideas to people easy way. The Important phase in the development of Tamil prose is the publication of journals and other reformist literature. In this direction too, the original lead was given by the Christian Missionaries. The earliest periodical journal, the Tamil Patrikä was begun in 1831 through missionary effort. This journal provided pre-eminently essay on religion and theology, though articles of secular interest too appeared occasionally. About the middle of the Nineteenth century, there arose several monthly magazines, established by the Missionaries. Over the years, the reformative journals and literature impacted the life of people, and the inner thoughts. People read the journals and seriously, to knowing the unknown facts and helps to survive against discrimination and hegemonic pattern. Perhaps, the medium of communication towards journal has been successfully changed the ideas and social reformation ever.

Keywords: *Journals and literature, Christian missionaries, discrimination, magazine, hegemony*

Introduction

Yesteryear, journals and literature might be important medium to communicate the ideas on people in Tamil Nadu. On the great consequence, some of the journal and literature raise the reformative ideas to the people. Perhaps, there is no option for the contemporary leaders. So they chose to communicate the ideas to people easy way. The Important phase in the development of Tamil prose is the publication of journals and other reformist literature. In this direction too, the original lead was given by the Christian Missionaries. The earliest periodical journal, the *Tamil Patrikä* was begun in 1831 through missionary effort. This journal provided pre-eminently essay on religion and theology, though articles of secular interest too appeared occasionally. About the middle of the Nineteenth century, there arose several monthly magazines, established by the Missionaries. This article mainly focused how the journals and literature helps to communicate the people on reformative ideas and thoughts.

The Cuvicöca Prapäla-Vilakkam of Nakercöil, the Narpötakam, Näna Snékan, Tina-Vartamäni of Pällayamköttai and Técöpakäri of Neyyör were some of the most prominent among them. The primary object of these journals was religious propaganda. They condemned the evils prevalent at that time and solicited the attention of the Tamils to the glaring evils of caste system, early marriage, position of women, etc. Soon the impetus given by the Missionaries was followed by the Hindu scholars. They became suspicious and critical of the missionary activities. The criticism of the missionaries against malpractices in Hindu society gave the Hindus, a sense of awareness to the existing evils among them. With the result, in 1865, a Tamil journal Vivékam was started with the object of drawing the attention of the people to the glaring superstitions which permeated the Hindu society. About the same time there appeared the Amrita Vacani and still later Cintämani which were all intended to provide up-to-date knowledge on current affairs and to improve the position of women in particular. Little later Cittanta Tipikai was started to propagate Saiva Siddhänta philosophy. Madras had the honour of being the birth place of the Indian National Social Conference which was first held at Madras in1887. In 1892, the Madras Hindu Social Reform Association was established in Madras, "to promote social reform among Hindus including female education, removal of restriction as to the marriageable age and the remarriage of widows, relaxation of the rules of caste and discouragement and abolition of such other customs, habits, practices of prohibition as are injurious to wellbeing of individuals and of society. The contemporary reformist Literature clearly brings out the position of women. Advocating the claim of women to a higher status, G. Subramania lyer stated: "It is self-love, narrow sympathy, and a low standard of conduct that constitute the cause of the subordination of woman to man."We hold that the true test of civilisation is the position of women, and the incongruity between our pretensions outside our home and our practice within it, should gradually lead to a greater harmony between the two lives. He also pleaded that their education should be as high, as scientific and as invigorating as the education of men. The third social conference which met in Madras in 1889 passed a resolution thus: "With a view to preventing early completion of marriages, which lead to the impairment of physical health of both husband and wife, and to the growth of a weakly progeny, cohabitation before the wife is 12 years old should be punishable as a criminal offence, and every effort should be made to awaken public conscience to the grave dangers incurred and to postpone the completion of marriage till the age of 14 at least as being in accordance with the dictates of our ancient medical works or modern science, and countenanced by the approved sentiment and practice of the country, that member, joining any of the Social Reform Association connected with this conference should be asked to pledge himself not to contemplate in his own case or in the case of the children, who are minors any marriages before the bride completes her 14th year.

The issue of child marriage was a burning problem and was widely discussed. The progressives were in favour of a post puberty marriages and wrote many articles and propagated this in many public platforms. A correspondent of Cutécamitran (a leading Tamil daily at that time) of the 18th of July, 1890, referred to in which a girl of 11 years died from the effects of injury caused her husband being allowed to cohabit with her. He urged the le of the country, the necessity of removing this evil practice' In these dailies many cases regarding ill-sorted marriages were quoted and condemned. In one instance, "a child of nine months was married to a man of thirty-five years". It pleaded that the Government should step in and fix an age of consent. The conservatives, on the other hand, were opposed to any change and reforms. A few orthodox dailies like Hindu Jana Bhüshani of the 15th November, 1890, condemned the demand of the progressives and observed that the Government of India was totally wrong in coming forward to act against the policy of neutrality on the representations of a few educated natives and that if Government should take action in the matter before ascertaining the opinion of the whole population, people would, to a certainty, become discontented and even disloyal.". Another paper by name Kömäli of Madurai of the 24th of November, 1890, also opposed the demand on the ground that the proposed legislation raising the age of consent,93 would, instead of eradicating any of the existing evils, only increase them by subjecting the Indian girls to unnecessary medical examinations in cases in which charges would frequently be brought against families of the bridegroom and the bride by their enemies who would be ever ready to take advantage of the proposed measure. Nevertheless the Government of India rose the Age of Consent from 10 to 12. To the progressives and to the educated elite this was a great success. Further in the last decade of the nineteenth century, "Social Purity Movement" as it was called, got its start in Madras. This movement focused its attention on temperance and the abolition of nautch dancing. "To pursue pleasure as the purpose of life is the animal; to subject pleasure to the purposed life is man for whom the spectacle of public and temple nautch dancing by women of double chastity, and liquor consumption by cultivated men were disgraceful blemishes on Indian society". Besides Venkata Ratnam condemned on moral grounds the entire system Of popular mythology and representations of established Hindu divinities which seemed to convey No sexual wonder, licentiousness, he suggested or what that he called "sanctimonious sin"

Europeans "Devotion, ridiculed Hinduism, that re-joining In strong of the soul terms in the he wrote graces that of Lord, degenerates into vagaries that embody themselves in images and pictures of ruthless realism with dissolute details and express themselves in song or verse that bigoted partisans alone can miss-name piety. Esotericism, that panacea for all the spiritual ailments of India, would fain galvanise these dead bones into life; but while the subtle apologist points to a mystic inside the simple world accepts the pleading to justify the palpable Outside and vulgar orgies and voluptuous, amorous ditties and unholy holies stand out among the main features of the faith of the majority. Venkata Ratnam's crusade against the nautch girl gained momentum and the Madras Hindu Social Reform Association too supported it. The members were required to pledge not to keep a concubine, not to hire nautch dancers, and to avoid the use of liquor. Besides they were called for education of girls, postponement of the marriages of daughters until they reached puberty or at least 10 years of age; postponement of the marriage of sons until they reached the age of 18; dining with remarried couples and foreign travelled Hindus; and joining in light refreshments with other caste individuals. This summed up the common denominator of liberal behaviour in Madras in the last decade of the nineteenth century. Untouchable too was felt as social evil. R. Venkata Ratnam with a few other reformers focused the public attention on the condition of the depressed classes. The Hindu reformers generally acknowledged that the successes of Christian missionary conversions from among the out-caste groups were the initial incentive for Hindus to come to the rescue of their dishonoured countrymen. The progressives of the tenth social conference passed a resolution in 1896 condemning untouchable. "That in the opinion of the conference, the education and the social amelioration of the pariahs and other outcastes in all parts of India is a duty which rests on all those who have the permanent good of their country at heart and every effort should be made to raise these classes to a position" through education and industry. The amelioration of the outcastes is indeed one of the greatest social transformations in Southern India and the role played by the progressives in this endeavour is indeed ennobling.

Conclusion

Over the years, the reformative journals and literature impacted the life of people, and the inner thoughts. People read the journals and seriously, to knowing the unknown facts and helps to survive against discrimination and hegemonic pattern. Perhaps, the medium of communication towards journal has been successfully changed the ideas and social reformation ever.

Reference

1. Cukunacuntari caritiram,
2. Pratapa Mutaliar Caritiram,
3. Gurusami Sarma, Premakalävatiyam,
4. Kamalämpal. caritiram.
5. K. S. Venkataramani, the Indian Village
6. The Madras Year Book, 1924.
7. Cintamani, C. Y . , Indian Social Reform,

8. Report of the Eighth National Social Conference. Madras, 1894.
9. C Y. Cintamanj, Indian Social Reform, pp. 52-53
10. Kanaka sapai Pillai, A, Geography, Madras 1890.
11. Sundaram Aiyar, M. T., History of India, its Past, Present and Future, Madras, 1881.
12. V. S. Purnahngam Pillai, Tamil Literature, Photo print, Tamil University. 1985

Genesis of Female Education in India During Colonial Period

Dr. K. Govindaraj
Assistant professor, Department of History, Thiru A.Govindasamy Govt Arts College, Tindivanam

Abstract

This article mainly focused to exhibit the educational system of British especially Female Education. After the identification of direct sea route from Europe to India have resulted dramatic changes in India? The coming of Europeans, contributed several fields like social, economical and cultural areas. On the path, Europeans made an attempt to change reformation in educational field. However, British have dominated in India and ruled more than 200 hundred, would made renaissance in Education. Before coming of the British Indians have been followed in the traditional system of education. So British nominated the committee to solve the issues and implemented innovative educational systems as per reports. Indeed, British implemented wise plan and system to transform the education into modern vision. Moreover, they are equally arranged some schemes for female education. Thus, British given the lot of good things to India, particularly female education was remarkable ever.

Keywords: Female Education, British India, traditional system, innovative schemes

Introduction

After the identification of direct sea route from Europe to India have resulted dramatic changes in India. The coming of Europeans, contributed several fields like social, economical and cultural areas. On the path, Europeans made an attempt to change reformation in educational field. however, British have dominated in India and ruled more than 200 hundred, would made renaissance in Education. Before coming of the British Indian education Indian have been followed in the traditional system of education. So British nominated the committee to solve the issues and implemented innovative educational systems as per reports. Indeed, British implemented wise plan and system to transform the education into modern vision. Education is not exotic in India. There is no country where the love of learning had so early an origin or has exercised so lasting and powerful an influence" says F.W. Thomas in the famous report on Indian education · But during the period under review, learning was at a low ebb due to Internal feuds and incessant wars. As a result, grants of land which were made for the support Indigenous schools by ancient Hindu and Muslim rulers had fallen into disuse and in some places, entirely disappeared. With no new industries worth the name, with a languishing weaving manufacture, with low prices and high taxes, the country was on the verge of collapse. Consequently, as Campbell, one of the collectors reported in response to the request made by the Board of Revenue, "the greatest part of the middling and lower classes of the people are now unable to defray the expenses incident upon the education of their offspring, while their necessities require the assistance of their children, as soon as their tender limbs are capable of the smallest labour" It was mostly confined to Brahmanas and a few higher caste Hindus who had the means and leisure to acquire it. Amongst the farmers, generally speaking and probably amongst one half of its population, the most common forms of education were entirely unknown. This article mainly focused to exhibit the educational system of British especially Female Education.

Munro's Scheme of Education

Sir Thomas Munro reviewed all the reports sent by the collectors of various districts and recorded his opinion in his famous minute of the 10th March 1823. In this regard a careful analysis of the statistics submitted by the various collectors would be very interesting and revealing The reports submitted by them in 1826, exhibited an aggregate of schools and collagen whom that there were 12,498 to population amounting to 12, 850,941 that is there roughly one to every of population. A further will denote that only 1 in 6760 received education, an females hall 01 the population on, the male population was roughly According to Munro the males between the ages 015 10 year might roughly be 9th of the total male population. The above assumption Munro calculated that the number of boys of the school going age might be taken at But the number 01 boys actually attended the schools was 1811 or little more than the figure arrived at by Munro. To this number, he added those who received instruction at home. In the city of Madras roughly about 26,963 received instruction at home. This was five times greater than those taught in the schools l% Exact number for the whole country is not known. Munro had come to a conclusion that the proportion of the males receiving instructions was nearer one -third than one-fourth of the total male population. In other words, according to him, 29 per thousand 5q of the males were receiving education. Munro was totally disappointed by this system of education prevailed then and felt it was due to poverty of the people. He also felt the low quality of education was mainly due to incompetent teachers with whom he viewed that "no progress can be made without a body of better instructed teachers than we have at present, but such a body cannot had without an income sufficient to afford a comfortable livelihood to each individual belonging to it". He, therefore, urged that "allowance should, therefore, be secured to them by Government, sufficient to place those above want and the rest should be derived from there on industry". If teachers happened to be superior both in knowledge and diligence, the scholars would "flock to them and augment their income", he argued. In the meantime, the committee of Madras School Book Society took interest in the cause of education and requested the Government of Madras to permit it to establish a school for training teachers. Munro accepted it immediately and ordered the sanction of Rs. 700 p.m. to the Society to run the school but then he felt such a small measure would not be sufficient. He thought some principal schools should be started in taluks and districts by taking the nature of thecountry into account and recommended for the establishment of two principal schools, one for the Hindus and the other for the Muslims in each Tashildari (Taluk) and i t was proposed to start 300 such schools. Likewise he was in favour of starting two collector ate schools in each district for higher learning and accordingly it was decided to start 40 collectorate schools in all the 20 districts of the presidency. The salary of the teachers was also fixed which was Rs. 15 to collector ate teachers Rs. 9 to Tashildari teachers per museum. He agreed that the allowance was small but he felt "the Tahsildari school master who received 9 rupees monthly from Government will get at least as much more from his scholars, and considering all circumstances his station will practically be better than that of a parish school master in Scotland". He calculated the total expenses and sent his proposal to the court of Directors for approval so that he would implement it with their consent to whom he wrote: "whatever expenses Government may incur in the education of the people will be amply repaid by the improvement of the country; for the general diffusion of knowledge is inseparably followed by orderly habits, by increasing industry, by a taste for the comforts of life, by exertion to acquire them and by growing prosperity of the people.The Madras School Book Society was interested in the scheme and the Government too was in favour of entrusting the task to it' But as the school would from a very important part of the general system for the improvement of education, it seemed advisable" to make it a public institution subject to the direction and superintendence of the committee of public Instruction rather than to afford the necessary pecuniary aid to the School Book Society in order that they might establish and maintain it.

Female Education

Tradition of the history of the educated women in early times conserved in classical literature, had become almost a thing of the past, In the eighteenth and nineteenth centuries, the number of educated women was negligible. Systematic survey on education of women was taken only in 1826 thanks to Munro. According to it only 5,480 girls were in schools out of total enrolment of 18, 110. 283 Education among them was almost confined to dancing girls who needed it as a complement to their profession. To other women reading and writing were almost un known as Munro says: "To the Women of Brahmana's and of Hindu in general, they reading and writing are unknown, because the knowledge of them prescribed and regarded as unbecoming of the modesty of the sex and fit only for public dances, but, among the women of Rajabundah and some other tribes of Hindus, who seem to have no prejudice of this kind, they are generally taught to some extent, domestic education for them was in vogue. But it was limited to a few well to do who had such pursuits. This neglect was due to child practice of pardah which were the chief obstacles to their all prudence against the education of women, the Company did not want to meddle with it. They did not have any definite policy in regard to female education before the despatch of 1854 which was an antithesis to policies pursued hitherto. Only some Christian missionaries were interested in their education. The first attempt to educate them was made by the Church of England Societies in Tirunelvelly in the early years of the nineteenth century. But they, out of compassion, concentrated mainly on the education of the daughters of the Christian converts. Only in 1841 the missionaries of the Scottish Church took interest in the education of the Hindu girls in Madras. In 1845, with the help of some Indian gentlemen they opened a school for girls. In 1854, according to the Woods Despatch 1854 only 8,000 girls were found in missionary schools and 1,110 of them were in boarding schools. There were roughly about 256 schools for them. Only in 1854, some serious concern was shown to their education.

The Wood's Despatch, 1854, clearly states: "the importance of female education in India cannot be overrated we have already observed that schools for females are included among those to which grant-in-aid may be given, and we cannot refrain from expressing our cordial sympathy with the efforts which are being made in this direction. For the first time thanks this Despatch, the policy of non-intervention pursued so far was given up and an active support of the Government to it was set in motion. The Despatch of 1854, though stressed the importance of Female education, was silent about ways and means to promote it. Even fourteen years after the passing of the Wood's Despatch, the Government of Fort St. George did not have any concrete plan to foster female education. In 1868, the Government of India in a plan envisaged starting of a female normal school at each of the Presidency towns which needed such schools very badly Accordingly, a female normal school was started in Madras. In 1880, the Inspectors of girls' schools were appointed to supervise and suggest ways and means to promote female education. Mrs. Isabel 13rander was the first inspectors of schools appointed in '1880 to encourage female education.

A great step was taken towards that direction only in 1882 by the Education Commission which suggested that "Female education should be treated as a legitimate charge alike on provincial or municipal funds and must receive special encouragement. The greatest care was to be exercised in the selection of suitable text-books for girls' schools and that the preparation teachers in girls' of such schools books must gradually be encouraged. be superseded The female by female teachers a female inspecting agency is to be set up This had given a great thrust to female education. By 1900 there were three women's colleges (i) the Sarah Tucker College, Palancottah, (ii) The Presentation Convent College, Veapery, (iii) St. Mary's Presentation Convent

College, Black Town, Madras in which there was an aggregate strength of 10 in each. Parents did not evince any interest in sending their girls to these colleges due to the stigma attached in sending grown up girls to colleges. In the beginning of the twentieth century, their literacy percentage was only 0.9.287 Female education practically was confined to primary stage only .Though the number of females receiving instruction at every stage had increased during the above period, the number had greatly decreased at the upper secondary stage. This is a clear evidence to prove that female higher education was not favoured.

The establishment of Model Primary Schools for girls at important centres, initiated a number measures such as liberal grants, appointment of additional female staff and creation of inspecting agency. As a result of such steps taken, there was some visible progress in their education. In 1902-03 there were 478 primary school exclusively meant for them with a strength of 3,975. After a decade (1911) the number of schools increased to 883 with a strength of 54,337 pupils.291 At the secondary stage also the growth was impressive. The number increased from 2,800 in 1902-03 to 3,348 in 1911-12. During 1911. 12 there were 19 girls in colleges. It is to be noted that during the quantum 1897-1902, three women students took the M A. Degree of the Madras University. In order to make their education real and meaningful instruction was given in health, house management, music, domestic science and some industrial subjects. Despite such measures, only one percentage of them was in schools in 1912. Even after a quarter century (1927), the percentage was only 2.5 During the period between 1900-25 in the field of their higher education also not much advancement was made. There were four colleges exclusively meant for women in which the strength was 348. It was far from satisfactory and hence it could hardly be said that there were even the faint beginnings of higher education among the girls

conclusion.

During the second quarter of the twentieth century it is gratifying to note that about 155 of them received instruction in Indian medicine and 2 in medical schools. During 1933-34, 77 of them were in Medical Colleges and 2 in Law College. After 1940, large number of them took to higher education. Between 1937 and 42, out of every 200 persons who have taken higher education 40 were females. The post war Educational reconstruction Report, 1944 was fully aware of the importance of their education and emphasised that "whatever is needed boys and men not less than will be required for girls and women. This may even apply to technical education not so many years since. Madras University is one of the earliest to provide special courses suited to women and women' s education has flourished in this University to a much greater extent than in any part Of the country. Degree courses like B. Sc. M. Sc. in Home Science were offered in order to make them good wives, mothers and citizens. It is most disheartening to note that despite all such laudable attempts, the women who were in schools and colleges were roughly about 3 per cent even on the eve of Independence. Despite many attempts to introduce education suited to women, it is still a far cry.

Conclusion

British came to India for the trade and commerce, to export Indian goods to Europe, particularly, spices and tea. For the long year, they captured the places from India and made permanent settlement for their protection. Later, they are involved in administration and also made social reforms voluntarily. On the path, they have implemented innovative educational plans and execute wisely. Moreover, they are equally arranged some schemes for female education. Thus, British given the lot of good things to India, particularly female education was remarkable ever.

Notes and References

l.Report of the Hartog Commision, London, 1929.
2.Revenue Consultations, No. 46, February 26, 1825 paras 5-6.
3.Ibid., Nos. 32-33 August 25, 1823, Campbell's Report para 18.
4.Ibid., No. 35, Vol. 924, September 25, 1822.
5.Ibid., Vol. 1011, No. 46, February 21, 1825.
6. Selections front the Records of the Madras Government paper relating to Public Instruction, Madras, 1855.
7.Ibid., Also Campbell's Report.
8,Revote Consultations, Nos. 32, 33, vol. 958.
9.Ibid
10.MacCleane, Manual Madras Administration, Madras, 1885. vol. l.

Effects of Ladder Training on Selected Motor Fitness Variables Among Water Polo Players

Dr. Pravin Lamkhade
Rani Indirabai Bhosle Mahavidyalaya, Kuhi, Nagpur

Abstract

The purpose of the study was to find out the effects of ladder training on selected motor fitness variables among 40 men Water Polo players from Colleges of Physical Education under Rashtrasant Tukadoji Maharaj Nagpur University, were selected randomly as subjects. The age of the students ranged from 18 to 25 years. The selected subjects were divided into two groups. Group A underwent ladder training, Group B acted as control group. The experimental group was subjected to the training for three days in a week for the period of 8 weeks. The motor fitness variables namely speed and agility were measured by 20 meter dash and shuttle run. The Data were collected from each subject before and after the training period and statistically analyzed by using 't' test and analysis of covariance (ANCOVA). It was found that there was a significant improvement in ladder training group on motor fitness variables namely speed and agility among Water Polo players.

Key Words: *Agility ladder training, Speed, Agility, 20 meter dash and Shuttle run.*

Introduction

Fitness is an essential component in the concept of wellness which might be defined as persistent endeavor to achieve highest probability for total well-being. The basic concern is human movement, primarily in the sense of larger movements rather than the more minutes or finer movements of body. More specifically, physical education is concerned with the relation between human movement and other areas of education that is, with the relationship of the body's physical development to the mind and soul as they are being developed. This concern for the effect of physical development and other areas contributes to the uniqueness broad scope of physical development for the broadest possible view of that field.

Ladder training will **improve our speed, coordination, timing and balance** and also it will set our calves on fire. We are not a muscle isolationist, but it is seriously effective calf training because this engages the fast twitch muscles. Olympic lifts, sprinting and other power training will help our move large distances quickly and that is a very important component of sports movement. Agility ladder training will add precision to those last few steps that get our body into perfect position. The importance of quick adjustment steps cannot be understated. They are like putting in golf. Adding it to our workout program is simple. We can throw it in as a warm-up. It elevates our heart rate and awakens our CNS. We can add it into any workout where we might normally put jump roping. Or we can place the ladder training at the end for a nice finisher. We only need 3-5 minutes a couple times a week to improve. After only a few weeks of training, we will notice **significant improvements in our movement quality.** A well-balanced athlete has good coordination and control when performing sports actions. When a player absorbs a heat in Water Polo players or Swimming, it is clear that maintaining balance is difficult. Air resistance, friction, and gravity also affect how well an athlete can maintain balance. The way in which an athlete resists and handles these outside forces is called stability. The better and more sports persons, specifically athletes train their bodies, the more balance and stable they will be during sports performance. And in the recent years the term that is very much related to balance is proprioception. The term components of physical fitness refers to the several key components required to facilitate quality overall fitness. In most traditional circles, there are considered to be five general components of fitness: cardio respiratory Agility, coordination, flexibility, and body composition, although healthy body composition is most often a by-product of the other components, and is therefore not recognized in some circles as an actual "component" of fitness. Following the five general components of fitness are the components of "motor" fitness, which most affect athletic performance. These include muscular power, speed, balance, coordination, accuracy, and agility. Reaction time is also considered by some to be a component of motor fitness; however, some also contend that it is a type of speed, i.e. "reaction speed". Improvements in endurance, stamina, strength, and flexibility come about through conditioning/training. Training refers to activity that improves performance through a measurable organic change in the body. Concurrently, improvements in coordination, agility, balance, and accuracy are developed through practice. Practice refers to activity that improves performance through changes in the nervous system. Power and speed are adaptations of both training and practice. Motor learning and motor performance are inextricably linked to sensation. As a motor task is practiced, the individual learns to anticipate and correct or modify movements based on sensory input organized and integrated by the central nervous system (CNS). The CNS uses this information to influence movement by both feedback and feed forward control. Feedback control uses sensory information received during the movement to monitor and adjust output. Feed forward control is a proactive strategy that uses sensory information obtained from experience. Signals area sent in advance of movement allowing for anticipatory adjustments in postural control or movement. The primary role of sensation in movement is to guide selection of motor responses for effective interaction with the environment and adapt movements and shape motor Programs through feedback for corrective action. (Susin B.O Sullivan2007)

Success in field Swimming is often associated with speed, but balance and quick feet, or agility, are the most important physical attributes to possess. Little can do to improve your innate sprint speed, but balance and foot agility can be improved significantly through practice. Proper body balance is controlled by the head, feet, and hands with the speed. When these extremities are in balance your body is ready to move quickly and skillfully. It is essential to have control of the body, arm, and feet before attempting to perform skills rapidly. Rushing your execution of Swimming techniques will only promote mistakes, which reflect a lack of emotional balance as well as a lack of balance. Quickness is specific to the Swimming skill being performed. The successful Swimming player must seed a point of balance in her relationship to the ball with every offensive and defensive technique. Like the golfer who attempts to prefer her body posture before swinging the club, the field of water polo player must also prepare the body for performing skills, unlike the golfer who has plenty of time to position her feet, head and hands before striking the ball, a Water Polo players usually moving or swimming when performing a skill, whether you are passing, receiving, dogging or tackling. The body must be momentarily in control before any skill can be performed successfully. Balance is closely related to footwork, which is basic to all fundamental Swimming skills. Effective footwork allows starting, stopping and changing direction with quickness and balance. The footwork also prepares the body to perform skills. Good footwork is important to all the attack roles and defense roles in Swimming.

Objective of the Study

The purpose of the study was to find out the "Effects of Ladder Training on Selected Motor Fitness Variables among university Water Polo players**."**

Hypothesis

1. There would be a significant improvement on speed and agility due to ladder training programme among university men Water Polo players.
2. There would be a significance difference between ladder training group and control group on speed and agility among university men Water Polo players.

Methodology

The purpose of the study was to find out the effects of ladder training on selected motor fitness variables among university men Water Polo players from College of Physical Education under Rashtrasant Tukadoji Maharaj Nagpur University, 40 Water Polo players were selected randomly as subjects. The age of the students ranged from 18 to 25 years. The selected subjects were divided into two groups. Group A underwent ladder training, Group B acted as control group. The experimental group was subjected to the training for three days in a week for a period of 8 weeks. The motor fitness variables namely speed and agility were measured by 20 meter dash and shuttle run. The data were collected from each subject before and after the training period and statistically analyzed by dependent 't' test which is used to find out the significant improvement on selected criterion variables and Analysis of Covariance (ANCOVA) was used to find out the significant difference between the experimental and control groups on each variables separately. All the cases 0.05 level of confidence was fixed as a level of confidence to test the hypotheses.

Analysis Of The Data

The effects of independent variables on selected speed and agility were determined through the collected data by using appropriate statistical techniques and the results are presented below. The analysis of dependent 't' test on the data obtained for speed and agility of the pre-test and post-test means of Experimental group and control groups have been analyzed and presented in table I.

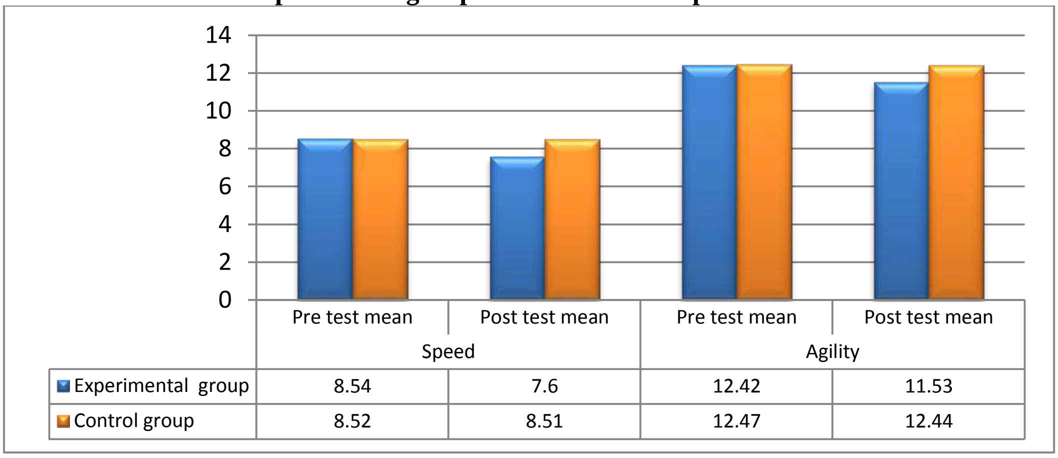
Table –I, The Summary of Mean And Dependent 't' Test For The Pre And Post Tests On Speed And Agility Of Experimental group And Control Groups

Variables	Name of the test	Experimental group	Control group
Speed	Pre test mean	8.54	8.52
	Post test mean	7.60	8.51
	't'test	**7.12***	0.62
Agility	Pre test mean	12.42	12.47
	Post test mean	11.53	12.44
	't'test	**9.24***	0.22

* Significant at 0.05 level

The Table **I** show that the pre-test mean value of motor fitness variables namely speed and agility in Experimental group and control group are 8.54 & 8.52 and 12.42 & 12.47 respectively and the post test means are 7.60 & 8.51 and 11.53 & 12.44 respectively. The obtained dependent t-ratio values between the pre and post test means of speed and agility in Experimental group are 7.12 and 9.24. The obtained dependent t-ratio values between the pre and post test means of speed and agility in control group are 0.62 and 0.22 respectively. The table value required for significant difference with df 9 at 0.05 level is 2.15. Since, the obtained 't' ratio value of experimental group is greater than the table value, it is understood that Experimental group had significantly improved the speed and agility. However, the control group has not improved significantly because the obtained 't' value is less than the table value, as they were not subjected to any specific training.

Graph –I, The comparison of Mean For The Pre And Post Tests On Speed And Agility Of Experimental group And Control Groups



The analysis of covariance on speed and agility of Experimental group and control groups have been analysed and presented in Table II

Table – II, Analysis of Covariance on Speed and Agility of Experimental group And Control Groups

Variables	Adjusted post test means		Source of variance	Sum of squares	DF	Mean squares	Obtained *f* Ratio
	Experimental group	Control group					
Speed	7.62	8.53	Between	9.015	1	9.015	**15.28***
			Within	0.035	17	0.59	
Agility	11.56	12.46	Between	16.20	1	16.20	**25.08***
			Within	0.038	17	0.646	

*Significant at .05 level

The table II shows that the adjusted post test means of speed and agility of Experimental group and control groups are 7.62 & 8.53 and 11.56 & 12.46 respectively. The obtained 'F' ratio value of speed and agility are 15.28 and 25.08 which are higher than the table value of 4.21 with df 1 and 17 required for significance at 0.05 level. Since the value of F- ratio is higher than the table value, it indicates that there is significant difference among the adjusted post test means of Experimental group and control groups on selected variables namely speed and agility.The results of the study showed that there was a significance difference between the adjusted post test mean of agility ladder training group and control group on speed and agility among men Water Polo players.

Conclusion

1. There was a significant improvement on speed and agility due to the effects of the ladder training among college men Water Polo players.
2. There was a significance difference between ladder training group and control group on speed and agility among college men Water Polo players.
3. Finally it was concluded that ladder training group is merely better than control group. Hence I recommended that physical education experts and coaches should give due to the importance of ladder training which helps the swimmers to do better performance in sports events.

Reference:

1. *Franklin, M., Palanisami, A., and Dhanaraj, S. "Effects Of Aerobic Training And Continuous Running On Athletic Performance Of College Men Players," International Journal of Scientific Research, vol-2,44-45.*
2. *http://www.brianmac.co.uk/agility.htm [Accessed 14/3/2020].*
3. *Charles,B., Corbin and others, "Concept of physical fitness," Dubuque :Wmc Brownpublishers,1985.*
4. *Neal pasty, "coaching methods for womens", massachussets;addition wisely publishing company, 1968.*
5. *Barrow, Harold, M., & Rosemary McGee. "A Practical Approach to measurement in Physical Education," Philadelphia: Lea and Febiger, PP-599;1979.*

E-commerce in India: Challenges and Opportunities

Dr. Vilas B. Zodage
HOD, Accountancy, Associate Professor, Sant Rawool Maharaj Mahavidyalaya, Kudal, Dist.-Sindhudurg(MS)

Abstract:
Today the internet and E-commerce are daily routine in our life. It is no longer a device to be used only by highly wealthy and technologically advanced people. Now it is very popular today with all kinds of people from rich to poor, from businessmen to employees, from scientists to school going students. E-commerce has unleashed yet another revolution, which is changing the way the business and changing the way traditional commerce is conducted. E-commerce or Electronic commerce consists primarily of the distribution, buying, selling, marketing, advertising and servicing of products or services with the help of internet and other computer networks. The birth of companies such as eBay and Amazon (launched in 1994) really began to lead the way in E- commerce. In response to expert opinions, between 1998 and 2000, a substantial number of businesses in Western Europe and the United States built out their first rudimentary E-commerce websites. Now a day's E- commerce companies play most important role in world commerce. The E-commerce sector has seen tremendous growth in recent years. The growth was driven by rapid technology adoption led by the increasing use of devices such as smart phones, tablets, access to the internet through broadband, 3G, 4G and credibility of E-commerce companies etc, which led to an increased online consumer base. This paper describes the recent trends in E-commerce business.

Key Words: *Computer Networks, E-commerce, Internet, Traditional commerce*

Introduction

E-Commerce stands for electronic commerce. Dealing in goods and services through the electronic media and internet is called as E-commerce. E-Commerce or E-business involves carrying on a business with the help of the internet and by using the information technology like Electronic Data Interchange (EDI). E-Commerce relates to the website of the vendor, who sells products or services directly to the customer from the portal using a digital shopping cart or digital shopping basket system and allows payment through credit card, debit card or electronic fund transfer payments. E-Commerce is the movement of business onto the World Wide Web (WWW). E-Commerce facilitates new types of information based business processes for reaching and interacting with customers. It can also reduce costs in managing orders and interacting with a wide range of suppliers and trading partners. For developing countries like India, E-Commerce offers considerable opportunities. Electronic commerce or E-Commerce refers to a wide range of online business activities for products and services. It also pertains to "any form of business transaction in which the parties interact electronically rather than by physical exchanges or direct physical contact." E-Commerce is the use of electronic communications and digital information processing technology in business transactions to create, transform and redefine relationships for value creation between or among organizations and between organizations and individuals. Today E-commerce in Indian society has become an integral part of everyday life. Accessibility to E-commerce platforms is not a privilege but rather a necessity for most people, particularly in the urban areas. Today the number of internet users in the world is close to 3 billion, out of this; India has a total of 259.14 million internet and broadband subscribers. This penetration of internet coupled with the increasing confidence of the internet users to purchase on line. This leads to an enormous growth in the E-commerce space, with an increasing number of customers registering on E-commerce websites and purchasing products through the use of mobile phones. India is in a prime position for the growth and development of the E-commerce sector. As per the report, the compound annual growth rates in the mature E-commerce markets of Japan, South Korea and Australia will run 11% to 12% over the next few years. In the rapidly growing markets of China and India, these growth rates will be 25% and 57% respectively. The report also highlights the rapid growth of E-commerce markets in neighboring China where, the compound annual growth rates of over 20% will take the market to over $ 350 billion. A report by the Internet and Mobile Association of India (IMAI) has revealed that India's E-commerce market expected to grow by 37% to reach U.S. Dollar 20 billion by 2015.

Research Design And Methodology

Selection Of Research Topic

E Commerce in India is still in nascent stage. Over the last two decades, rising Internet and mobile phone penetration has changed the way use communicate and do business. Growing Internet penetration, especially across major cities and evolving consumer mind set has enable e-commerce space to touch new heights with consumer habits changing, more and more people are finding it convenient to purchase among a wide range of product via Internet. Many sites are now selling a diverse range of product and services. Therefore I have selected Research Topic **"E-Commerce in India: Challenges and Opportunities"** for the study.

Objectives Of The Study

1. To analyze the concept of E-Commerce.
2. To study the various ecommerce models.
3. To reviewed challenges and opportunities of E-commerce in India.

Research Methodology

The paper is based on secondary data. The data has been collected from internet, references books, journals, and percentile method has been used to analyze the data.

Limitations Of The Study

1. The study has been conducted on secondary data.
2. The study focuses on importance, challenges and opportunities of E-commerce.

Concept Of E-Commerce

E-commerce means buying and selling of products or services over electronic systems such as the internet and other computer networks. Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, Electronic Data Interchange (EDI), inventory management systems, and automated data collection systems. E-commerce businesses employ the following:

- Online shopping web sites for retail sales direct to consumers
- Providing or participating in online marketplaces, which process third-party business-to-consumer or
- consumer-to-consumer sales
- Business-to-business buying and selling
- Gathering and using demographic data through web contacts and social media
- Business-to-Business (B2B) electronic data interchange
- Marketing to prospective and established customers by e-mail or fax (for example, with newsletters)
- Online financial exchanges for currency exchanges or trading purposes

Electronic commerce or E-commerce consists primarily of the distributing, buying, selling, marketing, and servicing of products or services over electronic systems such as the Internet and other computer networks. In the broad meaning electronic commerce is a means of conducting business using one of many electronic methods, usually involving internet, computers or both. E-Commerce is not about the technology itself, it is about doing business using the technology. It is an electronic business application and involves electronic fund transfer, supply chain management, online transaction processing, e-marketing, corporate purchasing, value chain integrations etc. E-commerce creates new opportunities for profitable activities online. It promotes easier cooperation between different groups, business sharing information's to improve customer relations, build new products or services, more personalization, better customer service etc.

E-Commerce Models

The different categories or Models of E Commerce:

A. **B2B (Business to Business):** Under B2B model one business sells to other business. Companies doing business with each other such as manufacturers selling to distributers, wholesalers selling to retailers are the examples of B2B e commerce model. Pricing under this model is based on quantity of order and is often negotiable.

B. **B2C (Business to Consumers):** In this model business sells products and services directly to consumers over the internet. They display their products or services on their Websites or Apps and the consumers can order the product or service directly on their Websites or Apps.

C. **C2B (Consumer to Business):** Consumer to Business E Commerce model involves consumers selling products or services to business. In C2B consumers create value and business consume that value. In C2B consumers can offer products and services to companies and the company pay the consumers. The C2B model at work in blogs or internet forums in which the author offers a link back to an online business thereby facilitating the purchase of a product, for which the author might receive affiliate revenues from a successful sale.

D. C2C (Consumers to Consumers):

C2C is a business model that facilitates the transaction of products or services between customers. C2C provide an innovative way to allow customers to interact with each other. IT involves the electronically facilitated transactions between consumers through some third party.

E-Commerce In India

Challenges:

1. Poor Internet Facilities:

Internet is considered the backbone of the e commerce. But the penetration of internet facilities in India especially in rural area is very less. Speed of Internet is also the major challenge in our country. No doubt we are moving towards 4G internet services but still a lot has to be done.

2. Feeling Unsecure:

Feeling unsecure by customer is one of the major and continuing challenges for e commerce in our country. Customers have to be confident about the integrity of the e dealers and payment process before making a purchase order online. Risk of hacking and cybercrimes are also there. Privacy has also become a major concern for consumers with identity theft and impersonation. Security challenges are not restricted to consumers only in e commerce, corporate firms also face security challenge as their vital information, records and reputation is at stake.

3. Logistic and Supply Chain:

Logistics and supply chain has been the major challenge to the e commerce companies. Most of the population in India lives in villages. To reach the consumer in the village is a big challenge. The e commerce companies' needs to invest more on setting up warehouse and signing up more suppliers across the country to ensure customers get order delivered by nearest suppliers.

4. Cash on Delivery (COD):

Cash on delivery is big problem for e commerce companies. In the era of digital payments, cash on delivery is still the most favoured mode of payment used by the consumers. This mode is very expensive for e commerce companies. Sometime courier companies take 30 40 days to return the cash collected from customers to dealers. If the customer return the product than it becomes very expensive for the company as the company pay two way courier charges.

5. High Competition:

There is a cut throat competition among the player in the e commerce market. With intense competition, the profitability of the of the companies decreases as they use aggressive pricing strategy and offer huge discounts and commissions.

6. Tax Structure:

Tax structure is another factor for lesser growth of e commerce sector in India in comparison to developed countries. In India there are different types of taxes and these taxes create accounting problems to online business. Some states are even charging separate tax one commerce transactions. Government has implemented the GST Act, which is expected to solve this problem to great extent.

7. Absence of Cyber Laws:

Absence of cyber laws to regulate the online business transactions is another bottleneck to e commerce in India. The new technology has created huge legal uncertainty in our country. The existing Consumer Protection Act 1986 needs to be amended to update and widen the scope of the Act.

8. Physical Purchase:

Most of Indian customers are more comfortable in buying product physically. They want to see and touch the product before buying. So they do not prefer to buy product online.

9. Lack of clarity in laws governing E-Commerce.
10. Rapidly changing business model.
11. Low rural penetration.
12. Bureaucratic wrangles.
13. Cultural Changes.
14. Problem of retaining customer.
15. Lack of trust of customer.

Opportunities:

1. **Strategies for growth**: The growth rate of e-commerce in India is mentionable and higher than other countries. In terms of e-commerce it places the third position in the world but due to lack of proper IT infrastructure, logistic support and financial infrastructure it faces challenges for its development. The smartphone user and internet subscriber in India are growing rapidly which stimulates the e-commerce growth in India. Now e-commerce traders provide a wide range of services from daily necessities to logistics which help them to spread the e-commerce business all over in India.
2. **Low inventory cost:** Inventory cost is an important element for maintain business. E-commerce traders are getting benefit for reducing their inventory cost due to living as a big country like India. It helps them to minimize the cost by storing the product at any places in India. It also provides a big opportunity for e-commerce traders to provide just-in-time (JIT) services and forecast the demand of the product more accurately.
3. **Better customer service**: E-commerce is a best approach to provide maximum level customer services in terms of low cost, quality products, and just in time. Customer satisfaction is an asset for businessman to increase their business growth. Best level customer satisfaction can be given by e-commerce business. In this business, both traders and customers get benefit from it. It is an alternative system of traditional business which provides an opportunity to deal their business from distant places and without physical interaction by saving money, cost and minimizing risk.
4. **Reducing distribution costs**: since e-commerce is based on virtual market i.e. internet, so it reduces distribution cost and time by providing just-in-time (JIT) services. It is a great opportunity for buyer and sellers to deal their business by sitting their own places. It helps to avoid all kinds of risk. Generally traditional business requires a mentionable amount for its distribution cost but e-commerce is an alternative system of traditional business which helps to reduce distribution cost and easily spread the business all over the country and sometimes out of the boundary of the country.
5. **Globalizing business**: E-commerce is a business platform which can provide the same kind of services to its customer crossing the country's boundary The people can easily buy products from an online shop which is situated within the country or from abroad by online payment through debit or credit card, m-cash and other

related methods. It also helps to market the products easily to mass people over the world within a short time. India is a country which is favorable for globalizing the e-commerce business as well as crores of Indian people.

6. **Quick marketing of products**: Since e-commerce is mainly based on internet and connected with the virtual arena, so it is a big opportunity for e-commerce trader to do marketing to a large number of people through various social networking site and websites. It is a platform to explain all details about the product to its consumers. E-commerce is providing a complete solution for purchasing the products from online and pay online by avoiding so many types of hassle and risk. It provides an opportunity to reach the product information to people of the domestic country as well as abroad within a short time.
7. **Integration of E-commerce**: Integration among various stakeholders is an essential tool for making the business easily. E-commerce business is usually connected to the other service providers like internet service provider, government agency, commercial bank, the central bank, payment gateway, businessman, and business cooperative society for maintaining the smooth running of e-commerce business. Coordination is necessary among all stakeholders. Integration should be done by including e-commerce in the academic syllabus, including latest business-related technology to e-commerce, coordination among e-commerce businessman, university professors, expert, IT experts and government agency for proper implementation and enhancement of e-commerce in India.

a) Online Travelling and Services, b) E-tailing, c) Financial Services, d) Banking, e) Classified Like Online Job, Matrimonial, real estate.

Conclusion

Internet penetration in India has been increasing exponentially. In 2006, there were only 21 million active internet users, which rose to about 624 million by January 2021. The number of internet uses in India increased by 47 million (+8.2%) between 2020 and 2021. Internet penetration in India stood at 45% in January 2021. This significant rise has given a trust to E-Commerce. According to study conducted by the Internet and Mobile Association of India, the e-commerce is to reach by 1,366,417,754 and Internet uses reach 755,820,000. The study also stated that online travel account for 60% of E-Commerce market while e-tailing contributes around 29%. According to Google India, Online shoppers in India are cross 100 million mark. Electronic and Apparel are biggest categories in term of sales. By 2021, India is expected to generate $100 Billion online retail revenue out of which $35 billion will be through fashion E-Commerce.

Reference

1. Nisha Chanana and Sangeeta Goele "Future of E-commerce in India", International Journal of computing and business research, 2012.

[2]. Abhijit Mitra "E-Commerce in India-A review", International Journal of Marketing, Financial services and Management Research, 2013.

[3]. Sarbapriya Ray "Emerging Trends of E-commerce in India: Some Crucial Issues Prospects and Challenges", Journal of Computer Engineering and Intelligent Systems 2011.

[4]. Muhammad Awais and Tanzila Samin "Advances SWOT Analysis of E-commerce", International Journal of Computer Science Issues, 2012.

[5]. Mr. Harjot Kaur and Mrs. Daljit Kaur "E-commerce in India - Challenges and Prospects", International Journal of Engineering and Techniques, 2015.

[6]. Bhavya Malhotra "E-Business: Issues and Challenges in Indian Perspective", Global Journal of Business Management and Information Technology, 2014.

[7]. Tryambak Hiwarkar "E-commerce impact on Indian Market: A Survey on social impact", International Journal of Advanced Research in Computer Engineering and Technology, 2013.

Well-being and Inequality: A Study in Indian States during 2000-2010

Dr. Debottam Chakraborty
Assistant Professor, Department of Economics, Sundarban Hazi Desarat College, Pathankhali, South 24 PGS., West Bengal

Abstract
The changes in the level of living has been estimated through money-metric measure and it is used to enumerate the level of well-being in India and its fifteen (15) major states during 2000-2010 separately for rural and urban areas. Engel's Law has also been examined in this context. Inequality has been measured among the different expenditure classes for both rural and urban areas. The change in social welfare and the rate of its change over 2000 to 2010 has been estimated. Policy measures are suggested towards enhancing the level of living.

Keywords: *Well-being, Inequality, Engel's Law*

Introduction

A person maintains her/his level of living through consumption of goods and services. Consumption basket consists of both necessary and luxury goods. The well-being a person derives from purchase of goods is measured through the amount spent on the consumption basket. In the two-good ordinal-utility framework, the (equilibrium) commodity basket whose money value at the given prices is the total expenditure the person incurs is indicated by the point of tangency between the expenditure line and the indifference curve which yields to the person a particular level of utility i.e., well-being. In the n-good model, this will hence give the equilibrium commodity bundle, which will, of course, correspond, to a particular level of utility. It thus follows that the amount of actual expenditure, being on ex post phenomenon, indicates the level of well-being of a person. Expenditure is hence taken as a money-metric measure of well- being. Given the prices, higher (lower) the amount of expenditure, higher (lower) the level of well-being (Gravelle and Rees 1981,Varian 1992, Mas-Colell at al, 1995). Expenditure thus serves as an indicator of living at the micro level. The aggregate expenditure (so to say, per capita expenditure) may hence be used as an indicator of social well-being at the macro level provided all persons have quasi-homothetic preferences with similar expenditure function (Gravelle and Rees, 1981).Per capita expenditure (income) changes over time, which leads to changes in the level of living. Based on the NSSO household data on average monthly per capita consumption expenditure (MPCE) Chakraborty, Pal and Sen (2004) have estimated the changes in actual levels of living in India and four constituent states during 1993-2000. They have examined the differences in living among the poor and the non-poor people. They have found the Engel law operative in respect of living. Pal and Sen (2004) in another study have analyzed poverty at both the absolute level and the relative level (relative deprivation) and observed their declining trends in India during 1993-2000. The present paper is an updated version of the work done by Pal and Chakraborty (2009). Here, all the 15 major states of India have been considered and MPCE data of 2000 to 2010 has been used. From 1991 onwards a series of reform measures have been introduced in India in the spheres of industry, service, trade, money & baking and agriculture with a view to increasing efficiency and growth on the one hand and reducing poverty and inequality and all the more, raising people's well-being on the other. The impacts of structural reforms in India have been expectedly diverse across regions (states). Rural-urban divergences in per capita expenditure (income) and hence in the pattern of living are specifically examined across the states.Economic reforms lead to changes in the income distribution in the country. But all the states in India have not experienced similar changes in both the magnitude of per capita income (expenditure) and the degree of inequality in income distribution. This means states have experienced variations in growth and distribution of income. Such variations are expectedly manifest in the level of living causing disparities among the states in India along with the disparity between rural and urban areas. The growth effect and the distribution effect hitherto not yet quantified in the context of the India's social wellbeing are examined across the states in a decomposition framework formulated in the paper.Household size-class data on average monthly per capita consumption expenditure (MPCE) are taken from the NSSO publications of 1999-2000, 2004-05 and 2009-10 (Level and Pattern of Consumer Expenditure). MPCE data are deflated at the constant prices of 1986-87. The same set of deflators has been used for all the states (15) under study. The estimates for the states are hence to be considered with such limitation.

Methodology

Let Yi be the expenditure the ith person incurs in purchasing a commodity bundle. The social well-being function for the economy having n persons is then written as:

$$W = W(Y_1, \text{-----}, Y_n) \qquad \ldots\ldots (1)$$

which is non-decreasing and symmetric in Y_i. W satisfies the Pigou-Dalton condition of expenditure (income) transfers. Define $\mu = \sum Y_i/n$, the average expenditure. When $Y_i = \mu$ for each i, W becomes maximum and is equal to μ. That is to say, social welfare becomes maximum when each person spends the equal sum of μ. It corresponds to the egalitarian distribution of expenditure (income). It thus follows that due to the unequal distribution of expenditure actual social welfare falls short of μ. Following Aitkinson (1970), actual average social welfare is written as:

$$W = \mu \ (1 - I) \qquad \ldots\ldots (2)$$

where I is an index of inequality in the expenditure (income) distribution of the society .

Equation (2) reveals the following:

(i) Actual average social welfare (W) has two components: (a) the per capita expenditure (μ) and (b) the degree of inequality in the expenditure (income) distribution of the society (I). Changes in either of the two components or in both cause changes in the level of social welfare. The time derivative of (2) is:

$$\frac{dW}{dt} = (i - I)\frac{d\mu}{dt} - \mu\frac{dI}{dt} \qquad \dots \dots (3)$$

(ii) Changes in μ reveal the effect of growth on W: per capita income changes and in turn, per capita expenditure and per capita savings change, causing changes in W (the growth effect).

(iii) Income distribution changes due to different pro-poor policy measures adopted by the government. The degree of income inequality (I) changes. Change in I reveals the effect of changes in the expenditure (income) distribution on W (the distribution effect). In estimation the Gini-coefficient (G) is used to measure the degree of inequality so that equation (2) is written as:

$$W = \mu(1 - G) \qquad \dots\dots (2a)$$

(iv) When μ changes, the commodity basket purchased changes in composition. The cut-off line between necessaries and luxuries changes. The consumption items hitherto considered as luxuries become necessaries and above all, the items of less quality become replaced by those of superior quality. That is to say, the relative importance of the consumption items changes over time. The compositional changes may be captured by some macro index of diversification. Theil's index of equality (inequality) may be used in this respect (Chakravarty, Pal, et al. 2004). Or if one is interested in accounting for the changes in person's responsiveness to some commodity items, one may compute the Engel elasticity for commodities and make their inter-temporal comparisons. In computing the changes in μ, one should, however, take note of the effect of price changes. Due to abnormal price changes, μ may change abnormally over time. So the price effect should be netted out using the price deflator. The price-adjusted μ (per capita expenditure) will then reflect the real social well-being.

(v) To examine rural (r)-urban (u) differentials in the level of living, the following equations are estimated:

Rural $W_r = \mu_r (1-G_r)$ ….. (4)

Urban $W_u = \mu_u (1-G_u)$ ….. (5)

From (4 and (5) we get:

$$\frac{W_r}{W_u} = \left(\frac{\mu_r}{\mu_u}\right)\left(\frac{1-G_r}{1-G_u}\right) \qquad \dots.. \qquad (6)$$

$\frac{W_r}{W_u}$ is rural average social welfare expressed as a percentage of urban average social welfare. It is factored into (i) $\frac{\mu_r}{\mu_u}$ which is the rural average MPCE expressed as a proportion of the urban average MPCE, and (ii) $\left(\frac{1-G_r}{1-G_u}\right)$ which is the rural Gini-coefficient expressed as a proportion of the urban Gini-coefficient. The index (a pure number) $\frac{W_r}{W_u}$ indicates the level of living of the rural people relative to that of the urban people. The relative difference in the actual level of living of the rural people is hence explained by the relative differences in average MPCE and Gini-coefficient. Factor (i) is regarded as the growth factor while factor (ii) is the distribution factor. The nature and the amount of changes in these factors determine the nature and the pattern of changes in $\frac{W_r}{W_u}$ (Pal 2004).

Findings

Average Mpce

In almost all the stats under study, average MPCE has been all through less in rural India than in urban India, in all the three years. Across the states it has undergone wide variations (Table 1). The range of its variation has risen in both rural and urban India : (i) in rural India the range has risen from Rs. 140.21 in 2000 to Rs. 197.57 in 2005 and to Rs. 251.59 in 2010; the corresponding figures for urban India have been Rs. 133.19, Rs. 176.10 and Rs. 340.08. Clearly, the range of variation in average MPCE has been less in urban India than in rural India as revealed by the coefficient of variation (CV). (ii) CV has risen over time both in rural and urban India and become more in the former than in the latter. Interstate disparity in average MPCE has risen during the post reform period both in rural India and in urban India.

Table 1: Average Mpce (μ) and Gini Coefficient (G) Of Expenditure Distribution In India

States	2000				2005				2010			
	Rural (r)		Urban (u)		Rural (r)		Urban (u)		Rural (r)		Urban (u)	
	μ (Rs.)	G	μ (Rs.)	G	μ (Rs.)	G	μ (Rs.)	G	μ (Rs.)	G	μ (Rs.)	G
A.P	167.07	0.23	277.87	0.31	191.05	0.34	330.60	0.43	219.39	0.28	426.28	0.38
Assam	156.77	0.20	292.23	0.31	182.48	0.31	305.70	0.41	185.67	0.24	331.26	0.32
Bihar	141.68	0.21	216.12	0.32	151.95	0.32	235.20	0.35	146.48	0.23	233.46	0.33
Gujarat	202.77	0.23	320.23	0.28	210.26	0.31	327.60	0.39	213.94	0.25	399.87	0.33
Haryana	262.75	0.23	327.41	0.29	301.15	0.36	315.00	0.42	299.83	0.30	407.98	0.36
Karnataka	184.00	0.24	327.05	0.32	171.84	0.35	281.10	0.40	173.45	0.23	369.08	0.33
Kerala	281.89	0.27	334.95	0.32	339.57	0.35	411.30	0.44	398.07	0.42	573.54	0.50
M.P.	147.57	0.24	248.79	0.33	149.89	0.32	237.90	0.43	171.31	0.29	315.97	0.36
Maharastra	182.90	0.26	349.31	0.35	194.82	0.35	378.00	0.42	217.37	0.27	479.51	0.41
Orissa	174.60	0.24	221.86	0.29	142.00	0.33	261.60	0.39	146.85	0.26	307.15	0.39
Punjab	273.42	0.24	322.74	0.29	324.82	0.33	317.70	0.47	317.85	0.29	427.83	0.37
Rajasthan	202.03	0.21	285.76	0.28	198.94	0.33	298.50	0.43	215.99	0.22	359.21	0.38
Tamil Nadu	189.15	0.28	349.31	0.38	206.83	0.37	339.00	0.40	208.27	0.26	360.91	0.33
Uttar Pradesh	171.87	0.25	247.71	0.33	184.53	0.35	248.10	0.43	178.21	0.26	293.90	0.36
West Bengal	167.44	0.22	311.25	0.34	198.94	0.35	339.90	0.43	183.95	0.24	373.25	0.38
All India	178.85	0.26	306.95	0.34	194.48	0.34	318.00	0.42	199.51	0.29	384.12	0.38
Range (Rs.)	140.21		133.19		197.57		176.10		251.59		340.08	
CV (%)	22.98		15.02		29.47		16.29		30.92		21.02	

Source: NSSO data and Author's Calculation

Average MPCE has risen during the period in both rural and urban India, except a few states under study. During 2000-10, Kerala (Rs11.62 per year] has shown the highest rise in the rural average MPCE, followed by Andhra Pradesh (Rs. 5.23 per year); for the urban average MPCE, the corresponding states are the same: Kerala (Rs. 23.86) and AP (Rs. 14.84). The state, which has enjoyed the fall in average MPCE, are Karnataka (-Re 1.06) and Orissa (-Re. 2.78) for rural areas. Urban India has exhibited more increase in the average MPCE than rural India, in most of the states under study (Table 2).We have already said that average MPCE is all through less in rural India than in urban India except in Punjab (only in 2005). Expressed as a percentage of urban MPCE, rural MPCE has lied in the intervals of (i) 52-84 in 2000, (ii) 51-102 in 2005 (figure 102 corresponds to Punjab where rural MPCE exceeds urban MPCE) and (iii) 45-74 in 2010 (Table 2). Inequality among states has declined in 2010 after a rise in 2005 in both rural and urban areas. Interestingly, the rural urban differential in MPCE has come down in 2005, but again it increased in 2010, as measured by rural MPCE as a percentage of urban MPCE. So, it can be concluded that over time interstate disparity has come down after 2005, but the rural urban differential has increased over the same period.

Table 2: Welfare Indicator (W) And Its Components In India

States	2000		2010		W_r / W_u (%)		$MPCE_r$ / $MPCE_u$ (%)		
	W_r(Rs.)	W_u(Rs.)	W_r(Rs.)	W_u(Rs.)	2000	2010	2000	2005	2010
A.P	128.64	191.73	136.52	225.85	67.10	60.08	60.13	57.79	51.47
Assam	125.42	201.64	152.90	241.33	62.20	62.70	53.65	59.69	56.05
Bihar	111.93	146.96	127.56	205.22	76.16	72.74	65.56	64.60	62.74
Gujarat	156.13	230.57	182.89	249.91	67.72	59.44	63.32	64.18	53.50
Haryana	202.32	232.46	233.94	244.62	67.03	80.18	80.25	95.60	73.49
Karnataka	139.84	222.39	157.30	243.31	62.88	53.99	56.26	61.13	47.00
Kerala	205.78	227.77	279.49	237.65	90.35	80.70	84.16	82.56	69.41
M.P.	112.15	166.69	133.95	173.91	67.28	60.32	59.32	63.01	54.22
Maharastra	135.35	227.05	159.77	246.24	59.61	56.20	52.36	51.54	45.33
Orissa	132.70	157.52	144.16	172.60	84.24	57.78	78.70	54.28	47.81
Punjab	207.80	229.15	251.75	250.67	90.68	84.09	84.72	102.24	74.29
Rajasthan	159.60	205.75	178.57	238.68	77.57	74.96	70.70	66.65	60.13
Tamil Nadu	136.19	216.57	152.99	244.86	62.88	63.61	54.15	61.01	57.71
Uttar Pardesh	128.90	165.97	131.08	172.89	77.67	70.01	69.38	74.38	60.63
West Bengal	130.60	205.43	151.28	269.77	63.58	60.88	53.80	58.53	49.28
All India	132.35	202.59	138.07	214.43	65.33	59.58	58.27	61.16	51.94

(contd) Table 2

States	G_r / G_u (%)		$(1-G_r) / (1-G_u)$		Δ $MPCE_r$ / T (Rs. / year)		Δ $MPCE_U$ / T (Rs. / year)		Δ W / T : 2000-10 (Rs. / year)	
	2000	2010	2000	2010	2000-05	2000-10	2000-05	2000-10	Rural	Urban
A.P	74.19	72.86	1.12	1.17	4.80	5.23	10.55	14.84	0.79	3.41
Assam	64.52	75.25	1.16	1.12	5.14	2.89	2.69	3.90	2.75	3.97
Bihar	65.63	67.92	1.16	1.16	2.05	0.48	3.82	1.73	1.56	5.83
Gujarat	82.14	77.26	1.07	1.11	1.50	1.12	1.47	7.96	2.68	1.93
Haryana	79.31	83.79	1.08	1.09	7.68	3.71	-2.48	8.06	3.16	1.22
Karnataka	75.00	70.29	1.12	1.15	-2.43	-1.06	-9.19	4.20	1.75	2.09
Kerala	84.38	83.62	1.07	1.16	11.54	11.62	15.27	23.86	7.37	0.99
M.P.	72.73	80.30	1.13	1.11	0.46	2.37	-2.18	6.72	2.18	0.72
Maharastra	74.29	65.44	1.14	1.24	2.38	3.45	5.74	13.02	2.44	1.92
Orissa	82.76	67.26	1.07	1.21	-6.52	-2.78	7.95	8.53	1.15	1.51
Punjab	82.76	77.66	1.07	1.13	10.28	4.44	-1.01	10.51	4.40	2.15
Rajasthan	75.00	59.45	1.10	1.25	-0.62	1.40	2.55	7.35	1.90	3.29
Tamil Nadu	73.68	79.43	1.16	1.10	3.54	1.91	-2.06	1.16	1.68	2.83
Uttar Pradesh	75.76	72.67	1.12	1.15	2.53	0.63	0.08	4.62	0.22	0.69
West Bengal	64.71	62.19	1.18	1.24	6.30	1.65	5.73	6.20	2.07	6.43
All India	76.47	76.15	1.12	1.15	3.13	2.07	2.21	7.72	0.57	1.18

Source: NSSO Reports and Author's Calculation

Average Social Welfare

Expenditure (income) distribution is nowhere egalitarian in India. People have different levels of consumption expenditure. Their level of living is hence different. Actual level of average social welfare is computed from the average MPCE by netting out the effect of inequality in the expenditure distribution. Equation (2a) is used in estimation. Economic reform of 1991 has brought a number of structural changes in the economy. Consequently the growth and distribution pattern of the economy has changed. Rural-urban differences in expenditure have changed. All these have affected the level of living of the rural people relative to their urban counterparts.Irrespective of the states under study, social welfare (W) has risen over time, though it is at the higher level in urban India than in rural India. Kerala and the Punjab are the two top states to enjoy the relatively higher level of social welfare in rural areas. In urban areas West Bengal and Punjab are enjoying relatively higher level of social welfare.Social welfare has risen in India. The two components of W – μ and G– have changed in the same directions. μ (MPCE) has risen (growth-effect) and G has also risen (distribution–effect). But the proportion of rise in μ is much higher than that of G. In effect, these two together have increased W in all the states in India over time.

Rural – urban differentials in well-being are revealed by the movement of $\frac{W_r}{W_u}$. $\frac{W_r}{W_u}$ has fallen during 2000-10 in India and in most of the states under study (Table 2). The reasons are:

(i) $\frac{1-G_r}{1-G_u}$ has been greater than unity and its value has risen over time in most cases, meaning that the distribution effect has been more pronounced in rural India than in urban India.

(ii) $\frac{\mu_r}{\mu_u}$ has been all through less than unity but it has fallen in most of the states, meaning that the growth effect has been more pronounced in urban India them in rural India.

(iii) Statements (i) and (ii) together assert that the relatively stronger distribution effect in rural India has been more than offset by the relatively stronger growth effect in urban India, resulting in a fall in the relative social welfare of the rural people in India as a whole and in its major states.

Pattern of Consumption

Development is manifest in the level of living; and the nature of living is manifest in the consumption of food and non-food items. With economic growth and development, people's well-being rises and the composition of the consumption basket changes. Consumption items hitherto less important become more important and items hitherto more important become less important. At the aggregate level, the food basket loses importance in favour of the non-food basket. The proportion of total expenditure spent on food items declines as total (income) expenditure rises: the proportion of non-food expenditure rises. That is, the Engel law becomes operative in the economy.

The on-going reforms in India have brought about drastic changes in the consumption pattern of the people. At the all – India level (rural), the proportion of food expenditure (Table 3) in total expenditure has declined from

59% in 2000 to 53% in 2010. During the period of 10 years, almost 6% fall is observed in the proportion of food expenditure in rural India. Such a declining trend is observed in all the states.

Table 3: Proportion (%) Of Food Expenditure in Total MPCE (RS.) In India

States	Rural			Urban		
	2000	2005	2010	2000	2005	2010
A.P	60.35	55.83	56.05	47.42	37.84	39.71
Assam	67.61	62.41	60.93	55.41	46.81	50.43
Bihar	66.49	59.05	60.36	57.31	47.83	48.46
Gujarat	59.89	54.49	56.04	49.55	43.68	41.88
Haryana	55.60	49.94	51.11	45.83	41.71	41.39
Karnataka	59.00	54.38	57.46	46.32	43.44	43.47
Kerala	53.66	46.57	37.83	48.98	40.74	31.03
M.P.	57.96	53.55	51.63	47.55	42.37	38.27
Maharastra	54.73	50.97	50.96	46.77	39.24	37.04
Orissa	64.08	58.45	59.20	56.96	47.71	42.65
Punjab	52.22	45.62	47.81	47.16	39.38	39.84
Rajasthan	59.38	54.48	54.52	50.75	43.32	40.58
Tamil Nadu	58.56	52.40	51.64	45.58	38.64	42.68
Uttar Pradesh	57.39	52.04	53.97	50.58	44.01	44.58
West Bengal	65.93	59.83	57.77	52.25	45.54	42.51
All India	59.26	53.81	53.58	48.07	41.56	40.74

Source: NSSO Reports and Author's Calculation

The declining trend in the food expenditure proportion is also observed in urban India and in the urban areas of the states. The percentage fall has been 8, more than in rural India. In some of the states the percentage fall has been in the range, 14 to 17. This is quite likely. The urban areas enjoy the growth effect (rising per capita expenditure) relatively more than the rural areas. The Engel law has been operative in India in the period of on-going reforms. All these indicate that the Indian economy has entered during the post-reform period into a phase of transformation in respect of well-being of the people.

Policy Measures and Concluding Remarks

The level of living during 2000-2010 has risen in India and in the constituent states. But all the states have not been uniform in the pattern of changes in living. Especially the rural urban differential has become a very big concern in recent times, which had come down in 2005 but again risen around 2010. The interstate differential, which was rising till 2005, had come down significantly in both rural and urban areas. Minimizing the rural-urban differentials in well-being is the major challenge. For this, selective appropriate rural employment policy measures should be undertaken so that per capita income (expenditure) is raised and inequality in income (expenditure) distribution is reduced. Skill enhancement programmes through education and training may lead to higher income in the rural areas. Rural institutions like Panchayets should be more and more involved in the formulation, implementation and monitoring of the programmes.

References

1. *Atkinson, A. B. (1970). "On Measurement of Inequality". Journal of Economic Theory, Vol 2.*
2. *Chakraborty, D.; Pal, D. P and Sen, J. (2004). "Changing Levels of Living in India in the 1990's" in Economic Reforms in India, ed. R.K.Singh, Abijeet Publications, Delhi.*
3. *Gravelle, Hugh and Rees, Ray (1981). Microeconomics, Pearson Education Ltd .UK.*
4. *Mas-Colell, Andreu; Whiston, Michale D. and Green, Jerry R. (1995). Microeconomic Theory, Oxford University Press.*
5. *NSSO (India): Level and Pattern of Consumer Expenditure 1999-2000, 2004-2005, 2009-2010.*
6. *Pal, D. P. and Sen, J. (2002). "Social Sector Reforms and Relative Income Deprivation in India: A Note", Conference Volume, IEA, 2002.*
7. *Pal, D. P. and Sen, J. (2003). "On Dimensions of Poverty: A Cross-Section Study in India with Rural-Urban Desegregation" Conference Volume, IEA, 2003.*
8. *Pal, D. P. & Sen, J. (2003). "Relative Income Deprivation: An Analysis of Sub-Group Decomposition" in "Economic Reforms and India Economy: A Development Experience" Ed: Prof. K. Malla Reddy, Deptt. of Economics, Osmania University, India.*
9. *Pal, D. P. (2007). "India's Poor: Are they getting better off?' in Emerging issues in development and referents in India, Ed. Prof. R. K. Sen, Deep and Deep Publications, Pvt. Ltd, New Delhi.*
10. *Pal, D. P. & Chakraborty, D. (2009). "Well-Being, Growth and Inequality in India, 1993-2004", Artha Beekshan, Vol. 18, No. 1, June 2009.*
11. *Varian, H. (1992). Micro Economic Analysis, 3rd Edition, W. W. Norton and Company, New York.*

Force of Retrenchment on Staffs Morale in Private Arts and Science Colleges at Kanyakumari District

Dr.G.Rajesh Babu
Assistant Professor, Nanjil Catholic College of Arts and Science Kaliyakkavilai – 629 153, Kanyakumari District.
Affiliated by Manonmaniam Sundaranar University, Tirunelveli.

Abstract

Retrenchment denotes disconnection of employees mainly due to decreased amount of work owing to recession of work. Based on the prior studies was focused on retrenchment in relation to pay, employee benefits, jobs security, alternative work schedule, job stress, participation in decision making, work place democracy, pension rights, and neglected the aspect of employee morale. This study sought to investigate the force of retrenchment on staff's morale in private arts and science colleges in Kanyakumari district. Overall objective is to establish whether the announcement process of retrenchment and staff's contribution on matters of retrenchment has influence on staff's morale. This study adopted descriptive design. The data collected from 100 staffs out of 26 private arts and science colleges. Using stratified random sampling method primary and secondary data used for this study. Weighted average method is used in for analysis of the data. All the practices on human resource should be geared towards improving the morale of the staffs; this can be done through by engaging the staffs in all the activities of the institution. The study enhanced better attitudes of the staffs towards retrenchments and they may link the present performance with past experiences and even have ways to overcome challenges that come their way. According to the opinion of the staffs of private arts and science colleges this issues are not addressed adequately as evidenced by the results that rates most of them as low. Consequently, this negatively affects the morale of the employees at private arts and Science College's hence low performance.

Keywords: Retrenchment, staff's morale, staff's contribution

Retrenchment:

Retrenchment strategy is followed when an institute aims at a contraction of its activities through substantial reduction or the elimination of the scope of one or more of its institutions, in terms of their respective employees groups, employees function or alternative technologies either single or jointly in order to improve is overall performance. Retrenchments should be done as the last alternative to reduce costs, corporate strategy or make the business more competitive. Retrenchment for the sake of cost reduction alone has been castigated intellectually as short sighted and neglectful of what resources will be needed to increase the revenue stream of the future.

Reviews

Biller,(1976), found that organizational cost increase as a result of retrenchment due to the package granted on retrenchment and catering for the needs of retraining the retained in the organization. He said that although lay-offs are intended to reduce the costs, some cost like the severance package, out of placement benefit, pension and administrative processing costs may be increase

Levine, (1984), found that retrenchment resulted in fiscal stress and human resource shrinkage that caused many difficult problems for government employees. The major problem is decrease in human resource that results from cost cutting measures which brings loss of skills, energy, morale, commitment, physical and mental health degradation the results from employees withdrawing physically and emotionally. Detrimental also cause reduced co-operative attitudes, greater fear and distrust, poor communication lowered performance goals, and increased turnover.

Problem Statement:

The earlier studies majorly focused on the view that retrenchment increased organizational cost due to package granted on retrenchment and catering for the needs of retraining the retained employees. Based on the preceding studies was focused on retrenchment in relation to pay, employee benefits, jobs security, alternative work schedule, job stress, participation in decision making, work place democracy, profit sharing, pension rights, and neglected the aspect of staff's morale. This study sought to investigate the force of retrenchment on staff's morale in private arts and science colleges in Kanyakumari district.

Objective of The Study:

- To reveals whether the announcement process of retrenchment has influence on staff's morale
- To study whether staff's contribution on matters of retrenchment has influence on staff's morale
- To establish whether the changes in scheme of service has influence on staff's morale
- To find out whether human resources practices rerated to retrenchment has influence on staff's morale

Research Methodology

This study adopted descriptive research design. The survey was conducted in 100 Staffs of 26 Private arts and science colleges in kanyakumari District. The study used stratified random sampling method in the study. The primary source comprised of information gathered from the respondent through questionnaires. Weighted Average Method is used in tools for analysis.

General Information of Respondents

S. NO	Gender	No. Of respondents	Percentage	Marital Status	No. Of respondents	Percentage
1	Male	41	41	Married	78	78
2	Female	59	59	UnMarried	22	22
	Age Group			**Experience**		
1	Below 25 yrs	13	13	Below 5 yrs	17	17
2	25 - 35 yrs	36	36	5 - 10 yrs	30	30
3	36 - 45 yrs	30	30	10 - 15 yrs	37	37
4	46 – 55 yrs	14	14	15 - 20 yrs	11	11
5	Above 55 yrs	7	7	Above 20 yrs	5	5
Highest qualification				**Income**		
1	MBA / MCA	18	18	Below Rs.10000	17	17
2	MA / MSc/ M.Phil	30	30	Rs. 10000-15000	23	23
3	Ph.D	52	52	Rs. 15000 - 20000	32	32
				Rs. 20000-25000	17	17
				Above Rs. 25000	11	11

Methods of Retrenchment Were Announcement to Staffs

S.no	Method of retrenchment	SA	A	N	DA	SDA	Total	Weighted average Score	Rank
1	Induced retirement	40	100	90	54	10	294	19.6	**IV**
2	Partition of benefits	280	92	36	14	2	424	28.2	**I**
3	Voluntary retirement	275	96	30	12	5	418	27.8	**II**
4	Hiring freeze	80	80	96	26	19	301	20	**III**
5	Involuntary retirement	10	28	36	46	56	176	11.7	**V**

The weighted average score of separation with benefits is 28.2 (rank 1). The score of voluntary retirement is 27.8 (rank 2). The score of hiring freeze is 20 (rank 3). The score of induced retirement is 19.6. (rank 5). The score of involuntary retirement is 11.7 (rank 6).

CRITERIA FOR RETRENCHMENT WERE ANNOUNCEMENT TO STAFFS

S.no	Criteria for retrenchment	SA	A	N	DA	SDA	Total	Weighted average	Rank
1	Number of years in service	300	116	21	4	2	443	29.5	**I**
2	Education level	170	44	78	34	12	338	22.5	**III**
3	Gender	10	28	36	112	23	209	13.9	**IV**
4	Terms of employment	45	104	186	6	0	341	22.7	**II**

The weighted average score of number of years in service is 29.5 (rank 1). The score of terms of employment is 22.7 (rank 2). The score of education level is 22.5 (rank 3). The score of gender is 13.9 (rank 4).

Method of Announcement Done the Retrenchment Atinstitution

S.no	Method of announcement	SA	A	N	DA	SDA	Total	Weighted average	Rank
1	Notice boards	15	24	30	42	60	171	11.4	**VIII**
2	Meetings	85	140	114	14	3	356	23.7	**III**
3	Verbally by the HOD	55	36	153	52	3	299	19.9	**VI**
4	Verbally by the Principal	240	132	33	12	2	419	27.9	**I**
5	Verbally by the Correspondent/Chairman	130	136	33	34	12	345	23	**IV**
6	Through Staffs Representatives	0	4	9	58	67	138	9.2	**X**
7	Letter	190	108	36	36	5	375	25	**II**
8	Email	100	104	111	22	6	343	22.8	**V**
9	SMS	0	8	21	92	45	166	11	**IX**
10	Any other(Specify)	10	4	39	76	46	175	11.6	**VII**

The weighted average score of verbally by the principal is 27.9 (rank 1). The score of letter is 25. (rank 2). The score of meetings is 23.7 (rank 3). The score of verbally by the correspondent and chairman is 23 (rank 4). The score of email is 22.8 (rank 5). The score of verbally by the HOD is 19.9 (rank 6). The score of any other specify 11.6 (rank 7). The score of notice boards is 11.4 (rank 8). The score of SMS is 11 (rank 9). The score through staffs representatives is 9.2 (rank 10).

Staffs Contribution on Matters of Retrenchment

S.no	Activity	SA	A	N	DA	SDA	Total	Weighted average	Rank
1	Planning for retrenchment	280	92	36	14	2	424	28.2	**II**
2	Criteria on who to be retrenched	85	140	114	6	7	352	23.4	**III**
3	Methods of communication to employees	120	40	165	10	6	341	22.7	**IV**
4	Suitable methods of retrenchment	335	116	6	4	0	461	30.7	**I**
5	Handling of survivors of retrenchment	0	16	51	108	25	200	13.3	**V**

The weighted average score of suitable methods of retrenchment is 30.7 (rank1). The score of planning for retrenchment is 28.2 (rank 2). The score of criteria on who to be retrenched is 23.4 (rank 3). The score of methods of communication to employees is 22.7 (rank 4). The score of handling of survivors of retrenchment is 13(rank 5).

Staffs Contribution On Decision Making

S.no	Decision	SA	A	N	DA	SDA	Total	Weighted average	Rank
1	Roles and Responsibilities	225	116	30	20	6	397	26.4	**II**
2	Profit sharing	0	20	30	100	35	185	12.3	**VII**
3	Increment	30	8	159	32	23	252	16.8	**VI**
4	Working hours	115	104	135	10	1	365	24.3	**IV**
5	Expansion	100	128	132	4	2	366	24.4	**III**
6	Concession	40	48	96	60	18	262	17.4	**V**
7	Self Development	200	128	60	16	0	404	26.9	**I**

The weighted average score of self development is 26.9 (rank 1). The score of roles and responsibilities is 26.4 (rank 2). The score of expansion is 24.4 (rank 3). The score of working hours is 24.3 (rank 4). The score of concession is 17.4 (rank 5). The score of increment is 16.8 (rank 6). The score of profit sharing is 12.3 (rank 7).

Staffs Opinion on Scheme of Service Issues

S.no	Changes in scheme of service	SA	A	N	DA	SDA	Total	Weighted average	Rank
1	Salary	50	184	108	12	2	356	23.7	**V**
2	Employee benefits	50	200	78	24	2	354	23.6	**VI**
3	Pension	120	88	90	40	4	342	22.8	**VIII**
4	Allowances	70	136	60	40	12	318	21.2	**X**
5	Leaves	100	208	42	20	4	374	24.9	**II**
6	Promotions	80	208	66	12	4	370	24.6	**III**
7	Working hours	140	228	45	0	0	413	27.5	**I**
8	Retirement age	95	100	153	10	0	358	23.8	**IV**
9	Welfare issues	25	180	120	14	3	342	22.8	**VIII**
10	Vacation	40	140	153	8	2	343	22.86	**VII**

The weighted average score of working hours is 27.5 (rank 1). The score of leaves is 24.9 (rank 2). The score of promotions is 24.6 (rank 3). The score of retirement age is 23.8 (rank 4). The score of salary is 23.7 (rank 5). The score of employee benefits is 23.6 (rank 6). The score of vacation is 22.86 (rank 7). The score of welfare issues and pension is 22.8 (rank 8). The score of allowances is 21.2 (rank 10).

Human Resource Practices Affects Morale of Staffs

S.no	Human Resource practices	SA	A	N	DA	SDA	Total	Weighted average	Rank
1	Transfers	200	208	24	0	0	432	28.8	**I**
2	Employee benefits	80	200	90	4	2	376	25	**V**
3	Recruitment procedures	185	180	45	6	0	416	27.7	**II**
4	Selection procedure	170	164	57	12	0	403	26.8	**III**
5	Placement procedure	30	112	105	38	12	297	19.8	**VIII**
6	Promotions	45	148	105	22	8	328	21.8	**VII**
7	Remuneration	75	156	72	36	4	343	22.8	**VI**
8	Layoffs	125	164	78	12	2	381	25.4	**IV**

The weighted average score of transfers is 28.8 (rank 1). The score of recruitment procedures is 27.7 (rank 2). The score of selection procedures is 26.8 (rank 3). The score of layoffs is 25.4 (rank 4). The score of employee benefits is 25 (rank 5). The score of remuneration is 22.8 (rank 6). The score of promotions is 21.8 (rank 7). The score of placement procedures is 19.8 (rank 8).

Factors Affect The Morale Of Staffs In Private Engineering College Of The Retrenchment

S.no	Factors	SA	A	N	DA	SDA	Total	Weighted average	Rank
1	Method of communication	200	92	105	4	0	401	26.7	**IV**
2	Working conditions	250	100	39	22	1	412	27.4	**II**
3	Dignity and respect	110	160	78	14	5	367	24.4	**V**
4	Human Resource practices	175	20	123	30	4	352	23.4	**VI**
5	Salary	265	76	54	16	2	413	27.5	**I**
6	Level of contribution	205	116	78	8	0	407	27.1	**III**
7	Changes in scheme of service	50	192	78	26	3	349	23.2	**VII**

The weighted average score of salary is 27.5 (rank 1). The score of working conditions is 27.4 (rank 2). The score of level of contribution is 27.1 (rank 3). The score of method of communication is 26.7 (rank 4). The score of dignity and respect is 24.4 (rank 5). The score of human resource practices is 23.4 (rank 6). The score changes in scheme of service is 23.2 (rank 7).

Recommendations

1.The management of private arts and science colleges to increase the salaries of the staffs in order to match the high cost of living, this will make the staffs settle down and work with dedicated efforts since they earning can meet their basic needs. The staffs who indicated that they carry a big burden due to high dependency ration. 2.The management should embrace the use of writing letters to the affected staffs as well as holding meetings to discuss the matters of retrenchment to the staffs. This will prepare them for retrenchment and probably get psychologically prepared to go home and get involved in other income generating activities.3.The management should organize and conduct seminars and workshop to the retrenches in order to advise them on how to utilize spent the golden shake given to them as they leave jobs. This can act as a coping mechanism to the retrenches and to the new environment. 4.Staffs should be involved in decision making processes concerning retrenchment. This will empower them on realization that whatever the organization is implementing is owned by the staffs hence improving their morale towards work.

All the practices on human resource should be geared towards improving the morale of the staffs this can be done through by engaging the staffs in all the activities of the institutions.

Conclusion

From the foregoing, discussion it is evident that the management of private arts and science colleges address the matters of communication, staffs contribution, schemes of service and human resource practices. However, according to the opinion of the staffs of Private arts and science colleges these issues are not addressed adequately as evidenced by the results that rates most of them as low. Consequently, this negatively affects the morale of the staffs at private arts and science colleges hence low performance.

Bibliography

1. *Abd-El-Fattah Sabry M. (2010), Longitudinal Effects of Pay Increase on Teachers' Job Satisfaction: A Motivational Perspective, Journal of International Social Research, Year 2010, Vol. 3, Issue 10, and pp 11-21.*
2. *Alam Muhammad Masroor, Jamilha Fakir Mohammad (2010), Level of Job Satisfaction and Intent to Leave Among Malaysian Nurses, Business Intelligence Journal, Vol. 3, Issue 1, pp 123-137.*
3. *Ali Taskina, Ireen Akhter (2009), Job Satisfaction of Staffs Members in Private Universities -In Context of Bangladesh, International Business Research, Vol. 2, Issue 4.*
4. *B Krnjajic Stevan (2003), The teacher under stress, Zbornik Instituta za Pedagoška Istraživanja, Vol. 35, pp 222-244.*
5. *Bennis, W. (1989). On becoming a leader. New York: Addison Wesley Publishing Company.*

6. Bhattacharyya, S., & Chatterjee, L. (2005). Organizational downsizing: From concepts to practices. Vikalpa, 30(3), 65-78.

7. Duncan, N. N., Sakwa, M. & Kiriago, A. N. (2013). Effects of retrenchment on the motivation and loyalty of surviving employees of Telkom Kenya Limited. International Journal of Academic Research in Business and Social Sciences, 2(9), 7-15.

8. Gulati, R., Nohria, N. & Wohlgezogen, F. (2010). Roaring out of recession. Harvard Business Review. pp. 4-10.

9. Hellgren, J., Naswall, K., & Sverke, M. (2005). There`s more to the picture than meets the eye: A comparison of downsizing survivors with changed and unchanged job content. SA Journal of Industrial Psychology, 31(4), 87-93.

10. Ogbechie, R. (2015). An Exploration into the Socio-Economic Effects of Retrenchment: Evidence from Nigeria. Journal of Economics and Sustainable Development, 6 (18), 224-234.

11. Ogbechie, R. (2015). An Exploration into the Socio-Economic Effects of Retrenchment: Evidence from Nigeria. Journal of Economics and Sustainable Development, 6(18), 224-234.
12. Okibo, S. S. (2012). Effect of Retrenchment on Service Delivery of Retained Civil Servants- A Study of Selected Ministries in Kisii Central District, Kenya. International Journal of Business and Social Science, 3(4), 138-144.
13. Okoye, R. C. (2010). The effects of retrenchment on the morale of workers: A study of Enugu State Civil Services. A MASTER Thesis Submitted to Department of Business Administration, University of Nigeria, Enugu Campus.
14. Spector, P.E., Dwyer, D.J. & Jex, S.M. (1988). Relation of job stressors to affective, health, and performance outcomes: A comparison of multiple data sources. Journal of Applied Psychology, 73(1), 11-19.
15. Lewis (2002). "Synthesizing outcomes: how to use research evidence from many tudies." Harvard Educational Review.
16. Lind, Edgar Allen (1988). The social psychology of procedural justice. New York: Plenum Press
17. Luthans and Sommer (1999) "Coping as a Mediator of Emotion", in Journal of personality and Social Psychology, vol 11 No .9.
18. Mishra and Spreitzer. (1998). "The role of mutual trust in effective downsizing strategies." Human Resource Management.
19. Mishra and Mishra (2003) "The Productivity Paradox", in the McKinsery Quarterly, winter 4thed. St Paul MN: West Publishing.
20. Moi (2002) nature of responses of survivors to downsizing, master"s thesis.
21. Mwangi (2002) a survey of factors that influence the attitude of survivors of downsizing towards management and job security in banking sector, master's thesis
22. Namatovu, B., (2006) Effects of the Retrenchment Exercise on Ugandan Organizations. A B.A. Dissertation, Dept. of Psychology, Makerere University, Kampala, 3rded Kampala: Fountain Publishers,
23. Shivo (2005). "A Conceptual Framework for Assessing Organization, Work Group and Individual Effectiveness During and After Downsizing." Human Relations.
24. Spurgeon, H. (2005). Job contribution, job enrichment and obsession-compulsion. Paper presented at the annual meeting of the Eastern Academy of Management, Buffalo.
25. Standing, G., &Tolkman, V. (2001) Towards Structural Adjustment: Labour Market Issues in Structural Adjustment, 5thed Geneva.

Natural Language Processing for Enhancing Education

Prof Yaseera Tausif Nevrekar [1] Prof Arun Shaikh[2]
Assistant Professor, Dept Comp Sci, Maharashtra College of Arts, Science and Commerce
Head Dept Comp Sci,Dept Comp Sci, Maharashtra College of Arts, Science and Commerce

Abstract

The development of Natural Language Processing (NLP) has advanced to a level that affects the research landscape of many academic domains. On the other hand, educational environment has also been improved to impact the world society, such as the emergence of MOOCs (Massive Open Online Courses). Educational applications differ in many ways, however, from the types of applications for which NLP systems are typically developed. Natural Language Processing provides solution in a variety of different fields associated with the social and cultural context of language learning. It is an effective approach for teachers, students, authors and educators for providing assistance for writing, analysis, and assessment procedures. Natural Language Processing is widely integrated with the large number of educational contexts such as research, science, linguistics, e-learning, evaluations system, and contributes resulting positive outcomes in other educational settings such as schools, higher education system, and universities. With these trends, this study focuses on the NLP techniques which can be applied to the educational environment to enhance teaching and learning.

Keywords: *Natural Language Processing, MOOCs (Massive Open Online Courses),e-learning, linguistics.*

Introduction

Natural language processing NLP is a major factor associated with the branch of science, which focus on the development and improvement in the process of learning. NLP provides theoretical grounds to assist in the process of developing techniques and effective approaches for providing assistance in the scientific learning by utilizing the effective theories and approaches. NLP can be effectively applied in the education for promoting the language learning and enhancing the academic performance of the students. [1] Natural language processing assists in developing effective process of learning in the educational setting by developing scientific approaches, which can assist in the process of using computer and internet for improvement the learning. In order to provide assistance, there are a number of different computer programs and effective language learning approaches to ensure that students can easily develop understanding of education in the natural settings. This is based on utilizing the effective and efficient language learning process in the natural settings [1]. NLP utilize the natural language process and utilize this process for developing effective approaches in order to bring improvement in the educational settings. The approach in NLP is more focused on developing educational software systems and educational strategies that can assist in utilizing the natural languages for education, for example, e-rater and Text Adaptor [2]. The software systems with the NLP have the ability to identify the process of language learning in natural settings.

Material And Methods

This study is based on qualitative approach. Method of data collection is based on gathering information from the secondary resources and analysis of the theories, which support and assist in understanding the natural language process and its implementation in the education. Various problems faced by the teachers and students for understanding the context due to obstacles of language. The use of effective linguistic tools such as grammar, syntax, and textual patterns are very effective for learning and assessment of text. The study is based on a qualitative approach.

NLP AND EDUCATION SETTING.

1. Assisting Process Of Learning.

Natural language process is an effective process to assist students in the process of scientific learning. Implementing NLP in the educational setting not only helps in developing effective language process, but it is also significant for enhancing the academic performance. The NLP techniques follow the approach of the natural process of language acquisition integrated with the scientific approach of using computer programs. The study also highlights how NLP can be utilized with scientific computer programs to enhance the process of education. The study follows qualitative approach.

2. Amazon Alexa

Artificial intelligence (AI) will be an integral part of student's work and personal lives in the future, and to an extent it already is as we are in a midst of a pandemic and online teaching and learning has become a part and parcel of a students life. One form of artificial intelligence which has an emerging use case in education is natural language processing (NLP), the oral-language technology behind products like Amazon Alexa. At their core these tools allow information on the internet to be accessed (both requested and received) using oral language rather than written text. The devices also have a defined role in administrative tasks such as keeping lists or setting reminders and alarms.

3. Plagiarism Checker

Artificial intelligence serves as a blessing for plagiarism checker. Natural language processing is a process to detect plagiarism hidden within. Natural Language Processing or NLP is the way to extract materials from the raw and unconstructed data. The NLP process can make the whole data complex, and the supervised process is said to be the most used NLP process, among the other. The varied kinds of NLP processes have been explained and elaborated below:

- NLP based on Semantic analysis: this is a process used to detect plagiarism between two words or more and whether they are near in meaning with each other or semantically same. After comparing it gets deduced, the smaller the value, the more is the similarity between the words.
- NLP based on Lexical analysis: the method detects plagiarism involving the structure and grammar usage in a sentence. In any NLP, the selected text gets divided into tokens or words, while searching for similarity or dissimilarity in the text. Structural copying detected and besides flaws in structures are also pointed, and necessary changes are done well ahead. However, this process has its drawbacks and is a bit imperfect. The disadvantage is that it analyzes only small sentences.
- NLP based on Syntactic analysis: similar to any other NLP after the breakdown of the sentences into tokens, each portion is compared with the grammar or vocabulary used. After that, the final decision depends on whether the words are used correctly and are grammatically error-free

4. NATURAL LANGUAGE PROCESSING FOR LEARNING BEHAVIOR AND MOTIVATION

Beyond improving students' language skills directly, NLP features can also be used to help educators better understand what is happening cognitively with their students. By analyzing language use in the classroom NLP can help identify and predict students' mental states during learning. Studies in this area are still nascent, and should be improved upon. But recent research provides evidence that text features in students' written and spoken production both in-person and online can be predictive of success in math and science domains. Automatically assessing mental states can provide teachers with a better understanding of how well their students are prepared to learn. This information may help teachers better manage the classroom, identify struggling students early on, and improve student learning.

NLP can also identify individual differences in learners. Recent research has focused on NLP predictors of students' individual differences, including vocabulary knowledge, working memory, and identity.

5. NATURAL LANGUAGE PROCESSING FOR READING AND WRITING

NLP can help students learn to write better essays by providing formative feedback (i.e., actionable feedback on specific essay parts) that can be used during the revising process to improve more than just grammar and mechanics. For instance, NLP can help identify the presence of absence of important discourse elements like claims, arguments, and evidence. In addition, NLP can provide feedback to learners about the organization of an essay. These NLP solutions can be combined into automatic writing evaluation (AWE) systems that can provide low level feedback (e.g., tips about vocabulary) or higher level feedback (e.g., advice about the cohesion of discourse).

Beyond writing, NLP can also go a long way toward helping struggling readers in the classroom. NLP algorithms can provide automatic feedback to students about the strength of self-explanations and summaries of reading samples, both of which are key elements of reading comprehension. However, teachers often don't have the time to provide students with detailed and individualized feedback on these tasks.

Newer readability formulas based on NLP can also help educators better match texts to students to ensure reading assignments are suitably challenging and productive. These new metrics provide information about the complexity of language in terms of vocabulary, cohesion, and syntactic complexity. Not only are they better predictors of reading speed and comprehension, but they better match cognitive models of text processing. They also work for a variety of different readers and genres. NLP techniques are even being used in text simplification algorithms that can automatically modify texts to make them better fit with the reading skills of students.

6. Curriculum Material

Primarily with teachers in mind, NLP is being used to try to automate tasks that traditionally have required manual effort, e.g., creating curriculum or assessment materials. NLP methods can be used to support fine-grained personalization of curriculum materials by automatically finding materials from electronic sources such as the web that are particularly tailored to a student's reading level and/or topics of interests. Semantic similarity shows promise in identifying core concepts from science education resources, while text simplification is being studied as a method for enabling the reuse of existing materials across student proficiency levels [5].

For students, NLP is being used to help them better navigate text and speech-based course related materials. For example, knowledge of speech has been used to develop tools that allow students to better access and process external online lecture materials related to course content.

7. Assessment

With respect to assessment, NLP-based methods for automatically generating multiple-choice, wordbank, and other types of test questions by processing texts in the subject domain are being explored. [3]

8. MONITOR AFFECTIVE FACTORS VIA MONITORING TOOLS

NLP can also help monitor affective factors via monitoring tools that are important in learning (i.e., engagement and boredom), which could be used to signal the need for transitions and spaced practice. The basic idea is that the language students produce can be strong indicators of cognitive and knowledge-based skills, all of which are dynamic elements of learning that can affect success in the classroom. Stealth assessment of these skills may help teachers more effectively tailor instruction to individual needs.

9. LEARNING ENVIRONMENT

NLP can be used to study less traditional educational metrics like successful collaboration in the classroom. Indeed, researchers have started to apply social-network analysis approaches to language data to find patterns of collaboration among students in online discussion forums and within MOOCS. These NLP approaches can identify semantic trends in discussion, discussion leaders, and the genesis of ideas, all of which can help teachers better understand learning in the classroom. Recognizing class leaders and key collaborators may be an effective means to develop classroom partnerships and peer mentoring to help ensure success for all learners.

NLP can thus both improve the quality of instruction within individual assignments and help educators improve the learning environment more broadly. It's still early days, but the research progress so far suggests that NLP can have a profoundly positive impact on learning.

Critique In The Applications Of NLP Tools In Education.

A-LEARNING ENVIRONMENT AND ACCESS

AI is not set to replace the classroom teacher eminently. There are many skills and decision-making processes which teachers engage in every day, which AI is not yet capable of. It is therefore critical that we consider AI to be a tool to support learning, not run it. There can be some resistance to introducing new technologies to the classroom and many of the concerns raised by educators in the survey mirror those which slowed the introduction of 1–1 device programs in schools. It is important that the use of NLP tools like Amazon Alexa are seen as part of the learning environment.

NLP tools are relatively inexpensive, and exist in many classrooms (via Apple's Siri or Google Web tools) already as many places across world till date only online learning is existing due to pandemic. Devices such as Amazon Alexa produce a larger range of spoken responses (instead of referring students to written answers) and are easier to use, but communities who have overcome access issues in 1–1 devices have likely given all students access to NLP tools already. The issue of access and equity for students becomes one of awareness and access to support and training.

B-SECURITY CONCERNS

NLP tools (like all AI) improves by learning from its own experiences, it is necessarily collecting data on its interactions with students, but it should not be ignored that the companies which own these technologies do not make guarantee anonymity, nor can they predict what the data may be used for.

Most classrooms already have NLP tools (even if they are not commonly utilized) and AI tools such as Google are in daily use in most classrooms. It would seem overdue that some policy and guidance was created to advise teachers and school leaders on appropriate usage, permissions and educating students and parents . Expectations around privacy and regulation when using more generalised AI need to be considered now.

C-CURRICULUM AND PEDAGOGY

AI and NLP are impacting all industries, and is therefore offering tools across all curriculum areas. Tools like Alexa are not designed for any particular curriculum area but are conceivably useful in all. As AI becomes more generalised we may see a trend towards the technology we access it through having less obvious subject-specific uses and integrating into daily life.

NATURAL LANGUAGE PROCESSING (NLP) INNOVATIVE APPLICATIONS

Natural Language Processing (NLP) expertise has also resulted in other advanced capabilities to support student learning and assessment.

A-Writing Mentor™

The Writing Mentor™ application is a Google Docs writing support add-on. The app targets a wide range of postsecondary users, including struggling writers and English learner (EL) populations enrolled in 2- and 4-year colleges. The app is intended to provide one-stop-shopping for writers who are looking for some writing help. Students who are using Google Docs can install the app and use it to get feedback for text — specifically, actionable feedback about their writing related to claims and sources, topic development, coherence, and English conventions and word choice. Feedback leverages ETS's natural language processing (NLP) capabilities and lexical resources, and synonyms for unfamiliar words they may encounter while reading external sources. In addition to feedback, the app provides a report illustrating the different feedback types that the user viewed. The report can be saved as a PDF file to show to their instructor. It can give the instructor a sense of how their students may be engaging with the tool, and what aspects of writing they are working on.

B-The Language Muse® Activity Palette

The Language Muse® Activity Palette is a web-based application designed to support English Learners (ELs). Aligned with reading standards, the tool automatically generates customizable activities aimed to help ELs build the academic language skills needed for deeper reading comprehension in content areas. The language-based activities are intended to support content comprehension and language skills development through activities that afford practice with vocabulary, sentence structures, discourse and summary writing. Teachers can use the tool to create and administer a "palette" of online activities for classroom texts that students can complete, and are scored online. Paper-and-pencil assignments are also available. Activities can be used for classroom discussion, independent or group work. While the tool targets ELs, activities may be useful for all students. Teachers can use their own texts, or the library of texts provided with the tool Advantages.

C-Massive Open Online Courses (MOOCs)

MOOCs use online platforms to make courses available to thousands of students without cost to the student. MOOCs are lauded for their potential to increase accessibility to distance and lifelong learners.

Conclusion

Although education is arguably one of the oldest application areas of NLP research, new phenomena such as MOOCs and big data have triggered an explosion of current interest in this area, as well as in-creased already strong ties between researchers in NLP and in other areas of Artificial Intelligence. Natural Language Processing and its Educational Application provide a perfect solution to the various problems and barriers in the educational system, which result in affecting the academic progress and learning of the students. It is very significant to develop new software systems and advanced techniques in the educational settings. The major purpose of using NLP in educational setting is to bring improvement in the educational system by implementing efficient and effective policies, which can assist in utilizing advance technologies for the bringing improvement in the educational system. For example, application of NLP in education for e-learning is very significant approach, which assist in producing educational material with technological development.

Artificial intelligence is going to become an increasing part of our student's lives, and tools such as NLP have the potential to transform education, making teachers more efficient and effective, and allowing students to develop a social relationship with, and empathy for, machines.

Acknowledgement

The author's own research described in this paper has been done in collaboration with the many co-authors listed in the references.

References

[1] Nadkarni, P. M., Ohno-Machado, L., & Chapman, W. W. (2011). Natural language processing: an introduction. Journal of the American Medical Informatics Association, 18(5), 544-551

[2] Burstein, J. (2009). Opportunities for natural language processing research in education. In Computational Linguistics and Intelligent Text Processing (pp. 6-27). Springer Berlin Heidelberg. http://link.springer.com/chapter/10.1007/978-3-642-00382-0_2#page

[3] Brown, J.; Frishkoff, G.; and Eskenazi, M. 2005. Automatic question generation for vocabulary assessment. In Proceed-ings of HLT/EMNLP.

[4] Mitkov, R.; Ha, L. A.; and Karamanis, N. 2006. A computer aided environment for generating multiple-choice test items.Natural Language Engineering 12:2:177–194.

[5] Candido Jr, A.; Maziero, E.; Gasperin, C.; Pardo, T.; Specia, L.; and Aluisio, S. 2009. Supporting the adaptation of texts for poor literacy readers: A text simplification editor for Brazilian portuguese. In Proc. 4th Workshop Innovative Use of NLP for Building Educational Applications, 34–42.

[6] Benson, P. (2013). Teaching and researching: Autonomy in language learning. Routledge. http://books.google.com/books?id=ZoarAgAAQBAJ&printsec=frontcover

[7] Castellani, S., Kaplan, A., Roulland, F., & Roux, C. (2010). U.S. Patent No. 7,797,303. Washington, DC: U.S. Patent and Trademark Office. http://www.google.com/patents/US7797303

[8] Shi, C., Verhagen, M., & Pustejovsky, J. (2014). A Conceptual Framework of Online Natural Language Processing Pipeline Application.COLING-2014,53.http://www.aclweb.org/anthology/W/W14/W14-52.pdf#page=63

'Journal of Research & Development'
A Multidisciplinary International Level Referred and Peer Reviewed Journal, Impact Factor 5.13, ISSN: 2230-9578, April-2021, Volume-11, Issue-8 "Recent Trends in Social Sciences"

Glorification of Women in Sangam Age: A Study Throgh Sangam Literature

Dr. S. Sridhar

Assistant Professor, Department of History, Arignar Anna Government Arts College Villupuram

Abstract

This article mainly focused on how women were glorified in Sangam age, gleaned by Sangam literature. Sangam literature might be the tool for knowing the position of women and their participation during Sangam age which has been exhibited in this study. A country or kingdom has been scaled by women's position and their participation in the fields. On the patrimonial society, women status would be cruel and they disciplined as second grade citizens. However, some of the kings and kingdoms were glorified women hood and given great status to participate all the fields like, education, music, dance, administration and etc., moreover, they have participated in the fields of literature ever. These are symbols revealed the greatness of kingdom always. On the consequences, In Tamil Country, which have been geographically situated in southern part of India, women were glorified in all fields., known as Sangam Age. In modern day, women have been discriminated the fields of education and other fields, for being a women. But the ancient Tamil Nadu, the kings and kingdom given a great position to women to fulfill their needs. They actively participated in the politics, administration and other fields like music, drama and literature

Keywords: *Sangam Literature, education, Tamil Country , Sangam Age, music, dance, education*

Introduction

A country or kingdom has been scaled by women's position and their participation in the fields. On the patrimonial society, women status would be cruel and they disciplined as second grade citizens. However, some of the kings and kingdoms were glorified women hood and given great status to participate all the fields like, education, music, dance, administration and etc., moreover, they have participated in the fields of literature ever. These are symbols revealed the greatness of kingdom always. On the consequences, In Tamil Country, which have been geographically situated in southern part of India, women were glorified in all fields., known as Sangam Age. Tamil Nadu history has been started during Sangam age. During Sangam women were glorified as equal as men. Women have been glorified in Tamil literature as the "lamp of home".[i] A young women shed luster to a home says nanmai-k-kadikai.[ii] It also negatively lays down that "a home is a void without a woman to run it. Thiruvalluvar has stated that a man whose wife could not save the honour of her home could not walk boldly like a bull before his enemies. a wife possessing all feminine virtues and homely cultures is an asset to a family. An accomplished wife illumines a home. A poem in palai-k-kali contains in a nut-shell the philosophy of married life. This article mainly focused on how women were glorified in Sangam age, gleaned by Sangam literature. Sangam literature might be the tool for knowing the position of women and their participation during Sangam age which has been exhibited in this study.

Education of Girls

The girls of the Sangam Age were given a good training in Literature, music and drama. The Sangam Literatuer given the clear evidence of women position and participation of the music those days. The education received by women was different from that imparted to men young men were taught the art of welfare, the ambassadorial assignments, town policing and various professions for earning a living. The modern terms, the theory of training science or domestic training was given. Perhaps, the mother liked only her educated son.**.** Purananuru says that a king followed the path prescribed by men of wisdom.[iii] The education imparted to the young men of the Sangam age was designed to promote their physical health, balanced growth and to fit them to their married life to follow. The girls were instructed to the have maintain their house-hold for lady-companions or foster-mothers.[iv]. The companion sits on the same side of the boat where the lady-love sits; and follows her during her sports her in water.[v] The primary instruction, a girl receives from her lady-friend and foster-mother blossoms into a fully fledged knowledge in lyal, Isai and Natakam, even before she out-grown her adolescence.[vi] Outstanding among the poetesses were Anji Attai Makal Nakaiyar, Allur Nan Mullaiyar, Adi Mandiyar, Uttiyar, Unpittaiyar, Okkur Masattiyarr, Avvaiyar, Nanakaiyar, Kakkaippaitniayar, Nachellayar, kaverpendu, kuramaka, veyiniyar, Nakkannaiyar, nettimaiyar, Netumpalliyattai, Pari makalir, Punkan uttiraiyar, budap pandiyan devi, perunkoppendu peymakal, ilaveyini, pottiyar, pondaippasalaiyar, maiokkattu, nappasalaiyar, varumulaiyaritti, vennikkuyattiyar, vellividiyar, very, patiya kamakkanniyar. Kakkaippaitniyar has contributed two works on prosody namely, Kakkaipatiniyam, and sirukakkaippadiniyam. The most equisite and soul-stirring pieces contributed by the Tamil Poetesses of Sangam period have been prasied as the repositories of poetic excellence and fertile wisdom.

Music

Naturally women voice were smooth and their tone are sweet manner. From birth to death they sing a song to each occasion, especially at the time of nursing babies and sung lullaby songs.Even the beasts of the forests were charmed music of women. In one of the Sangam poems and interesting episode is related , a kurava girl sang the kurinchi-p-pan, a melody native to the kurinci tract , so smoothly and an elephant , while came to forage the well ripe ears of thinai corn was fascinated by the music and fell into slumber.[vii] When women sang the palai-p-pan even the cruel hearts of the Mravars of the palai tract melted and the hunting weapons slipped from their hands.[viii] It was no unusual for women to sing sweetly into the ears of their war wounds. Malaipatukam one of the ten idylls, contains reference to such instances.[ix]

Drama

Dancing is an art in which the participants could express by physical signs the emotions which surge through their hearts. The ancient Tamil women were well versed in this art too. A dancer who knew the art of physically expressing her emotions (viral) was called a virali. Malaipatukam could dance to the mellow tunes of yal. We shall now pass on to consider the life of women led subsequent to their marriage. A little girl and a boy would have been quarrelling with one another rand would have pulled each other's hair even through her foster-mother tried to stop them. but later when these children grew up , and blossomed into youth, their hearts go locked up in love, and they appeared like beautiful twin garlands. Here, in the lives of these young persons, we see the fingers of fate moving. Those who have observed the life of this happy couple have blessed the fate for its contribution to their felicity.. The stage setting now turns. We now witness a different drama. A young men and a girl meet together for the first time. Till this happy and accidential meeting thery was strangers yet they fall in love with one another. The lover addresses his lady-love in these words;" your mother and father and my mother and father are not relatives at all. Till this movement were too have not seen each other. The showers fall from the skies and mix with the red soil they soak into. Similarly we have now become inseparable ones.[x]The ancient Tamilagam, in most cases a short period of love preceded marriage. A girl would like to marry only the young men whom she cared for. To achieve this purpose she would pray to God offering him flowers a licenses. Poet kabilar in one of his songs included in Ainkurunuru paints a beautiful picture of such of girl.[xi]

Bull fights

Young women born of mullai trat would like to marry only those heroes who came out successful in bull fighting games. They never dream of marrying a coward who fighting afraid of the games.[xii] Girls of long beautiful tresses could be won only by the heroes who had over mastered the bull.[xiii] Form this internal evidence we have to infer that bull-fighting and success in the fierce game was a condition precedent to a match between a young man and a young women of the mullai tract In the ancient Tamil society a huge amount was offered by the bridegroom's party for purchase of jewels for the embellishment of the bride. But a father would never agree to give his daughter in marriage to a young man, even though he ahead brought out very large gifts of wealth, if only he was otherwise ineligible to her hand.[xiv] When once a lady-love elected to marry a young man, she accepted him as her lord finally, and never ejects him late. A lady-love who had lost her heart to her lover feigns to be carried only away by fresh floods while she was sporting in the river along with her maid friends. The lover who , she know was in the vicinity ,plunged in the stream, caught hold of the girl., hugged her to his bosom, and rescued her from her danger. Her parents and villagers decided to marry them because their physical bodies united in contact, as did their hearts already. The mind friends of the lady love wonder how, at the apt movement the lady could have called for ratings at her command to bring freshens in the river. [xv] The first of mullai tract also follow those of the kurinci girls in the practice of this matrimonial virtue. The neytal firm does not lag behind in these high morals. A mullai girl can never thing of marrying anyone other than her lover, even though she could have the world offered to her as prize.[xvi]A kurinci lady-love decked her dark hair with the little string of flowers offered by her lover, but she is afraid of her mother and her reproach her lady-companian comforts her by these words;"he is the son of a shepherd; you are the daughter of a shepherd. You love him .now where is the question for your mother rebuking you for the act. The heart of your mother is similar to yours, be assured.[xvii]A poet of kuruntokai has also confirmed in one of his verses the existence of the practice of love marriages, and none of other among the ancient Tamils.[xviii]

Conclusion

In modern day, women have been discriminated the fields of education and other fields, for being a women. But the ancient Tamil Nadu, the kings and kingdom given a great position to women to fulfill their needs. They actively participated in the politics, administration and other fields like music, drama and literature. Thus, Sangam Age might be golden age for women by its nature.

Notes and Resfrenssces

1. *Purannanuru, 279*
2. *Ibid.,*
3. *Purananuru, 183, 7*
4. *Tolkappiyam, Klaviyal, 35*
5. *Kuruntogai, 42:1-4*
6. *Kuruntogai, 10:1*
7. *Akananuru, 102:5-9*
8. *Porunararruppatai,21-22*
9. *Porunararrupatai-21-22*
10. *Kuruntogai, 40*
11. *Tolkappiyam, kerpiyal ,11*
12. *Kalittokai, 103:63-64*

13. *Ullaikkall , 1:41-42*
14. *Purananuru, 383:10-13*
15. *Tirukkural,55*
16. *Kurichickkali, 3:15-18*
17. *Mullaikkalai, 14.15-21*
18. *Kuntokai, 44:3-4*
19. *Purannanuru, 279*
20. *Ibid.,*
21. *Purananuru, 183, 7*
22. *Tolkappiyam, Klaviyal, 35*
23. *Kuruntogai, 42:1-4*
24. *Kuruntogai, 10:1*
25. *Akananuru, 102:5-9*
26. *Porunararruppatai,21-22*
27. *Porunararrupatai-21-22*
28. *Kuruntogai, 40*
29. *Tolkappiyam, kerpiyal ,11*
30. *Kalittokai, 103:63-64*
31. *Ullaikkall , 1:41-42*
32. *Purananuru, 383:10-13*
33. *Tirukkural,55*
34. *Kurichickkali, 3:15-18*
35. *Mullaikkalai, 14.15-21*
36. *Kuntokai, 44:3-4*

Event Management

Mr. S. C. Dudhal
Assistance Professor, D.S.Garad Mahavidyalaya, Mohol

Abstract

"Humans are the most socially evolved species on the planet. As such, we develop social interactions beyond our family structures which can trigger the need for events". Events have played an important part in society. In social sciences, events are researched typically as unplanned occurrences rather than as the outcome or target of deliberate management activities. Even though a number of streams of management research have examined how events influence organizations and organizational fields, the notion of event management is often equated with project Management and mainly debated in professional publications .This paper represents a comprehensive overview of existing studies, providing vital information for events researchers in all areas of the field. Further, the research highlights the Concept of the Event Management, types of event management, Characteristics and the Benefits of the event management and also This paper shows the career opportunities in the event management.

Keywords : Event, Management, Corporate, Private, Characteristics

Research Methodology:-

Primary Data:- Primary data is first hand information collected by researcher. It is customizing according to the need of the researcher and focuses exclusively on the current research problem.

1)Personal Interview of customers.2)Drafting questionnaire

Secondary Data:- Secondary data may be defined as data that has been collected earlier for some purpose of the present study. Any data that is available prior to the commencement of the research project is secondary data and therefore secondary data is called as historical data. This study is based on the secondary data that was collected by the researcher through the following source-

The secondary data was gathered from -

1) Company manuals and brochures. 2) Reference books and websites

Here it should be noted that the World Wide Web was the source of information. However there are many books available on green marketing, which were getting a basic idea about the project .This research paper completely depend up on secondary data which is all the sources used to carry out the dissertation can be categorized as :

1)Internet. 2)Text Books. 3)News papers and commercial magazine,

4)Academic Journal and research paper.

Objectives of the Study:- The objective of this chapter is to understand

1. *To understand concept of Event*
2. *To understand the concept of Management*
3. *To study the characteristics of event management*
4. *To study the benefits of event management*

Limitation of the Study

1.The study focuses on Event Management. 2.The study has been conducts only by collecting the secondary data.

Introduction –

In Event Management two words are include Event& Management

Event: An event is something that happens at a given place and time for a reason with someone or something involved. Getz (1997) illustrated the definition of events as follows, "To the customer…a special event is an opportunity for a leisure, social or cultural experience outside the normal range of choices or beyond everyday experience" (Shone & Parry. 2004, 3). Historically, before the fall of the Western Roman Empire (A.D.476), both events and festivals appeared in the historical period (Raj et al. 2009, 1). Events have had certain functions within society with the purpose of sharing rituals and celebrations and affirm identities with other people. Also, events have played a significant role in reflecting any nation's culture and contributing to economic development

Management: Management could be defined as the act of applying necessary skills in all business and all human resourceful activities to accomplish desired goals and objectives

So Definition of event management after joining the two is:

"The process of creatively applying necessary professional skills in organizing a focused event for a target audience to achieved a desired objective."

The process of planning and coordinating the event is usually referred to as event planning and which can include budgeting, scheduling, site selection, acquiring necessary permits, coordinating transportation and parking, arranging for speakers or entertainers, arranging decor, event security, catering, coordinating with third party vendors, and emergency plans. Many companies and individuals realize they do not have the expertise or time to devote to the task of planning such special events and turn to professionals specializing in event planning. Event management companies can ensure that any event, corporate or private, large or small, goes smoothly. Event management services can be tailored to the client's needs and budget.

Event Management of Corporate Event & Private Event

Event management of business and corporate events is the essential activity of event managers and event agencies. While the objectives of corporate events can vary from Educational or Promotional to Ceremonial, the underlying goal of all corporate events is to create a positive image in the eyes of the target audience.

One way to ensure a corporate event proceeds flawlessly is to hire a professional event management company. The role of the event management company is to take the stress off of you by managing the infinite number of decisions that go along with any corporate event.

Event Manager for Corporate Events

Event Managers manage the theme, location, marketing, entertainment and catering for the event. Online promotion and registration is another important benefit offered by most professional event managers. Online registration is not only a convenience for the attendees, but also a valuable tool that allows you to manage and track the event much easier.

Event management services can include virtually every detail of the event to your specifications and budget. A professional event management company can make your event less stressful and more successful.

Private Events

Private events are primarily celebrations such as weddings, birthdays, anniversaries and reunions. At these events the host is usually trying to create memories to last a lifetime. Unfortunately, planning such an event can be time consuming and often the only memory the host has is how much work it was to plan the party.

Characteristics of Event Management

1) Uniqueness

It is certainly comprehensible that being unique is one of the main elements of all events regardless of purposes. That being said, the consecutive repetition of one event is not advisable. Nevertheless, event organizers and coordinators should bear in mind that what makes one event become unique certainly depends on the participants, the surroundings, the guests, etc. When it comes to uniqueness, it is inevitable that depending on types of events.

Perishability of events

2)Apart from being unique, events need to be "perishable. Perishability of events refers to the fact that events should not be repeated in the same way all the time. In fact, in spite of the repetition of events, a wide range of different activities have to be included in order to avoid the boredom and attract more attention. Perishability is also related to the utilization of facilities and services for events.

3)Intangibility

Intangibility of events is related to mental values, whereas tangibility refers to something that can be seen or touched. When attendees attend one event, they would like to receive some intangible values such as happiness, memories etc. The aspect of intangibility plays an important role in service sectors or activities. Nevertheless, event organizers should make the event tangible by boosting up the tangibility of events

4)Ambience and services

Without a doubt, ambience is regarded as one of the most important and decisive characteristics to the outcome. Whether an event gains a huge success or is considered a big failure depends on ambience. Ambience refers to the surroundings, participants, catering services etc. at the event. For example, at one conference, guest speakers, decoration, technology could be considered ambience.

5)Labor-intensiveness At an event, staffing is quite crucial. More specifically, without having any staff at an event, the event itself would become a disaster. Staff play an important role in organizing a good event as well as helping the event to reach its objectives. The level of labor intensiveness depends on the complexity together with the uniqueness of the event.

Benefits of Event Management-

1) Save valuable time:

The success of an event depends on every element and every person involved in the project doing their job to a high standard, at the correct time and in the right place, which requires flexibility and cross-team communication; managing so many different people at one time takes versatility.

Outsourcing your events to a dedicated professional ensures your employees remain dedicated to their own core roles, rather than being tied up for weeks or even months organizing venues, entertainment options and managing delegates.

The chances are that your team are not experienced in each area, and will therefore take significantly more time than an expert would to do the same tasks. An experienced event management company will have access to a vast array of event related suppliers, who have a proven ability in delivering their services – avoiding the need for suppliers to be researched, set-up as new vendors, references taken and payment terms being negotiated.

2) Access insider knowledge, skills & expertise:

Seasoned event managers who have seen and done it all will suggest ideas, plug in the gaps, and make improvements based on best practices and past experiences to help you create an outstanding memorable event.By outsourcing your event management requirements, you are buying-in a raft of skills and expertise including: Knowledge and experience of best locations and venues for your event Experience in managing logistically challenging situations.

3) Avoid hidden costs:

Event management companies know the important questions to ask. A seasoned Event Manager will ask the right questions from the start, so that hidden venue or supplier costs will be explained, avoiding any unexpected costs when it comes to paying the final invoice.

4) Ensure you're covered:

In today's world it's crucial to ensure all of the necessary Health and Safety paperwork is created for each and every event, and this can be quite a task on its own! Risk assessment of all elements of the event will be coordinated by an Event Manager, giving you complete peace of mind that all the correct documentation is provided, and that you are covered, should any incidents occur.

5) Remain Stress Free:

Stress reduction is often deemed the biggest benefit for employees when hiring an event management company. All of the liaison and preparation will be tended by them, leaving you worry-free knowing that they are on standby to manage any issues that may arise.

Past experiences have prepared Event Managers to tackle any type of surprises or situations, usually before anyone else notices; experienced event managers make it look easy and work tirelessly to create the best possible experience for their clients, leaving you free to relax and enjoy the event!

Careers in the event management industry:

Working in event management industry can be very hectic, but at the same time, very rewarding. There are many career opportunities in the industry, and work is generally available in small and large cities around the world. Most event management focuses on concerts, parades, parties, conventions, and special events. You can work for corporations, governments, non-profits or for yourself! Most of the planning work for events is done prior to the event; however, event planners are required to be on site during the event, to make certain everything goes smoothly. Most positions are full time; however, some may be contract positions. Occasionally, positions are strictly for a particular event. Generally, companies look for a college educated individual to fill the position.Depending on your role, experience and city you choose to work in, the event management industry can be very lucrative. The positions listed above generally offer bonuses in addition to the salary range shown.

Conclusion:

We are at the start of the event operations management model, and as such it is important to take stock of all that is happening around the organization and the event. This chapter identifies some basic definitions that are essential to understand before we proceed through the rest of the chapters. In particular, the chapter introduces terminology from the events industry, general management theory and operational management theory. It establishes the framework in which event managers work, looks at the constraints of policy, and shows how events are limited and affected by resources and the nature of the event. The chapter serves as an explanation for the need for external and internal analysis which is required for any event organization that is in the process of creating an event and having sustained business success

References:-

1. Desai & Limaye (2000)Modern Management Practices, Phadke Publication
2. Bode, C./Wagner, S.M./Petersen, K.J./Ellram, L.M. (2011): Understanding responses to
3. supply chain disruptions: Insights from information processing and resource dependence
4. perspectives. In: Academy of Management Journal
5. Bode, C./Wagner, S.M./Petersen, K.J./Ellram, L.M. (2011): Understanding responses to
6. supply chain disruptions: Insights from information processing and resource dependence
7. perspectives. In: Academy of Management Journal,2July allens(2001) The Business of Event Planning: Behind-the-Scenes Secrets of Success Special Events
8. De Pelsmacker, Patrick., Geuens, Maggie., Van den, Bergh Joeri., 4th edition 2010. Marketing Communications, a European Perspective. Financial Times/ Prentice Hall Internet & Google Sites related to event management
9. Langley, A. (1999): Strategies for theorizing from process data. In: Academy of Manage-ment
10. Review
11. Langley, A. (1999): Strategies for theorizing from process data. In: Academy of Manage-ment
12. Review
13. Lynn, M.L. (2005): Organizational buffering: Managing boundaries and cores. In:
14. Organization Studies

Employment Generation by Hotel Industry with Special Reference to Sindhudurg District

Sumedha Naik
Assistant Professor, S. K. Patil Sindhudurg Mahavidyalaya, Malvan, Dist.Sindhudurg, Maharashtra, India.

Abstract

Role of Human resource is significant in service industry especially, the hospitality and entertainment industries. Hotel employees are responsible for understanding customer needs and for interpreting customer requirements in real time and delivering the service. Despite basic function of smooth running of the hotel business, they play different roles in management and continual operations of the hotel. Especially in small hotels, the role of employees is crucial as they are the face of the hotel services.Sindhudurg District, the first ever declared Tourism District in India, following the footsteps of tourism and increasing its yield from the hotel industry and other tourism enterprises. This paper assesses the role of hotel industry in employment generation. This study gives a snapshot of employment scenario in hotel industry of Sindhudurg District. It also presents the working conditions of hotel employees in Sindhudurg District. It highlights various ways to increase the share of hotel industry in employment generation.

Keywords: *Hotel Industry, Employment Generation, Human Resource Management, Talent Management, Sindhudurg*

Introduction

India is a big market for travel and tourism. Indian Tourism Industry offers a varied range of niche tourism products - cruises, adventure, medical, wellness, sports, eco-tourism, and film, rural, religious and spiritual tourism. Tourism influences the Indian economy in terms of revenue generation, employment generation, foreign currency earnings and capital investments. As per the World Travel Tourism Council (WTTC) data, 41.074 million jobs are provided by Tourism and hospitality, that is 9.25% of the total jobs in India. Out of these, 25.93 million jobs are direct jobs provided by Tourism and hospitality. Direct employment includes employment by hotels, travel agents, airlines and other passenger transportation services.[1] It is always said that the Tourism and Hotel industry are inextricably linked with each other. Both the industries are supportive of each other.

Sindhudurg District, the southern part of the greater tract in Maharashtra known as the 'Konkan', famous for its natural beauty like beaches, backwaters, waterfalls and pilgrimage centres has the highest green cover in Maharashtra (49%). This coastal region represents an economically backward district where a tourism-led development strategy introduced by the Government. **The declaration of Sindhudurg as a tourism district by the Government of Maharashtra in 1997 and a Special Tourism Area (STA) by the Government of India was the first example of an entire district being selected for development focusing exclusively on tourism.** The hotel business, the backbone of tourism, is yet to be developed and prominently featured by small hotels. Although the district has witnessed the horizontal development of hotel industry in terms of the rise in a number of hotels, tourist arrivals and the revenue, the leading hotel groups or chains, star hotels, midscale and upscale luxury hotel brands with corporate affiliations are yet to make an entry in the district.

Objectives of the Study

(i) To assess the contribution of hotel industry in employment generation.
(ii) To take an overview of hotel employment in the hotel business in the study area

Review of Literature

Jollie, L. and Farnsworth, R. (2003)[xix] examined the tourism employment in Atlantic Canada and suggested a model for managing the seasonality in employment, providing various strategies to the tourism employers running seasonal businesses. Karen Lo; Felicity Lamm (2005)[xx] investigated various factors behind the hotel employees occupational stress. They revealed that many hotel employees are stressed mainly with poor working conditions and low wages. Chaudhary and Gupta (2010)[xxi] assessed the gender equality in hotel personnel and found management bias in the official policies for male and female employees, giving more benefits to male employees. Brown et al (2015)[xxii] studied the hospitality employees turnover issues, particularly for the generation Y employees i.e., Millennials graduated from US four-year hospitality programs. They found that those graduates are passionate about their jobs and the employers need to take advantage of their passion. However, they identified that long working hours is one of the major reasons behind the turnover. Dayanandan (2016)[xxiii] identified the problems in employment generation from standard hotel business in Hawassa City of Ethiopia and classified the causes into instability and inefficiency.

The perusal of literature revealed that the researchers have studied the hotel business employment with a wide range of perspectives such as gender equality, employment generation and associated issues, employment turnover and impact of hospitality education, etc.

Methodology

[1] Travel & Tourism Economic Impact 2017, accessed from www.wttc.org, retrieved on 25/04/2018

This study is based on both types of data, qualitative and quantitative data as well as primary and secondary data. The Sindhudurg District is selected as the study area. **100 hotels** as against 429 total hotels from all eight blocks of the district. For a selection of the hotels under survey, the **random sampling technique** is used. A survey questionnaire was prepared for the hotel owners and employees.

Discussion

Role of Hotel Industry in Employment Generation

Tourism occupies an essential position in the Indian Economy in terms of GDP, employment and Forex earnings. One of the most important factors directly dealing with Tourism is the Hotel Business.

As per the World Travel Tourism Council (WTTC) data, 41.074 million jobs are provided by Tourism and hospitality, that is 9.25% of the total jobs in India. Out of these, 25.93 million jobs are direct jobs provided by Tourism and hospitality. Direct employment includes employment by hotels, travel agents, airlines and other passenger transportation services.[xxiv]

The direct employment scenario in a hotel depends upon different factors viz. the nature of hotel, size of hotel and preferences of hotel management. Food and Beverages department has different positions like waiting staff, Kitchen staff, kitchen manager, restaurant manager, head chef or executive chef, room service personnel. Front Office department has various employees like hotel porter, front desk manager, front desk employees, Hotel concierge. Housekeeping department includes different jobs like housekeeping manager, housekeeping staff, maintenance staff. Besides these functional departments different managerial positions are offered by the hotels such as marketing manager, general manager, Sales manager, revenue manager, accounts manager, purchase manager, personnel or human resource manager and IT manager.

Employment Scenario in Hotel Business of Sindhudurg District

The hotels in Sindhudurg District embraced with the basic accommodation, food & beverages services, indoor and outdoor amenities and recreational services like water sports with a few exceptions of agro-tourism and medical tourism units. The 'Atithi Devo Bhava' spirit of Konkani Culture, specifically mentioned, as 'Malvani Tradition' is the core value of Hotel Industry in the district and 'Malvani Cuisine' is one of the major reasons that many tourists repeatedly visit the district.

The basic information of the sample hotels regarding type, ownership, management, years in business and annual income is illustrated in Table No. 1 below:

Table 1 Basic Information of Hotels

Particulars	Options	Frequency	Percent	Cumulative Percent
Type of Hotel	Non-Star	30	30.0	30.0
	Bed and Breakfast	31	31.0	61.0
	Resort and Others	11	11.0	72.0
	Homestay	14	14.0	86.0
	Lodges	14	14.0	100.0
Ownership Pattern	Sole Proprietor	80	80.0	80.0
	Partnership Firm	12	12.0	92.0
	Hindu Undivided Family	1	1.0	93.0
	Company	2	2.0	95.0
	Group	5	5.0	100.0
Years in Hotel Business	Upto 5 yrs	35	35.0	35.0
	6-10 yrs	36	36.0	71.0
	More than 10 yrs	29	29.0	100.0
Type of Management	Lease	4	4.0	4.0
	Personal	88	88.0	92.0
	Management	1	1.0	93.0
	Group	7	7.0	100.0
Annual Income (Approx.)	Less than10 lakhs	57	57.0	57.0
	10- 50 lakhs	30	30.0	87.0
	More than 50 lakhs	13	13.0	100.0

Source: Primary Data

Above table shows that Bed and Breakfast establishments (31%) and Non-Star hotels (30%) comprise the major part of the sample selected for the survey. There are 14% Homestays, 14% Lodges and 11% Resort and others included in the sample. BnBs are registered and approved by the MTDC, and other types of hotels are registered with the District Collectorate and Food & Drugs Department.

It also reveals that most of the hotels (80%) are owned by the Sole Proprietors while 12% of hotels are owned by Partnership Firms, only 5% of hotels belong to Group Hotels. One percent of hotels are owned by the Hindu Undivided Family, and 2% of hotels are owned by the Companies. The table indicates that 88% hotels have personal or family management, i.e. managed by the owners, 7% hotels are managed by the Group Hotels, 4% hotels are under lease management contract, and 1% hotels have separate management. Chart 4.23 demonstrates that 57% hotels' Annual Income is less than Rs. 10 lakhs, 30% of hotels have income between Rs.10 to 50 lakhs and 13% hotels' income is more than Rs. 50 lakhs.

The following Table No. 2 illustrates the details regarding the number of employees, staff welfare facilities, uniform provision, tips payment, training and staff feedback.

Table 2 Hotel Employees

Particulars	Options	Percent	Cumulative Percent
Total Employees (No.)	1-10	65.0	65.0
	11-20	25.0	90.0
	21-30	6.0	96.0
	More than 30	4.0	100.0
Provision of Staff Welfare Facilities	No	56.0	56.0
	Yes	44.0	100.0
Provision of Staff Uniform	No	43.0	43.0
	Yes	57.0	100.0
Allowing Tips Payment	No	8.0	8.0
	Yes	92.0	100.0
Training Provision	No	59.0	59.0
	Yes	41.0	100.0
Education about Customer Expectations	No	64.0	64.0
	Yes	36.0	100.0
Reward System for Staff for Excellence	No	74.0	74.0
	Yes	26.0	100.0
Periodical Feedback from Staff	No	41.0	41.0
	Yes	59.0	100.0

Source: Primary Data

Table 2 shows that 65% of the hotels have 1 to 10 employees, as most of these hotels are managed by the family members of the owner; these family members are not included as the staff. 25% of the hotels have 11 to 20 employees, and 6% of hotels have 21-30 employees, and only 4% of hotels have more than 30 employees.

It also reveals that only 41% of hotels give training to their staff, the remaining 59% of hotels do not give any training for the staff. It is observed that only a few of the hotels have formal recruitment and training systems. Most of the hotels' staff is temporary, and they did not get benefits like Provident Fund and Medical Facilities. As per Table 2, 44% of the hotels' staff receives the welfare facilities but mostly regarding food and accommodation.

The table further reveals that only 36% of the hotels train their employees to understand the customers' expectations, the remaining 64% of hotels are unaware of educating the staff about customers' expectations. Moreover, the data illustrates that 59% of the hotels take regular feedback from their staff about service performance, service failures and service recovery. However, it was observed that there is no formal system of staff feedback; the hotel authorities take the informal and oral feedback from the employees.

Strategies to improve Employment Generation by Hotel Business in Sindhudurg District

Following strategies are suggested to increase the employment generation in hotel business in the Sindhudurg District:

1. **Service differentiation approach** can lead increasing customer intake and further will lead to more hotel jobs. For example: beach weddings, room upgrade options, add-on in-room amenities, special packages for offseason, packages for target groups-senior citizen, ladies groups, study groups, nature and adventure lovers.
2. **MICE Tourism** will help in generating more employment by hotel industry.
3. **Staff Training:** Short training module to improve communication with the guest should be developed especially for the family members of BnBs and Homestay owners' family members and local staff. Simulation technique can be used for detailed visualization of the service delivery process, customer behaviour patterns and strategies to deal with them. This will be helpful in improving the quality of hotel employment.
4. **Institutionalized Leadership:** At District level, an Association of the hotel owners should be incorporated for collective say against state authorities and coordinative efforts for setting common rules and regulations for hotel operations and hotel employment.
5. The **government** should remove the obstacles in clearance and approval procedures for starting new hotels. The anomalies created by CRZ in the district should be removed. Government should make it mandatory three months training for all existing and potential hotel owners.
6. An appeal by **local authorities** can be used for active participation of natives in tourism activities by way of opening variety of food joints, medical shops in interior areas, availing parking spaces at reasonable rates,

availing private transport facilities at fair prices, maintaining clean environment and volunteering for tourist safety with a true spirit of 'Atithi Devo Bhava.' These initiatives will lead to generate indirect employment.

Limitations

This study is based on primary data collected in 2017-18. It does not represent current pandemic situation.

Conclusion

Sindhudurg District has a great potential for employment generation. However, the hotel business owners need to employ professional strategies for running their businesses. The family management-based bed and breakfast units and homestays can incorporate more number of employees, if they will increase their arena of services. Moreover, the non-star hotels need to concentrate on service differentiation to increase their market share and employment potential.

References

1. *Jollie, L. and Farnsworth, R. (2003), "Seasonality in tourism employment: human resource challenges", International Journal of Contemporary Hospitality Management, Vol. 15 No. 6, pp. 312-316. https://doi.org/10.1108/09596110310488140*
2. *Karen Lo; Felicity Lamm, 2005, Occupational Stress in the Hospitality Industry - an Employment Relations Perspective | New Zealand Journal of Employment Relations Peespective, New Zealand Journal of Employment Relations, https://search.informit.org/doi/abs/10.3316/informit.081382539478848*
3. *Chaudhary, Manjula; Gupta, Megha, 2010, Gender Equality in Indian Hotel Industry --a study of perception of male and female employees, International Journal of Hospitality & Tourism Systems, Vol. 3 Issue 1, p31-41. 11p*
4. *Eric A. Brown, Nicholas J. Thomas and Robert H. Bosselman (2015), Are They Leaving or Staying: A Qualitative Analysis of Turnover Issues for Generation Y Hospitality Employees with a Hospitality Education, International Journal of Hospitality Management, 46, DOI:10.1016/j.ijhm.2015.01.011 available on https://www.researchgate.net/*
5. *Dayanandan 2016, Employment Generation Through Standard Hotel Industry Business: Myths And Realities!!, IJRDO-Journal of Business Management , ISSN: 2455-6661, 2(11), pp 85:98*
6. *Travel & Tourism Economic Impact 2017, accessed from www.wttc.org, retrieved on 25/04/2018*

Guava Farming in Mouje Umalwad Village: A Microlevel Analysis

Anita Magadum[1] Ratan.V. Hajare[2]

[1]*Assistant Professor, Department of Geography, Chhatrapati Shivaji College, Satara.*
[2]*Head and Assi. Professor Department of Geography, Elphinstone College, Mumbai.*

Abstract

The climate, slope, soil texture and nearest market canters affects on the development fruit farming. Present research reveals fruit farming regionalization of Mouje Umalwad village.Tal.Shirol, Dist: Kolhapur. The year 2017-21 average vallue has considered for the study. The entire study constructed on primary data. 10% sample fruit growers were selected for data collection. Mouje Umalwad village have been selected as an aerial unit and only fruit crops have been selected for current investigation. The Bhatia's location quotient method have used for calculation of guava concentration and productivity of guava calculated by using simple productivity method. The highest guava concentration is observed in North-West, western part of the village and area decreased towards south-western part of the village. The productivity of guava is high where land holding capacity of guava is high and vice-versa.

Key words: *Fruit Farming, Concentration, Productivity etc.*

Introduction

The demand of food in under developing countries is increasing continuously. Fruit crops give much production and earning than traditional crops. Fruit crops contribute medicinal and nutritional values as well as it gives employment throughout year.

Crop concentration focuses on significant crops those may be food or cash crops. According to region the diverse variables like physiographic, climate, soil, socio-economic factors and method of agriculture affects on the crops concentration e.g. the areas of undulating terrain and high rainfall may have the dominance of fruit crops like guava, sapota, grapes and banana.

Shirol, Hatkanangale, Panhala, Kagal and Karvir tehsils are included in eastern part of the district. In which Shirol tehsil is famous for the production of guava, grape, sapota and banana fruits. In which most of villages are well known for guava fruit crop in Shirol tehsil. To learn the nature of fruit cultivation, land use, cropping pattern, production and marketing status of guava fruit of Shirol tehsil of Kolhapur district one sample village is taken for the micro-level study i.e. Mouje umalwad.

Study Region:

Mouje umalwad village is situated at river basin of Krishna. It is exactly to north of Jaysingpur city, which is situated in Shirol tehsil. Location of Mouje umalwad is 16˚47'46" North to 16˚48'24" North latitude and 74˚32'35" East to 74˚32'48" East longitude. The total geographical area of the village is 506.55 hectors.

Generally most of the area of village is covered by plain region. It is settled at height of 550 meters above mean sea level. The slope of village is observed from north-west to south-east. The nature of the slope is very gentle. The average annual maximum temperature is 30˚C. and minimum temperature is 18˚C. February to June month had warm climate and December to January is cold climate. The 120 to 180 cm annual average rainfall recorded at the time of monsoon.

Objective:

Present paper intends to investigate guava concentration and productivity in the Mouje Umalawad village, Tal. Shirol, Dist: Kolhapur.

Data Base And Methodology:

To micro-level study of fruit farming in the study area for primary data used, such as land use, cropping pattern, fruit cropped area and working population data are collected by using schedules and interview method. 10 per cent fruit growers are selected for the interview out of the total farmers, in Mouje Umalwad village. And data processed in to table form for the easy understanding analysis and interpretation with the help of maps.

We are used two methods for this study as Bhatia's crop concentration method are applied to show the guava concentration and another simple productivity method is used for demarcate the high, moderate and low productivity areas in the Mouje Umalawad village.

Table No.1,Fruit Farming of Mouje Umalwad Village (Aveg.2017to 2021)

Sr. No.	Fruit Crop	% to Net Sown Area	% to Fruit Cropped Area
1	Guava	5.13	62.91
2	Banana	2.16	26.49
3	Sapota	0.67	8.21
4	Other	0.20	2.39

5	Fruit crops	8.15	100
	Total	100	100

Source: Based on field work.

The Mouje Umalwad and surrounding villages are famous for guava cultivation. In the Mouje Umalawad i.e. 33.14 hectare (8.15 %) area out of total net sown area is engaged under major four fruit crops. Those are guava, banana, sapota and other fruits crops are including watermelon, tamarind and coconut etc. Guava is an important fruit crop in surrounding area of Mouje umalawad. We are consider fruit cropped area as 100 per cent (33.14 hect.=100%) out of that guava is cover 62.91 per cent out of total fruit cropped area(33.14) of Mouje Umalwad village, followed by banana fruit (26.49%), it ranks second fruit crop of village Mouje umalawad, third rank has by sapota (8.21%) and fourth rank by other fruit crops (2.39%). In this village more than 60 per cent out of total farmers engaged in fruit farming because of climate, soil texture and adequate water supply through Krishna River these factors are effaced on Guava cultivation. That is the major cause for four fruit crops are cultivated in this village. G9 and Local varieties are of Guava are cultivated by farmers in this village. Most of farmers are put Guava plantation in their farm because guava fruit crops have need less care than other fruit crops and vegetables. In this plantation ground nuts are taken as an internal crop in the same field. So it is helps to reduce soil degradation and increase the nutritional value of soils. So they get economic benefits and status of fruit growers.

Regionalization Of Guava:

Guava regions in Mouje umalawad village are attempt by delineating crop concentration regions, for this purpose Bhatia's crops concentration technique has been applied. The Concentration index shows the spatial distribution of the particular fruit crop. The analysis of Fig. no.1 it reveals that the regionalization of guava fruits in Mouje Umalwd, it is divide in to major three groups i.e. high >50%, moderate 25-50% and low <25% based on the concentration index percent value. The high concentration of guava is observed in some patches of North and west side and South western part of the Mauje – Umalwad village. And one single patch of east side of this village. due to suitable soil type and heavy floods during rainy season injurious to other traditional crops that's why farmers of Mouje umalwad village most of land are used for to guava fruit crop and fodder only. The south-eastern and southern part of the village indicates moderate concentration of guava due to farmers land are used to banana, sapota and groundnut and other oilseeds cultivation purpose(Fig.no.-1).

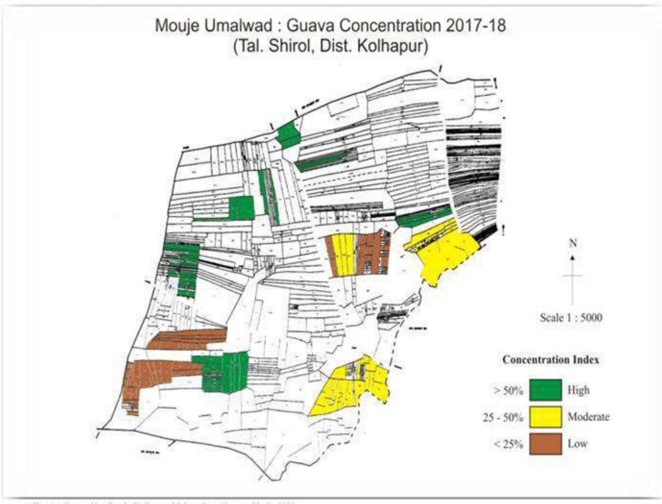
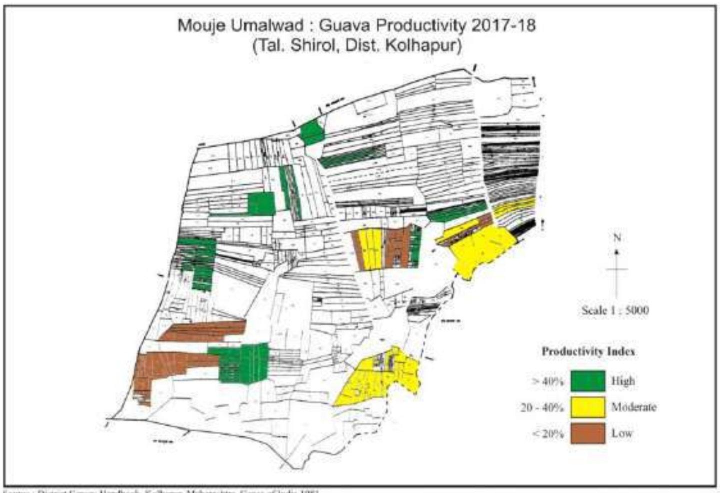


Fig. No. 1

The south-west and central part of the village indicates low concentration of guava concentration. At south-west part most of land covered by sugarcane that's why guavas concentration is low and at central part of village covered by mostly goanthan including houses, roads, school and play grounds, hospital, gram panchayat talathi offices and various shops.

Productivity of Guava:

In the Mouje umalawad village total 406.54 hectare area is net sown area. Out of that 33.14 hectare area is under guava cultivation. The productivity of guava is it declared in major three categories. i.e. High, Moderate and Low with the help of simple productivity index. The productivity of guava in Mouje umalawad village in 2017-21 is shown in fig.no.2. The high productivity is observed in the north-west and western part of the village due to highest land engaged for guava cultivation and suitable soil with sufficient water supply. The moderate productivity is found in south-eastern and southern part of the village because farmers also practices banana, sapota fruit crops and food crops also. The low productivity of guava is noticed in south-west and central part of Mouje Umalawad due to sugarcane and this area mostly surrounded to Gaonthan so low productivity observed in this part.



Source : District Censes Handbook, Kolhapur, Maharashtra, Cense of India 1981

Fig. No. 2

Marketing Of Guava:

Marketing of guava in the village Mouje Umalawad is studied by personal visit and interviews of farmers, fruit supplying agencies and local fruit sellers. 58 per cent production is dispatched from the village to national market through agents, They are pickup guava directly from to farm based on quality and demand. i .e. Mumbai, Pune, Belgaum, Solapur, Pandharpur and Kolhapur. It is done through good roads and rail facility is available to this village. It helps to save lots of time and travelling money. 28 per cent production goes to local markets i.e. Ichalkaranji, Jaysingpur, Sangli and Miraj and remaining 14 per cent production is dispatched to local purchaser means road side stalls. The guavas are not goes to abroad from this village, due to its low production, perishable in nature and not sufficient knowledge about abroad marketing.

Conclusion:

The Mouje Umalwad village is well known for cultivation of guava fruit crop, it is very old practice known from last 150 years ago. Most of villager's main source of income is guava Production and marketing. Nearly 35 hectare land are used under guava cultivation, because rich soil, Water facility, road and Railway transportation facilities and Local market places with including roadside market also available for this village. Most of guava growers are located over to the north-west, western and northern part of this village, and the concentration reduced towards the south-western part due to this village, is given to sugarcane, ground nut and vegetables cultivation. The productivity also increased towards the north-east, western and northern part of the village. Production is increased by this village from last 20 years. Today the village Mouje Umalawad dispatched their guavas fruits to national and local markets through their agents.

References :

1. *Majjid Hussain (1999): "Systematic Agricultural Geography", Rawat Publication,New Delhi.*
2. *Hajare and others, (2003): Pattern of Fruit farming and It's Potentials in Maharashtra Plateau, Journal of Shivaji University, (science and Technology) Kolhapur. Vol. No. -38, Pp. 59-63.*
3. *Hajare R.V. (2007): A Study of Fruit Farming in Maharashtra Plateau, Ph.D.Thesis submitted to Shivaji University, Kolhapur.*
4. *Hajare R.V.(2012): "Regional Inequalities in Fruit Farming Intensity of Maharashtra Plateau" Interdisciplinary Research Journal Vishleshaka- Bi-Annual Referred Research Journal of Economics. Vol. I. Pp. 111 to 116.*
5. *Hajare R.V.(2013): Study of Fruit Regions In Maharashtra Plateau, The Goa Geographer, Vol-X, No.1.ISSN0976-786X.*
6. *Chavan, Sunita Mohan (2013): Problems and Prospects of Agriculture in Satara District Maharashtra A Geographical Study, Ph.D. Thesis submitted to Shivaji University, Kolhapur.*
7. *Socio-Economic Review and Statistical Abstract of Kolhapur District, (2014-15).*
8. *District Census Handbook, Kolhapur, Maharashtra, 2018-21.*
9. *http://www.censusindia2011.com>Kolhapur.*

'Journal of Research & Development'
A Multidisciplinary International Level Referred and Peer Reviewed Journal, Impact Factor 5.13, ISSN: 2230-9578, April-2021, Volume-11, Issue-8 "Recent Trends in Social Sciences"

Recent Trends of Rural Education in India

Dr. Anand A.[1] Muley1 Prof. Rupali Petkar[2]

[1,2]Department Of Commerce,J. M. Patel Commerce,Art and Science College Bhandara (M.S)

Abstract:-

Education is the doorway to the wider world and an exposition on rural infrastructure is incomplete without an assessment of the extent to which we have been able to open this door for the children of rural India. India has the largest education system in the world after China. However, issues of Quality education and access remain challenges in some parts of the Country. The role of education in facilitating social and economic progress is well accepted. Access to education is critical to access emerging opportunities that accompany economic growth. Keeping in view of this accepted fact there has been a major thrust on education Since independence, but as far as ensuring quality education in rural India is concerned it has always been one of the biggest challenge for the governments. Now, In India there is so many new things are implemented. A trend implies a particular tendency or a movement or even a bias towards a certain issue. Due to the colonization, science as taught in the western world and the English language became integral parts of the school curriculum in India.

Keywords :-*Rural ,Education ,Trends, Scenario.*

Introduction:-

Education is recognized as one of the keys to fighting poverty, but despite the awareness of that fact too many children in rural India of which is in poverty itself. Which forces families to put children to work or into other situations because, they cannot afford to keep them at home and in school. In addition, some social customs deny education to girls, and children who are orphaned are almost always placed in situations that reduce their chances for education.In India, half of the population lives in the villages. The contribution of rural India towards the economic development is not hidden from any of us. Earlier the people used to correlate rural development with agricultural development and thus focus was only on the increased agricultural production. But with the changing time, this misbelieve has also changed. Today the concept of rural development is fundamentally different that it was used to be 2 or 3 decades ago. Now rural development includes development improving the quality of life of rural people. It constitutes improvement in their health and nutrition, education, safe and healthy environment, fairness in income distribution and no discrimination in gender. Indian society too is undergoing transitions in some areas. For example the liberalization of the economy and its becoming a part of the global economy is one such transition. As a result today there is an increasing presence of the private sector in many areas including education. The ongoing phenomenon of globalization too has a significant impact on the Indian society and in turn on the educational scenario. There is another new thought process, which is leading to the realization that development has to be sustained. Bringing about sustainable development is one of the Millennium Development Goals of the United Nations and we know that education is the key to attain it. Apart from privatization, globalization and education for sustainable development, there are many new trends in education such as technology mediated education, lifelong education, distance education, inclusive education, education for peace, etc. and all these trends are the consequences of the contemporary thoughts and practices.

Objectives:-

- To provide leadership for rural education – related conferences and workshops.
- To know about certain modem trends in education
- To promote state, regional and local delivery systems which bring about efficient and effective education for children in rural areas.
- To stimulate discussion, research, and policy development regarding equal educational opportunities for all students.
- To serve as a national advocate and representative for rural education at all levels: Local – State – Regional – National.
- To understand the impact of privatization of educational institutions.

Present Scenario:-

According to statistics and research, there is a wide gap between urban and rural education systems in India. In urban and metro cities, the number of schools is huge. These schools also have proper infrastructure and adequate teachers. Unfortunately, rural schools are deprived of good quality education. There are very few **schools** in the **rural** areas and children have to travel far away distances to avail these facilities and most **schools** in these locations do not provide drinking water. The quality of **education** is also very poor. Right to Education is the primary right of every citizen of India, whether a child resides in a high profile society or in a far away not so developed secluded village. In India, the condition of rural education is still improving, the conditions of these rural schools are still very poor. The teachers get very less income, so most of the time the teachers are either absent or they do not teach properly. Scenario of the rural education system in India.

Lack of local transportation: The rural areas and villages in India are struggling hugely when it comes to transportation. This is a basic and major problem faced by rural children and teachers. As a result, they are not able to attend the classes on time.

Lack of rural schools: Another saddest part is that, as compared to metro and urban cities, the number of schools is less in rural areas. The local transportation problem and less number of schools both are responsible for disrupting the rural education system in India.

Inadequate infrastructure: Inadequate infrastructure is one of the major problems of the rural education system. Inadequate infrastructure means a lack of well-trained teachers, poor classrooms, lack of books, poor laboratories, etc. This may lead to poor quality education.

Trends In Rural Education:-

- Boost free education

  Poverty is one of the most critical and common problems in rural India. This is also one of the major obstructions in propelling the education in rural India. This problem can be solved only if free education or education at a very minimal fee is being offered. This is certainly going to bring up the literacy rate as more and more parents will be eager to send their kids to schools if they are not required to bear the expenses of their education.

- Establish more schools

  Fortunately, with the changing times, the changes are being witnessed in the rural society as well. There is an increase in the number of parents in rural India who understand the importance of education in their children's lives. However, there exists a problem of lack of ample number of schools in India.

  The solution can be found only if the government takes an initiative to establish affordable schools which are pocket-friendly to the middle as well as lower economic groups of the society.

- Bring innovative teaching methods

  The level of education has gone a notch up in urban areas with newer teaching techniques being introduced; the state of teaching techniques is still primitive and traditional in rural India. The rural schools are still stuck on inculcating rote learning in its students. This has to change.

  These schools must start adopting concept learning to develop their students holistically.

- Promote computer literacy

  Our country is progressing technologically; however, sadly, the imprint of this advancement has yet not reached the rural areas. This has led to a digital gap in urban-rural India. The schools in rural India are required to get equipped with computer education and need to be imparted with technological education as well.

  This will help them be at par with the level of urban education and develop themselves better.

- Shifting focus towards towards concept –based learning.
- Emerging trend of blended learning.
- DIY(Do-it-yourself) learning
- Personalized learning.(MOOCs)
- Lifelong education
- Open and distance learning.
- Integration of ICT
- Inclusive education.

Research Methodology

This paper is basically descriptive and analytical in nature. In this paper an attempt has been taken to analysis the recent trends of rural education in India. Here, the data from various research journals, websites and articles are collected in order to understand the trends of rural education & the data used in it is purely from secondary sources according to the need of this study.

Suggestions:-

- The curriculum of rural education can be updated and should accompany education related to farming, gardening etc.
- To attract more number of students and creating enthusiasm in them for learning, visual aids like projectors, television etc. can be used to show some educational movies.
- To motivate the teachers they should be made to feel proud that by teaching in the rural or remote area they are acting as a helping hand in the development of economy.
- Some special sessions or classes can be conducted for the parents to make them realize the significance of education for their children.
- To appreciate the efforts of students, some type of scholarships either in the form of gifts or books can be given to them who perform well in the class.

Conclusion:-

In India, education in the rural segments is not only important to eradicate poverty and illiteracy, but also for a variety of other social, economic as well as cultural and political reasons. In India there is implemented the new trends in rural education. Now, peoples are more aware about the education and that's the reasons now they are ready to accept the changes in there lives. However the lack of infrastructure is being a major obstacle which needs an active intervention of the government.

Reference:-

1. *Advance Research Journal of Social Science of , 'An overview of rural education in India - Issue 1/June, 2013 by J.G. Sreekanthachari and G.Nagarara.*
2. *Journal Of Rural Education in India: A Scenario, June 2017 by Nagapp P Shahapur,Ph.D & Omprakash HM, Ph.D.*
3. *https://scicomm.in/education/growth-of-education-rural-india/*
4. *https://humanitariansupport.wordpress.com/category/rural-education-india/*
5. *www.wikipedia.com*
6. *www.google.com*

Recent Trade in Social Work Education Field Practitioners

Mr. Mayur Balkrishna Bagul
Visiting faculty, Social Work College, Pune, Tilak Maharashtra, Vidyapeeth, Pune

Introduction

The signature pedagogy of social work education is always evolving. Field education, where it is often said the rubber meets the road, has seen recent trends in its delivery, practice, and focus. With the increase in online educational programs, how students acquire, practice, and hone their interactive skills looks different than the traditional classroom setting. Another shift in preparing social work students to be professionals surrounds the increasing use of social media. Making sure students are aware of the new ethical standards and knowledgeable about the positive and negative aspects of social media use in the professional realm is important for field educators. Lastly, in recent years, social work has seen an increase in the inter professional dynamic of social work with other disciplines. Being able to work effectively with colleagues from various professional backgrounds is crucial for social work practice. The present scenario of Social Work Education and practice is with issues and concern regarding quality at most. The standard curriculum, pedagogy, teaching learning methods and field work practices are under reservation to its standardization. The uniformity is not unanimous in social work education. The complex society with existing social problems is evident to the emergence of new realities in social sciences. The relevance of social work education needed an essence of contemporary world of social realities. The scope of social work profession in India is demanding but the employment opportunities are at stake. Hence this research paper is an effort of the Ph.D. research scholar to explore Student engagement in Social Work Education is the aspiration for Government job rather than a vision of social development.

Objectives:

The main objectives of this paper are: –

1. To Understand the Professional Social Work field Practice.
2. Exposure to the social work field areas and opportunities.
3. To know about the importance of Professional Social work field Practice.
4. The Professional filed work practice Ethics and Values**.**

Area of Social Work Field:

Virtual Learning -

Ensuring students have mastered beginning social work skills and a competency prior to and during their field education continues to be a primary focus of social work education. This mastery is evaluated through different methods during the course of a student's academic career. From critical thinking through papers and presentations to role play and simulations to the field practicum experience, students are provided multiple arenas in which to be evaluated on their skills and to learn from and integrate feedback. While role plays and the use of standardized clients have traditionally occurred in live, face-to-face classroom settings, the number of students requesting and attending distance learning or online programs is increasing dramatically. In an effort to provide similar learning experiences, programs are able to utilize virtual platforms to continue to engage students in active learning settings, such as role-plays. For instance, the University of Alabama (UA) School of Social Work requires students enrolled in distance learning practice courses to participate in skills labs throughout the semester. These labs are offered face to face in regionally convenient locations as well as on campus. Recently, the School of Social Work piloted offering a make-up lab session using a virtual platform. Response was positive, with students liking the live engagement through practice activities and in-time feedback from instructors. Instructors, too, believed the online lab session offered similar experiences for students. Karen Thompson, PhD, an adjunct professor, says, "Having the opportunity to teach skills labs, face to face and virtually, allows the instructor to combine current technology with active learning. The students are provided equal learning opportunities with both platforms. Instructors are able to teach the necessary skills while maintaining educational integrity with the virtual labs. All of the required learning objectives are met while enhancing the opportunities for students to engage in a meaningful learning setting." In addition to learning skills virtually, field programs are also grappling with the notion of virtual field placements. With video calls, telehealth, and virtual meeting mediums becoming commonplace communication and meeting forums, this provides a platform for discussing the educational soundness of virtual placements for social work interns. While virtual placements may lack the face-to-face interaction inherent in most practicum sites, they can also open the door for more specialized training. Students who do not live in a geographic area for a particular project or movement could still be provided day-to-day educational experiences towards their area of interest. Virtual placements may also allow for flexibility in scheduling a workday, as tasks that do not rely on other team members could be done during non-traditional work hours. Focusing on the learning contract, discerning opportunities for face-to-face engagement and ensuring students are gaining experience to be evaluated on each competency would be a collaborative effort between students, their field education office, and the agency. According to Madison Hale, MSW, from Troy University, "Completing an online/hybrid field placement with the Alliance of Social Workers in Sports was a beneficial placement, as it encompassed parts of the organization

I had not realized were involved in daily operations. I observed the business aspect of social work, as well as the developmental and outreach side. It also allowed me to continue my work and schooling at the same time; this was extremely important and instrumental in my completion of my Master of Social Work degree." As field agencies struggle with maintaining traditional placement sites as discussed during the 2014 Council on Social Work Education (CSWE) Field Summit, exploring the feasibility of virtual placements may be one way to help students capture innovative learning experiences (CSWE, 2014). Social work students now have opportunities to complete field placement in agencies that use technology to assist clients. UA has a field placement at Pack Health, which offers digital health coaching programs for 20-plus chronic conditions. Clients are assigned a health advisor to help them set and stick to weekly goals through calls, texts, and e-mails, based on communication preference. The director of health advising at Pack Health, Michael McMorris, MSW, discusses the positive impacts of telehealth. "Telehealth helps organizations and practitioners with efficiency, scalability, and connectivity with their clients. It is an efficient way to engage clients since there is no travel time involved for the client or the social worker. Due to this, it can be a way to scale a program for a single social worker to engage more clients with a greater reach into geographical areas than ever before," McMorris says. With this change of dynamic, social work students have the opportunity to see appropriate use of technology-assisted social work services modelled for them and begin gaining mastery of this emerging trend of service delivery.

It is also important to note that the NASW **Code of Ethics** (2017a) considers social media as tools that can be used to provide services to client systems. This is referred to as "technology-assisted social work services," and it is defined as any service that is provided through the use of "computers, mobile or landline telephones, tablets, video technology, or other electronic or digital technologies; this includes the use of various electronic or digital platforms, such as the internet, online social media, chat rooms, text messaging, e-mail, and emerging digital applications" (NASW, 2017a, para. 10).

Social Media and Technology -

With technology such an increasing focus in the field of social work, social work educators must be aware of the ethical standards and best practice guidelines related to technology. The most recent update to the Code of Ethics addresses these challenges by applying ethical standards to all interactions with client systems, whether they occur in person or with the use of technology (NASW, 2017a). Because the Code of Ethics considers social media as tools that can be used to provide services to client systems (NASW, 2017a), the NASW's Standards for Technology in Social Work Practice provides a uniform set of technology standards for professional social workers to use as a guide in their practice (NASW, 2017b). Social work educators must understand the implications of these standards and guidelines in order to address technology and social media with students. Taking this understanding into account, it may be beneficial for field programs to create or modify their own field policies related specifically to student professional and ethical use of technology in placement. Field programs have a direct opportunity to promote best use of social media with students. Laurel Hitchcock, PhD, LICSW, an associate professor of social work at the UA at Birmingham (UAB), says, "Like it or not, the reality is our clients, communities, and social service agencies are using social media to communicate and connect. The new NASW Standards for Technology in Social Work Practice recommend that social workers develop their own social media policy, which is an informed and ethical approach to how they will use social media with clients and colleagues." While social work programs are educating students on appropriate use of technology and social media in practice, field instructors must also keep up to date on current ethical standards, best practice guidelines, and emerging policies and how they impact students. One way to keep field constituents updated on best practices and new policies is through field instructor trainings. Many schools provide continuing education through trainings, and information gained can help field instructors reflect on technology use in their own practice. Field instructors can also learn how social work programs are teaching students to use social media consciously, ethically, and with purpose, while also providing an opportunity for reflection on their own use of social media. Focusing on technology can also invite discussion surrounding boundary concerns, including student use of social media to connect with their field supervisor, clients, and other agency staff. This training provides field instructors and agencies the opportunity to further understand what is expected of students while in placement.

Interprofessional Education -

Knowing the critical importance of being able to work with others in their role as a social worker, social work programs strive to provide unique, innovative interprofessional learning opportunities for their students. Interprofessional education (IPE) is defined as having students from two or more professions who are able to learn about and from each other and create effective collaboration in order to improve client systems (Interprofessional Education Collaborative, 2016). The CSWE emphasizes the importance of interprofessional work in the 2015 Educational Policy and Accreditation Standards, focusing on understanding and valuing the role of other professions with clients and constituents and using interprofessional collaboration to achieve outcomes with these groups. (CSWE, 2015). Field programs have unique opportunities to provide IPE to students through the use of simulation, interprofessional field placements, and partnerships within a college or university system.

Simulation is a growing part of social work education, and many programs are incorporating structured simulation-based learning experiences to develop students' practice skills and allow them to experience working with interprofessional teams. Understood in the IPE model is that students will learn to respect other professions and have context for shared values. Stamford University MSW students engage in ongoing simulations throughout their program, including ones designed to teach interprofessional competencies. Jean Roberson, DSW, director of field education at Stamford, says, "Simulations immerse our students in practice situations that allow them to integrate knowledge, skills, and internal processes as they develop professional judgment. More importantly, we have seen our students grow in their own metacognition, leading to self-corrected practices. Research has shown simulation to be more intensive and effective than role-playing, and our students echo this by frequently commenting that simulations were the best learning experiences for them throughout their MSW program." Field programs are also recruiting agencies and organizations to provide students with the experience and training to work with other disciplines. This can involve seeking out placements where social workers are currently practicing as members of interdisciplinary teams and also organizations that serve vulnerable populations but do not employ social workers. With today's focus on integrated care, social workers in health care often work on interdisciplinary teams in order to provide optimal service to client systems facing an array of problems. More field programs are placing students in health care settings without social workers and providing MSW supervision through the school. For example, according to de Saxe Zerden, Kanfer, Palmer, Jones, and Brigham, two social work programs in North Carolina developed a program in 2007 that provides interdisciplinary field placement opportunities for MSW and BSW programs, called the Congregational Social Work Education Initiative. Students are paired with trained registered nurses who assess and treat medical concerns while the social work students assess and intervene in social and behavioural areas. Field instruction is provided by a full-time MSW level university faculty member (de Saxe Zerden, Kanfer, Palmer, Jones, & Brigham, 2018).

There are other interprofessional field placement opportunities outside of health care. Social work field programs utilize placements in the legal system, including courts as well as the district attorney offices and public defender offices, to provide students with the opportunity to work with attorneys, judges, and probation officers. These offices often employ social workers and provide field opportunities for BSW and MSW students. Practicum students placed in these settings have the opportunity to work alongside attorneys, visit clients in jail, facilitate group sessions, advocate for clients, and participate in court hearings. A recent non-traditional pairing of professions with social work involves the fire department. Cacciatore and colleagues describe utilizing social work field students in their crisis response teams to assess, intervene, refer, and follow up as needed (Cacciatore, Carlson, Michaelis, Klimek, & Steffan, 2011). UA and UAB also offer an experience with fire and rescue services focused on reducing no emergent transportation to emergency departments through education, case management, and advocacy. Social work students work on a team with other allied health professional students and members of fire and rescue squads. Through these innovative, non-traditional placements, the agencies benefit through a broadened scope of services provided and the students benefit from an innovative learning opportunity.

Field programs have several factors to consider when recruiting interprofessional field placements. One item to consider is developing an organized approach to recruit these agencies, including establishing what opportunities social work programs want students to have and seeking agencies that can provide them. This may involve the discussion of additional eligibility criteria for agencies with social workers and developing new criteria for agencies without social workers. Another consideration is choosing a model for off-site or faculty-led field instruction when the agency does not employ social workers. This may consist of educating agencies on social work competencies and what services social workers are trained to provide.

Field education is a dynamic, comprehensive learning experience inherent in social work education. Being able to adapt to innovative shifts and technological advances offers varied learning opportunities for all students, whether they live on a college campus or across the nation. These shifts and technological advances provide students opportunities to learn and practice social work skills in a variety of environments. Social work programs, particularly field education departments, can use their platform to provide exposure and educational opportunities to students as well as other field constituents on innovative practices, ethical standard updates, and other emerging social work practice trends.

Filed work practice Ethics and Values:

Effective social work practice is guided by knowledge, skills, and values. The values of the profession reflect the historical foundation of the field and the ideological underpinnings of contemporary practice. They distinguish social work from other professions and, as operationalized through ethical standards, help guide social workers' decisions in practice. Eth-ical standards can also be used to hold social workers accountable for poor decisions, through malpractice suits, regulatory board sanctions, and other adjudication mechanisms. Regardless of their setting or role, social workers must be cognizant of professional and personal values and ethical standards. Further, they must be able to engage in problem solving to effectively resolve dilemmas when they arise.

Values are core beliefs about what is right, good, or preferable. The values held by each individual guide their choices and actions on a daily basis. Some values are broad or general, such as honesty, freedom, productivity, or accountability. Other values may be articulated more specifically, "I value human life, and therefore I am against the death penalty, abortion, and assisted suicide," or "I believe in protecting the environment, so I follow principles of sustainable development." In these explicit examples, personal beliefs are translated into the individual's actions and choices. For any given individual, some values are embraced more fully than others.

For example, consider the person who believes in the humane treatment of animals but is comfortable eating beef and wearing leather shoes. In Values are core beliefs about what is right, good, or preferable. The values held by each individual guide their choices and actions on a daily basis. Some values are broad or general, such as honesty, freedom, productivity, or accountability. Other values may be articulated more specifically, "I value human life, and therefore I am against the death penalty, abortion, and assisted suicide," or "I believe in protecting the environment, so I follow principles of sustainable development." In these explicit examples, personal beliefs are translated into the individual's actions and choices. For any given individual, some values are embraced more fully than others. For example, consider the person who believes in the humane treatment of animals but is comfortable eating beef and wearing leather shoes. In personal values, there may be limits in the extent to which a belief about what is right or preferable is conveyed into action. Professional values refer to the core beliefs of a profession, to ideals reflecting the origins of the field and the hallmarks of contemporary practice. When professions express their values, they define themselves for the public and help those who might join the profession decide if the field is right for them. Professional values also form the basis for standards to guide the conduct of people within the profession. Six core values have been identified for the social work profession: service, social justice, dignity and worth of the person, importance of human relationships, integrity, and competence. Taken together, the values for social work say, "this is who we are," "this is what makes us unique," "this is what we think is important," and "this is how we live our professional lives." The value of service refers to the expectation that social workers will "elevate service to others above self-interest" (National Association Social Workers [NASW], 2008, p. 5), bringing their skills and expertise to bear for all people, including those who cannot afford to pay for care. In embracing "helping others" as their primary goal, social workers explicitly make other goals (such as generating wealth or gaining fame) secondary. In valuing social justice, social workers give a high priority to serving those who are particularly disadvantaged and marginalized, working on intractable systemic problems like poverty and unemployment and striving to change social systems that perpetuate oppression and disadvantage. The value of social justice also refers to an empowerment perspective, where all who are troubled by injustice work together to mutually bring about desired change. The value placed on the dignity and worth of the individual is multi-faceted. It refers to the importance of embracing all people, regardless of difference, and treating others respectfully. It upholds the rights of people to make autonomous life decisions and charges social workers with advocating for such empowerment. It acknowledges the prospect of cases where individuals' interests may clash with those of society, but commends social workers to address those cases in an ethical fashion. In valuing human relationships, social workers identify relationships as the medium for personal and social change. The profession values relationships between practitioners and clients and fosters relationships among individuals to "promote, restore, maintain, and enhance the well-being of individuals, families, social groups, organizations, and communities" (NASW, 2008, p. 6). Here, too, the theme of empowerment is emphasized. Although some of these values distinguish social work from other fields, the values of integrity and competence are common across the helping professions. Integrity refers to the commitment to honesty and trust worthiness, to taking steps to assure ethical practice by individuals and organizations. Competence requires that social workers practice only within their domains of expertise, and take continuous measures to improve their capabilities as knowledge evolves and cases require.

Rationale and Significance:

The changing context of social work is unrecognized by the governance of academic institutions. It reflected in insignificant visibility of social work profession. Today's era is of qualitative and output driven academics, research and extension. The stakeholders are playing pivotal role in ensuring standardization of social work education. Hence it is needed to understand the aspirations of students.

Statement of Problem: The five NMU Jalgaon affiliated colleges of social work education and department of social work at university campus are having minimal presence in socio-political discourses to study or intervene in resolving social problems. These institutions are producing sizable number of social work professionals but their work is unable to make remarkable positive mark in society. The professional social worker's role is very important for a visible social change. In this context, on the aftermath of platinum jubilee of social work education in India, it is essential to do an analysis of quality of social work education in North Maharashtra Region.

Rationale and Significance:

The changing context of social work is unrecognized by the governance of academic institutions. It reflected in insignificant visibility of social work profession. Today's era is of qualitative and output driven academics, research and extension. The stake holders are playing pivotal role in ensuring standardization of social work education.

pecialization in Social Work Education

The Tata Institute of Social Sciences has offered five specializations in social work education in year 1953. Theses specialization called as the "Concentrations". It introduced with a special objective to train trainee social workers in a specialized course. Current trend in social work education have a common similarity of having different specializations. These specializations are like medical and psychiatric social work, Community development, Family and child welfare, Personal management and Industrial training. There are also new trends are set by the premium institutes like Tata Institute of Social Sciences, Mumbai. The new specialization as Dalit and tribe centered social work

introduced recently. These specializations transformed into the specialized degree courses as M.A. in Dalit and tribe centered social work, M.A. in Community Development etc. These courses are having the common foundation courses in first year. It proposed that instead of offering the old and conventional specialization the center of excellence should offer specialized courses in a particular field. For example, NIMHANS, Bangalore is offering course of social work education with a specialization as in Medical and psychiatric social work Specialization in Social Work Education the Tata Institute of Social Sciences has offered five specializations in social work education in year 1953. Theses specialization called as the "Concentrations". It introduced with a special objective to train trainee social workers in a specialized course. Current trend in social work education have a common similarity of having different pecializations. These specializations are like medical and psychiatric social work, Community development, Family and child welfare, Personal management and Industrial training. There are also new trends are set by the premium institutes like Tata Institute of Social Sciences, Mumbai. The new specialization as Dalit and tribe centered social work introduced recently. These specializations transformed into the specialized degree courses as M.A. in Dalit and tribe centered social work, M.A. in Community Development etc. These courses are having the common foundation courses in first year. It proposed that instead of offering the old and conventional specialization the center of excellence should offer specialized courses in a particular field. For example, NIMHANS, Bangalore is offering course of social work education with a specialization as in Medical and psychiatric social work. Social Work Education in Development Paradigm The critical exploration of innovative emerging models of SWE in Asia was carried out 24by Nanavati M.C. The SWE has western philosophy as theoretical premise. Author has suggested 'New Models of Social Work Education '. Profession education has 5 basic components i.e. Context, Purpose, Structure, Content and Process. Co-relation and integration of these components in a process are called as "Curriculum Development". The contemporary scenarios of social, cultural and economic context explore the social work curriculum. Theories of social development and social change are having basic premise in objectives of SWE. The point of contradiction in SWE is related with personate social development. Egalitarian society is envisioned by professional social workers but the question is in individual or professional growth. Today's industrial civilization has an impact on SWE and practice. The social work profession would intervene in various issues of development paradigm. It can be understood in relation to illiteracy, industrialization, social security and universal employment. These challenges need to bead dressed by the application of indigenized knowledge. Indigenized knowledge considered as a base for resolving the challenges to set alternate model to social work practice. The discourse of indigenization carried forward since its emergence. Unfortunately, its academic and practical applicability could not achieve in India and the third world countries. The causes in failure of indigenization are explained as below

1. Elite middle class intellectuals could not find their roots in the ground reality. These elite intellectuals influenced by the western philosophy.
2. Traditional approach had a fundamentalist identity. On the contrary, liberal perspectives acclaimed and widely accepted. Hence, the role of indigenization has its own limits.
3. The emotional unrest in societies demands an alternate model of social work education where intellectual thoughts combine with emotional urge.
4. The elitist intellectuals and their western conditioning did not promote indigenization. There is a failure in balancing the influence of actual roots and concepts-theories of great masters Discourse of indigenization is existed generally in social sciences and particularly in sociology, anthropology etc. The national and regional milieus are the basic reasons to increase urge to change and ask for an alternate model. There are three different types on interests in the social workers. These interests influence curriculum designing and development that explained below First, these people are working in masses to resolve their problems. They have the means of Conscientisation and structural change to deal with social problems. They have very little faith in academic training of social work education. Second, there is the professional shaving specialized training in respected fields of interest. The third group of professionals is interested in personal and professional self-development. These interests of professionals considered as to develop the alternate model of social work education in third world countries. These three alternate models are as Model-A-Change Oriented, Model-B-Mixed and Model-C-Professional Interest Based.

Conclusion:

Social work education is with vision to create human resource for social development by resolving issues and problems of society. The factual research finding in north Maharashtra region about profession social workers are really optimistic and in line with vision of social work education. The most students' social workers are interested to address social issues and address social problems. The students believe that the issues and problems will be resolved by working within system or outside the system. Hence there is no. of students interested to work in Govt. jobs. This research brings an opportunity to study aspirations of students in structural social work perspective.

References:

1. Desai M., Jaswal S. Sudha G. Ed. (2000), Social Work Knowledge, Development and Dissemination, Tata Institute of Social Sciences, Mumbai.

2. Lawni B.T., Jadhav Jagdish (2010), Governance of Social Work Education in Maharashtra: in Search of Space for Quality, University News, 48 (45) November 08-14, 2010, page 128-132

3.Menachery J., Mohite A. (2001), Whither Social Work Education in Maharashtra, Indian Journal of Social Work, volume 62(1), January, 106-122.UGC (2001) Model Curriculum, 2001, Social Worker Education, University Grants Commission, New Delhi.Beauchamp, T. L., & Childress, J. F. (2001). Principles of biomedical ethics (5thed.). Oxford University Press: Oxford

4. Beauchamp, T. L., & Childress, J. F. (2001). Principles of biomedical ethics (5thed). Oxford University Press: Oxford

5. Clinical Social Work Association. (1997). Code of ethics. Retrieved October 12, 2011, from http://associationsites.com/CSWA/collection/Ethcs%20Code%20Locked%2006.pdf

School students' use online learning due to Covid-19 feebly

Srimanta Ghosh
Headmaster

Abstract

Due to Covid -19 ,school level educational institutions undergo to online learning. This study inquired into school level students' appreciation of their adoption, use and acceptance of emergency online learning. The factors analyzed were attitude affect and motivation .Quantitive and qualitative data were collected from 270 students. The findings present how motivation self-efficacy and use of technology play a significant role and decrease academic performance of students. The findings also present , participants preferred face to face learning or offline and physical teaching . This study presents suggestions as how to improve the acceptance of online learning during unavailable circumstances Students' appreciation of online learning due to 2^{nd} wave of corona-virus.

Key Words: Online learning, physical learning, 2^{nd} wave of corona-virus, appreciation, online learning acceptance, upper primary students.

Introduction:

India has been facing a health crisis as Covid-19 along with whole world. India recovered an all-time high of 103558 crore virus infections in a day pushing the nation-wide covid-19 tally to 12589067, according to the Health Ministry data updated on Monday (5/4/20) students came school last on 24/3/2020, and on and from 1st April online classes had been started at Kalna Maharaja's High School. But, students have expressed stress related to online learning and difficulties when completing schoolwork. Now , second wave of corona virus is being continued and educational institutions can develop strategies to assist students and requires an emergency transition to remote learning current study explored school level students' of upper primary level perceptions about their adoption, use and acceptances of online learning during 2 nd wave of corona virus. WHO declared to transmission of covid -19 to control contact between people. Government ordered to maintain physical distancing and movement restrictions. Government of several states allowed for offline class as form class 9 to class 12, maintaining restrictions. But upper primary level students are still remaining "stay at home". There is same evidence to suggest that online learning during the pandemic facilitated benefits Gonzlaezetal (2020) analyzed students' performances during covid -19 and found that students improved their performances when compared with the previous year. The another found significant improvement in the scores of both modalities, online and covid -19. But there is no enough information about how covid -19 measures stay at home and online learning have affected the learning process from Students' point of view.

Online Learning

Online learning is simply defined as electronic learning without having travel,a students can acquire knowledge through online using internet. Physical institutions have been for long used as the main means though which knowledge could be transmitted.In the recent past, technology has taken a tremendous growth which also being transferred into education sector. Specially during lockdown period teachers and students come to discover how convenient and reliable the interest is ,and electronic learning is being much popular in the world of technology. Due to the covid-19 pandemic ;many students around the world had to transfer from face to face instruction to an online learning environment in the total academic session in the last year. But online learning's effectiveness highly depends on the degree of acceptance of the user (Tarhini et al. ,2017). Therefore ,it is important to analyze the factors related to the use and acceptance of technology.

Technology Acceptance models

Technology acceptance model (TAM) based on cognitive theories that explain the process of changing a behavior. The models explain the discriminates of computer acceptance among the people(Abdulla &Wind,2016,Chen,2013,Kenp et al,2019).The first model has limitations and has been redefined many times. Kemp et all(2019) analyzed different technology acceptances models and developed a laxonomy of factors that affect attitudes towards the use of educational technologies by the students. Thus are seven primary categories 1.Attitude,affect,and motivation. 2. Social factors 3. Usefulness and visibility 4. Instructional attributes 5. Perceived behavioral control 6. Cognitive engagement 7.System attributes. Though all the factors are influential for adopting technology, this research will be focused on the factors that are mainly related to students behavior. The factors will be considered are attitude, affect and motivation; perceived behavioral control and cognitive engagement. Now ,social distancing during second wave of covid-19 created a new social reality that is outside of the scope of this study.

Attitudes,affect and motivation:

Student's attitudes towards educational technology directly affect their learning process (Ali 2020). The Author found that students attitude significantly impacts their intention to adopt mobile technology for language learning. Another consideration is user's affect towards the learning experience . Affect includes the user enjoyment and satisfaction with the prior use of technology. Motivation includes the satisfaction inherent in the activity and the intention to achieve a goal. Research has shown that lack of motivation and self –regulation skills in online learning may result individuals spending extra time completing assignments, turning in late assignments or overall poor-quality work (Albelbisi & Yasop,2019).

Perceived Behavioral Control:

Perceived behavioral control refers to the individual's capability and effort and facilitating conditions that affect the ability to use education technologies. It implies prior experience and knowledge about educational technology (Kemp at at ,2019). It states that previous experiences and efficiency expectations contribute to self-efficiency . From this social cognitive theory "individuals also are regarded is protective agents in the regulation of their cognition, motivation, actions and conditions.(Myers et all 2019). Students achieve online learning self-efficacy based on previous experiences with technology and may require training and assistance to use learning tools and platforms before the start of online education(Hecket and Ringeison 2019). It depends also accessibility and mobility.

Cognitive Engagement

Kemp et al (2019) describe cognitive engagement process that allow the user to absorb the knowledge . It includes focusing attention , engaging curiosity, concentration and flow. Online learning material must be provided in ways that enhance that learning experience. The research is part of a larger cross-cultural study on upper-primary students' perceptions about how online learning due to covid-19 has effected.Their learning process . The research presents only data from west Bengal, india.

The research questions that guided this study are:

1)What are upper primary students' perceptions about their adoption, use and acceptance of online learning during covid-19 Government measuers (stay at home and mention physical distance.)

2)What is students' perception regarding factors that affect the and adoption of educational technologies such as attribute ,affect and motivation

3)How do attitude, affect and motivation ;perceived behavioral control and cognitive engagement relate to each other.

Method

A total of 298 students responds to my anonymous questionnaire and 28 provided no information after login. A total of 270 participants gave informed consent and completed the questionnaire. Participants received noremuneration. Participants mean age 13.9.All students were from the author's home institution.86% were class 8 and 14% were class 7 students. I provided a 36-item questionnaire geared a gauging students' experiences with activities, attitudes, emotions and educational experiences after the transition from sealed syllabus to online learning.

Quantative Items

The questionnaire included demographic items, items geared at assessing towards in person versus online learning, motivation to pursue school and efficiency , accessibility and mobility and items about cognitive engagement.

Qualiatative Items

I also included two additional open-ended questions about the challenges and positive changes in the school students' learning experiences during the story at home order due to covid -19.

Question 1- Describe other related to the covid -19 pandemic that affected your learning experiences.

Question2-Describe the positive aspects and or changes that you have experienced since the stay at home order because of covid -19. A total 158 students answered and 156 reporting positive aspects related to covid-19.

Result:

Attitude, affect and motivation:-

Regarding attitude towards the education method,I asked students their performances and if they struggled with adapting to online learning. Students showed a stronger preferences for face to face learning than for online learning, $t(249)=20.18$, $P<.001$. Moreover students prefer face to face learning struggled with adapting to online learning. Responses showed a moderately significant correctation between preference for face to face and struggled to adapt to online learning, $r\ s(249)=.539$ $P<.001$.

Table-1, Descriptive statistics=

Item	N	M	SD
Attitude- Prefer face to face	249	4.49	0.89
Attitude-Prefer online learning	249	1.98	1.23
Struggle online learning	249	3.69	1.41
Affect(satisfied w/courses)	249	3.32	1.25
Motivation(Before)	247	3.19	0.62
Motivation(after)	240	2.27	0.81
Use of technology(before)	243	3.09	0.73
Use of technology (after)	238	4.28	0.73
Self-efficacy	236	2.63	0.87
Accessibility	227	3.40	0.59
Cognitive engagement	235	239	0.92

For students motivation, I listed a series of factor and asked participants to gauge their perception of low motivated than to pursue schooling before stay at home order was implemented. Factors were talking to classmates, interclass with teachers , hanging out (eating,talking,studying etc.),school activities , complete school work, internet in class topics, and finishing my program .Participants rated each on a four-point scale, where 4= very motivating, 3=motivating, 2= slightly motivating and 1=not motivating. Responses showed acceptable internal consistency (Cronbach's alpha =.83) participants then rated the same factors in terms of their perception of how each motivated them to pursue schooling after the stay at home order was implemented. Responses showed good internal consistency(Cronbach's alpha=.86). I calculated a mean score for the seven "before" items and a mean score for the seven "after" items. Responses indicated that students are statistically more motivated before the stay at home order them the stay at home order, t (239)=13.14, P<.001

QUALITATIVE DATA:

Challenged and positive changes during covid-19.

This table displays the quantative data with the theme, calogories and the number of responses for the challenges and positive aspects mentioned by students'

Qualitative Data DisplayTable - 2

	Theme	Category	Students
Challenges	Situational and Environmental Challenges	Concentration difficulties living at home	38
		Stress balancing life	23
		Financial hardship	17
		Lack of social interaction	9
		Sudden life changes	07
	Online Educational Challenges	Online learning was difficult	38
		Lack of supporting academic resources	25
		Work load increase	11
		Being distracted during class	10
		Unfamiliar online technology	03
	Emotional Challenges	Lack of motivation	26
		Negative emotion	25
Positive Aspects	Increased Family Time	More family time	66
	Personal Improvement	Self care& personal growth	15
		More sleep	09
		Managing own time	08
		Financial benefits	07
	New Activity	Practicing hobbies	41
		Gaining new skills	17
	Absence of Positive Aspects	No positive aspects or change	18

Challenges relatable to covid-19:

1) ***Situational and environmental challenges***:
Students reported their biggest challenges to be conemtrating while being at home. They were many distractions such a family members ,noise and housework. Also, students associate home with a space for ,so concentration was difficult. Financial hardship during the pandemic was mentioned as a challenges too. Other challenges that students mentioned were the lack of social interaction and sudden changes in their life.
2) ***Online educational challenges***:
The important challenges mentioned more often was lack of suffering resources to complete schoolwork. Look of inherent connection was also a problem because many prople were using internet at once.
3) ***Educational challenges***:
Participants reported a lack of motivation and negative emotions as the most prevalent emotional challenges. Stay at home order has made then lose a lot motivation mental of the students was bed.

Positive aspects/changes related to covid-19

These themes emerged related to positive aspects that students experienced after the stay at home order ;increased family time ,personal improvement and new activities. Students reported more time with family the majority expressed it as something positive. Participants expressed that they had more time for doing new activities such as writing poetry or doing excersise, students home participated different hobbies and creative activities. Few students wrote that they do not perceive any positive changes. They chose to add comments like "nothing", "honesty-none", or "not really any". These answers reflect that same students could not sea positive aspects.

Discussion:

This study presents the factors that influences students use and acceptance of online learning during stay at home order due to covid-19.The quantitative and qualitative results showed that students prefer face to face instruction over online education. They expressed a negative attitude towards online learning. They told online learning more difficult. Thus were lack of supporting resources like learning center, library, interaction with teachers. Students who did not have previous experiences with online learning may think that online delivery is not desirable .Student's did not have previous experiences with online learning may think that online delivery is not desirable. Concerning motivation to pursue school during the stay to order, quantitative and qualitative data showed that participants were more motivated before stay at home order .Then after Tichavsky et al(2015) examined the students motivations behind their preferences for face to face or online learning . The author found that interaction(90%) and specially interaction withteachers (50%), was important for students. In a similar line , the findings of this study confirm that motivation decreased when students transitioned to online learning and interaction was a motivating factor for students.In the qualitative data, students reported that the lack of interaction with teachers and students was a challenge for them. In the open –ended question twenty –five, students (8-71) wrote as a challenge an increase in negative emotions such as anxiety, sadness and worry. This study confirms that students used more platforms and online educational tools after transition to online learning than before. As Murphy (2020) mentioned ,the use of emergency programs increased the students' knowledge of technological tools. The knowledge and experience gained may help students with their future abilities and perception of self-efficacy regarding educational technologies.

Reference:

1) *Murphy ,2020 SARS-COV 2*
2) *Ali,2020*
3) *Hodes,etal,2020*
4) *Kemp etal 2019*
5) *Crawford el al, 2020*
6) *Chan 2013*
7) *Cao,2020;CDC, 2020;Huangetal,2020*
8) *Bower,2019; Gonzaloez et al 2020; Wangetal 2019*
9) *Myers at al,2019, P-2.*

'Journal of Research & Development'
A Multidisciplinary International Level Referred and Peer Reviewed Journal, Impact Factor 5.13, ISSN: 2230-9578, April-2021, Volume-11, Issue-8 "Recent Trends in Social Sciences"

Boon or Peril - A. I in Agri - Marketing

Dr. Sindhu Varghese
Assistant Professor, Loyola Academy, Alwal, Secunderabad.

Abstract
Artificial Intelligence aids in Pest attack warnings, the right time to sow seeds, optimum utilisation of farm data, soil sensing, , help increase farm productivity, Enhance soil yield, Controls wastage of agricultural inputs, warns of pest or disease outbreaks. This paper weighs the benefits and apprehensions surrounding the A.I in Agricultural marketing. AI can be a boon to the needs and demands of the agriculture sector. It can solve many problems of the farmer, government in tackling various issues concerning agriculture. The adoption of any technology as here AI should be in a balanced systematic manner to reap its benefits.

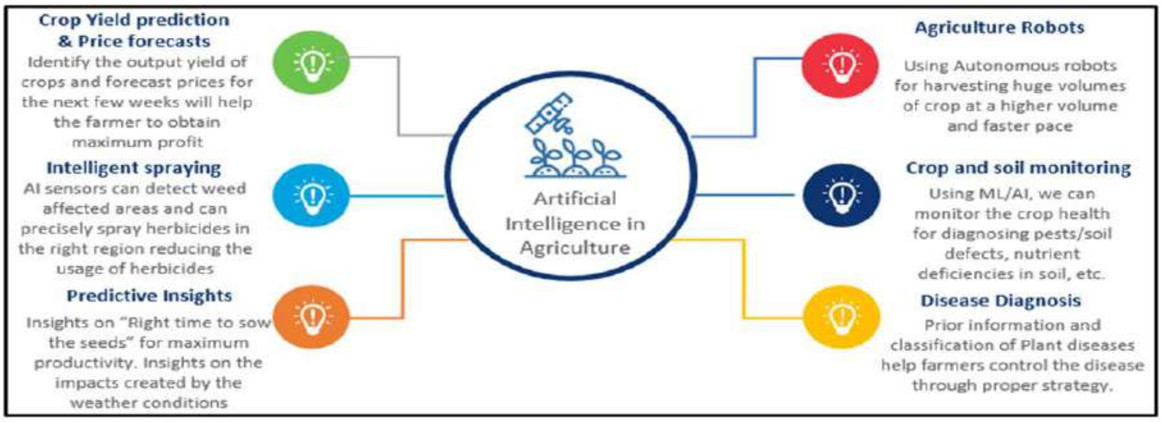
Introduction
India is an Agrarian economy; one third of its population depends directly or indirectly on agriculture. It employs 46 per cent of the workforce and contributes 16 per cent of the GDP. Improvement in agriculture would positively impact a large section of the population of India and also food security. It is the need of the time to tune up the Agricultural Marketing System of the country to enable the farmer

Agricultural-marketing
In the financial year 2019-20, Indian agro-food tech start-ups raised more than $1 billion through 133 deals. India's exports of agricultural products rose to $37.4 billion. Marketing is making or producing a product which satisfies the need of the customer. Pricing it accordingly, distributing the product to the consumer, and very important making the customer aware of the product and motivating the customer to make a sale. Predominantly agriculture the backbone of our economy finds its customers both in final consumers that is households and industrial consumers that are business which trade, like resellers or the companies which make processed items with these agricultural produce. These include traders, wholesalers' processors importer exporter marketing cooperatives and retailors. Now marketing should be a win-win situation for the farmer and also for the consumer for a sustainable ecosystem, depletion of any one party's interests would undermine the sustainability of either. If suppose the farmer wants to make profits and doses his produce with heavy pesticides he would lose his customers in the long run. Vice versa for the profit of middlemen and for attracting customers with a cheaper price, the farmers would be at the receiving end. Therefore it is important for a sustainable strategy from the part of policy makers, for a smooth running economy. The policy makers should be far sighted, in their planning and implementation.

Challenges in Warehousing, Intermediaries, Transportation
Considering distribution of the produce to the consumers various intermediaries come into picture also called as middlemen. These would take a part of the sale price; too many middlemen would cut on the profits of the farmer. A very important decision is the storage of the produce, the surplus amount of goods if not utilized would become stale and spoiled. This is the situation for all perishables goods, especially agro based, grains, vegetables, fruits, etc. This forces the farmer to sell their surplus at rock bottom prices, which in turn would yield high profits for the middlemen who have the facility to store. The transportation facilities have to be improved for the faster movement of the produce. Farmers lack the knowledge of the price of their products in the markets, lack of financial sources. The government has intervened and come up with various policies to face the new challenges and reap the opportunities as well.

Artificial Intelligence in Agricultural marketing
To help farmers understand temperature changes, A.I helps in checking defective crops, It can identify pest and disease of crop. Apart from this A.I can help the customers provide information about the availability of crop, and the farmers the availability of customers in need of their produce. AI can identify where the surplus of food grains is available and Government can find buyers for the same. A regulatory body can oversee these activities. As the farmers may lack the technical know-how the government can intervene to bring about changes in the farming system. AI applications help farmers in accurate and controlled farming by providing them proper guidance about water management, crop rotation, and timely harvest, type of crop to be grown, optimum planting, pest attacks and nutrition management. It also helps in predict weather conditions, analyse crop sustainability and evaluate4 farms for pest and disease. AI improves the track and traceability of agricultural supply chain by removing bottlenecks to get a better and fresh produce to the customers. AI helps in the right mix of biodegradable pesticides and limiting its application only to the area which needs treatment. By using drones AI can find out the most infested area in the land. And can find out the right mix of pesticide to reduce infecting the healthy crop. Price forecasting for crops based on yield rates that help predict total volumes produced are invaluable in defining pricing strategies for a given crop.

Figure:1:- Benefits of Artificial intelligence



Source:-*https://www.wipro.com/holmes/towards-future-farming-how-artificial-intelligence-is-transforming-the-agriculture-industry/*

In predictive Agricultural analytics AI is used to predict

- Pest attack warnings
- The right time to sow seeds
- Optimum utilisation of farm data
- Soil sensing
- Help device like drones
- Help increase farm productivity
- Enhance soil yield
- Controls wastage of agricultural inputs
- Warns of pest or disease outbreaks

A.I can help the government in crop yield prediction, and real time advice to farmers. A.I can help solve the problem of price volatility in input price. A.I also assists in large scale quality testing and post-harvest produce handling and monitoring. A.I can create a platform to check malpractices in the supply chain.

Thanks to the diversity of its soil types, climate and topography; India provides a great opportunity for the data scientists and A.I experts to develop state of the art A.I tools and solutions for agriculture. Indian farms and farmers provide vast and rich data to help create A.I solutions for not just the country but the world at large. And this is one of the factors that make the opportunity for A.I in Indian agriculture unparalleled.

Afterthoughts

Do farmers have the technical literacy, knowledge and skills to successfully use the solution? Before tackling marketing, needs of market access and productivity have to be tackled.

Disadvantages of A.I in Agriculture

Even though the agriculture industry finds improvement through A.I , it can have derogatory effects on employment, as it employs over a billion people. It can leave millions unemployed.

Field tasks which are monotonous can be easily automated this can gradually make certain roles obsolete, Humans will be replaced by smart robots that can safely navigate the space, find and move agricultural products as well as perform simple and complex field operations.

The cost of technology such as drones has made it unavailable outside of the government and research bodies, it is costly to buy the drones, the biggest challenge will be funding internally from the government efforts and research institutions.

Conclusions

A.I can be a boon to the needs and demands of the agriculture sector. It can solve many problems of the farmer, government in tackling various issues concerning agriculture. Agriculture marketing is all about producing the best produce for the customer, which is beneficial not harmful without losing the farmer's profits. It deals with setting the right price, for a win- win situation. Marketing is distributing the produce at the right time to the right customer, also bringing awareness to customer in turn promoting their products. We have seen how A.I is beneficial in all of these. Therefore we conclude that A.I is a boon, care has to be take that if not regulated, it can turn into a peril, anything in excess is not beneficial.

Finally, machine is for man, man should not lose his sustenance to accommodate machine, all the development, technology should be for the wellness of humankind. The adoption of any technology as here A.I should be in a balanced systematic manner to reap its benefits; care should be taken not to override morality, ethics and humanity.

References

1. *https://www.forbes.com/sites/louiscolumbus/2021/02/17/10-ways-ai-has-the-potential-to-improve-agriculture-in-2021/?sh=369cd95d7f3b*
2. *Heba Soffar , published july 11, 2019 · updated august 29, 2019, Artificial Intelligence in Agriculture advantages, disadvantages & uses.*
   https://www.online-sciences.com/robotics/artificial-intelligence-in-agriculture-advantages-disadvantages-uses/
3. *https://www.analyticsvidhya.com/blog/2020/11/artificial-intelligence-in-agriculture-using-modern-day-ai-to-solve-traditional-farming-problems/*
4. *Abhishek Singh , November 26, 2020AI for the farmer, , ,*
   https://indianexpress.com/article/opinion/columns/artificial-intelligence-farmer-agriculture-7069520/

Sustainable Development Plan for Safe Drinking Water for Pune city, Maharashtra state, India

Dr. Asaram S. Jadhav
Department of Geography, Tuljaram Chaturchand College, Baramati, Pune (Maharashtra state)

Introduction:

The climate of Pune is very healthy. There is three main season, namely summer, winter and rainy season. The temperature ranges from 15°C to 35°C. The high temperature occurs during 15th April to 20th May, and lowest temperature occurs in the month of January. The average rainfall is 70cm with more rain during monsoon period. Below give the monthly average temperature and rainfall information about Pune. Large scales of migration to Pune city create problems of enough water. Each person cannot get enough water for every day to their domestic use as per their need. In monsoon season, due to discharge of dirty and contaminated water, there are chances of spreading of epidemics. As per study there is total 551957 and 514663, households and tap connections respectively (Census 2011). There is shortage of 37294 tap connections, if determine to provide a tap connection to each household. The low economic class residential people could not get enough water because such areas mainly have public tap connections. High altitude part of the city does not get water, as low pressure of water.

Review of Literature

Kalantari (in 2002) had been studied the internal structure of Indian cities and from this study he developed his own formula to eliminate the bias of size and population. Pratibha Singh worked on 'Role of NGOs for Sustainable Development of Rural area in 2005'. Danielle C. Ompad, Sandro Galea, Waleska T. Caiaffa and David Vlahon studied the social determinants of the health of urban populations. Edmund J. Zolnik (in 2004) attempt work on 'the North American city Revisited: Urban Quality of Life in Canada and the United States'. A. Giannias study 'Quality of Life in Southern Ontario in 2003' by using Scalar Method to calculate 'Environment Quality of life'. Jeffrey Zimmerman (in 2001) has been made a contribution on the 'Nature of Urbanism of the new Urbanist Frontier: Sustainable Development, or defense of the Suburban Dream. Michael Pacione (in 2003) attempt work on "Quality of life: Research in Urban Geography'. Brian J. L. Berry study on 'Efficiency Frontiers: Urbanization and Development in 2001'.

Objective: To find out the sustainable development plan for safe drinking water for Pune city.

Significance of the Study:

This studies very useful for planners, researchers, government management and society also, because its gives an idea about water availability for drinking purpose for Pune city, and daily consumption of water require for city.

Source of data:

Primary and secondary data have been used for this section. Primary data have been collected from Pune city. Secondary data is collected from the Pune Municipal Corporation, census of India, water supply department of Pune city.

Methodology:

Various maps and graphs have been used to find out ward wise sustainability. To identify sustainable development index used indices method of K. B. Baburajan and M. Stalin (Geographic information system for planning rural development programmes, K. B. Baburajan and M. Stalin).

Study Area:

Pune city situated on the 18^{0} 31' North latitude and 73^{0} 51' East longitude. It has a strategic position in the valleys of Mula and Mutha, which join each other in the Pune city. In Pune city total 177 census wards with three Cantonment Boards namely Pune Municipal Corporation, Pune Cantonment Boards and Kirkee Cantonment Boards, more than 600000 households and more than 3.2 million people (according to Pune Municipal Corporation 2006).

Analysis

Water requirements and supply

At present Pune gets its water supply from Khadakwasla dam about 12 km from the city through right bank canal and a closed pipeline. Three more dams i.e. Panshet, Warasgaon and Temghar have been constructed on the same river, upstream of Khadakwasla. The storage capacity of these 3 dams is 900 MM^3 whereas the present annual requirement of city is about 200 MM^3 (Million Cubic Meter). It is estimated that 80-90% of the population is connected through PMC water supply. PMC serves a water supply of 195 liters / person-day (including water losses) against standard of 135 liters / person-day. Drinking water is supplied to Pune Municipal Corporation through New Mutha Right Bank Canal. It was to tune of 5 trillion cubic meters (TMC) up to 1997. As the population of Pune city is increasing rapidly the demand for drinking water has also increased. In water planning of Khadakwasla Project, only 5 TMC water was reserved for drinking water purpose. Though the water supply of Pune city is more than standard water supply per person, but there is large amount of waste water. This water waste due to break or to leak water pipeline, abuse of water, and use of water more than need. The total storage capacity of water is 29.05 TMC of Khadakwasla, Panshet, Warasgaon and

Temghar. There is a need of water to Pune city is 14 TMC per year. But location of Pune city is east of the Western ghat, this part is under lee ward side of monsoon wind and known as rain shadow zone area. Irregular and indefinite rainfall occurs every year. Population growth is also increasing rapidly. Therefore stress on water supply in the month of May and Jun.

6.7.2. Present condition of water storage shown in the table

Dams	Storage Capacity (in TMC)	Useful water Capacity (in TMC)
Khadakwasla	3.03	1.97
Panshet	10.96	10.65
Warasgaon	13.25	12.82
Temghar	3.72	3.61
Total	30.96	19.05

(*Source:* Water Supply Department, PMC, Pune.)

There are three main fresh water bodies i.e. Khadakwasala Lake, Pashan Lake and Katraj Lake. Khadakwasala is a moderate sized dam on the Mutha River. Water is one of the most critical services provided by Municipal Corporation. Water supply in the city, on a whole, seems to be adequate in terms of quantity and quality. There is four major dams surrounding area of Pune city, provides water supply to Pune city. High useful water capacity is available in the Panshet and Warasgaon dams. The total drinking water of these dams is 19. 05 TMC. In present, for drinking water to Pune city are 14 TMC provided by four dams. Pune Municipal Corporation serves water @ 195 / liters / day / capita. There are 17 pumping station having total of 109 operating pumps. At present there are 5 water works in Pune city.

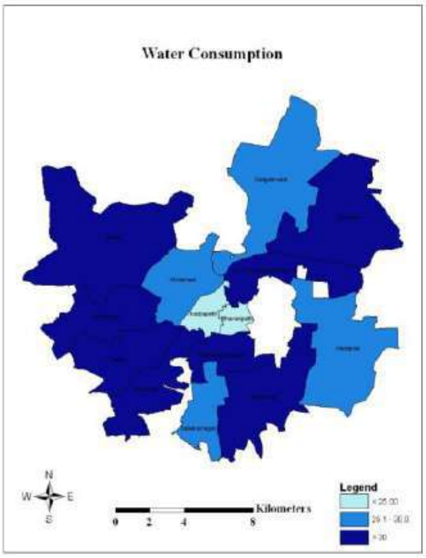
Present Condition of Water Recovery:

Water is the most essential commodities and the city's behavior in terms of almost all development is related to the water availability and supply. There are many indicators to calculate water quality, supply and need such as water quantity, ground water resources, water availability, consumption patterns, access to safe drinking water, etc. For the evaluation water supply and water consumption has been considered.

Administrative Wards	Water Supply	Water Tax Consumption	Water Recovery
Max. Limit	70	30	100
Aundh	39	14	53
Karveroad	41	30	71
Gholeroad	28	11	39
Warje Karvenagar	34	3	37
B. S. Dholepatil Road	42	11	53
Hadpsar	27	20	47
Yerwada	39	15	54
Sangamwadi	26	3	29
Bhavanipeth	23	6	29
Kasbapeth	20	11	31
Vishrambaugwada	42	7	49
Tilakroad	36	19	54
Bibvewadi	38	14	52
Sahakarnagar	27	12	39

(*Source:* Water Supply Department, PMC, Pune.)

Though the quality of water much more important indicator than the quantity, the report of quality of water, says uniformity of every wards, because same water distributed all over Pune city.



Conclusion:

After observing the ranking mechanism of water supply, it is clear that the water distribution is not uniform across the all Pune city, the city such that almost 50 percent of the wards are being over supplied of rater excess consumers whereas the other may have under standard consumption. The water consumption is high in the western part of the city and Yerwada, B. S. Dholepatil Road and Bibve. For the water tax point of view Sangamwadi, Bhavanipeth, Vishrambaugwada and Warje- Karvenagar are less than the other wards. The reason of that, these parts are having more slum population. Thus, B. S. Dholepatil road, Yerwada, Bibvewadi and Sahakarnagar have over consumption with higher tax recovery whereas, Sangamwadi, Warje, Karveroad and Hadpsar are intermediate when compared to Aundh, Tilakroad and Gholeroad that require higher intervention as opposed to Vishrambaugwada ward showing major concern.

Sustainable Development:

Pune city is one of the old cities. Though the water supply per person of Pune city is higher than standard level, water leakage and water wastage is very high. There are old service lines of pipes, inadequate water distribution, high proportion of slum area and poor water demand management system. Pune city need water for 24 hours for seven days in a week. This scheme can be implemented today's water volumes. There is no need of extra water or extra pumping station. There is a requirement of water audit, metering, leakage correction, rehabilitation of distribution system, construction of new water treatment plants, meter of every tap and refurbish the existing water distribution system. Water supply should be even in the every ward and every house. Water must be purifier and safe for drinking in every season including rainy days.

Reference:

1. *Baburajan K. B. and Stalin M. (1996) "Geographic Information System for Planning Rural Development Programmes", Indian cartographer, journal of the Indian National Cartographic Association, volume 16, Pages 148-155.*
2. *Chandrashekhar S. (2005): "Growth of Slums, Availability of Infrastructure and Demographic Outcomes in Slums: Evidence from India" paper presented in Urbanization in Developing Countries at the Population Association of America.*
3. *Dempsey N., Brown C. and Bramley G. (2012): "The key to sustainable urban development in UK cities? The influence of density on social sustainability", Journal of Progress in Planning, Volume 77, Issue 3, Pages 89-141.*
4. *Ghorbani R., Ebrahimpour A. and Noshad S. (2012): "Motivational Modeling in Developing of Urban Fringe Recreational Places an Approach for Improving the Quality of Life Case Study: Recreational Place of Oun-Ebn-Ali, Tabriz, Iran", Journal of Environmental Sciences, Volume 13, Pages 297-306.*
5. *Kalantari S. (2002): "A compass for sustainable development", International Journal of Sustainable Development and World Ecology, Volume 4, Pages 79-92.*
6. *Kusakabe E. (2013): "Advancing sustainable development at the local level: The case of machizukuri in Japanese cities", Journal of Progress in Planning, Volume 80, Pages 1-65.*
7. *Hsueh-Sheng Chang, Sheng-Lin Chiu (2013): "Discussion on Sustainable Land use Allocation toward the Sustainable City–A Practice on Linco New Town", Journal of Environmental Sciences, Volume 17, Pages 408-417.*
8. *Rasoolimanesh S. M., Badarulzaman N. and Jaafar M. (2012): "City Development Strategies (CDS) and Sustainable Urbanization in Developing World", Journal of Social and Behavioral Sciences, Volume 36, Pages 623-631.*

9. *Song, Y. (2011): "Ecological City and Urban Sustainable Development", Journal of Engineering, Volume 21, Pages 142-146.*
10. *Environment Report (2010): Pune Municipal Corporation (PMC), Pune.*
11. *Environment Report (2020): Pune Municipal Corporation (PMC), Pune.*
12. *Environment Report (2018): Pune Municipal Corporation (PMC), Pune.*
13. *Gazetteer of the Bombay Presidency (1885): Pune District, Volume 3.*
14. *General Economic Tables, Census of India: 1961, 1971, 1981, 1991, 2001,2011.*

A review on the role of Krishi Vigyan Kendra (KVK) in Agricultural sector

Dr V K Mukke

Department of Environmental science, Shivneri Mahavidyalaya Shirur Anantpal, Dist. Latur

Abstract:

All the agricultural extension centres established in India are known as Krishi Vigyan Kendra (KVK). The name indicates "A centre for Scientific Agriculture". These KVKs are associated with a local agricultural university. These centres serve as the ultimate link between the Indian Council of Agricultural Research and farmers, and aim to apply agricultural research at local level. All KVKs are come under the jurisdiction of one of the 11 Agricultural Technology Application Research Institutes (ATARIs) throughout India. Till January 2020, there were around 721 KVKs throughout India. The KVK scheme is 100% financed by Govt. of India. Thus, KVKs are sanctioned to Agricultural Universities, ICAR institutes, related Government Departments and Non Government Organizations (NGOs) working in Agriculture.

Introduction:

The Instruction Commission (1964-66) suggested that a solid exertion be made to build up particular organizations to give professional schooling in farming and united fields at the pre and post register levels to provide food the preparation needs of an enormous number of students coming from provincial zones. The Commission, further, proposed that such organizations be named as 'Farming Polytechnics'. The suggestion of the Commission was altogether talked about: during 1966-72 by the Service of Instruction, Service of Farming, Arranging Commission, Indian Gathering of Rural Exploration (ICAR) and other unified establishments. At last, the ICAR set forth setting up Krishi Vigyan Kendras (Rural Science Communities) as inventive establishments for giving professional preparing to the rehearsing ranchers, school dropouts and field level expansion functionaries. The ICAR Standing Panel on Agrarian Schooling, in its gathering held in August, 1973, saw that since the foundation of Krishi Vigyan Kendras (KVKs) was of public significance which would help in speeding up the horticultural creation as additionally in improving the financial states of the cultivating local area, the help of all connected establishments ought to be taken in executing this plan. In this way ,the ICAR, comprised an advisory group in 1973 headed by Dr. Mohan Singh Mehta from Seva Mandir, Udaipur (Rajasthan), for working out a nitty gritty arrangement for executing this plan. The Advisory group presented its report in 1974. On a pilot premise the principal KVK, was set up in 1974 at Puducherry (Pondicherry) under the regulatory control of the Tamil Nadu Agrarian College, Coimbatore. At present there are 721 KVKs, out of which 498 are under State Horticultural Colleges (SAU) and Focal Agrarian College (CAU), 66 under ICAR Organizations, 104 under NGOs, 38 under State Governments, and the excess under other instructive establishments. From that point forward, KVKs have been set up in all states, and the number keeps on developing. The Indian rural area faces numerous difficulties, including a high level of little land holding ranchers, absence of store network framework, and outrageous climate conditions. A vital technique in tending to these issues, notwithstanding strategy support and a working business sector, is utilizing innovation to all the more likely comprehend and adjust to complex difficulties. Be that as it may, more elevated level examination about present day horticultural patterns, like Environmental Change and GMO, happens in colleges. The down to earth ramifications of this examination, or their pertinence to a specific nearby setting, are not promptly recognizable. For instance, scholarly exploration on new yield practices or seed types regularly happens in brought together testing areas, because of the simplicity of observing and assessment. The equivalent goes for ground-level advancements which are powerful in one neighborhood setting yet may not be available to other people. Particularly in regions with such geographic intricacy as India, rural augmentation offices, for example, KVKs serve to assemble, test and scatter information between unified organizations and a geologically scattered country populace.

In this order, the adequacy of KVKs is hard to gauge, because of enormous number of ranchers served by a solitary KVK and to a great extent disconnected correspondence between the KVK and ranchers. Hence, research in the course of recent years has zeroed in on the limit of KVKs to utilize ICT with the end goal of better dealing with their interchanges with ranchers. An excess of uses has been created, sharing warnings, for example, climate data and market valuing, enhancing the KVK's correspondence with its recipients. In any case, a considerable lot of these activities are short-endured, or have restricted effect, since the groups at each KVK frequently don't have the ability to keep up programming applications or on the grounds that ranchers don't discover the data valuable.

Topic/Thought:

While KVKs are relied upon to attempt their own activities, they are additionally expected to fill in as an asset community for stretching out government activities to neighborhoods. The current public government's program "Multiplying Ranchers' Pay by 2022" calls for expansions in agrarian profitability, advancement activities like Pradhan Mantri Krishi Sinchai Yojana and Pradhan Mantri Fasal Bima Yojana just as more spotlight on mechanical development. The public authority anticipates that KVKs should help in the dispersal of data and works on with respect to these new government activities. Notwithstanding KVKs, there are numerous nearby establishments which likewise interface straightforwardly with ranchers, for example, the Horticultural produce market board and the Rural Designing Division. As of October 2018, there is an online dashboard which gives reports on the action of different KVKs.

In every one of these exercises, the KVK centres on harvests and techniques explicit to the nearby environment and industry. A few elements which may affect this choice are: soil type, crops developed, water accessibility, occasional temperatures, and unified areas like dairy and hydroponics. As well as tending to neighbourhood factors, KVKs are likewise ordered to build reception of practices that help with gainful farming, environment based agribusiness. Some KVKs likewise have social exercises to work with interface between the establishments and the nearby local area.

Role of KVK:

On-Farm Testing: Each KVK works a little ranch to test new advances, for example, seed assortments or creative cultivating strategies, created by ICAR establishments. This permits new advances to be tried at the nearby level prior to being moved to ranchers.

Frontline demonstration: Because of the KVK's ranch and its closeness to close towns, it sorts out projects to exhibit the adequacy of new advancements on rancher fields.

Capacity building: as well as showing new innovations, the KVK additionally has limit building system and workshops to deliberate present day cultivating strategies with gatherings of ranchers.

Multi-sector support: Offer help to different private and public activities through its nearby organization and ability. It is extremely regular for government research foundations to impact the organization of KVKs when performing overviews with a wide scope of ranchers.

Advisory services: Because of the developing utilization of ICT, KVKs have carried out innovations to give ranchers data, for example, climate warnings or market estimating, through radio and cell phones.

Mandate of KVK:

The order of KVK is Innovation Evaluation and Exhibition for its Application and Limit Advancement. To carry out the order viably, the accompanying exercises are conceived for each KVK.

1. KVK would deliver quality mechanical items (seed, planting material, bio-specialists, and animals) and make it accessible to ranchers.
2. organize bleeding edge expansion exercises, distinguish and report chosen ranch advancements and merge with progressing plans and projects inside the command of KVK
3. On-ranch testing to survey the area explicitness of rural advances under different cultivating frameworks.
4. Frontline shows to set up creation capability of innovations on the ranchers' fields
5. Capacity advancement of ranchers and augmentation staff to refresh their insight and abilities on current agrarian advances
6. To function as Information and Asset Focal point of rural advances for supporting activities of public, private and intentional areas in improving the agrarian economy of the locale.
7. Provide ranch warnings utilizing ICT and other media implies on shifted subjects important to ranchers.

Conclusion:

KVK, is a fundamental piece of the Public Agrarian Exploration Framework (NARS), focuses on appraisal of area explicit innovation modules in agribusiness and unified undertakings, through innovation evaluation, refinement and exhibitions. KVKs have been working as Information and Asset Focal point of horticultural innovation supporting activities of public, private and deliberate area for improving the agrarian economy of the locale and are connecting the NARS with augmentation framework and ranchers. Thus, KVKs will serves as a pool between the Agro based research and Rural Farmers.

References:

1. *https://kvk.icar.gov.in/aboutkvk.aspx*
2. *https://vikaspedia.in/agriculture/agri-directory/krishi-vigyan-kendras*
3. *https://en.wikipedia.org/wiki/Krishi_Vigyan_Kendra*
4. *Sankar kumar Acharya & Riti Chateerjee: "Krishi Vigyan Kendra (KVK) and its Role in the Upliftment of the Farm Women in Indian Agriculture Introduction", Indian Journal of Agriculture Business, July - December 2019, Vol. 5 (2): 75-78.*

Research Ethics and Values in Social Sciences

Dr. Kudnar C. K.
Assistant Professor, Head Department of Geography, KKHA Arts, SMGL Commerce AND SPHJ Science College Chandwad

Abstract:

This research paper provides a general framework for enhancing research integrity by focusing on potential threats and good practice at each stage in the research cycle. Typically, research misconduct is defined in terms of fabrication, falsification, or plagiarism. However, malfeasance manifests itself in multiple forms and can occur at any stage of the research cycle from the initial selection of the research problem, through to the dissemination of the research outputs, to fellow researchers, decision-makers, and the public at large. institutions to establish and maintain a culture of research integrity. This culture must be supported by robust policies, procedures, and processes together with a governance structure to promote these values and address any transgressions in a timely, fair, and transparent fashion. Research culture is not static; it varies across time and space. It is informed by local traditions and norms, so although this research paper is based on a set of shared values, these must be interpreted and implemented in accordance with the local context.

Good Research Practice: The Office of Research Integrity must promote the following values in the conduct and management of research:

Ethics: Research is conducted in an ethical manner ensuring dignity, rights, safety, and privacy within the researcher ecosystem.

Rigour: Research ensures high quality design, reliable data, the appropriate use of methods, rigorous and careful analysis, and transparent reporting and interpretation of the results.

Relevance: In the endeavour of expanding the knowledge-base and understanding the environment and ecosystem, research advances the short-and long-term goals of science and society. Transparency: Honesty is promoted through transparency in developing, undertaking, reviewing, reporting, and communicating research in a fair, comprehensive, and unbiased fashion

Respect: The process of research is aligned with the norms and traditions of society and its cultural heritage, with respect for colleagues, research participants, and the environment.

Impartiality: Objectivity and lack of bias are the core principles of research. Researchers should avoid conflicts of interest in setting research priorities, establishing research collaborations, choosing research questions, and interpreting and assessing the implications of the research results.

Independence: Research functions must be insulated from both the appearance and the reality of undue influence of funders or other non-researchers with a stake in the outcome of the research. To promote objectivity, researchers should be allowed independence in the design, conduct, analysis, interpretation, and dissemination of the research and research findings.

Accountability: Research will comply with both the spirit and the letter of relevant rules and procedures such as regulations governing professional standards. The ORI will publish and make readily accessible such rules, roles, and procedures that will ensure that instances of alleged misconduct or malfeasance are rare. If and when they occur, they are effectively and promptly addressed in a fair and timely fashion with sensitivity towards the rights of all concerned.

Framework for Good Academic Research Practices

The purpose of this framework is to encourage discussion and debate about ethical research practice and not merely to provide a set of rules that must be adhered to without reflection. This framework is meant to be the beginning of a living document that must be interpreted and applied within the specific context of each research institution. The framework focuses on three stages of the research life cycle:

Research Design, Conduct of Research, Research Dissemination

Research Design:

Planning: Responsible conduct of research begins at the planning stage. The choice of research questions and rationale is a critical starting point. The creation of new knowledge and translation are important outcomes of research. While translation of research comes at a later stage, researchers should proactively think about the downstream impact. Does the project potentially have positive outcomes for society, industry, country, or the ecosystem in general? The Impacting Research, Innovation and Technology (IMPRINT) initiative of the Ministry of Human Resource Development (MHRD), for example, lists major science and engineering challenges that may be addressed by researchers. Similarly, the United Nations Sustainability Development Goals (SDG) are another example where researchers can contribute towards creating a sustainable future.

Research Questions and Documentation: Any research activity starts with a research question. A good research question should be:

Clear: with sufficient specificity so that it is readily understood.

Focused: to ensure feasibility given the available resources and time frame.

Concise: brief but comprehensive.

Nuanced: with a research design that matches the complexity of the problem being addressed.

Logical: to ensure that the available evidence supports the research claims

Literature Review: Describing the research questions and locating them properly in the existing literature are important aspects of research planning. A literature review involves searching and compiling the literature available on a specific topic. A meaningful literature review, however, is much more than a collection of summaries of papers or an annotated bibliography of research manuscripts. It involves using the ideas in the literature to ensure an understanding of earlier research, their methodological approach, and contributions. A literature review also serves the important function of preventing the duplication of research and redundant publication.

The essential steps in a literature review involve:

Framing research question in terms of the existing literature.

Consulting relevant databases and texts for the search.

Listing relevant keywords and phrases, as well as known key references.

Ensuring search results are easily retrievable and traceable. Revising the original research question, if necessary.

Data, Research Methods, and Analytical Approach: Choosing the appropriate research methods is a crucial decision. The methods vary depending upon the type of research questions, the sources and nature of the data and the purpose of the research . Primary data sources are where the researcher collects the data for the purposes of the research; secondary data are those that already exist and could contain information that might shed light on the research questions. Primary data are often obtained from experiments, surveys, focus groups, interviews, case studies, and other sources. Field research often involves detailed observation, document review and analyses of natural phenomena, human artifacts, and objects as well as behaviours and action.

Conducting Research:

Research Execution, Documentation, and Data Storage: Robustness of the research results depends on thorough research execution, systematic documentation, and data quality. Careful collection of data is necessary not only for ensuring the quality of the results but also for maintaining records of collection methodology. These records are essential for judging data quality and for ensuring that future researchers can replicate the results.

Checks for Plagiarism, Falsification, Fabrication, and Misrepresentation:

Fabrication: Making up data or results.

Falsification: Manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.

Plagiarism:

Collaboration and Authorship

Intellectual Property

Dissemination:

Selection of the Right Medium for Publication: Research findings are truly impactful only when publicly shared and communicated. Moreover, researchers earn their property rights by giving away their findings in the form of publications. Researchers must present all results, including favourable, unfavourable, and null findings. The honest reporting of all findings is essential as a matter of record and to save time for future researchers, who need not redo the work that has already been done.

Choosing the Right Journal for Publication: Submitting a manuscript to an unsuitable journal is one of the most common mistakes that authors make and one of the major reasons for the rejection of a manuscript. First-time authors or those who are branching out into diverse research areas may be unfamiliar with the journals in the field. On the other hand, seasoned authors, too, tend to publish in the same journals, although new publication opportunities are constantly arising in the form of online- and open access (OA) publications. As per the Directory of Open Access Journals (DOAJ), "Open access journals are journals that use a funding model that does not charge readers or their institutions for access.

Conclusion: This research paper is focus on good research practises in research and values .researcher should followed some ethics and values of research . Research is conducted in an ethical manner ensuring dignity, rights, safety, and privacy within the researcher ecosystem. Research ensures high quality design, reliable data, the appropriate use of methods, rigorous and careful analysis, and transparent reporting and interpretation of the results. The research paper mainly focuses on three stages of the research life cycle: Research Design ,conduct of research and research Dissemination .

References:

1.UGC(2020): Good Academic Research practices, University Grants Commission September 2020

2. Adams, J., 2013. The fourth Age of Research. Nature, 497(7451): 557-560

3. Aguinis, H., Hill, N.S., and Bailey, J.R., 2019. Best Practices in Data Collection and Preparation: Recommendations for reviewers, editors, and authors. Organizational Research Methods, p.1094428119836485.

4. Fang, F.C., Steen, R.G., and Casadevall, A., 2012. Misconduct Accounts for the Majority of retracted Scientific Publications. Proceedings of the National Academy of Sciences, 109(42): 17028-17033

5. Zimring, J. C., 2019. What Science Is and How it Really Works, Cambridge: Cambridge University Press

A study of Aatmanirbhar Bharat and Inequality as a Challenge before Indian Economy

Dr. Vijaykumar Wawle
Gokhale Education Society's, BYK College, Nashik

Introduction

India is growing at a fastest rate economy in the world and the fifth-largest overall, with a nominal GDP of \$2.94 trillion. India is having rank of 5th in 2019 in largest economy overtaking United Kingdom and France. The country ranks third when GDP is compared in terms of purchasing power parity at \$11.33 trillion. India's high population drags its nominal GDP per capita down to \$2,170. The Indian economy was just \$189.438 billion in 1980, ranking 13th on the list globally. India's growth rate is expected to rise from 7.3% in 2018 to 7.5% in 2019 as drags from the currency exchange initiative and the introduction of the goods and services tax fade, according to the IMF.[1] (IMF Report 2019) Before independence India Was an agrarian economy however, manufacturing and service sector started developing rapidly. In today's date service sector is the fastest growing sector in the whole word, which contributes more than 60% in economy and accounting for 28% of employment. Manufacture sector plays a crucial role, which is supported by government by some initiatives like "Make in India". Although the contribution of agriculture sector is declined around 17%. [2] Rudra and Datt Sundaram 2020. The economy's strength lies in a limited dependence on exports, high saving rates, favorable demographics, and a rising middle class.

Facts of Indian Economy

Indian economy is in increasing trend of 3.1 % year-on-year in the first quarter of year 2020; still it is lowest growth in GDP as nationwise lockdown is announced on 24th march 2020 with the aim to control coronavirus spreading in country. Expenditure started declining at faster rate were seen for gross fixed capital formation (-6.5% vs -5.2% in Q4) and exports (-8.5% vs -6.1%) while imports fell at a slower pace (-7% vs -12.4%). Also, both private spending (2.7% vs 6.6%) and inventories (0.5% vs 1.1%) slowed sharply. On the production side, output fell for manufacturing (-1.4% vs -0.8%), the third straight quarter of contraction and construction (-2.2% vs 0%) and slowed for trade, hotels and transportation (2.6% vs 4.3%), finance and real estate (2.4% vs 3.3%) and public administration and defense (10.1% vs 10.9%). [3] Rudra and Datt Sundaram 2020.

Firstly, the Rs 20 lakh crore, Rs 1.7 lakh crore had already been disbursed to the government in the first days of the lockdown. Its salutary impact is therefore long over. Rest Rs. 5.2 lakh crore was disbursed as loans by Reserve Bank. Because of this, Borrowing rates goes down to levels not known since 2010, but their were no borrowers. By this commercial bank left with no option to park all of this money park all of that money in the RBI's reverse repo account, which swelled from Rs 3 lakh crore on March 27 to Rs 8.4 lakh crore by the end of April. [4] RBI Report 2019

'Open secret of economic growth' David McCord Wright had observed: "The fundamental factors making for economic growth are non-economic and non-materialistic in character. It is the spirit itself that builds the body." Something like this comes to mind when one goes through the Atmanirbhar Bharat package that came in wake of the Covid-19 crisis. [5] David McCord Open secret of economic growth'

Prime minister Narendra Modi addressed to citizens of India with the slogan, vocal for local to make it global this was the first time approach to growth had truly turned towards internal strength which should not be misconstrued as protectionism. He not only announced five pillars but the core was non-economic and non-materialistic in character. A logical corollary should be a demand-based economy system, which is self-producing and self-consuming as was revealed over the course of the next five days by our finance minister. [6] On May 12, Prime Minister Narendra Modi's Speech.

A self-dependent India is stand on five pillars 'economy', which brings in quantum jump and not incremental change; 'infrastructure'; 'system', based on 21st century technology driven arrangements; 'vibrant demography', which is our source of energy for a self-reliant India; and 'demand', whereby the strength of our demand and supply chain should be utilised to full capacity. Let me summarize how the PM's vision is being translated into action. But without annihilation in inequality in India, it is not possible to achieve Aatmanirbhar Bharat policy and making in India. Following indicators are showed here inequality.

Inequality

1. The United Nations describes inequality as "the state of not being equal, especially in status, rights and opportunities".
2. Inequality can be broadly classified in to:

a. **Economic inequality:** Economic inequality is the unequal distribution of income and opportunity between individuals or different groups in society.

b. **Social inequality:** It occurs when resources in a given society are distributed unevenly based on norms of a society that creates specific patterns along lines of socially defined categories e.g. religion, kinship, prestige, race, caste, ethnicity, gender etc. have different access to resources of power, prestige and wealth depending on the norms of a society.

3. Both these categories are deeply intertwined and inequality of one type affects the inequality in another e.g. Social Inequality due to gender have large impact on income of women. In patriarchal societies large gender wage gap tends to exist.

Dimensions of Inequality in India

1. In India, following are distinctive forms of social inequality:

Gender

1. According to The **Global Gender Gap Report, 2018** India ranks 182 out of 149 countries. [7] (**Global Gender Gap Report, 2018)**
2. Economic participation and opportunity, health and survival, educational attainment and political empowerment are the four parameters for measuring gender inequality.
3. Women are **paid 34% less than me,** according to International Labor Organization, which shows highest gender wage gap of India.
4. Women comprise over 42 per cent of the agricultural labour force in the country, yet they **own less than 2 percent of its farm land** [8] India Human Development Survey (IHDS).

Caste

1. Caste is significant factor for determining access to resources like education, income, health valued by individuals.
2. As per the World Inequality Database India's upper caste households earned nearly 47% more than the national average annual household income, the top 10% within these castes owned 60% of the wealth within the group in 2012.

Religion

1. Religious identities are important for an individual's ability to mobilize resources.
2. Religious identities can cause prejudices which may lead to economic exclusion and other forms of discrimination which can impact jobs and livelihood opportunities.
3. While minorities such as Christians, Parsis and Jains have a larger share of income/consumption than their population share, Muslim and Buddhist populations have significantly lower access to economic resources.

Ethnicity

1. Tribal communities in India have been identified as ethnic group on the basis of their unique culture, language, dialect, geographical location, customs etc.
2. The National Family Health Survey 2015-16 (NFHS-4) showed that 45.9% of ST population were in the lowest wealth bracket as compared to 26.6% of SC population, 18.3% of OBCs, 9.7% of other castes. [9] NFHS-2015-16

Economic Inequality

1. The 2019 report by Oxfam, titled "Public good or Private Wealth?" explained that India's top 10% holds 77.4% of the total national wealth, while the top 1% holds 51.53% of the wealth. [10] Oxfam report 2019
2. The bottom level of 60 % population holds only 4.8% of the national wealth.
3. 13.6 crore Indians, who make up the poorest 10% of the country, have continued to remain in debt for the past 15 years.
4. The Gini coefficient of wealth in India in 2017 is at 0.83, which puts India among the countries with highest inequality countries. [11] World Inequality Report 2019

Consequences of Inequalities

1. Inequalities **produce social conflict** among the social groups for instance, caste groups such as Jaats, Maratha, Patels are started demanding reservations but this demand is declined by caste groups already claiming the benefits of reservations clash of interest due to perceived inequality tend to produce violent conflicts between opposing caste groups.
2. Inequalities in ethnic groups had laid to different **ethnic movements** demanding separate states or autonomous regions or even outright secession from India. North East has been rocked by numerous such ethnic movement e.g. by Nagas for greater Nagalim etc.
3. Religious inequality tends to generate **feeling of exclusion among religious minority groups**. This reduces their participation in mainstream, in India religious minorities have large population their economic exclusion compromises the GDP growth of nation as whole.
4. Poor development indicators like IMR, MMR, low per capita income, lower education and learning outcomes at schools, high rate of population growth can be traced to existing socio-economic inequalities.
5. High economic inequality is **detrimental to public healthcare and education**. Upper and Middle classes do not have vested interest in well-functioning public healthcare and education as they have means to access private healthcare and education.

Measures to Deal with Inequalities

- **Constitutional Provision**

1. Right to Equality acts constitutes **Articles 14, 15 and 16**. Article 15 and 16 are incidents of guarantees of Equality, and gives effect to Article 14. [12] Constitution of India

- **Promoting Civil Society**

1. Becomes voice of traditionally suppressed and oppressed groups, including enabling civil society groups like unions and association with in these groups.
2. Scheduled castes and Scheduled tribes should be motivated to become entrepreneurs, schemes like Stand up India need to be expanded to widen its reach by increasing funding.

- **Women Empowerernment**

1. For gender equality policies like affirmative action by reserving seats in legislatures, increasing reservation at Local self-government both at Urban and village level to 50% in all states, strict implementation of The Equal Remuneration act,1976 to remove wage gap, making education curriculum gender sensitive, raising awareness about women right, changing social norms through schemes like Beti Bachao Beti Padhao etc.

- **Inclusion of Religious Minorities**

1. Religious minority groups need special attention in terms of representation in government jobs, provision of institutional credit, improvement of their education access, protection of their human rights by empowering National commission for Minority, strengthening rule of law etc.

- **Progressive Taxes**

1. Additional public resources for public services by progressive taxes on wealthy more and by increasing the effective taxation on corporations, more importantly broadening the tax base through better monitoring of financial transactions.

- **Economic Policies**

1. Inequality can be eradicated with the help of public funded high quality services like Public health and education, social security benefits, employment guarantee schemes.

- **Employment Generation**

1. Failed do develop manufacturing sectors like Textile, Clothing, automobiles, consumer goods etc. is the important reason of rising inequalities.
2. The Labor-intensive manufacturing has the potential to absorb millions of people who are leaving farming while service sector tend to benefit majorly urban middle class

- **Conclusions**
    1. Poverty, unemployment and inequality in in India are the basic obstacles before the Aatmnirbhar Bharat policy. Without reduction it economy will not achieve what the government has seen dream. As we extreme poverty and inequality.
    2. 48% population in India which are from women. They have no proper jobs in the employment market. According to The Global Gender Gap Report, 2018 India ranks 182 out of 149 countries. Without reduction between the gap of male and women through give proper equal opportunities and whenever women will not come in the flow of development Aatmnirbhar Bharat will not possible.
    3. Caste, race and religion are significant factor for determining access to resources like education, income, health valued by individuals. Marginal people and minorities want to feel better opportunities are available for their self. When majority, marginal society and minority will come together and to put their hand together for the development of country then India economy will be Aatmnirbhar Bharat and five trillion economy.
    4. Scheduled castes and Scheduled tribes should be motivated to become entrepreneurs, schemes like Stand up India need to be expanded to widen its reach by increasing funding.

References

1. *IMF Report -2019*
2. *Rudra and Datt Sundaram, Indian Economy, Chand Publication co. New Delhi*
3. *Ibid 19*
4. *RBI Report 2020*
5. *David McCord Open secret of economic growth'*
6. *On May 12, Prime Minister Narendra Modi's Speech*
7. *Global Gender Gap Report, 2018*
8. *India Human Development Survey (IHDS) 2019*
9. *National Family Health Survey 2015-16.*
10. *Oxfam report 2019*
11. *World Inequality Report 2019*
12. *Indian Constitution, fundamental rights. Articles 14, 15 and 16 form part of a scheme of the Constitutional Right to Equality.*

General land Use Pattern in Dongarwadi Village: A Geographical Study

Dr. Prakash Soudagar Raut
Head & Associate Professor, Department of Geography, Yashwantrao ChavanWarana Mahavidyalaya, Warananagar Tal- Panhala Dist. Kolhapur

Introduction:

Indian rural economy is based on agricultural. The land use pattern is rural areas is generally according to the crops produced locally. The land use is an important aspect of geographic studies particularly relevant to Agricultural Geography. "Land use is also related to conservation of land from one major use to another general use" (Nanavati) "Land use means surface utilization of all development and vacant land for a specific point at a given time and space" (Foreman T. W.) Stamp has classified the need of man into six major categories viz. the need of work, home, transportation, communication, defence and recreation. Land is necessary for human survival, because it provides man with living space, with food and number of raw material which are used in the satisfaction of his wants. Land utilization is the function of four variables like land, water, air and man.

Objective:

The Main Objective of the Present Research Paper is a Geographical Study of General Land use Pattern in Dongarwadi Village

Study Region:

TheDongarwadi Village of Sangli district that lies in south-western part of Maharashtra, The average altitude of Dongarwadi Village is 550 meter. It extends between 18^{o} 96 North to 17^{o} 10 North latitudes and 72^{0} 82 to 74^{o} 42 East longitudes. This having dry summer and moderately cool winter. Its total geographical area is 404 hectares and population according to 2011 census is 1331with 704 male and 627 female.

1. Data Base and Methodology:

For the present research paper, researcher has adopted following method for data collection.

a) The present research work is mainly based on primary source of data.

b) The discussion and observation methods are also used for necessary data.

c) Field study has been organized in the Study region.

d) Collection of secondary data is done from various officers of Study region.

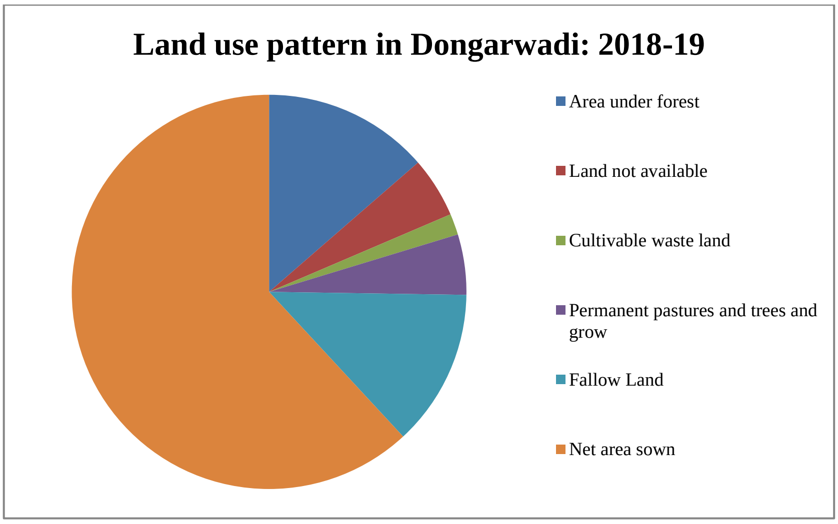
The collected data has been represented in the forms of relevant cartographic techniques.

2. General Land Use Pattern in Dongarwadi Village:

Table No.1, General Land Use Pattern in Dongarwadi Village

Sr. No.	Land use Pattern	Area in Hectares	Percentage of Total Geographical Area
1	Area under forest	55	13.61
2	Land not available for cultivation	20	4.95
3	Cultivable waste land	07	1.44
4	Permanent pastures and trees and grow	20	4.95
5	Fallow Land	52	12.87
6	Net area sown	250	61.88
	Total Geographical Area	**404**	**100**

Source: - Field Study, 2018-2019



5.1 Area under Forest:

This category includes any land classed or administered as a forest under legal enactment. The figures under grazing lands or a crop within the forest are also included in the area under forest. It is clear from the Table No.1 and Figure No. 1 that the total area under forest was 55 hectares. This was 13.61 percent of the total geographical area in study region, being less than the average for Sangli district.

5.2 Land not Available for Cultivation:

This category includes barren and uncultivable land and area under non – agricultural use. Barren and uncultivable lands are bare rocky outcrops of hills, plateaus, mountain etc. This land can under no conceivable circumstances be brought under cultivation but at a very high cost a very little proportion may be classed as uncultivable. Area under non – agricultural use covers all lands occupied by settlements, roads and railways, beds of streams, ponds and canals. General land use pattern under this category are exhibited in Table No.1 and Figure No.1 that is 20 hectares during 2018-19. Thus it was 4.95 per cent of the total geographical area of the study region.

5.3 Cultivable Waste Land:

Cultivable wasteland denotes land considered by present judgments as cultivable but actually not cultivated during the current year and last seven years or more in succession. Nearly 07 hectares or 1.73 Percent of the total area of the study region is cultivable waste land. The land under this category is waste land though it can be cultivated for agriculture and other purposes. The reason for the waste land that is not used for agriculture is scarcity of rainfall and non – availability of enough water for irrigation in the area.

5.4 Permanent Pastures and Trees and Grow:

Permanent pastures and other grazing lands embrace all grazing lands which may be permanent meadows and village common pasture. Area under miscellaneous tree crops etc. covers all cultivable and which is not included in the net area sown, but is put to some agricultural use other than seasonal cropping. The is clear from that area under permanents pastures and tress and groves in study region was 20 hectares during 2018-19. Thus, it was 4.95 per cent of the total geographical area of the study region.

5.6 Fallow Land:

This category of land consists of current fallow and other fallow lands. Current fallow the lands left unsown during the current agricultural year only to regain fertility and also that which remained un-cropped in the short – term for want of moisture and economic reasons. The fallow lands comprise all lands which were taken up for cultivation but are temporarily unsown for a period of not less one year and not more than seven years. The Table No.1 reveals that area under total fallow land in the study region. It was 52 hectares during 2018-19. Thus it was 12.87per cent of the total geographical area of the study region.

5.7 Net area sown:

Net area sown represents the extent of the cultivated area actually sown during the year2018-2019. It may be referred to as net cropped area also. The Dongarwadi Village is one of the widely cultivated areas of the 250 hectares or 61.88 per cent of its total geographical area devoted to crop. Spatial distribution of net area sown to a large extent is influenced by variation in relief. River valleys, Flood plains, low land and low under cultivation.

Conclusion:

The total geographical area of the Dongarwadi Village is 404 hectares. In the study region the utilization of land use was classified into six categories i. e Forest land, Land not Available for Cultivation, Cultivable waste land, Permanent pastures and trees and grow, Fallow Land and Net Area Sown. In the study region Net Area Sown is the most important type of land use and excels all the other land use categories. Proportion of such land is higher in 250 hectares or 61.88 per cent of its total geographical area.

References:

1. *Coleman, A. : land Use Studies in Britain, Annual of the Tohky, Geographical Association*
2. *Nanavati, M. B. : Reading in land utilization, the Indian Society of Agricultural Economics, Bombay*
3. *Stamp, L.D. : The Land of Britain and how it is used, London.*
4. *Guha & Chhattorjiee. : A New Approach to Economic Geography*
5. *Zimmerman: World Resources and Industries*

Overview of Trends in Expenditure by State Government of Maharashtra for Health & Employment Sector In COVID 19 Crisis.

Ms. Vaishnavi Ajit Bhosale[1] Dr. Santoshkumar. B. Yadav[2]
Research Scholar, Department of Economics, Shivaji University Kolhapur
Assistant Professor, Department of Economics, Devchand College, Kolhapur

Abstract

The recent COVID-19 crisis has placed enormous fiscal burden on the Union and State governments. Amidst the economic slowdown triggered due to the outbreak of the Covid-19 pandemic in India there have been made many changes in policies of central and state government. India witnesses a rapid increase in amount of Corona virus cases, mutation in the strains of the deadly virus and rise in fatalities which calls for a need to manage the government expenses on rural and urban health & employment along with other sectors in an appropriate manner. As a result of massive lockdown strict rules and regulations the economy has suffered to such an extent that the GDP fell down to -23.9% in the 1st quarter of fiscal year 2020-21. Inspite of V shaped recovery post lockdown the economy is continuously shrinking. Economic growth and tax revenues remain uncertain in 2020-21 making it challenging for the government to finance any addition to the fiscal deficit. If these discrepancies in public finance are not tackled effectively it might worsen the health of the economy.

Keywords: Health, Unemployment, Fiscal deficit, Government expenditure, Government policies, COVID 19 measures.

Research Methodology:

The research focuses on extensive study of Secondary data collected from various books, National & international Journals, government reports, publications from various websites magazines and articles which focus on expenses on health and employment and Covid 19 measures adopted by Government of Maharashtra. Data for the analysis of revenue and expenditure components was primarily sourced from State budget documents Important conclusions have been drawn and constructive future approach are suggested for social and economic recovery.

Objectives:

1. To analyse the impact of COVID 19 on health and employment in Maharashtra.
2. To study Government expenditure of Maharashtra for the year 2020-21.
3. To study government policy measures of Maharashtra to tackle the Covid 19 Crisis.

Introduction:

History is replete with visitations of pandemics in India. The worst fatality record in India was associated with the Spanish flu pandemic during 1918-20 with human cost of the pandemic of about 12 to 18 million people. Like the COVID-19 pandemic, the 1918 flu was also superimposed on a pre-existing slowdown in the Indian economy. India was also severely affected by several bubonic plague pandemics during 1855-1960, the spread of small pox in 1974, swine flu in2009 and now COVID 19 as shown in the following table.

Notable Epidemics with its Severe Impact				
Event	Year	Affected Areas	Cases	Deaths
Bubonic plague	1896-1918	Provinces of Bombay, United Provinces, Punjab, North West Frontier Province, Hyderabad, Mysore, Madras, Agra & Oudh	-	10 million
Spanish Flu	1918-20	Nearly all India	125 million	12–18 million
Asian influenza	1957-58	Nearly all India	4.4 million	1,098
Small Pox	1974	Bihar, Odisha and West Bengal	61,482	31,262
Swine Flu	2009	Nearly all India	1,62,420	11,073
COVID-19 (up to 13 April 2021)	2020	Nearly all India	13.9 million	1,72,000
COVID-19 cases in state of Maharashtra	2020	Nearly all districts of Maharashtra	3.52 million	58,526

Source: compiled by the researcher (RBI publication, Statista/infographics, JHU CSSE Covid 19 data)

All these Pandemics are associated with a contraction/deceleration in GDP. These severe disease outbreaks have also depressed per capita economic output in the economy with varied magnitudes. Policy responses post these pandemics have essentially focused on the provision of medical and public health services for offsetting the negative impact of pandemics on the economy. Public health and infrastructure played a pivotal role in policy responses. State interventions in the form of subsidised medical treatment and drug price controls as part of the pandemic response have been documented. Economic stabilisation after pandemics has, in general, relied upon large scale fiscal stimuli, viz., temporary tax reliefs and subsidies for affected industries, loan guarantees, lower taxes various sectors and measures to revive small and medium-sized businesses, similarly the heinous impact on health and infrastructure can be resolved with appropriate government expenditure on different policies and its channelised implementation.

Impact of Covid 19 in Maharashtra viz Health and Employment

A) Health: Maharashtra had the highest number of cases since early March 2020. In order to cope with the crisis better, the government was making contingency plans to increase COVID-19 testing capacity of the country. At the same time, the country went into a total lockdown on March 25, 2020 making it the largest in the world restricting 1.3 billion people. After further extensions, the country was divided into red, orange and green zones. Like other countries across the world, restrictions were slowly being lifted to attempt building economic momentum. Maharashtra recorded over 16,000 new COVID-19 cases accounting 62.7% of India's new cases as of March 14, the highest for the State in 2021. 3.2 million cases have been witnessed with recovery of 2.87 million patients and casualties of 58,526 patients in Maharashtra as of April 12, 2021. Maharashtra is leading with 89,49,560 doses, of COVID-19 Vaccine accounting for 9.92% of total doses but health infrastructure including availability of beds, oxygen, medicines etc. in the state to treat Covid-19 patients is inadequate. The trend of rise of COVID-19 cases from March 2020 till April 2021 can be shown as below.

B) Employment: Rising cases and probability of more restrictions in Maharashtra pose a big threat to businesses and the economy at large, due to the restrictions put in the state, the "radical" lockdown decision taken by the Maharashtra government will have an economic impact of Rs 40,000 crore. Hotels, trade, and transport sectors in the state are going to bear the biggest dent, according to Care Ratings. Thus, increasing unemployment in various sectors of economy. According to the Periodic Labour Force Survey 2017-18, Maharashtra has an unemployment rate of 4.9%, which is lower than the all-India unemployment rate of 6.1%. The ratings agency further stated that the loss of economic activity will have a 0.32% impact on the GVA (Gross Value Added) at the national level. It also revised down its national GDP growth estimate to 10.7 - 10.9% from 11 - 11.2% hence shrinking the economic growth.

Overview of Government Expenditure of Maharashtra during COVID-19 Crisis:

The Gross State Domestic Product (GSDP) of Maharashtra for 2020-21 (at current prices) is estimated to be Rs 32,24,013 crore which is 12% rise from the revised estimate of 2019-20. **Total expenditure** for 2020-21 is estimated to be Rs 4,34,085 crore, a 4.1% increase over the revised estimate of 2019-20. In 2019-20, total expenditure is estimated to increase by Rs 12,127 crore (3%) from the budgeted estimates.

Fiscal deficit for 2020-21 is targeted at Rs 54,618 crore (1.69% of GSDP). In 2019-20, the fiscal deficit is estimated to increase by Rs 16,947 crore (2.73% of GSDP), as compared to the budget estimate of Rs 61,670 crore (2.07% of GSDP).

Maharashtra's expenditure on six key sectors as a proportion of its total spending on all sectors.

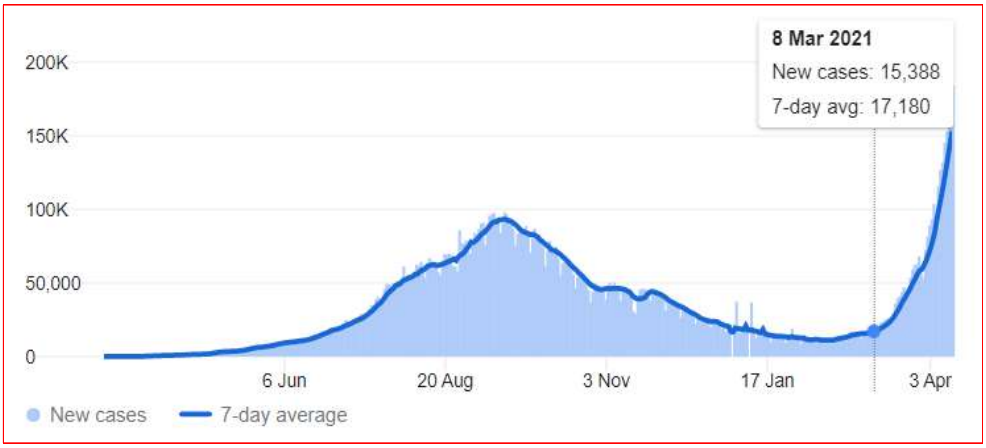
Education: Maharashtra has allocated 18.2% of its expenditure for education in 2020-21 Health: Maharashtra has allocated 4.3% of its expenditure for health in 2020-21.

Agriculture and allied activities: The state has allocated 7.5% of its expenditure towards agriculture and allied activities in 2020-21.

Rural development: Maharashtra has allocated 5.3% of its expenditure for rural development in 2020-21.

Roads and bridges: Maharashtra allocated 4.3% of its expenditure for roads and bridges in 2020-21. **Police:** Maharashtra has allocated 5% of its expenditure for police in 2020-21.

Policy measures taken by Government of Maharashtra in COVID-19 Crisis



Shivbhojan yojana: 2.81 crore Shivbhojan thalis have been distributed through total 906 Shivbhojan centres

Pradhan Mantri Garib Kalyan Anna Yojana: about seven crore Antyodaya Anna Yojana & Priority Households beneficiaries in the State have been provided five kg of food grains per person per month and one kg of pulses per family per month free of cost. **Mahatma Jyotirao Phule Shetkari Karjamukti Yojana 2019:** benefit of ` 19,847 crore has been given to

31.04 lakh beneficiary farmers up to January, 2021 since inception.
PM KISAN scheme: as on 4th January, 2021 in all 102.54 lakh beneficiary farmers in the State have been benefited and the total amount of ` 9,496.38 crore has been credited to beneficiary farmers' bank accounts.
Maharashtra State Rural Livelihood Mission: under which total credit linkage of ` 872.52 crore was disbursed to 63,063 Self Help Groups during 2020-21 up to January 2021.
Distribution of agricultural inputs to 9.42 lakh farmers at their door steps

Conclusion

The pandemic has changed the scenario of government functioning and finance. As the public health crisis recedes, the priorities will need to shift to improving the resilience of economic, social and fiscal systems by boosting investment in social overhead capital infrastructure and digital literacy so as to sharpen aspects like contact-tracing, targeted public service provisioning amidst social distancing norms and sanitation compulsions. Local governance must be empowered for effective interventions at the grass-root level. Gainful employment through various schemes must go hand in hand with scaling up health infrastructure and social safety nets for labour class.

References

1) RBI Publication dated 27/10/2020: "COVID-19 and its Spatial III Dimensions in India."
2) Ila Patnaik and Rajeswari Sengupta: NIPFP Working paper series No. 319 /07-September-2020: "Impact of Covid-19 on the Indian Economy: An Analysis of Fiscal Scenarios"
3) Economic Survey of Maharashtra 2020-21.
4) Amartya Sen, Raghuram Rajan, Abhijit Banerjee write: Huge numbers may be pushed into dire poverty or starvation...we need to secure them (indianexpress.com)
5)https://prsindia.org/budgets/states/maharashtra-budget-analysis-2020-21
6)https://www.statista.com/page/covid-19-coronavirus

A Geographical Study of Effects of Creek Water Pollution on Human Health and Environment

Gosavi Nandkumar Manohar[1] Dr. Suresh J. Phule[2]

[1]*Research Scholar, Department of Geography, Rajarshi Shahu Mahavidyalay (Autonomous), Latur, Maharashtra.*
[2]*Research Guide, Department of Geography, Rajarshi Shahu Mahavidyalay (Autonomous), Latur, Maharashtra.*

Abstract :

Thane creek ($72^0$55' to 73^0 East Long and $19^0$15' North Lat) is 26 kms long. Thane creek joins by minor connection with Ulhas River on its North near Thane city. A few decades back heavy industrialization and consequent urbanization have occurred along both the banks of the creek. The creek supports good diversity of mangroves and birds including Flamingos. The creek used for domestic and industrial effluents. It results water pollution in creeks. It affects the creek ecosystem. It is possible to revive the creek ecosystem if remedial measures such as reduction of sewage and solid wastes at source, plantation of mangroves.

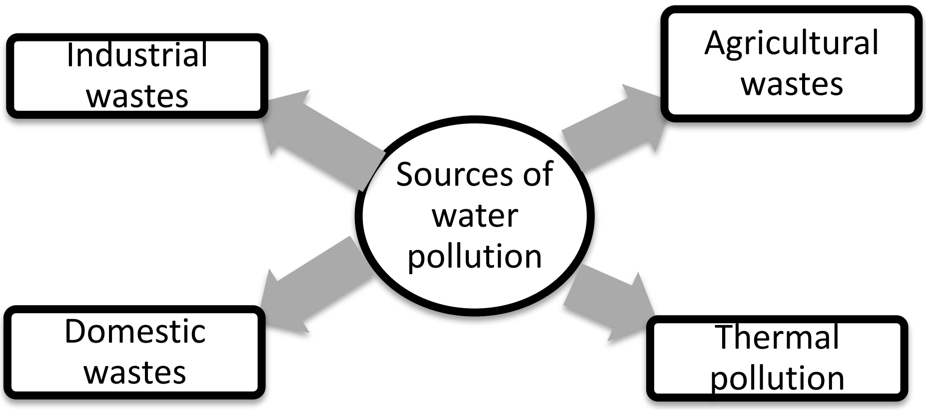
Introduction:

Water is undoubtedly the most precious natural resource existing on our planet. It is required to meet our basic needs in day to day life. It is also required for irrigation, day to day activities, generating electricity in power plants, manufacturing processes and disposal of waste. In the process of urbanization, industrialization and agricultural practices, we knowingly or unknowingly pollute our rivers, lakes and oceans. Subsequently, we slowly but surely harm our planet. one of the consequences of this is that many species of flora and fauna are diminishing at an alarming rate.

Creeks play an important role as habitat for fishes and prawns. However, they are vulnerable to anthropogenic activities, as they are being used as dumping grounds for domestic and industrial wastes. Mostly industrial waste is harmful for aquatic ecosystem. A few decades back heavy industrialization and consequent urbanization have occurred along both the banks of the creek. On the east bank exists Asia's largest industrialized zone namely Thane Belapur industrialized area along with the Navi Mumbai Urban area.

Theme:

Water pollutants:



Domestic wastes (sewage):

This primarily includes excreta of humans and animals along with papers, food waste, detergents etc. Various discarded materials ultimately gets accumulated in nearby water bodies like lakes, Ponds and rivers and creeks.

Industrial wastes:

Huge amount of water is needed for manufacturing processes in steel
and paper industries. Hence such industries are situated on the banks of rivers. Many other industries like textile, Rubber, leather, medicines etc. are responsible for water pollution. all these Industries produce huge amount of effluents, it is discharged if untreated into water bodies, can cause severe water pollution. Wastes like heavy metal are carcinogenic in nature and toxic compounds like phenol, cyanide and Ammonia are the major contaminants of chemical industries. Most of these pollutants are non-degradable in nature.

Agricultural wastes:

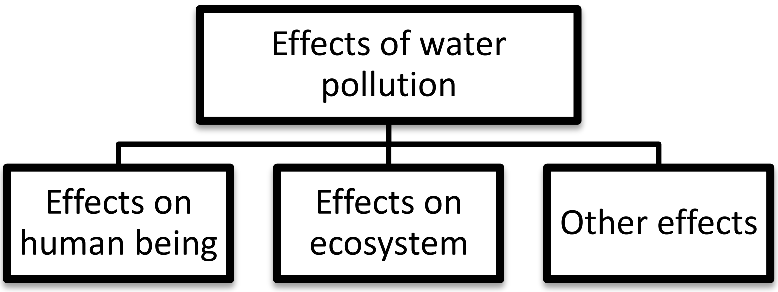
Chemical fertilizers are applied in fields to increase the crop yield. They have harmful effects on human beings, animals and the environment too. The excess of fertilizers are leached into the ground and pollute the groundwater. Excess pesticides, insecticides and herbicides are also used in the fields to protect the crops, but all these find their way into nearby water bodies through surface run-off and are responsible for severe water pollution.

Thermal pollution:

In thermal power stations and nuclear power plants, huge quantity of water is used for cooling purposes and such water becomes hot. When such heated water enters into nearby lakes or rivers it causes thermal pollution. Such type of pollution has harmful effects on aquatic ecosystem. Water pollutants include contamination due to domestic wastes, insecticides and herbicides, food processing waste, pollutants from livestock operations, volatile organic compounds (VOCs), heavy metals, chemical waste, and others. Rampant dumping of debris and effluents in the creeks abutting the city has been polluting the water of these natural bodies and posing a grave threat to marine life. This water has also been causing rashes in humans. A TMC survey reveals high alkalinity and less oxygen in the Thane creek water.The reports show high alkaline values to the extent of 7.85 mg/l at Kasheli while the volume of dissolved oxygen is also less at Gaimukh (7.4 mg/l). Dissolved oxygen is required to keep micro-organisms alive in water.The values were found higher at certain spots like Kolshet, Kalwa and Kopri and calls for immediate attention by the pollution control department. Organic content, Nitrates and Phosphates, heavy metals (zinc, chromium, cadmium and copper) present in the sediments of Thane creek.

Effects of water pollution:

Waterborne diseases caused by polluted drinking water include typhoid, amebiasis, giardiasis, ascariasis, hookworm, etc. Waterborne diseases caused by polluted beach water are rashes, ear ache, pink eye, respiratory infections, hepatitis, encephalitis, gastroenteritis, diarrhea, vomiting, stomach aches, etc. When water is contaminated with chemicals such as pesticides, hydrocarbons, persistent organic pollutants, or heavy, it could lead to cancer, including prostate cancer and non-Hodgkin lymphoma, hormonal problems that can disrupt reproductive and developmental processes, damage to the nervous system, liver and kidney damage, and damage to the DNA. Specifically, mercury in water can cause abnormal behavior, slower growth and development, reduced reproduction, and death.



Effects on human being:

1. Diseases like hepatitis, typhoid, diseases of skin and alimentary canal. 2.• Ailments of liver, kidneys, brain, deformities in bones,hypertension.

Effects on ecosystem:

1. Retarded plant growth 2. Loss of plant species 3. Increase in salt content of water 4. Decreased dissolved
5. oxygen level 6. Disturbance in aquatic ecosystem7.Death of aquatic animals 8.Adverse effects on sea birds

3. Other effects:

• Changes in physical and chemical properties of water
• Changes in natural color and taste
• Useful aquatic fauna is destroyed
• Soil fertility is affected
• Toxic materials are added to crops

Conclusion: The study reveals the detrimental state of Thane creek. Moreover the livelihood of the local fishing community solely depends on the health of the creek. The constant hypoxia and high nutrients would not only affect the ecology of the creek but also the economy of the area. In order to combat this situation the government authorities should plan and implement certain remedial measures. Such as, stopping reclamation activities, proper planning of solid waste disposal and making the use of effluent treatment plants mandatory before disposing the effluents and domestic sewage into the creek.

References:

1. *https://sciencedirect.com*
2. *https://www.vpmthane.org/pub_waterpollution/Pollution*
3. *http://www.ijser.org*
4. *https://www.mpcb.gov.in*
5. *https://timesofindia.indiatimes.com*

Extraction of the Water Bodies Through Modified Normalized Differential Water Index.

ThejaswiniM.U[1], Dr. Arun Das[1], Dr. Ravikumar M[2], Sushant Sawant Anil[3]
[1]Research Scholar, DoS in Geography, University of Mysore
[2]Professor, DoS in Geography, University of Mysore, Mysore
[2]Assistant professor, Division of Geoinformatics, Dept of Water & Health, JSS AHER, Mysuru
[3]Assistant professor, Division of Geoinformatics, Dept of Water & Health, JSS AHER, Mysuru

Abstract:
Monitoring open water bodies accurately is an essential and fundamental application in remote Sensing. Various water body mapping approaches have been developed to extract water bodies from multispectral images. The method based on the spectral water index, especially the Modified Normalized Difference Water Index (MNDWI) calculated from the green and Shortwave-Infrared (SWIR) bands, is one of the most popular methods. The MNDWI method can suppress information about built effectively by highlighting from water bodies in the study area. Recently launched Sentinel-2 satellites provide satisfactory spatial resolution multispectral images. This new dataset is of potential significance for regional water bodies mapping due to its free access and frequently revisit capabilities.

Keywords: *Modified Difference Water Index (MNDWI), Sentinel, Water bodies,*

Introduction:

The surface water body of a region is a significant natural resource which regulates directly the carrying capacity in the agriculture and indirectly climatic condition. A more significant number of surface water bodies is a good indicator of good rainfall conditions and underground water storage. With the help of satellite images extracting the present situation, the surface condition is a boom given to humankind to plan for the sustainable development of a region meticulously. The water body data of a region will be of immense help to conserve and manage water resources. Not realizing the valuable freshwater resource man has ended into blatant natural resource devastation in the recent past. From this point of view, analyzing the decadal change in diminishing and vanishing the water body is a crux of present-day planning. Although there are many methods to extract the present-day surface water body, the normalized NMDWI is one such method. This paper deals with the method of extracting the surface water resource through NMDWI.

Study area:

Kabini is the main tributary of the Cauvery River, next to Hemavathy River. The river basin location is between 11^0 37' 10" to 12^0 50' 30" North latitude and 75^0 22' 25" to 76^0 58' 02" east longitude. It originates in the Pakramthalamhills of Wayanad district of Kerala state by the confluence of the Panamaram River and the Mananthavady River at an elevation of 2140 mts. Annual rainfall is 1000m to 1500m. The length of the river is 230 km, drainage area is 7080sq Km. Kabini enters Karnataka, and its channel part starts from Heggadadevana Kote, Nanjangud, Gundlupete, Hunsur, and Mysore. Nanjangud, Heggadadevankote is drained 100% by kabini. A significant portion of Mysore city drains towards Kabini river basin, which accounts for 70% and only 30% by Cauvery river. The Kabini river takes its path towards the southwest of Nanjangud that is up to Gundlupete, and another branch flows eastward to join the Cauvery River at TirumakudaluNarasipura in Karnataka. Kabini flows diagonally from southwestern parts to the northeast before joining the river Cauvery at Tirumakudalu Narasipura. Kabini River has four tributaries, namely Taraka, Hebbala, Nugu, and Gundal. Both Cauvery and Kabini river carries the finely decomposed rocks and mineral particles from North West and southwest parts respectively and deposits most at meanders of various riverbeds. Kabini is a prominent source of drinking water in Bengaluru.

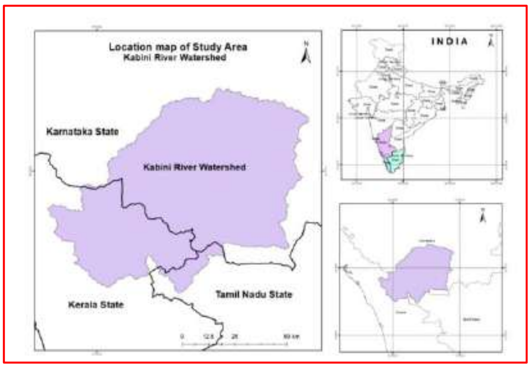


Figure 1 Location map of Kabini river basin.

Methodology:

For the present work to extract water bodies of the Mid- Kabini river basin. Sentinel 2 satellite image was downloaded from USGS Earth explore. Totally five images have been downloaded to cover the study area of different dates between February 25^{th} to March 3^{rd} 2021. Sentinel 2 satellite images consist of 12 bands, among which band three and band six have been used that is Green and short wave infrared bandwidth. These two bandwidth has different significance in extracting the water bodies.

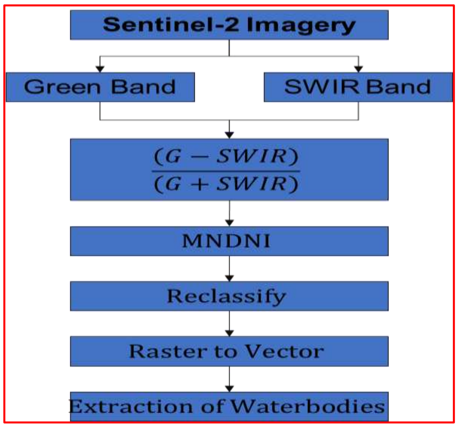


Figure 2 Flow Chart of the Methodology

Band 3 is the green wavelength which absorbs long waves, and reflectance value based on land reflects short waves, whereas water body observes short waves reflect long waves that the non-land will be black and land body will be a bright one. Post downloading these two bands; the simple formula has been adopted to extract only the water bodies, such as band three minus band six as one feature class and band three plus band six as another feature class. From this feature, classes B3-B6 has been divided by B3+B6. The final output is the modified normalized differential water index. Further to validate the data, reclassify has been done to obtain the raster data set. Finally, the raster data set has been converted to vector format as a final. Output, the water indices have been performed and mapped. "The Modified Normalized Difference Water Index (MNDWI) uses green and SWIR bands to enhance open water features. It also diminishes built-up area features that are often correlated with open water in other indices.

MNDWI = (Green - SWIR) / (Green + SWIR)

Where: MNDWI: Modified Normalized Difference Water Index, Green = pixel values from the green band, SWIR = pixel values from the short-wave infrared band.

Result and Discussion

Water bodies are extracted using the sentinel 2 images and process. The Kabini river basin has four important tributaries in Karnataka. Taraka, Nugu, Gundal, and Hebballa. The dams are constructed in Kerala and Karnataka. Kabini river is the primary source of irrigation in Nanjangud, Gundlupete, Chamarajanagar. It is the primary source of drinking water to Mysore city, Mysore Taluk and Nanjangud. Many lakes are extracted, and it is the main objective of the research. Around 280 lakes are found in the Kabini river basin.

Figure 3 Waterbodies in the Kabini River Basin

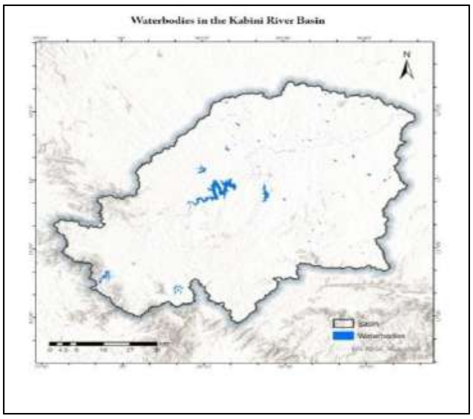


Table 1 Distribution of the Lakes

SN	Size of the lake	No of lakes	Area (km^2)
1	Minor	280	13.15
2	Moderate	2	0.174
3	Major	1	43.185

Conclusion:

Extracting surface water from optical sensors is straightforward; tremendous efforts have been devoted to developing automatic extraction methods. Using these sentinel images, the water bodies were prominently extracted for the Kabini river basin. On this MNDWI layer, the Google earth is used to check the lakes falling under the Kabini river basin of the study area. Using the google earth validation is applied, it became easier to visualize the consistencies between the two data and verify the presence or absence of water bodies in certain regions. Future work includes the assemblage and analysis of the available data to evaluate the trend of vanishing of lakes in the study area.

References

1. *Xiucheng Yang, Qiming Qin, Pierre Grussenmeyer, Mathieu Koehl(2018): Urban surface water body detection with suppressed built-up noise based on water indices from Sentinel-2 MSI imagery.*
2. *Ujwala Bhangale, Swapnil More, Tanishq Shaikh, Suchitra Patil, Nilkamal More(2020)**:**Analysis of Surface Water Resources Using Sentinel-2 Imagery.*
3. *Chang Huang ,Yun Chen ,Shiqiang Zhang ,Jianping Wu (2018):Detecting, Extracting, and Monitoring Surface Water From Space Using Optical Sensors: A Review*

Maximum Light Intensity Tracker Using PIC Microcontroller

Mr. Bhavesh Anant Chavan
Assistant Professor

Abstract-

Energy sources are of two types renewable and non-renewable. 'Renewable' resources are those that recover their capacity in a time significant by human needs. Examples are sun light or wind power, when natural phenomenon that are the primary source of energy are going and not depleted by human demands. Now days, sometimes we complete our demand of electricity with the help of solar energy. This is done with the help of solar panels. By maintaining the solar panel always perpendicular to the incident sun rays we can receive maximum amount of energy. For this purpose, we have to set the tracker below the solar panel which always sets the panel orientation towards maximum intensity.

Introduction-

Generally, the technology elaborates most of the concept from physics branch. By using the simple concepts of physics, we design application-based circuits for day-to-day life. Energy sources are of two types renewable and non-renewable. 'Renewable' resources are those that recover their capacity in a time significant by human needs. Examples are sun light or wind power, when natural phenomenon that are the primary source of energy are going and not depleted by human demands. Now days, sometimes we complete our demand of electricity with the help of solar energy. This is done with the help of solar panels. But main fact is that, only in the day time, hardly for 8 hours we can store maximum up to 40 percent of incident light falls on the panels. By maintaining the solar panel always perpendicular to the incident sun rays we can receive maximum amount of energy. For this purpose, we have to set the tracker below the solar panel which always sets the panel orientation towards maximum intensity. With the help of newly designed "pic basic pro" language and PIC microcontroller series we can co-design hardware and software. We can easily design the small scales sensing circuit with the help of PIC microcontroller. With the help of PIC microcontroller, we can design the small scales embedded systems.

Objectives: -

a. To find out the appropriate sensor for the detection of small variation in light intensity and easily convert into electrical signal.
b. To study Pic basic pro language for interfacing the hardware parts using pic microcontroller.
c. To construct the circuit which can be easily detect the maximum light intensity and automatic track towards maximum intensity.
d. Using this technique we can easily capture maximum intensity in same time as done in early method. This method is eco-friendly and convenient too.

Methodology:

This research work was totally laboratory work. The research work was completed by following methods:

- Selection method: An appropriate sensor was selected. A Light Dependent Resistor (LDR) with voltage divider mode was selected for light sensing purpose. And for tracking purpose stepper motor was selected with 7.5 degree angle.
- Microcode Studio was downloaded and installed with appropriate version as per report. With help of pic basic pro programming the working of software was monitored by simple program.
- IC-16F628A was selected as microcontroller. Because it has inbuilt oscillator, therefore no need to install extra oscillator crystal for processing purpose. Also This IC provides 2 comparators. I used this IC because PIC 16F628A has 2 analog comparator and there are 8 comparator configurations according to content of CMCON register.
- The microcontroller circuit was constructed /soldered on PCB along with driver IC ULN-2003 for stepper motor. Separate sensor circuit was soldered.
- Then with appropriate program IC 16F628A was burned with the help of PIC KIT and Melabs programmer.
- Then Burned IC of pic microcontroller was connected in soldered circuit.

Experimental: -

A) Operation of Instruments:

1. All instruments were arranged in proper manner in such a position to detect the intensity of source of light.
2. Ensured the proper connection of the circuit as per the circuit diagram.
3. Make the power supply ON for the instruments and all sources and relevant IC's terminal properly grounded.
4. It is observed that, panel moved towards high intensity of light.

B) Working of Microcontroller:

The microcontroller used in the present experiment is 16F628A. This consists of analog to digital converters which converts the analog voltages in the digital form. The analog signal connected to pin AN2 and reference signal is connected to pin AN1.

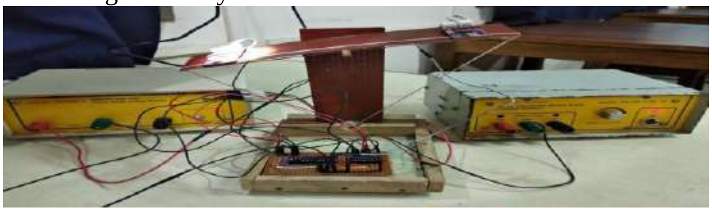
When light intensity is high (i.e. the measured voltage variable is higher than reference voltage) then Bit 1 of CMCON will be set. If the intensity of light is low than the reference voltage then Bit 0 of CMCON will be set.

The stepper motor used has programmed in such a way that if comparator signal is 1 then the stepper motor moved forward which will rotate the panel in the direction of light having higher intensity. If the digital signal is 0 bit then stepper motor will move in reverse direction indicating that the measuring light is having low intensity than reference signal.

Index Position	Y2	Y1	X2	X1
1	1	0	0	1
2	1	0	1	0
3	0	1	1	0
4	0	1	0	1

This is the sequence for stepper motor to move clockwise direction with 7.5 degree per step.

When tracker moving towards high intensity:



Applications: -

1. Maximum power output from solar panel is desirable to increase efficiency. In order to maximize power output from the solar panels, one needs to keep the panel aligned with the sun. As such, a means of tracking the sun is required. This is far more cost effective solution than purchasing additional solar panel. It has been estimated that the yield from solar panels can be increased by 30 to 60% by utilizing tracking system instead of stationary array. This project can be developing an automatic tracking system which will keep the solar panel aligned with the sin in order to maximize the efficiency.
2. We use high sensitivity light sensor that sensor should detect the light intensity in longer distance.
3. To move the robot we can use such automatic system.

Conclusions: -

This project will provide cheap circuit for solar panels for tracking purpose. This circuit will elaborate the use of Pic microcontroller in small scale embedded systems. This project will show the co-designing of hardware and software to develop electronic firm.

Future Enhancement: -

1. *The stepper motor move with the angle of 7.5 degree at each step. The accuracy of movement of stepper motor can be increased by increasing the number of steps in 7.5 degree movement.*
2. *We can use another IC of greater efficiency.*
3. *We can use photo diode instead of LDR .*

References:

1. ***Muhammad Ali Mazidi.*** *The 8051 Micocontroller and Embedded System. Second Edition, Pearson, 2008, ISBN 978-81-317-1026-5.*
2. ***Raj Kamal.*** *Embedded System. New Delhi: Tata MacGraw Hill, 2008, ISBN-10: 0-07-066764-0*
3. ***Ajay Deshmukh.*** *Microcontrollers, The MacGraw-Hill Companies.*
4. ***Microcode Studio, instructions set.***
5. ***Melabs programmer instructions set***

SHGs: Women Empowerment and Managerial Approach

Dr. Asha Dadasaheb Kadam

Head, Dept. of Commerce, KPG Arts, Commerce & Science College, Igatpuri, Dist-Nashik

Abstract

Women's participation in self-help groups (SHGs) has been driving access for decision-making at the household level, and such facilitation, if carefully captured, is sure to result in a broader influence on social issues. Decision-making can be considered as the mental process that results in the selection of a course of action among several alternative scenarios. Each decision-making process produces a final choice. The result can be an action or an opinion of choice.

Key words: decision-making, SHGs, Women Empowerment

Introduction

The participation of women members in the SHG movement allows them to proclaim themselves in making several important decisions. Although they are not very assertive when making economic decisions, they could at least agree to "participate" in that sense. However, what is more "significant is their participation in the decision-making process in various social aspects such as education of the family, economy and several other factors. It is social decisions of this kind that cover the way for further propelling society towards health care and the promotion of literacy. If these social problems are solved, society as a whole is destined to be at a threshold level where more opportunities to excel can be seized by members of society. In this article, the researcher has tried to highlight that the empowerment of women is a multidimensional topic that encompasses economics, politics, sociology, psychology and so many social sciences related to human behavior. No research in economics is complete unless it is supported by other social sciences.

Review of Literature

While writing this research paper the researcher has studied some related secondary materials i.e., books, articles, reports, etc. and present below;

Kumaran K.P	Role of NGOs in promoting the socio-economic development of the poor through SHGs, the structure and operation of SHGs with special reference to patterns of resource mobilization, decision-making and participation of the members in group activities.
Holvoet	Women are seriously shifted in overall decision-making processes and longer-term group membership and more intensive group training and meetings strengthen these patterns.
Amartya Sen	Defined SHGs in terms of three sets of capacities (1) autonomy (2) control over decision-making within the family and (3) relative access to household resources.
Sudha Rani at el	Degree of participation in all aspects, namely self-confidence, house management, health and sanitation, leadership, activities economic and decision-making power increased over the period.
Sonawane Ashalata	Common participation of women in the groups has a significant effect on their family and on decision-making of their groups also.
Marillee Karl	Women learn management and decision-making skills, how to deal with banks, insurance companies, police and municipal authorities, and the power of the collective force.

Joining SHG independently is the first step in decision-making for women. After making entry in SHGs, women make various decisions, such as saving, taking a loan, starting a business, choosing a business, etc. Decisions about their economic activities, as well as about family and society are also important to them. When women's participation in all activities increases, their decision-making capacity also increases.

Objective of the research paper:- To study the decision-making capacity of women organizers and members through SHG.

Methodology

This research paper is based on primary as well as secondary data. The secondary data is collected through books, articles, reports, etc. and primary data is collected through direct visits with 10 groups of women SHGs (10 organizers and 10 members) working in Nashik city. The researcher has made direct visit with the organizers of the SHGs and SHG members. To achieve the objective of this research paper, the researcher has used interview method and collected the data which is analyzed below.

Decision Making of Organizers

Organizers are leaders of the SHGs. They are directly involved in decision making process. Every decision regarding SHG, NGO or GO and federation depends upon organizers. Therefore, their decision-making power is important for strengthening the SHG. Decision of saving, loan, repayment, meeting and other activities depends upon organizers. So, it is necessary to observe the decision making of organizers. Following aspects about the decisions of organizers are observed.

1. **Motivation for Establishment of Group.**

It is observed that, out of selected SHGs, 70 per cent women organizers are self-motivated for establishment of SHSs. And remaining 30 per cent are motivated by others for establishment of SHGs. These others are NGO, government officer, banks etc. It shows that majority of organizers are self-motivated for SHG establishment.

2. Decision strategy in Meetings

Out of selected samples, SHGs of women 70 per cent have taken their decisions unanimously. And remaining 20 per cent are dependent on president and 10 per cent are dependent on NGOs or government officers. It shows that many SHGs are run by democratic processes by discussing the issues among members.

3. Election of the President

The organizers were asked the method of appointing the Presidents of SHGs, either by election amongst the members of SHGs or by nomination through NGOs or by the Government.

Out of women samples, 60 per cent have elected their president by election, 40 per cent have nominated president by NGOs or government officers. Majority organizers are selected as President by election by members. It shows that most of the groups are run by democratic method. All members are participating in decision making in democratic style.

4. Rules and Regulation of SHGs.

Out of selected women organizer's sample, 30 per cent have determined their rules and regulation independently, 20 per cent have determined their rules and regulations as per situation and 50 per cent are following the rules of NGO. It shows that, majority SHGs are determining and following their own rules and regulations. They are taking decisions on their own responsibility. Organizers and members are bound to follow the rules and regulations of the SHGs.

Decision Making of Women members

1. Own decisions of SHGs women regarding education

All SHG women members have reported positive opinion about women education. All is supportive to women education. They have entered in SHG movement on their own decision. It is observed that, out of women members 80 per cent have taken their own decision for the membership and 20 per cent have entered in SHG by others decision. It shows that majority of SHGs women members have taken their own decision of membership of SHG.

2. Awareness among SHG Women

Out of women members 30 per cent do not have any insurance, only 70 per cent have insurance. Women members are more dependent on others to insure themselves. It shows that there is a little need to create awareness about insurance among SHGs' members.

3. **Choice of business**

Out of 10 business holders 70 per cent members have chosen their own business and 30 per cent have chosen their business with the help of others like NGO, organizer, DRDA etc. It shows that majority of business holders choose their business by themselves.

Conclusion

From the above discussion, it is quite clear that most of the decisions of SHG members and organizers are taken by themselves. Several decisions about groups are taken democratically. It shows that, every member of SHG is involved in decision making process, regarding to themselves and their SHGs.

References:

1 Kumaran K.P. (1997-98) Case Studies on Self Help Groups. NIRD
2 Holvoet, Nathalie (January 2005) "The Impact of Microfinance on Decision Making Agency: Evidence from South India" Development and Change, Vol. 36(1), pp. 75-101
3 Amartya Sen, Article in Daily Times of India, dated 23rd April, 2017
4 Sudha Rani K., Uma Devi D. and Surendra G. (Feb 2002) "Self Help Groups, Micro Credit and Empowerment" Social Welfare, Vol. 48(2)
5 Sonawane A., D., (2013), Women Empowerment through SHGs in Nashik District: A Case Study, Ph.D. thesis, SPPU, Pune
6 Marilee Karl, Women Empowerment– Participation in Decision Making, Zed Books Ltd., London and New Jersey, pp. 48

Scrutinizing the Correlation and Causation Effect of Rice and Wheat in Agriculture Sector: A Case Study of Haryana

Babli
Research Scholar, M.Phil Economics, MDU, Rohtak, Haryana

Abstract
Haryana is considered predominantly an agricultural state. Here we consider production of rice and wheat. And then we linked both the crops with the growth rate from agriculture and the allied sector in Haryana. Data has been taken from the official websites during the time span 2000-01 to 2019-20. Our objectives of study are to find out the correlation and causation between rice and wheat production with the agricultural growth rate. Econometric tools used in the study are correlation and granger causality tests. Result shows absence of causality between variables. That implies that there is an absence of a short run relationship between wheat and rice production with the agricultural growth rate. But wheat and rice production are positively correlated to a higher degree. Government must focus on agro-processed products. This study is helpful for further analysis.
Keywords: *agriculture, wheat, rice, correlation, granger causality test, haryana.*

Introduction

A huge segment of the Indian population experiences malnourishment and poverty. It has been found in numerous investigations worldwide that one per cent development in agriculture is at any rate a few times more remarkable in lessening poverty than the same development in non-farming areas (World Development Report, 2008). Haryana are famous for a lot of major crops like sugarcane, maize, cotton, rice, wheat and oilseeds but here we consider only rice and wheat. At least 60% of Basmati Rice export from Haryana. Haryana is a landlocked state in the northern region. Agriculture is the primary area of Haryana. Higher part of the population of Haryana has depended on agriculture and its allied activities via directly or indirectly. Haryana are working to reduce the percentage of underweight children, the percentage of anaemic children and anaemic women. They are working on the sides of like increase the milk production and to increase the production of fish and horticulture. Here in our study we want to explore the correlation and causation effect between rice and wheat production with agrarian growth rate of the Haryana state.

Literature review

Singh, A., & Singh, J. (2017) et. al. investigated the development situation of agriculture and allied also, sub-area of Haryana and Punjab from 1980-15. As noticed, the agribusiness area of Haryana is seeing a better development rate contrasted with Punjab from 2000-01.The major issue is the negative development of yield area at 2011-12 costs seen during the time frame 2011-12 to 2015-16 in Haryana and Punjab. There is a need to improve the development pace of the yield area as a result of its driving offer in agribusiness GSDP. In 2014, the portion of Livestock area share has increased to 36% in Haryana and 28% in Punjab in farming GSDP. This investigation is recommending the need to build the spending plan in R&D of farming organizations. **Yadav, D., & Wati, L. (2020) et. al.** analysed the cropping pattern in Karnal. They investigated the long term effect zero- tillage practices on physicochemical properties of soil at 0-15 and 15-30 cm. Study observed that Ph, EC and BD was not overall influenced by zero-culturing (ZT) rehearses. On embracing ZT, soil natural carbon (SOC) expanded from 0.49 to 0.52% at surface soil and 0.41 to 0.43% at subsurface soil in contrast with CT. More accessible P, N, K, and absolute N were verified in surface soil tests under zero culturing when contrasted with conventional framework. So, the ZT works on coming about, improved SOC, can be reasonable for improving efficiency and soil wellbeing under the rice-wheat trimming framework (RWCS).

Objectives

1. To analyse the correlation between rice and wheat with the growth rate from agriculture and allied sector.
2. To analyse the causation between rice and wheat with the growth rate from agriculture and allied sector.

Data sources

Data used in the study are in secondary form. Data of rice, wheat and growth rate from agriculture and allied sector has been taken since the time span 2000-01 to 2019-20. Data has been taken from the previous economic surveys of Haryana. Wheat and rice production are in the form of '000 tonnes. But the growth rate of Haryana from agriculture and allied sector are in the form of percentage.

Research methodology

Here we cover all the econometric tools which we applied in our study.

1 Correlation

Correlation tells about the connection between variables. It tells about whether the variables are correlated or associated with each other. It will tell if the variables are correlated then which type of relationship present between them: positive and negative. Its value measures between 0 - 1. 0 states the absence of relationship and 1 states perfect correlation.

2 Granger Causality Test

Granger causality test was discovered by Engle Granger in 1969. It is useful to decide if one series is valuable for predicting another. It tells about the short run association between variables. Null hypothesis tells about the absence of causation. If the probability value is less than 0.05(significant level) then we reject the null

hypothesis. At that point we can say that the series shows a causal relationship. We differentiate our result in three ways:
1"no causality" shows the absence of causality between variables.
2"unidirectional causality" shows one sided causal connection between variables.
3"bidirectional causality" shows both sided causal connection between variables.

Data analysis

Table 4.1: correlation analysis between variables

	Agrarian Growth rate
Rice	0.079411
wheat	0.186726
	rice
wheat	0.787239

According to the above table, rice and wheat are positively correlated with growth rate but the degree of correlation is very low between all of them. Production of wheat and rice are highly correlated with each other.

Table 4.2: results of granger causality test

Null hypothesis	**Obs**	**F-Stat.**	**Prob.**	**causality**
_rice does not Granger Cause **_agr** **_agr** does not Granger Cause **_rice**	18	0.67148 2.77582	0.5278 0.0991	No causality
_wheat does not Granger Cause **_agr** **_agr** does not Granger Cause **_wheat**	18	0.55406 0.57374	0.5876 0.5771	No causality
_wheat does not Granger Cause **_rice** **_rice** does not Granger Cause **_wheat**	18	0.68349 2.25889	0.5221 0.1439	No causality

Agr = agrarian growth rate

According to the above table, there is no causality present between all the variables.

Results and conclusion

In Haryana results show a very low degree of positive correlation between rice and wheat production with agrarian growth rate during the time span 2000-01 to 2019-20. But rice and wheat are highly positively correlated with each other. Results of granger causality test shows absence of causation between variables. The initiative has been taken by the government of the state like crop diversification, crop insurance scheme; soil health management, water management, seed certification and national food security mission are very good for the farming sector. Haryana state must focus to improve productivity, agro food processing and income. This study is helpful for further studies related to production of various crops. If we want to check causation and comparative analysis between all the major crops with the agrarian growth of the state Haryana, this study must be helpful.

References

1. *https://dbie.rbi.org.in*
2. *Singh, A., & Singh, J. (2017). Agricultural scenario and issues: A study of Punjab and Haryana. International Journal of Research in Economics and Social Sciences, 7(07), 422-430.*
3. *www.esaharyana.gov.in*
4. *Yadav, D., & Wati, L. (2020). Impact of zero tillage on rice-wheat cropping systems in Haryana. IJCS, 8(3), 1163-1166.*

A study on Rural Development in Wetland Regions- Special Reference to Kuttanad in Kerala

Thomas K. C.
Assistant Professor, Department of Economics, St. Stephen's College, Uzhavoor, Kottayam, Kerala.

Abstract:

Riverside wetlands have been recognized as valuable and most suitable for food production. India having 68.8% of the rural people (Census 2011) are living with subsistence farming and experience seasonal and disguised unemployment. The slow growth of new jobs compared with large work force exerts pressure on rural youth. Sustainability of ecosystem and the rural people who depend on wetland resources for their livelihood are equally significant. This study focuses on the changing socio- economic status of Kuttanad wetland community in Kerala. Though 73.3% of the respondents depend on paddy for their livelihood, fails to meet a decent living. Moreover, regular environmental shocks are additional risk of uncertainty of life in the region. The study recommends the Livelihood diversification through local community participation is necessary to reduce the rural and environmental vulnerability of wetland community.

Keywords: Kuttanad, Wetland, livelihood diversification, Paddy.

Introduction

From the very early days of settled cultivation, riverside wetlands have been recognized as valuable and most suitable for food production. This is due to the fact that they have very fertile soils as a result of regular sediment deposition during floods. Wetlands carry water either at the surface or within the root zone, seasonally or permanently. They have unique soil conditions that differ from adjacent uplands, and they usually support vegetation adapted to the wet conditions (hydrophytes) and, conversely, are characterized by an absence of flood-intolerant vegetation (Mitsch and Gosselink). Though, wetland protection is officially a priority for the 159 nations (as of 2009) that have ratified the Ramsar Convention. Wetlands continue to be under threat of being drained and reclaimed. Based on the expected growth of the world population in the next 25 years, it is estimated that the demand for food products will increase by 50 percent by 2030 (Hassan *et al*., 2005). Wetlands serve a number of vital functions: of the most important wetland ecosystem services to human wellbeing the supply of water, rice and fish comes first. Competition for land uses and the societal demands for urbanization and development have exacerbated the pressures on wetlands (Hassan *et al*., 2019). India having 68.8% of the rural people (Census 2011) are living with subsistence farming and experience seasonal and disguised unemployment. The slow growth of new jobs compared with growth rate of work force in the rural sector exerts pressure on rural youth. In this context, the sustainability of the rural people who depend on wetland resources for their livelihood and the sustainability of the ecosystem on which it depends are equally significant.

Rationale of the Study

Water and Wetlands play a critical role for the rural poor as sources of health, livelihood and economic prosperity. Rural poverty is often rooted in lack of access to as well as control over natural resources. According to a study conducted by SACON (1990), the country has lost 38 percent of its wetlands within just a decade. This has happened because wetlands are often considered not directly productive and they are given priority for reclamation for any starting any kind of development projects. The extensive reclamation of water bodies including wetlands, results in irreparable loss of habitat for many species of fish leading to sharp decline in the nutrition level and earnings of local people. It is necessary to make urgent intervention for sustainable management of the wetland resources. Kuttanad is the major wetland region in Kerala, well-known for its paddy fields and waterways. Traditionally, rice cultivation in Kuttanad has been a labour-intensive activity in fields that lie under water for a major part of the year. Kerala's rice fields can therefore be classified as 'agronomically managed wetland ecosystems'. Apart from rice cultivation, people use wetlands for other livelihood activities like animal husbandry, duck rearing, fish farming, recreational activities, transportation, and tourism promotion. By exploiting such opportunities the farmers used to find additional income, especially during periods when farming cannot be carried out. The people of Kuttanad are presently exposed to serious environmental pollution which threatens their health. Incidences of communicable diseases are very frequent. For transportation people depend on localized water ways. To reach distant places ordinary people have to depend on government-run boat service, which is inadequate and irregular. This study addresses the wise use of wetlands through a case study of Kuttanad in Kerala, and highlight how the wetland resources benefitted the livelihood enhancement of rural people of Kuttanad.

Objectives

The study aims to examine the changing socio- economic status of Kuttanad wetland community in Kerala.

Methodology

The present analysis is made on the basis of Primary and Secondary data. Primary data have collected from 360 households by stratified random sampling using interview schedules. Information also retrieved through scientific observation and participatory discussions with the '*padasekhara samithi'* (Farmers group) and inhabitants of Kuttanad region in Kerala during November 2020. Secondary data is obtained from the publications. Data compiled in tables and analysed with percentages. Bar diagrams and pie diagrams are also used.

Wetlands in Kerala

Kerala is located on the southernmost tip of India and embraces the coast of Arabian Sea on the west and is bounded by the Western Ghats in the east extending from 8^0 17' and 12^0 48' north latitude and 74^0 51' and 77^0 20' east longitude. Tthe total area of Kerala is 38, 863 sq km. and 1762 wetlands have been delineated.

Table: 1 Area estimates of wetlands in Kerala (Area in ha.)

SL. No	Wetland Category	Number of Wetlands	Total Wetland Area	% of wetland area
	Inland Wetlands - Natural			
1	Lakes/Ponds	3	2643	1.65
2	Riverine wetlands	18	410	0.26
3	Waterlogged	922	20305	12.64
4	River/Stream	172	65162	40.58
	Inland Wetlands -Man-made			
5	Reservoirs/Barrages	39	26167	16.29
6	Tanks/Ponds	439	2435	1.52
	Total - Inland	**1593**	**117122**	**72.93**
	Coastal Wetlands - Natural			
7	Lagoons	39	38442	23.94
8	Creeks	19	80	0.05
9	Sand/Beach	111	2354	1.47
	Total - Coastal	**169**	**40876**	**25.45**
	Sub-Total	**1762**	**157998**	**98.39**
	Wetlands (<2.25 ha), mainly Tanks	2592	2592	1.61
	Total	**4354**	**160590**	**100.00**

Source: Space Applications Centre (ISRO), Ahmadabad and Kerala State Remote Sensing & Environment Centre, Thiruvananthapuram, February 2010.

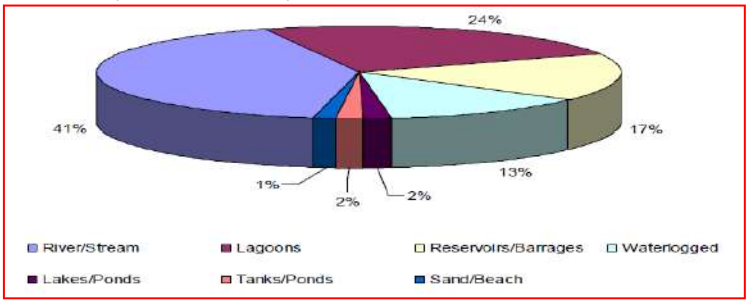


Figure: 1 Type-wise wetland distribution in Kerala

Total wetland area estimated is 160590 ha (Table 1). The major wetland types are River/Stream (65162 ha), Lagoons (38442 ha), Reservoirs (26167 ha) and waterlogged (20305 ha). Graphical distribution of wetland type is shown in the figure-1.

District-Wise Distribution of Wetlands

The state has fourteen districts. District-wise distribution of wetlands showed that four districts can be called as wetland rich. Alappuzha has highest concentration with 26079 ha area under wetland. This is mainly due to the location of the famous Vembanad kol wetland.

Table-2 District-wise wetland area

Sr. No.	District	Geographic Area (sq. km)	Wetland Area (ha)	% of total wetland area
1	Kasaragod	1961	7561	4.71
2	Kannur	2997	10870	6.77
3	Wayanad	2132	3866	2.41
4	Kozhikode	2345	7690	4.79

5	Malappuram	3548	9511	5.92
6	Palakkad	4480	11892	7.41
7	Thrissur	3032	13285	8.27
8	Ernakulam	2408	25065	15.61
9	Idukki	4998	10655	6.63
10	Kottayam	2204	9523	5.93
11	Alappuzha	1256	26079	16.24
12	Pathanamthitta	2731	4948	3.08
13	Kollam	2579	13703	8.53
14	Thiruvananthapuram	2192	5942	3.70
	Total	**38863**	**160590**	**100**

Source: Space Applications Centre (ISRO), Ahmedabad and Kerala State Remote Sensing & Environment Centre, Thiruvananthapuram, February 2010.

Socio-Economic Status of Kuttanad

In the past few decades, paddy cultivation has become highly uneconomical in Kuttanad. The cost of cultivation has increased tremendously. The required labour force has become scanty, and the cost of labour has become quite high. Many of the enterprising farmers have left the place, and their fields are either remaining fallow or are given to others on a lease. As per a rough estimate, more than 50 per cent of the paddy cultivation in Kuttanad is carried out on leased land. Farming on the lease has its ecological impact. Those who cultivate on leased land are least interested in land protection methods or environmental stability but are focusing on the maximum yield at any cost in each crop season. The application of chemical fertilizers are contaminating the cultivated fields and the entire wetlands of Kuttanad.

Economic Status of Households

Primary data collected from the Kuttanad reveals that there is a transition in the social and economic life of the region. Though majority of the households depend paddy farming as their main livelihood, it is insufficient to meet the annual expenditure of the family. Table: 3 show that 73.3% of the household head depend on paddy for their livelihood. Salaries people (3.3%) are comparatively least number. Table-4 reveals that 37.8% of the family in the study area are having monthly income between five thousand and ten thousand. Only 1.1% are having a monthly income above fifty thousand.Table:5 points out that that paddy farmers are comparatively marginal, small and semi medium farmers with less than 4 hectares of operational holdings of land. Only 6.7% households possessed more than 10 hectares of operational holdings of paddy.

Economic Status of Family

Table: 3

Occupational status of family head	*Frequency*	*Percent*
Paddy Farmer	264	73.3
Agriculture and allied activities other than paddy cultivation	24	6.7
Petty business & Self Employed	32	8.9
Salaried	12	3.3
Pensioner	28	7.8
Total	360	100.0

Table: 4

Monthly income of head alone	*Frequency*	*Percent*
Below Rs.5,000	80	22.2
Rs.5,000-Rs.10,000	136	37.8
Rs.10,000-Rs. 25,000	96	26.7
Rs.25,000-Rs.50,000	44	12.2
Above 50,000	4	1.1
Total	360	100.0

Table:5

Operational holdings of paddy land	*Frequency*	*Percent*
Marginal	146	40.6
Small	78	21.7
Semi medium	80	22.2
Medium	32	8.9
Large	24	6.7
Total	360	100.0

Source: Primary Data

Experience of Environmental Shock

As the waterlogged, wetland paddy zone, the primary environmental challenge in Kuttanad is that of flood and water pollution. Lack of waste management systems along the rivers in the upstream regions also causes flowing down of the entire waste of all those towns to reach Kuttanad regularly. As a result, the entire Kuttanad now remains the waste-basket of central Kerala. Kuttanad is an environmentally vulnerable spot and the people often experience its shock every year. Table: 6 and Figure-1 reveals the Properties affected due to environmental shock in the study area. Submerging residence, loss of Labour days, pollution of nearby Pond/well, Loss of crops, Loss of household durables, effect on transportation etc are the major issues experienced by environmental shock in a regular manner.

Table: 6

Properties affected due to environmental shock	***Yes***	***Percent***	***No***	***Percent***
Human casualty	0	0.0	360	100.0
Submerged residence	296	82.2	64	17.8
Loss of household durables	228	63.3	132	36.7
Loss of labour days	260	72.2	100	27.8
Livestock	184	51.1	176	48.9
Loss of crops	248	68.9	112	31.1
Pond/well polluted	252	70.0	108	30.0
Septic tanks	212	58.9	148	41.1
Affected transportation	216	60.0	144	40.0
Stay at relief camps	104	28.9	256	71.1
Loss of fish farms	80	22.2	280	77.8
Extra medical expenses	8	2.2	352	97.8

Source: Primary Data

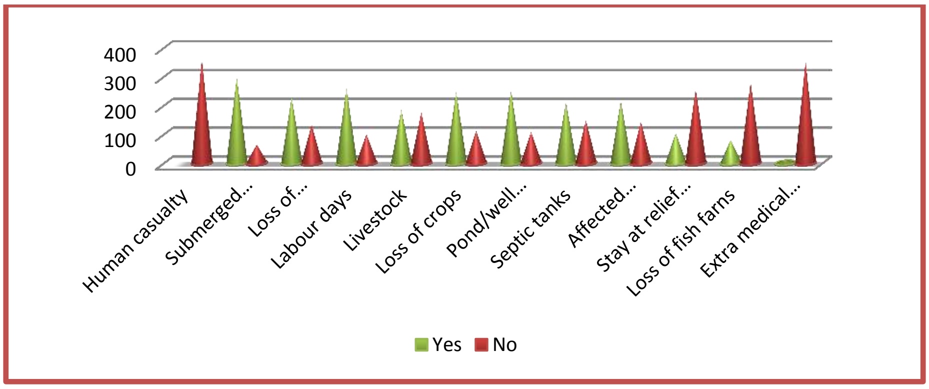


Figure: 2 Properties affected due to environmental shock

Proximity to Wetland

Figure-3 shows that about 93 % of the respondents are having wetland proximity to their residence. Only 7% of the respondents are not having wetland proximity. Table-7 denotes that the wetland resources are productively benefitted by 82.2% of the respondents and 17.8% of the respondents are not having any livelihood options from the wetland resource from their region.

Do you have livelihood options using wetland resources?	***Frequency***	***Percent***
Yes	296	82.2
No	64	17.8
Total	360	100

Table:7 *Livelihood options using wetland resources*

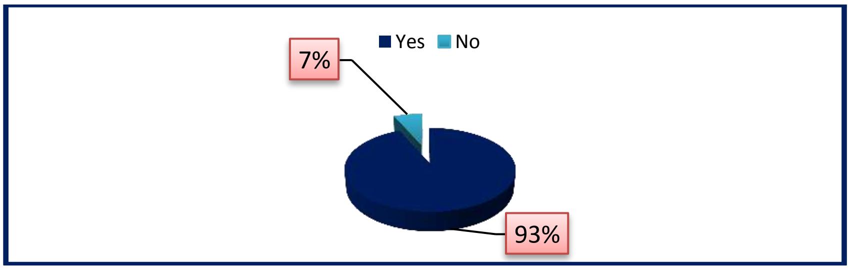


Figure: 3 Whether the household has a proximity to wetland

Conclusions

The presence of Vembanad lake makes Kuttanad (Alappuzha, Kottayam and Pathanamthitta districts) under wetland region. Though Food security in the state of Kerala is partly ensured with farming operations in this region, paddy farming fails to meet a decent living. Subdivision and fragmentation of holdings together with increased cost of cultivation made the paddy farming uneconomic and they do not enjoy the benefit of economies of scale evident from the operational holdings of land. Moreover, the inhabitants of the region possess a rich culture and heritage. The unique geographical and environmental settings make the life uncertain (table.6). Moreover, wise use of wetland resources, recommended by Ramsar Convention, is known to some sections of the community and they diversified their livelihood (table.7). The region and its people directly and indirectly protects the sustainability of the country as a whole and Kerala and Kuttanad in Particular. This study calls attention to the wise use of wetland resources and to enhance the livelihood diversification of the people and ensure their sustainable living.

Recommendations

Though Kuttanad is environmentally vulnerable, it offers a significant scope for the sustainability of the region through wise use of wetland. Paddy farming needs to be protected at any cost as it ensures food security and flood control in the region. Cooperative farming and consolidation of holdings need to be promoted to get the benefit of economies of scale. The risk of uncertainty of life in the region shall be shared by the entire country by ensuring royalties to the Kuttanad community as they preserve the rich biodiversity of the country. Livelihood diversification through local community participation is necessary to reduce the rural and environmental vulnerability of wetland region. Moreover, the wise use of wetland resources shall be the wise policy of the policy makers.

References

1. *Mitsch, W. J., & Gosselink, J. G. (2000). The value of wetlands: importance of scale and landscape setting. Ecological economics, 35(1), 25-33.*
2. *Hassan, A. N., Awad, S., & Muthukumarappan, K. (2005). Effects of exopolysaccharide-producing cultures on the viscoelastic properties of reduced-fat Cheddar cheese. Journal of dairy science, 88(12), 4221-4227.*
3. *Hassan, S., Olsen, S. B., & Thorsen, B. J. (2019). Urban-rural divides in preferences for wetland conservation in Malaysia. Land Use Policy, 84, 226-237.*
4. *INDIA, P. (2011). Census of India 2011 provisional population totals. New Delhi: Office of the Registrar General and Census Commissioner.*
5. *Gupta, B. Sálim Ali Centre for Ornithology and Natural History (SACON).*
6. *Space Applications Centre (ISRO), Ahmadabad and Kerala State Remote Sensing & Environment Centre, Thiruvananthapuram (2010). NATIONAL WETLAND ATLAS: KERALA.*
7. *Sustainable Rural Livelihood: Practical concepts for the 21st century by Robert Chambers and Gordon R. Conway (December 1991).*
8. The Ramsar Convention (1971), Scoones, I. (1998) Sustainable Rural Livelihoods: A Framework for Analysis, IDS Working Paper 72, Brighton: IDS

'Journal of Research & Development'
A Multidisciplinary International Level Referred and Peer Reviewed Journal, Impact Factor 5.13, ISSN: 2230-9578, April-2021,
Volume-11, Issue-8 "Recent Trends in Social Sciences"

Characteristic features of Yakshini statues of Jainism

Dr. Somnath D. Kadam

Head,Department of History, , Kankavli College, Kankavli, Sindhudurg (M.S.)

Abstract

Jainism is the unofficial branch of Indian philosophy which is more ancient than Buddhism. Jainism and its various statues and monuments have an important place in ancient Indian religion, sculpture and architecture. In particular, Jainism and culture have contributed to the development of Jain architecture and sculpture. Sculpted cavities, Viharas and temple architecture as well as worship centers of Jainism, as well as impressive evidence of sculpture are found in all regions of India. Like Buddhism, Jainism also does not accept the validity of the Vedas and Varnadharma and is sympathetic to all sects. It teaches moral religion and advocates rigorous penance and moderation to be free from the cycle of birth and death. In later times, there were two sects of Jainism - Svetambara and Digambar. Jainism is more ancient than Lord Mahavira. Some believe Jainism to be as ancient as the Vedas. A total of twenty-four Tirthankaras are considered in Jainism, the consecration of Tirthankara idols in Jain temples is in seniority order. When more than one statue is installed, the main statue is called the original hero, which is located in the middle of the other Tirthankara statues. Rishabhanath, Suparshvanath and Mahavir are considered to be the main protagonists. The group of these three Tirthankaras is called Tritirthanka while the group of twenty-four Tirthankaras is called Chaturvinshati. The Tirthankara statues began to be embellished with Dharmachakra, Chanvar, throne, Trichhatra, Prabhavali, Ashoka tree, etc. According to Jainism, twenty-two tirthankaras out of twenty-four belonged to the Ikshvaku dynasty while two others Munisubrata and Neminath are associated with Harivamsa. All the Tirthankara idols have a nearly identical design. The plot related to his birth, penance, and ultimately salvation is also almost identical. Yakshini is the female attendant of the Tirthankaras.

Objectives

1. to know the statues of statues of these statues.
2. to focus the Jain **Stutus** by classical point of view.
3. to find out the nature of jain Art and Architectures

Hypothesis

1. The influence of Brahmin religion is clearly reflected by their names and symbols.
2. Yakshini is the female attendant of the Tirthankaras.
3. Along with the tirthankaras, independent statues of their Yaksha-Yakshanis have also been found.

Primary and secondary tools have been used for the historical study of the subject presented. The number of Yakshini statues in Jainism is 24. She is the goddess of knowledge. Apart from this, Jainism A Shrutadevi or Saraswati has also been added to it which bears a resemblance to the Goddess of the Brahmin religion of the same name and is considered to be the representative of the sixteen goddesses. His description reminds of the Brahmani who holds the book in the same hands as Brahma. In Jainism, it has been disclosed for the protection of the Tirthankaras.

Chakreshwari

They are performed with the first Tirthankara, Ribha Nath. Their similarity is established with Vainavi. Their vehicle is a vulture. Dhanu, arrow, thunderbolt, loop, chakra, mace and varadamudra are performed in the hands of Atabhuji Devi. In the Digambar tradition, there is a law to display this goddess in the form of Chaturbhuji or Dwadshbhuji.

Ajitbala / Rohini

This second pilgrimage is the rule of Ajitnath. They are also called as Rohini. In the Digambar tradition, his vehicle is the iron bench, while in the Svetambar tradition, there is an increase. In the hands of this Chaturbhuji Devi, the display of loop, Jambhar, Dand, Varadmudra (Svetambara) or Varadamudra, Abhayamudra, Shankh, Chakra (Digambar) is performed.

Distance or intelligence

Tirthankara Sambhavnath's Sasanadevi, while in Digambar tradition is called Prajnapati. In the Svetambara tradition, it is said to be derived from Saraswati and has also been described as the wife of Agni. Their vehicle is sheep. Varadamudra, Akshamala, fruit and Abhayamudra should be performed in the hands of Chaturbhuji Devi. Kuthar, Ardha Chandra, fruit, sword and Varadmudra should be displayed as their ordnance.

Thunderbolt / Black

It is called Kali in the Svetambara tradition. She is also Yaksini as well as Vidya Devi. In the Digambar tradition, his vehicle is called the vehicle, while in the Svetambar tradition, the Padma Pupa is displayed as a vehicle. One hand of this Goddess is displayed in Varadamudra and in other hands the loop, serpent and dand (Svetambara) or snake, fruit, loop and Akshamala (Digambar).

Mahakali / Purusadatta

She is the reigning goddess of the fifth Tirthankara Sumatinath. In the Digambara tradition, they are called Purudatta. is. His vehicle is the Padma in the Svetambara tradition and the Gaja in the Digambar tradition. According to the Svetambara tradition, Varadamudra, Pasha, Jambhar and Danda are displayed in their hands while Chakra, Vajra, Fruit and Varadamudra are performed in Digambar tradition.

Achyuta / Shyama

Tirthankara is the reigning goddess of Padmaprabha. In the Digambar tradition, they are also called Manowega. In relation to them, it is believed that they originated from Achyuta or Vishnu. These are displayed in quadrilateral form. Their vehicle is considered to be Manuya (Svetambara) or Ashava (Digambar). Varadamudra, Veena, Dhanu and Abhayamudra should be performed in the hands of the Goddess created in the Svetambara tradition, while in the Digambara tradition, Dhanu, Javelin, fruit and Varadamudra should be performed.

Shashan Devi

Shashan Devi of the seventh Tirthankara Suparshvanath is called Shanti in the Svetambara tradition and Kati in the Digambara tradition. The vehicle of this goddess is Gaja (Svetambara) or Vrhabha (Digambar). Varadamudra, Akshamala, Shool and Abhayamudra (Svetambara) or Varadamudra, Trishul, Fruit and Ghanti (Digambar) should be performed in the hands of Chaturbhuji Devi. This Yakshini is accepted as the wife of Mathang and is also included under Vidya Devi.

Bhrkuti / Jwalamalini

Chandasrabha's Sasanadevi is known as Jwalamalini in the Digambara tradition. In the Svetambara tradition, their vehicle is a cat and in the quadrilateral form of the sword, punishment, spear and ax, while in the Digambar tradition, the law of displaying them in the form of the intricate chakra, loop, bow, arrow, sword and shield is.

Sutari / Mahakali

Pushpadanta's Sasanadevi is called Sutari in the Svetambara tradition and Mahakali in the Digambar tradition. Its vehicle is Vribha (Svetambara) or Tortoise (Digambar). In the hands of Chaturbhuji Devi, Akshamala, Kalash, Dand with one hand is performed in Varadmudra (Svetambara) or Varadamudra, Vajra, Dand and Fruit (Digambar) is performed.

Ashoka / Manvi

Shashan Devi of Tirthankar Shitalnath is called Ashoka in the Shvetambara tradition and Manvi in the Digambar tradition. The vehicle of this Chaturbhuji Devi is Padma (Shwetambar) or Sukar (Digambar). One hand is always in Varadmudra while the other hand should have loop, fruit and punishment according to the Svetambara tradition. At the same time, in the Digambar tradition, there is a law to display fruits and bows etc.

Gauri / Manvi

The reigning goddess of Shreyansnath is called Manvi (Shvetambara) or Gauri (Digambar). The origin of this Chaturbhuji Devi is believed to be from Shiva's wife Uma. In the Svetambara tradition, his vehicle is the lion and in the Digambar tradition is the antelope. One hand is always in Varadmudra while the other hand is displayed Dand, Kalash and Ankush (Shvetambara) or Dand, Padma, Kalash (Digambar).

Silver / Garuda

The reigning goddess of the 12th Tirthankara Vasupujya in the Shwetambara tradition and Chanda in the Digambara tradition

Garuda says. Their vehicle is Ashwa (Shwetambar) or Makara (Digambar). One hand of this Chaturbhuji Devi is also always displayed in Varada posture while in the other hands the spear, flower and dand (Shvetambara) or dand and two Padma (Digamber) are displayed.

Vairoti / Vijaya

The reigning goddess of Vimalnath is called Vijaya (Shvetambara) and Vairoti (Digambar). According to the Shvetambara tradition, their vehicle is a snake in the Padma and Digambar traditions. The bow, arrow, loop and snake (Svetambara) in the hands of this quadrilateral goddess and bow, arrow (digambar) with two snakes should be performed

Curb / Anantamati

The reigning goddess of Anantnath is called Ankush in the Shvetambara tradition and Anantamati in the Digambar tradition. His vehicle is Padma (Svetambara) and Duck (Digambar). According to the Shvetambara tradition in the hands of this Chaturbhuji Devi, the sword, spear, ankush and loop and bow, arrow, fruit and varada mudra should be performed in the Digambara tradition.

Kandarpa / Mansi

Mansi, the reigning goddess of Dharmanath, is also known as Kandarpa in the Shvetambara tradition. In the Svetambar tradition, their vehicle is horse or fish and there is a law to display one hand in Abhaya mudra in quadrilateral form and Padma and Ankush in the remaining three hands. It is instructed to be Ashtabhuji. 69 Padma, bow, arrow, ankush and Varada mudra should be performed in his hands.

Nirvani / Mahamanasi

The reigning goddess of Shantinath has been called Nirvani in the Shvetambara tradition and Mahamanasi in Digambar. Mahamanasi also means the goddess of learning. Therefore, his relationship with Saraswati has been stated. His vehicle is Padma (Shwetambar) and Mayur (Digambar). The book, Padma, Kalash and Padmakalika (Shvetambara) or Chakra, Fruit, Sword and Varada Mudra (Digambar) are performed in the hands of this Chaturbhuji Devi.

Bala / Vijaya

The reigning goddess of Tirthankara Kunthunath has been called Bala (Shvetambara) and Vijaya (Digambar). The vehicle of this Chaturbhuji Devi is a peacock in the Shvetambara tradition or a Varaha in the Digambara tradition. Jambhar, Javelin, Musandi, Padma (Shvetambara) or Shankh, Talwar, Chakra and Varadamudra (Digambar) are performed in the hands of this goddess.

Earth / Star

The reigning goddess of Arnath has been called Dharni in the Shvetambara tradition and Tara in the Digambar tradition. Their vehicle is Padma or Duck. Jambhar, Padma and Akshamala should be performed in the hands of Chaturbhuji Devi according to the Shvetambara tradition, while the Snake, Vajra, Harina and Varadamudra should be performed according to the Digambara tradition.

Dharanipriya / Aparajita

The reigning goddess of Mallinath has been called Dharanipriya (Shvetambara) and Aparajita (Digambar). The vehicle of this Chaturbhuji Devi is described as Padma in the Shwetambar tradition and the lion in the Digambar tradition. In the Svetambara Sampradaya, one hand is always in Varadmudra while in the other hands Jambhar, sword, shield and Varadamudra are performed in the Akshamala, Jambhar, Shakti or Digambara Sampradaya.

Nardatta / Polymorphic

These Tirthankaras are the reigning goddesses of Munisubrata who have been called Nardatta in the Shvetambara tradition and Bahurupini in the Digambara tradition. The vehicle of Chaturbhuji Devi has been described as Bhadrasana (Shvetambara) and Kala Snake (Digambar). One hand of this Goddess is always displayed in Varadmudra and in other hands the Akshamala, Jambhi and Trishul Kalash (Shwetambara) and sword, shield, fruit and Varadamudra (Digambar) are displayed.

Gandhari / Chamunda

The reigning goddess of Tirthankar Naminath is called Gandhari (Shwetambar) and Chamunda (Digambar). is. According to the Svetambara tradition, the vehicle of this Chaturbhuji Devi is a duck and their ordnance should be displayed in Jambhar, sword, spear and one hand Varadmudra whereas according to Digambar tradition the vehicle of this goddess is dolphin fish and in their hands is Akshamala, Dand, Talwar. And the gradient is performed .

Ambika / Amra

The reigning goddess of Tirthankara Neminath is known as Ambika (Shvetambara) and Amra (Digambar). According to the Shwetambar tradition, the goddess of this goddess is the lion and the mango fruit, loop, baby and goad should be performed in the hands of Chaturbhuji Devi, while in the Digambar tradition only mango and baby in the lap are performed.

Padmavati

The reigning goddess of Tirthankara Parshvanath is Padmavati, whose vehicle has been described as snake or poultry (Shvetambara) and Padma (Digambar). The quadrangular statues of this goddess are more found in whose hands there is a law to display Padma, loop, fruit and Ankush (Shvetambara) and Ankush, Akshamala and two Padmas. In the Digambar tradition itself, the figurines of its conspiracy and quadrangular arms are also found. The loop, sword, spear, half-moon, mace and punishment are displayed in the hands of conspirators.

Siddhayika

Vardhman is the reigning goddess of Mahavira, Siddhayika. The vehicle of this Chaturbhuji Devi is Leo. The Goddess's hands display the Ordnance Book, Abhaya Mudra, Jambhar and Bansuri.

Summary

The temple is famous for its architecture and virility and idols for its unique beauty, charm and adornment. Oil stools probably did not develop until the Kulana period, and neither the Yaksha and Yakshini statues were with them. But Ambika Yakshi's idol is an exception. The performance of Yaksha-Yaksini idols with the Tirthankara statues began in the Gupta period, but the performance of the attendants and affiliation with the Tirthankaras was not determined until the Gupta period. The performance of Gandharvas and pastures was common in this period. They are armed with paramilitary weapons. Many Yakshas are also known as Vidya Devi and the symbols of these Vidya Devi are influenced by the Goddess.

References

1. *Jaiswal, Vidularu: The outline of the ancient phase of Indian history; Old Age Delhi, 1987.*
2. *Jaiswal, Center for Nonviolence, 1957; April, May.*
3. *Guptas Parameshwari Lalru Gupta Empire, Varanasi 1963.*
4. *Gupteye Arsenrew Iconography of Hinduism Buddhists and Jains Bombaye 1980.*
5. *Declared Amalandaru Jain Art and Architecture Indian Jnanpith, New Delhi 1975.*

Innovative Practices and Reforms in Higher Education

Dr. Shakuntala Mane
Savitribai Phule Pune University, M.M. College, Pune, HoD, Department of Economics

Introduction

Education has always been an area of importance in the society, through generations we have been listening and practicing. Education is extremely important for the development of a Nation. Higher Education plays an important role in the social - economic growth co and development of any country; higher educational institutions provide the necessary trained and educated manpower required for the growth and development of a Nation.

Objectives of the Higher Education Sector:

The Objectives of the Higher education include hit Improvement of the teaching - learning - research process with a view to ensure that the employability of the students is improved upon and the entire process is made an interesting experience for the students and these further take into account the interests/ aspirations of the other shareholders in the process. Some specify the objectives of such teaching - learning process as:

- To increase their conceptual and analytical knowledge and skills about individual, interpersonal, group and intergroup behavior in complex organizations and to manage the environment under the industrial / business scenario.
- To increase awareness of one's and others assumptions, motivations' and values regarding workplace, interactions in ordered to enhance leadership effectiveness.
- To sharpen skills in engaging people and refining the process for using in generating and selecting from the alternatives.

The Central Government is responsible for major policies relating to higher education. The agenda of the universities in this scenario may * include opening new vistas of learning new frontiers of researching academic restructuring sharing of expertise, innovations, technology.

transfer knowledge man aliment, training, employability, entrepreneurship media / convergence and meeting social, cultural and economic challenges thrown by the forces of globalization etc.

Higher Education Scene Today:

Today our institutions have become factory of degrees only. Everybody, may it be student or the teacher running after attaining or providing degrees and not towards the knowledge.

Higher Education in India: Present Profile

We may consider the major deficiencies of higher education systems in India compared with the prevailing trends in the modern world, as follows:

- Higher education all over the world is in the university campuses, while in India, it is predominantly in affiliated colleges, many of which are small , under equipped and understaffed,
- India has nearly 25,000 colleges, 240 state universities and 39 institutions of national important and nearly 128 Deemed Universities for a country of the size of India, with more than billion population, the number of universities is too low.
- The few universities that we have, many are loaded with administrative and routine academic work because of the affiliating system and the number of affiliated college that come under them.
- Nearly ninety percent of the undergraduate students and sixty percent of the postgraduate students are in the affiliated colleges. Consequently! there is no appreciable research atmosphere. This situation is academically quite unacceptable.
- There are multiplicity of national institutions associated with the regulations of universities and college in the country with overlapping responsibilities leading to duplication and confusion (Tandon 2008)
- The examination system is outdated and stereo typed It gives more emphasis to cramming.
- The public - private partnership in the higher education in negligible.
- On almost all levels ice. faculty standards, library facilities, computer availabilities student - teacher ratio, higher education is in need for up gradation.
- 90% of the colleges and 68% universities across the country are of mediocre or poor quality.
- The dropout rate amongst ST is maximum (61 .5%) followed by SC (52.2 1 %) and OBC (50.09%)
- There is only one computer for 229 students.

Actually, the major challenge before the Indian Higher Education is now to create new strategies, policies and programs of revolutionary nature that would lead to the direction of qualitative improvement, equality, inculcation of values and commitment integration of socio - cultural nature involvement of ale people in the process of development.

Actually good governance in Higher education is to make quality the defining element of higher education through a combination of self and external quality evolution promotion and sustenance initiatives good government lays focus on the institutional development with reference to aspects - quality aspects may be abbreviated as

Q: Quest for Innovation
U: Upgradation of curriculum
A: active student support
L: leadership and Governance
I: Infrastructure
T: Teaching - learning & Evaluation
Y: Yield for research consultants and extension: Research & related activities should conduct relevant extension programs in the shape of MSS, NCC, Youth Red Cross, Red ribbon club, Legal Cell, Women Cell etc.

Participative management with open communication channels has proved to be the best option. Motivation has been identified as a major factor and its importance has been described by the statement.

Performance = (Ability + knowledge) x motivational feeling.

Participative management with open communication channels has proved to be the best option. Motivation has been identified as a major factor and its importance has been described by the statement.

i) Admission of the students.
II)introduction of various innovations like Semester System, Continuous internal Evaluation, Choice Based Credit System etc.
iii) Management of mass conducted exacerbation and timely declaration of results.
iv)Prescribing the syllabi which are job - oriented.

To bring back a congenial atmosphere in our campuses, the university teachers have to play a positive role. A total dedication arid devotion to their academic responsibilities would give the teachers strength to lead the student community on the right path. The teachers are the source of inspiration to the young wards placed under their trust. lf their moral and intellectual health is strong, there is a hope for a better future of the university system. If they allow themselves to be corrupted by the forces enumerated above, they would be sounding the death knell of education. lf Himalayas is polluted how can Ganga be pure? So measures must be taken to allow proper academic atmosphere in the any interruption to build up the character of student community so that they can become the worthy citizens of tomorrow.

Conclusion:

To complete successfully in the knowledge based economy we need best governance of higher education. We can't produce graduates for export but which can also support research in scientific field. Information technology and space based communication systems are changing the need and directions of higher education in India. There is requirement of IT to satisfy the needs of students, teachers and society related to advanced countries. Online teaching methods have to introduce in remote areas for that all scientific infrastructure should be provided. Futures administrators, planners, engineers, doctors, teachers and lawyers will be created.

References:

1. *Agarwal Paven (2009). Indian Higher Education. New Delhi: Sage Publications.*
2. *All India Council of technical education (2007).*
3. *All India Council of technical education (2005).*
4. *Govrnment of India(2010). Foreign educational institutes.*
5. *University Grants Commission (2003). Model act of formation of education of 21st century.*
6. *University News Association of Indian Universities. Vol.48 No.45*

'Journal of Research & Development'
A Multidisciplinary International Level Referred and Peer Reviewed Journal, Impact Factor 5.13, ISSN: 2230-9578, April-2021,
Volume-11, Issue-8 "Recent Trends in Social Sciences"

Study of Family Life from the Perspective of Female Members During lockdown in 2020

Dr. Chhaya D. Bhise

Assistant Professor, Smt. Ratnaprabhadevi Mohite -Patil College of Home Science for Women, Aklu.

Abstract:

Study of Family Life From the Perspective of Female Members During lockdown in Covid- 19 was undertaken with the aim to study the support available to respondents from family and relatives and to investigate pastime activities adopted by families. Forty five female respondents in the age group of 28 to 50 were selected for this research. Online survey was conducted with the help of Google forms shared personally and through WhatsApp group. Responses received during 07.072020 to 20.09.2020 were analyzed for this paper. Results of the study showed that male spouses and children were not very helping in conducting household chores where as other family members were found to be helping often in household activities. Most of the families spent their lockdown time on mobile, experimenting in kitchen, T.V. viewing, online learning, reading books, playing carom and cards.

Key words: Family, lockdown, covid-19

Introduction & Rationale: In the month of March 2020 lockdown was declared by the Indian Government for preventing spread of Corona virus. Lockdown was to prevent us from social gatherings and was aiming to maintain social distance. Lockdown was completely a new experience for this generation. Actually for successful lockdown it requires lot of co-operation at each level especially within households as presence of everyone inside, working from home , managing school and studies and even leisure time and use of digital media(Bent et al 2020) especially T.V. viewimg (Premapriya & Jeyaseelan 2020) increases burden and demands rearranging and relocating family life and allied responsibilities. Male members were never thought of being at home for so long , children had to learn online ,depart from school and other social and leisure time activities. Suddenly everyone got locked in four walls of home. Elderly, children and even working, earning young human force was also confined in home. Women and home making and family life suddenly became a heart core of life all over the country. Maids were absent and hence lots of household responsibilities were required to be shared by family members.In terms of household work, shared childcare has found to be increased dramatically (Biroli et al 2020). It threw new challenges on families to manage domestic work and tensions, maintain peace, cooperate with each other and make opportunity of lockdown as a real 'family time' for everyone. Research on this aspect is yet very limited but has shown remarkable impact on families worldwide. Efforts for documenting to which extent family members have rendered their help in managing changed family life , what strategies are adopted for spending time during lockdown are supposed to be studied and up to what extent domestic tensions affected family stability are supposed to be reviewed . In light of the above research was conducted on family life during lockdown in Covid -19 pandemic experienced in 2020.

Objectives of the research were as follows-

1. To study the support available to female respondents from family and relatives during lockdown in covid-19
2.To investigate pastime activities adopted by families during lockdown in Covid-19

Hypothesis :

1.There was lot of support available from family members in household chores in lockdown in Covid -19
2.Most of the time during lockdown was passed on mobile and T.V. viewing .

Methodology : In view of current pandemic conditions an online survey was conducted with the structured cum open ended questionnaire . It was posted personally to individuals in contact as well as was shared on groups and was personally requested to respond to it. Responses were collected in 5 point scale ranging from 'never' to 'rarely'. Total 45 responses were received during 07.072020 to 20.09.2020 and these responses were included in this study. Responses received were female participants working as well as home makers, in the age range of 28 to 50 , married and all were graduate and 34 percent belonged to joint families . Data was analyzed and results are presented as below.

Analysis and Data analysis: Results of the study are as follows -

Table 1. Support available to female respondents from the family and relatives during lockdown in covid-19

N=45

Sr. No.	Support from other family members	Often (%)	Sometimes (%)	Occasionally (%)	Rarely (%)	Never (%)
1.	Spouse	08(17.77)	02(4.41)	05 (11.11)	18(40.05)	12(26.66)
2.	Children	11 (24.44)	09 (20.00)	08 (17.77)	15(33.33)	02(04.44)

3.	Other family members	16 (35.55)	09 (20.20)	04 (08.68)	10 (22.22)	06(13.03)
4.	Relatives	08 (17.77)	14 (31.11)	11 (24.44)	05 (11.11)	07 (37.77)

Table 1 shows Support available to female respondents from the family members and relatives in household chores during lockdown in covid-19. From above table it is clear that spouse's support for household chores was very rarely (40.05) or never (26.66) available to these female respondents. Most of the male spouses were not helping their partners in carrying out household chores like cleaning, washing ,cooking , child care etc. followed by rarely by children (33.33).Instead other family members like mother-in- aw, father-in law and other members found to be helping often (35.55) in completion of household work. Relatives moral support found to be never (37.77) occasionally (24.44), sometimes (31.11) and often (17.77) available during this crises period. From this table it is very clear that lockdown increased burden on female partners with regard to managing household activities, cooking, cleaning, washing, childcare etc. Spouse and children were found to be inactive, unsupportive in managing family life. Spouses were more engaged in T.V. viewing, mobile and discussion on world covid conditions. Children were engaged in online schooling, and busy on social media and other entertainment activities. Female members were over burdened with household chores and preparing demanded dishes for family, disciplining, schooling, cleaning and taking care of overall health of everyone in the family. So hypothesis one, There was lot of support available from the family members in household chores in lockdown in Covid -19 is rejected.

Table 2. Pastime activities adopted by families during lockdown in Covid-19

N=45

Sr. No.	**Pastime activity**	**Percentage**
1.	T.V. viewing	**27(61.40)**
2.	Use of mobile	**31(70.50)**
3.	Playing carom	**11(25.00)**
4.	Playing cards	**11(25.00)**
5.	Talking with friends/ relatives	**23(52.30)**
6.	Reading books	**18(40.90)**
7.	Experimenting in kitchen	**29(65.91)**
8.	Online Learning	**26(59.10)**
9.	Knitting and embroidery work	**3(06.80)**
10.	Creative activities	**2(04.50)**
11.	Writing and watching informative videos	**1(02.30)**
12.	Playing with kids	**2(04.50)**

Table 2 Indicates Pastime activities adopted by families during lockdown in Covid-19.From above table it is clear that most of the participants spent their time on mobile **(**70.50), in experimenting in kitchen (65.91) , followed by T.V. viewing(61.40), talking with friends / relatives(52.30), online learning (59.10), reading books (40.90), and playing carom and cards (25.00). Few also found it interesting in knitting and embroidery, creative activities, watching videos etc.

Conclusion: From above study it is concluded that male spouses and children were not very helping and interested in conducting household chores and were quite uncooperative in managing family work, where as other family members were found to be helping often in household activities. Most of the families spent their lockdown time on mobile, experimenting in kitchen, T.V. viewing, online learning, reading books, playing carom and cards.

Recommendations: Following recommendations are given for further research

1. Detail study should be done with regard to changing family life scenario. 2. Research should be done on effect of lockdown on children and elderly members. 3.Effect of lockdown on gender equity should be studied

in depth 4. Lockdown and Domestic violence should be researched. 5.Effect of lockdown on children's education should be studied. 6. Work from home : a new family rearrangement should be taken for research 7. Implementing gender equality in family life : Need of men education

References:

1.Bent, E. M. (2021). The role of digital media in family life during the UK lockdown 2020. Journal of Children and Media, 15(1), 33-36.

2.Biroli, P., Bosworth, S., Della Giusta, M., Di Girolamo, A., Jaworska, S., & Vollen, J. (2020). Family life in lockdown.

3.Premapriya, M., & Jeyaseelan, M. (2020). ISSUES AND CHALLENGES OF FISHER FOLK WOMEN DURING COVID-19 LOCKDOWN: A SOCIOLOGICAL CASE STUDY ANALYSIS WITH SPECIAL REFERENCE TO PUDUCHERRY. Journal of Critical Reviews, 7(19), 3613-3617.

4.Sharma, I. (2020). COVID-19 pandemic: Some observations and a few recommendations. *Indian Journal of Social Psychiatry*, *36*(5), 19.

5.Somasundaram, J., Ganesh, B., & Anjali, A. K. (2020). RECREATIONAL ACTIVITIES OF PEOPLE TO REDUCE STRESS DURING THE LOCKDOWN-A SURVEY. *PalArch's Journal of Archaeology of Egypt/Egyptology*, *17*(7), 909-923.

A Study on Impact of Goods and Service Tax on Hotel Industry in Kolhapur Region

CS.Dr.Krishnat H.Chougale[1] Dr.Mahesh Chougule[2]
[1]Assistant Professor Finance & Accounts,CSIBER, Kolhapur
[2]Assistant Professor Accounts & Finance, Shivraj College, Gadhinglaj

Abstract
Goods and Service Tax (GST) is an indirect tax (or consumption tax) imposed in India on the supply of goods and services. It is a comprehensive multistage, destination-based tax. Comprehensive because it has subsumed almost all the indirect taxes except few. Multi-Staged as it is imposed at every step in the production process, but is meant to be refunded to all parties in the various stages of production other than the final consumer. And destination-based tax, as it is collected from point of consumption and not point of origin like previous taxes. Goods and services are divided into five different tax slabs for collection of tax -0%, 5%, 12%, 18% and 28%. However, petroleum products, alcoholic drinks, and electricity are not taxed under GST and instead are taxed separately by the individual state governments, as per the previous tax regime. There is a special rate of 0.25% on rough precious and semi-precious stones and 3% on gold. In addition access of 22% or other rates on top of 28% GST applies on few items like aerated drinks, luxury cars and tobacco products. Pre-GST, the statutory tax rate for most goods was about26.5%, Post-GST; most goods are expected to be in the 18% tax range. The study found that there is significant certain impact of GST implementation on hotel industry at Kolhapur city. The study concluded that GST in hotel industry will attract more consumers to consume hotel service and also enhances revenues to the Government.

Key Words: GST, Hotel Industry & Kolhapur City

Introduction

Rapid urbanization, growing knowledge of Western lifestyles, more people joining the labor force and larger disposable revenue are some of the components that have contributed to restaurant industry growth. As an outcome, we are waiting in queues over the weekend at most restaurants. Customers, after consuming food and other services from restaurants, they pay for it and most of us are not even aware of the components included in the bill. Many find it hard to pay attention to their food bill. Previously, we find Service Tax, Service Charge and VAT are being added over and above the food value. But after the introduction of GST, the rates are vastly different from the previous one. With effect from 1st October 2019, varied GST rate for varied type of eating outs are provided such as railway restaurant (5%), standalone restaurant (5%) standalone outdoor catering services (5%), restaurant within hotels which vary according to the room tariff (5% and 18%). It reduces the amount paid to hotels by the customers by way of tax. Under the new regime, GST brings joy for consumers and restaurant owners alike.

Rationale of the Study

GST take the service industry by storm and most of us are unaware of its implications, especially on the hotel industry Hotel industry is one of the most cripplingly taxed sectors with numerous cascading taxes (VAT, service tax, luxury tax, etc.) growing into a huge tax rate of 20-30 per cent, essentially eating away at operating costs and rising income. Even though the government has introduced the bill and set out a date for its roll-out, still it does not have enough clarity on its implementation. It is necessary for the government to provide clear guidelines as to how the accounts need to be maintained and returns to be filed. In addition, the hotel industry may have fear regarding increase in payment of taxes in future and may result in competition from Asian market. Hence, the study has been undertaken to identify the influence of GST on Hotel Industry at Kolhapur city. It identifies the pros and cons of GST implementation with respect to hotel industry.

Objectives of the Study

1. To examine the pros and cons of GST with respect to Hotel Industry.
2. To analyze the positive or negative influence of GST on Hotel Industry at Kolhapur city.

Hypothesis

H1 There is a significant impact of respondent's opinion and satisfaction towards GST implementation at Kolhapur city.

Research Methodology

This study aims to investigate the impacts of GST on Hotel Industry at Kolhapur city. The study is empirical in nature. The study collects data from 100 hotels by using structured scheduled interview method. Secondary data was gathered from books, magazines and from websites which have published the information regarding GST and its impact on hotel sector. The sampling technique adopted for the study is disproportionate stratified random sampling method. The analysis such as descriptive statistics and multiple regression analysis are applied.

Data Analysis & Interpretation

Pros and Cons of GST on Hotel Industry

Pros

- GST implementation reduces administrative steps and creates more opportunities to streamline the taxation of the economy.

- Reducing food bill taxes attracts more customers and creates revenue to the government.
- The removal of a lot of entries from the accounts book under name of various taxes leads to fasterprocessing of a transaction.

Cons

- Though the bill has been introduced by the government there is a great deal of ambiguity on its implementation. The government should provide clear guidelines on how accounts have to be compelled for maintenance and filling of returns.
- The tax bracket for luxury hotels is simply too wide.
- Small hotels need skilled assistants to work on GST. They have to bear extra charges for hiring specialist or training the old one.

Descriptive Statistics

Data Analysis and Interpretation

Scale	Mean		
	3 Star	**4 Star**	**5 Star**
GST is effective	3.73	3.59	3.62
Easy to understand	3.52	3.67	3.74
Taxation condition	3.50	3.45	3.49
Profit margin	3.63	3.37	3.37
Customer increases after GST	3.49	3.43	3.72

(Source: Primary Data)

From the above table, the mean value of 3 star, 4 star and 5 star hotels are below 4.00; which means the hotel owners have good opinion on the implementation of GST regime.

Regression

H0 There is no meaningful impact of respondent's opinion and satisfaction towards GST implementation at Kolhapur city.

H1 There is a significant impact of respondent's opinion and satisfaction towards GST implementation at Kolhapur city.

Multiple Regression Analysis

Multiple R Value	R Square Value	Adjusted R^2 Value	F Value	Standard Error	P Value
0.896	0.806	0.795	97.177	1.413	0.001**

(Source: Primary Data)

Note: **Denotes correlation is significant at 1% level.

Since the p value is less than 0.01, the null hypothesis is rejected at one percent level of significance. Hence the linear combination of opinion of respondents towards GST implementation is significantly related to their satisfaction on GST implementation (F = 97.177 and P = 0.001**).

The above table revealed that the respondents' satisfaction on GST implementation can be predicted at R2 = 0.806; which denotes that 80.4% of the observed variability in respondents' satisfaction on GST implementation can be significantly explained by the opinion of respondents towards GST implementation. The remaining 19.6% is not explained which means that the rest 19.6% of the variation of respondents' satisfaction on GST implementation is related to other variables which are not depicted in this model.

Conclusion

The study originate that there is a significant positive impact of GST on hotel industry in Kolhapur city. Hence, it was determined that the mantra of GST One Nation One Tax Policy creates a standardized price for the services offered by the hotels, provides lower tax rate and precise and easily understandable bill for the customers. These benefits increase the consumer consumption of hotels which in turn create more employment opportunities in hotel industry and also lead to enhanced revenues to the government.

Recommendation

Based on the analysis, it is clearly found that the mean value of 3 stars, 4 stars and 5 stars hotels are below 4.00; which means the hotel owners have good opinion on the implementation of GST regime. Since, GST is considered as a long term benefit for India, in future, the favoritism of GST towards hotels may subject to change positively.

References

1. *Dr. M. Subha Priya, P. P. (n.d.). An Empirical Study on Impact of GST On Hotel Industry at Chennai City. Journal of Emerging Technologies and Innovative Research.*
2. *Jonathan, 2. D. (5; September 2017). Impact of GST in hotel and restaurants. International Journal of Academic Research and Development .*

3. *Krishna, A. (n.d.). V. S. Datey (9th Edition 2019). GST Ready Reckoner. IOSR Journal of Business and Management (IOSR-JBM) .*
4. *Sharma, 1. D. (06, 2020). Impact of GST on Hotel Industry. International Journal of Psychosocial Rehabilitation , 14.*
5. *Abraham, A., & Dr. Mathew, T. (2019). A Study on the Impact of Goods and Services Tax Reform on Hotels in Kerala. International Journal of Management Studies, 6(1), 54-61.*
6. *Akshay R. Rakhunde, Dr. Priti Rai. (2019). Effect of GST in Hotel Industry (Nagpur). International Journal of Scientific Research in Engineering and Management (IJSREM), 3(10), 1-7.*
7. *Aswathy Krishna & Divya. M.S, Aashish C.I (2018). A study on GST and its effect on hotel industry.*
8. *IOSR Journal of Business and Management (IOSR-JBM), 4-5. https://taxguru.in/goods-andservice-tax/gst-impact- servicesector.html*
9. *Panwar, D & Patra, S. (2019). Impact of Goods and Services Tax on the Restaurants and Food Service Businesses in India. International Journal of Applied Business and Economic Research, 15(23), 203-213.*
10. *Poonam M. (2017). Goods and services tax in India: AN. 6th International Conference on Recent Trends in Engineering, Science and Management.*
11. *https://www.gst.gov.in*
12. *https://www.taxmann.com*
13. *https://taxguru.in*
14. *https://cleartax.in*

Impact on Human Resource Due To Covid-19

Shaikh Reshma Fazlur Rehman[1] Dr. Anant P. Jadhav[2]
[1]Research Student, Swami Ramanand Teerth Marathwada University, Nanded
[2]Associate Professor, College: N.W. College, A. Balapur, Nanded
(Swami Ramanand Teerth Marathwada University, Nanded)

Abstract

The COVID-19 pandemic is considered as the most crucial global health calamity of the century and the greatest challenge that the humankind faced since the 2nd World War. In December 2019, a new infectious respiratory disease emerged in Wuhan, Hubei province, China and was named by the World Health Organization as COVID-19 (coronavirus disease 2019). A new class of corona virus, known as SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) has been found to be responsible for occurrence of this disease. As far as the history of human civilization is concerned there are instances of severe outbreaks of diseases caused by a number of viruses. According to the report of the World Health Organization (WHO as of April 18 2020), the current outbreak of COVID-19, has affected over 2164111 people and killed more than 146,198 people in more than 200 countries throughout the world. Till now there is no report of any clinically approved antiviral drugs or vaccines that are effective against COVID-19. It has rapidly spread around the world, posing enormous health, economic, environmental and social challenges to the entire human population. The coronavirus outbreak is severely disrupting the global economy. Almost all the nations are struggling to slow down the transmission of the disease by testing & treating patients, quarantining suspected persons through contact tracing, restricting large gatherings, maintaining complete or partial lock down etc. This paper describes the impact of COVID-19 on society and global environment, and the possible ways in which the disease can be controlled has also been discussed therein

Keywords : Human Resource , Pandamic, Covid-19, prevention.

Introduction

Corona is a single stranded RNA virus that had its roots into the world from almost 60 years since its discovery in late 1960s. Corona viruses belong to the Corona viridae family in the Nidovirales order. The nomenclature of the Corona virus is named after the crown-like spikes on the outer surface of the virus structure. The virus has been infecting animals like chickens and pigs but there was no major human contraction to humans. Earlier, the allied viruses of the same family like the Severe acute respiratory syndrome coronavirus SARS-CoV in 2003, Human corona virus HCoV NL63 in 2004 HKU1 in 2005 Middle east respiratory (MERS) in 2012, have shown their outbreaks and now the novel version of this virus has presented a threat of unmatched severity. According to the classification of International Taxonomy of Viruses (ICTV) has referred this novel pathogen as SARS-CoV-2 (formerly known as 2019-nCoV) in 2019. The first case was identified in the city of Wuhan, a Chinese seafood market and since then it has been exponentially increasing with an evident human to human contact via respiratory droplets while sneezing and coughing. The mode and transmission and other related details about the virus continue to be updated in every few weeks, leading to enhanced uncertainty. During this period most of the research has been focused on understanding and preventing transmission; exploring treatment options and issues with global governance. However we think that the psychological impact of this pandemic like stress and anxiety among the general population is also a grave concern. A study from China suggesting that more than half of the participants had a significant psychological impact of the COVID-19 pandemic. Another recent study from Denmark reported psychological well-being as negatively affected. In the United States nearly half were found to be anxious as per the survey conducted by the American Psychiatric Association. The same has not been studied in Indian population systematically; except anecdotal discussions and case reports.

In Indian subcontinent, as of 30 March 2020, according to the Ministry of Health & Family Welfare (MoHFW), a total of 1071 COVID-19 positive cases (including 49 foreign nationals) were reported in 27 states/union territories. These include 99 cases that were cured / discharged, one person who has migrated and 29 deaths. Hospital isolation of all confirmed cases, tracing and home quarantine of the contacts is on-going. In India, spread of the initial disease could be traced mainly to the foreign nationals who visited the country as tourists from the disease affected countries and secondly due to the mass immigration of Indian nationals from abroad; due to the fear of infection. As the pandemic outbreak in India was on-going, the Government of India took stringent measures to limit the cases by far in that stage only, by initiating a major lockdown pan-India and also by shifting the immigrants to the special quarantine facilities prepared by the Indian Military directly from the airports and seaports for a minimum of 14 days. Community health teams were also launched to spread awareness about the chances of spread and precautionary measures that one can use to protect themselves and others.

Review Of Literature

The study has been approved by the Institutional Ethics Committee at Institute of Liver and Biliary Sciences, New Delhi (letter no: IEC/2020/73/MA04). A cross sectional survey design was decided to assess the initial psychological impact of COVID-19, (fears worries and impairment in sleep). We collected data using an online (anonymous) survey platform (Survey Monkey) as per Indian Government's recommendations to minimise face-to-face or physical interaction as citizens continue to isolate themselves at home. Potential respondents were invited through a text message, which lead them to a survey monkey page (designed by IT team at ILBS, New Delhi). All people who have registered at ILBS (2009 to present) since the inception were sent the SMS for participation in the FEEL-COVID survey.

Objective:

The objective of this paper is to know the impact on human resource due to covid-19.

Methodology:

Data is collected through secondary source from various reference books, research papers and internet.

Significance of The Study:

The current study investigated the initial psychological impact of COVID-19 outbreak in Indian population. As the disease progressed, concerns regarding health, economy, and livelihood increased day-to-day. The findings of the pandemic's impact on mental health could help inform health officials and the public to provide mental health interventions to those who are in need. This can guide researchers to plan prospective longitudinal studies for assessing treatment need. There are mental health concerns like anxiety, worries and insomnia especially after the declaration of lockdown in India on 24th March, 2020. Government of India has launched helpline numbers to provide guidance and counselling, in collaboration with different Institutes of national importance. World Health Organization has urged to take the necessary precautions to tackle the negative impact of the spread of Coronavirus on psychological health and well-being. Overall, among the 653 respondents 33.2% had significant (mild / moderate /severe) psychological impact regarding COVID-19. This finding was different from the study conducted in china by Wang et al which reported 53.8% of respondents suffered a psychological impact from the outbreak, ranging from moderate to severe among 1210 respondents. Since these findings were during the early phase of COVID-19 outbreak in the country, chances are they could have changed over time and hence, should be interpreted accordingly. In the past, during outbreaks such as 'Ebola Virus', individual and community at national and international had a major and wide spectrum of psychosocial impacts due to the sudden outbreak of the disease. It is likely that people are relating contracting the virus with a fear of falling sick, helplessness, hopelessness, stigma and even death. Providing psychological first-aid & counselling are quintessential during an epidemic. It helps in reducing the psychological distress and promoting adaptive coping strategies to deal with the situation. Despite the efforts of WHO and other public health authorities to contain the COVID-19 outbreak, this time of crisis is generating stress throughout the country , much alike its impact on the global counterparts. Constant support for mental and psychosocial well-being in different groups during the outbreak should be of highest priority. Demographic variables showcase that males had lesser psychological impact of COVID-19 outbreak as compared to their female counterpart. The impact on females was found to be statistically significant. These findings were similar in the Chinese community where females suffered a greater psychological impact of due to the coronavirus outbreak. This also corresponds to previously available extensive epidemiological literature which shows that women are at a higher risk. In our survey, physical co-morbidities were a predictor for higher psychological impact in response to the outbreak, similar to the finds in existing research. An unexpected finding was the non-statistically significance of impact of being a health care worker on psychological impact. This is contrary to existing literature [30] about them being more prone to unfavourable mental health outcomes. This could have been due to low sample size of healthcare professionals representation in the study; thus limiting generalizability of the findings.However, there are some more limitations to be considered while analysing the study results. First is the inherent design of the study like sampling technique being only restricted to people with internet access and having understanding of English; could also limit generalizability of the study. Second are the concerns of social desirability while responding to questions on mental health issues. Thirdly the study was conducted during a period of lockdown, which can have its own psychological impact and this confounder could not be addressed through the questionnaire used in the study. These issues could have caused under or over reporting in the rate of psychological impact found in the study. Since approximately 20% of the study participants had history of some liver disease, there could be a sampling bias in the study. Moreover, the questionnaire used has not been validated in Indian population earlier. But we felt the timely need of conducting this survey in order to enhance the understanding of psychological concerns and hence a separate validation was not attempted before the study.Despite the limitations, this study provides the first cross-sectional data on actual level of psychological impact among Indian community; and how mental health of people is affected during a pandemic of this nature. Online surveys (or self-administered questionnaires) have been found as an effective way of assessing problems related to mental health and this becomes a prudent method of conducting research in the period of lockdown. Since these findings pertain to the initial period of pandemic in India, a larger longitudinal study should be conducted in the current time to guide policy makers in understanding the psychological impact

Conclusion

The coronavirus epidemic has come with extraordinary, intense uncertainty. It is difficult to estimate how long and to what extent will the impact of the epidemic be on the lives of people and economy of the country. The government has to come up with a well-crafted strategy to deal with this crisis. At the national level, greater coordination is required between government agencies separately tasked with migration and health mandates. There is also a need to relook at the national migration policies, which should accommodate the assistance and protection of migrants arriving from, or faced with the prospect of returning to, the areas affected by health crises. Establishment of resilient food systems could reduce food insecurity and the pressure to return to origin among migrants. More research is required on the impact of health crises on migration, particularly in distinguishing health from other motivations to migrate

Reference:

1. *Shereen MA, Khan S, Kazmi A, Bashir N, Siddique R. COVID-19 infection: Origin, transmission, and characteristics of human coronaviruses. J Adv Res. 2020;24: 91–98. pmid:32257431*
2. *World Health organization. Coronavirus Disease (COVID-19). 2020. Available: https://www.who.int/india/emergencies/novel-coronavirus-2019*
3. *Galante O, Avni YS, Fuchs L, Ferster OA, Almog Y. Coronavirus NL63-induced Adult Respiratory Distress Syndrome. Am J Respir Crit Care Med. 2015;193: 100–101. pmid:26720790*
4. *Kanwar A, Selvaraju S, Esper F. Human Coronavirus-HKU1 Infection Among Adults in Cleveland, Ohio. Open Forum Infect Dis. 2017;4. pmid:28616442*

Rural Development in Raigad District: Case Study of Uran City

Mr. Rajkumar Dnyanoba Kamble
Assist. Prof., Veer Wajekar A.S.C College Phunde Uran - Raigad (Maharashtra)

ABSTRACT:

The Rapid population growth in Raigad District especially Uran Taluka includes a process of urbanization that has led to a change in land use patterns. Uran is one of the fastest growing regions in the region of Raigad. The population of the City increased from 22.2 percent in 2001 to 43.3 percent in the 20011 Census of Raigad District. Due to increasing human pressure the perfect sites for Land use and construction. But the area under the forest cover was rejected. It will be 30 percent in 1971 but in 1991 it was 27 percent and in 2011 it was 22 percent. This paper will learn about the impact of human growth on land use Pattern in Uran taluka.

Keywords*: Population growth, Population density, Change Land use Pattern, Uran, Raigad*.

Introduction:

Uran is located on the peninsula, flanked by Karanja Village to the south and Mora Village and port to the North. Uran has salt pans area, also one of the part of a salt manufacturing around Mumbai. The land has been under redevelopment pressure. The Uran have natural gift of beautiful wetlands were so many species of birds and reptiles, some critically endangered stay. Cause of Development of this area there is only one Wet land left which is Panje wetlands. Fishing is the main occupation in Uran is 80% of the population were engaged in fishing were the fish production of Mumbai comes from fishermen based out of the Uran district, especially the villages of Karanja and Mora. Farming is the second major occupation were 20 % of population engaged in farming. Major Crops production is Rice, that contributes to the district. Raigad is the second largest district of rice production in India.

Shipping, shipbuilding, and port support are major economic factors in Uran district. Jawaharlal Nehru Port (JNPT) is the largest container terminal in India.[10] Other container terminals in the Uran district include APM Terminals (formerly GTI) and DP World (formerly the British Peninsular and Oriental Steam Navigation Company). Salt pan owners revolted against the government decision to build a seaport,[when?] but the port has proved to be the main source of income to residents and nearby villages, as major projects and warehouses have opened nearby. The Indian Navy maintains a naval base near Mora. Due to Security reasons sea travel restrictions is imposed by the Indian Navy. The Oil and Natural Gas Corporation (ONGC) has a plant nearby. GTPS-MSEB is Asia's first power plant run by gas. Other industrial and manufacturing employers Grindwell Norton Limited, NAD. Uran is growing.

Objective:

1) To Study the Increasing Population
2) To Study the Villages which have Drastic Change.

Study Region:

The name of the city of Uran comes from the Hindu goddess Uranavati. It was named Uruvan during the reign of the fourth Pesha of the Maratha Empire. Later, the area was renamed Uran by the Portuguese and Ooran by the English. Many Indian emperors ruled over the area. In early history, this included the Maurya Empire, the Sātavāhana Empire, the Western Kshatrapas, the Vākāṭaka Empire, the Calukyas, and the Yadavas. The area around Mumbai was part of the 16th and 19th centuries under Portuguese and British rule. Maharashtra. The Uran was once the base of the famous Maratha Sarkhel (Admiral) Kanhoji

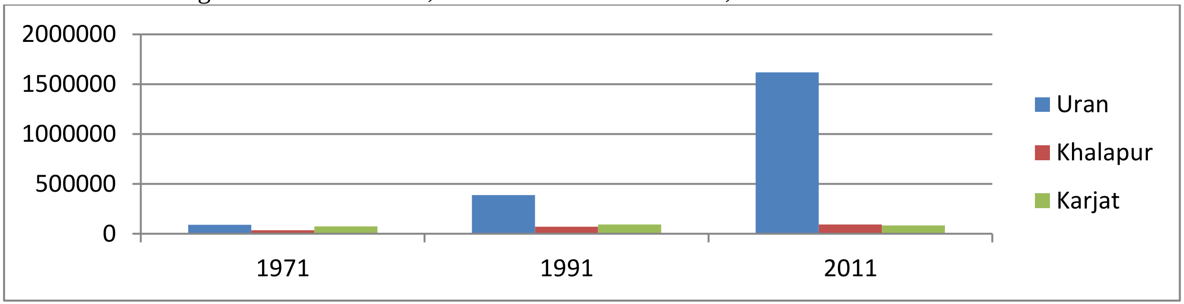
Angre, who fought against European interests in the 18th century. Uran is located at 18.88 ° N 72.94 ° E. [6] Uran has an average height of 21 meters (69 ft). At the edge of the peninsula, the region of Uran is surrounded by sea on three sides. In the 2001 census in India, Uran had a population of 23,254; this was an increase in the 2011 census to 30 439. Men make up 53% of the nation and women 47%. In Uran, 10–11% of the population is 6 years of age or younger. Iran's literacy rate has also increased, from 79% in 2001 to 82% in 2011. 2001 and 85% in 2011, and women's education was 75% in 2001 and 79% in 2011. India's national literacy rate is 59.5%

Population Growth in Study Region With Reference to others Taluka :

Population distribution and density in Study Region 1971-2011

Regions	Population			Percent of Population			Density		
	1971	1991	2011	1971	1991	2011	1971	1991	2011
Uran	**91557**	**390114**	**1616751**	**1.2**	**2.7**	**7.3**	**427**	**1821**	**7548**
Khalapur	36577	72392	93167	0.5	0.5	0.4	213	421	542
Karjat	75939	93629	84141	1	0.6	0.4	246	303	272

Source: Draft Regional Plan for MMR, 1971-1991 and 1996-2011, MM



In 1991, the population of the region dropped to 69%, expected to drop to 58% in 2011. increased from 1.2%, in 1971 to 2.7% in 1991, and is expected to increase to 7.3%, respectively in 2011. Uran. The population of the city of Iceland is expected to decrease to 39 236 and in the cities it is expected to increase to 25,578. Other regions expecting the largest congestion (over 2000) are Uran.

Villages Are a Big Change:

Nagaon, Bokadvira, and Sheva were selected as study areas from this part of taluka to understand the transformation processes taking place in the high, low and completely displaced regions. A brief description, and presentation, of each of the study villages is provided below.

1) Nagaon:

ONGC acquired 750 hectares in 1978-79 from local people and was permanently awarded Employment of about 400 local residents.

2) Bokadvira

Bokadvira is considered to be a major destination for future city development. It is strange that this city is known for its culture of struggle and resistance. Bokadvira is best described as being located in the uterus of Dronagiri and Sahyadri (Patil, 2005). The first village to receive electricity after the Uran in 1962 was Bokadvira. Respondents have suggested two possible origins of the name of this mountain village on the Uran-Panvel road, about one and a half miles from the city of Uran.

3) Sheva Village

In 1970-71 the government acquired 120 hectares of land from the Air Force on a very small scale and the rest bought the JNPT in 1985. The JNPT project relocated the entire district, the main district was resettled in Bokadvira and the Koliwada community in Bori Pakhadi along the Morora-Uran road. Sheva communities chose these areas after considering access to markets and transport facilities, including state transport.

4) Khopta Village:

The first three incoming villages were officially recognized as part of the Copper Valley until the 1980's but locally, in terms of social and economic relations, they built one town called Khopta. While Kacherpada consist suffice hamlets. A community salt shrine near the town of Khopta, which was once cultivated by the local community, has now been purchased from major salt producers who bring in workers from Gujarat. Residents of Khopta who still cultivate paddy have a strong desire to continue salt production in the area.

5) Govathane Valley:

. With very little arable land, the villagers have relied heavily on sand digging, fishing and animal husbandry for nearly two centuries. Extension of the coastal strip by approximately 100 hectares. There was a decline in employment with the number of sand dug boats in Govathane falling to 30 in the 1980s. Decreases are linked (Mhatre, 1981) to declining sand availability, introduction of mechanical dredgers and new job opportunities with increasing levels of education. Increasingly, educated young people are refusing to enter the profession because of the difficulties and dangers involved. In addition, continued involvement in this life span of 30-35 years has been found to lead to chronic eye and hearing problems. After 1990 there was some improvement in socio-economic status with JNPT and other emerging projects that provide for the employment of chiefs and Bandhpada consisting of one village each.

Changes in occupation structures:

Changes have begun to take place due to environmental changes and the pattern of employment in the area. As more and more local people try to find work in nearby courtyards and the contempt created by the new generation through activities such as farming and fishing, the workload is declining. Several respondents who had a passion for farming lamented that the previous joy of farming was over and farming became a job for older people who had no safe choices. While we were helping to thresh rice in the fields one day, one of the members pointed out that all the members working there were over 60 years old and laughed at the fact that farming is a job for adults. They younger generation had been kepta way from farming, so that they could attend. school and benefit from any opportunities thrown through forced development. However, these same small groups find the idea of farming unpopular. The plots are sometimes given to shareholders but farmers who are willing to do this have become harder to find. This is despite the fact that the principles of share allocation improve the tenant farmer. Previously the product would be divided into three parts. Salt production has also become one business as salt miners.

Occupational changes generations:

Salt is an important agricultural tool such as fertilizer and fishing as a healing agent. Fishing has also served as a critical source of fertilizer for the cultivation of northern vegetables through the supply of waste fish and dried fish. The salt panels also serve as a barrier between the seaside / river pads and the paddle by mediating the flow of water. Families have followed a number of economic activities that vary from season to season, the natural conditions in their area and the opportunities created by development activities in the surrounding areas from time to time. Community life on the northwest coast of Uran is largely determined by the food / building needs of the city of Mumbai and the development stages of the port. Families have identified themselves as sand miners, farmers or fishermen depending on their main source of income. Fishing communities contributed to the agricultural labor pool during the caliphate while the farming communities contributed to the fishing pond and the water supply to the boats of members of other communities. Changes in any sector have therefore affected each other and the relationships between communities. Livestock, fishing and home-brewed liquor were additional sources of income in the highlands. and the sea, where the arable land was scarce. Depending on the reliability of family and community services in land and sea connected services, equal participation of men and women has been demonstrated. Unemployment from 3% east of Uran. Uran on the other hand shows a sudden increase from 5 percent to 30 percent in the legal sector from the 1960s to the 1990s. This is linked to the making of profits from employment in Grindwell Norton and the absorbing of NAD and ONGC in the 1970s and 1980s respectively.

Conclusion:

The response of the people has shifted to changing regional development approaches, and has led to a change in relations with the State, the environment and with each other. The population has grown very rapidly in the past but the growth rate indicates a declining trend. The Island City, which supports one third of the population, has it. It's starting to lose people. These three regions, which grew very fast, in Uran. Uran Region experienced significant growth of 15 percent annually between 1991-2011 as the new port Nava Shevahas has started attracting more commercial activities. Its growth rate was 4 percent between 1971-91.

References:

1. *Mahatra, Dhurma Amajee and others, and. Petition complaining of increased rates of assessment by the Survey Department on their land in the Tanna Collectorate. Poona, Bombay Presidency : Unpublished petition filed with Revenue Department papers of 1867, 28September 1867.*
2. *Kharpatil, Kalu Dhaku. Community-environment history of Chirner. [interv.] Rekha Mammen. 07 March2012.*
3. *Patil, Kisan Shantaram. History of Govathane Village. [interv.] Rekha Mammen. 10 March 2012. Chainani, Shyam. Nhava & Sheva - Battling for the Environment: Oil, Ports and the Coastline. New Delhi : Academic*
4. *Raigad District Gazetteer https://gazetteers.maharashtra.gov.in*
5. *https://raigad.gov.in*

Recent Trends of Tax Planning Investment Avenues in Private and Government Salaried Taxpayers under COVID scenario

CA Sandeep Suresh Sawant2 Dr. Anant P. Jadhav2
[1]Assistant Professor, College: Chetana's H.S. College of Commerce and Economics, Bandra, Mumbai – 400051 (University of Mumbai)
[2]Associate Professor, College: N.W. College, A. Balapur, Nanded (Swami Ramanand Teerth Marathwada University, Nanded)

Abstract:
In this paper I have presented recent trends of tax planning investment avenues of salaried taxpayers from Government and Private employees under current covid Scenario where share market is highly volatile and returns on Government securities and investments are decreasing.Investors needs to study the current situation and accordingly should take decisions about their investments based on different parameters and also shall strive for tax saving.

Introduction:
The second wave of Covid infections is looking more dangerous than what the country witnessed in 2020. Share market also dropped sharply in last few weeks. Under such scenario investors in Private and Government sectors are looking for some investment avenues which will give fixed returns as well as save tax. Different Tax planning investment avenues undertaken by Government & Private sector employees are discussed in this paper.

Theme/Idea:
Available funds after satisfying our daily needs, needs to be invested very wisely under current Covid scenario. Salaried taxpayers are focussing mainly on such investment avenues whereby they will get fixed rate of return as well as tax saving. Investors are hesitating to take risk by investing in share market because due to covid impact it has become highly volatile. Investors wants to go for risk free investments.

In this paper we are studying recent trends adopted by investors from Private and Public sector taxpayer employees. Investors are aware about tax saving investments and hence they are looking for tax-saving investments. Many taxpayers are not aware of the investments and expenses are eligible for tax deduction they can take help of professional such as Chartered Accountants, Cost Accountants etc.

Some investors from Private and public sector are taking advantage of investments in Mutual funds to save tax by investing in ELSS (Equity Linked Saving Scheme). Percentage of investment in equity market and fixed interest-bearing securities is depends upon the income earned by such taxpayer, risk taking ability of such investor and age of such investor.

Now we will discuss few savings or expenses which are eligible for deduction under Income Tax Act, 1961 which are mainly adopted by investors to save tax.

Saving or Expenses	**What is eligible for deduction**
Provident Fund	Contribution to the Provident Fund
NPS	Contribution towards NPS
Voluntary PF	Additional voluntary contribution towards PF
Insurance policies, Pension plans and investment in ELSS Funds	Amount paid as a premium towards insurance policies , pension plans and investment in ELSS funds
Tuition fees	Tuition fees paid for full-time education of up to two children even playschool fees is also eligible for deduction
Interest on NSC	Compound interest which accrues on NSC in the year is deemed to be reinvested and that also can be claimed as deduction
Repayment of Home loan	The principal amount of home loan repayment under section 80C as well as interest up to Rs. 2,00,000 under section 24(b) of the Income Tax Act. Even stamp duty and registration charges paid towards purchase of house also can be claimed as deduction.

Maximum deduction as per section 80C under Income Tax Act is Rs. 1,50,000 however additional deduction for contribution towards NPS can be claimed to the extent of Rs. 50,000 under section 80 CCD (1b). Hence total investment of Rs. 2,00,000 can be made by salaried taxpayer to save tax during the financial year. These investments will give guaranteed returns and benefits of tax saving as well.

Other few Investment avenues for salaried taxpayer:

1. To inculcate investment habit among the taxpayer government has exempted interest on saving account up to Rs. 10,000 u/s 80TTA.
2. Medical insurance premium paid to cover medical expenses up to Rs. 25,000 for self and family whereas Rs. 25,000 for parents and Rs. 50,000 if they are senior citizens.
   This benefit is available u/s 80D
3. Education loan interest paid is allowed as deduction for maximum eight financial year from the year in which repayment of education loan started. The education loan can be taken for self or dependent. This deduction is allowed u/s 80E.
4. If Taxpayer does not get House Rent Allowance (HRA), he can claim lowest of the following u/s 80GG.

a) Rs. 5,000, per month
b) 25% of adjusted gross total income
c) Rent paid less 10% of basic salary

5. Donation to eligible organisations can be claimed as deduction u/s 80G , however cash donations in excess of Rs. 10,000 are not allowed as deduction.
6. Purchase of electric car also helpful in claiming deduction u/s 80EEB. Interest up to Rs. 1,50,000 paid on loan taken to purchase electric vehicle is allowed as tax deduction.
7. If Taxpayer or dependent suffers from disability then deduction can claim deduction of Rs. 75,000 to Rs. 1.25,000 depending upon the percentage of disability u/s 80U and 80 DD.
8. If Medical treatment is taken by taxpayer or his dependent for any specified disease, he can claim deduction up to Rs. 40,000 and Rs. 1,00,000 in case of senior citizens u/s 80DDB.
9. Investment made in **Sukanya Samriddhi Yojana** offers higher interest than PPF as well as tax deduction u/s 80C
10. Tax saving Fixed deposits gives low returns but contributes in tax saving u/s 80C.

After reviewing above investments avenues which are open for Private as well as Government employees to save tax and earn fixed rate of return under current Covid scenario.

Now we will analyse the priority given by the investors for investment in different investment avenues available to them.

Sr. No.	**Investment avenue available**	**Reason for High, Moderate or Low priority**
1)	ELSS Funds	High Priority -Flexibility, high returns and easy investment
2)	NPS	High Priority – Additional tax benefits and flexibility
3)	ULIPS	High Priority- Low cost, tax-free returns and flexibility
4)	PPF	Moderate Priority- Assured returns, tax free returns but low interest rates
5)	Senior Citizens' Saving Scheme	Moderate Priority- Suitable only for retired persons hence has limited scope
6)	National Saving Scheme (NSCs)	Low priority- Falling interest rates
7)	Sukanya Samridhhi Yojna	Low Priority- Offers higher interest than PPF but limited scope and restrictions
8)	Tax saving Fixed Deposits	Low Priority – Low returns but easiest way to save tax
9)	Pension Plans	Low Priority- scores poorly on cost and tax benefits compared to NPS
10)	Life Insurance	Low Priority- safe and secure option but very low returns and cost is very high

Above table gives clear idea about recent trends of salaried taxpayers towards tax saving investment avenues. I have studied ten popular tax-saving instruments on different key parameters. Priority of investors keeps on changing based on different parameters and time to time changing Government policies.

Conclusion:

Recent trends and investment habits among salaried taxpayers from Government and private sectors are changing in current Covid scenario. Investors are looking for steady and fixed rate of return without taking much risk. After investing in risk free investment, they move to equity investment to park their idle cash or excess funds. Government Sector employees have fixed income from salary but lesser compared to private sector employees hence they prefer to invest in risk free investments where returns are fixed even though low compared to other lucrative investment opportunities. Whereas in case of Private sector employees where income is high compared to Government employees hence they divide their income after satisfying their essential needs in to fixed return bearing securities and then some percentage of their income can be invested in equity market by studying the market.

References:

1) *Students Guide to Income Tax*
2) *Direct Tax provisions from Income Tax Act, 1961.*

Travelogues: As the Source of Deccan History

Dr Shaikh Musak Rajjak
Assistant Professor in History, Maulana Azad College of Arts, Science & Commerce, Aurangabad Maharashtra

Abstract
Travelogues are the fulfillment of journey of a dream from one place to another place and have the more or less experiences of the life beyond native environment. The voyages gave us the information about the socio cultural and economic life of the particular land which visited by the travelers and their accounts gave the historical data to understand the core aspects society and economy of the history of land and people. In this paper, the author focuses on the economic aspects of Bahamani and Deccan Sultanates reflected in the foreign travelogues. It is very significant facet of Deccan history in the age of space travel. In the term of methodology, the paper has been used primary and secondary sources including the translations and edited version of the travel accounts of the foreign travelers in Deccan.

The Bahamani Empire of Deccan in Foreign Travelogues:

Many foreign travelers noted the political aspects of the Deccan history during Bahamani and the five *shahis* during sixteenth and seventeenth century. Afanasii Nikitin, a native of *Tver'* in Russia came to Bahamani Deccan in sixteenth century. He had written "*Voyage Beyond the Three Seas"*, as *Khozhdenie za Tri Moria* the book on his travel in Indian Subcontinent or Deccan especially. The Russian and French translation published earlier at 1792.[1] This travel account has a relatively significant place on account of its precocity in Russian literature, for although pilgrimage accounts are known from the Kievian period, non religious or secular travel accounts only begin to appear in numbers somewhat later.[2] Nikitin laft his native town in 1466, as part of a group of merchants whose intention it was to trade with the lands of the Caspian Sea littoral, and to go as far as Shirwan. After crossing the Iran he reached to Hurmuz port for Deccan journey. During his visit to go and went back with the route of Isfahan, Yazd, Lar, Hurmuz, Masqat Port and Diu, Chaul and Dabhol port in Deccan coast. He renamed himself during the journey as Khwaja Yusuf Khorasani, by his own account. He reached to Cambay at 1469. The last paragraph begins with a prayer to "God the Protector", *Allah Parwardigar,* in his travel account. When he arrived at Chaul port of Bahamani Empire he narrated the political aspects of Deccan. He met to Asad Khan, the noble of Junner fort of Bahamani Empire. Nikitin narrated about the political aspects of the Junner during Bahamanai period. He noted two lack soldiers was under the command of Asad Khan. He noted the Vijayanagar and Bahamani conflict and military organization in his account. The Malik Asak Khan's army too big and had horses and elephants, and warriors drawn from lands to the north and the west, such as men from Khorasan, Arabs, Turkomans, and also other from the land of Central Asia. He narrated, "*Five hundred men dine with the Malik Ut Tujjar each day. Three Viziers also dine with him, and with each of them are fifty men, and hundred other lords who are bound to the malik ut tujjar by oath. He has two thousand horse in his stables, of which a thousand are kept saddled and ready day and night; he also has a hundred elephants in his stables. Each night, a hundred men in armour guard his court, as well as twenty trumpeters, twenty drummers, and men who are assigned in pairs to beat a great drum".*[3]

The reference of the Bahamani Wazir Khwaja Mahmud Gawan Gilani, who held extensive power through a good part of the reign of Muhammad Shah Bahmani (ruled between 1463-1482). He described the social and political condition of Bahamani Empire. The rulers had carried about on their silver *palankeens*, surrounded by horsemen, musicians, elephants, dancers and the linked, these great lords are in Nikitin's view mostly foreigners, and so he states, for the most part from Khorasan. The Sultan himself resides in Bidar, "their great city", and "the throne of Muslim Hindustan", where Nikitin spent some four months after his initial sojourn at Junnar. He narrated; the Sultan's palace is described in conventional terms: it has seven gates, and at each gate one finds hundred guards and hundred scribes, who take note of those who enter and leave. The Palace itself "is truly marvellous, with a good deal of sculptures in gold; the stones are sculpted and gilded in a truly wonderful fasion, and there are many vases everywhere". This was a highly militarized empire, where each night the town is patrolled by guards or *Kotwals* on horseback, and in armour, each carrying a torch; besides, the great lords such as the *Malik ut Tujjar,* Asad Khan, Nizam ul Mulk and Farhad Khan, all have extensive armed retinues that they take to war.[4]

Another example Barbosa, who was narrated the Bahamani Deccan in his account. His personal information already discussed in Chapter number one within review of the literature and early foreign travelers. The Bahamani purchased horses and elephants from Ceylon and Iranian merchants at west coast of Deccan. The Arab and Iranian merchants sells the elephants to Deccan emperor. These elephants were highly valued among the Indian rulers and Deccan rulers and used in war and labour.[5]

Qutb Shahi Deccan in Foreign Travelogues: The travelogues of three distinguished Frenchmen who visited Golconda Hyderabad of Qutb Shahi Deccan in the time of Abdullah Qutb Shah are valuable documents for the Study of the Political history of Qutb Shahi.[6] Jean Baptiste Tavernier, made his six voyage to the East and was in the Qutb Shahi Sultanate in 1638-39, 1651, 1657-58 and 1662-63. His book Travels in India, appeared in 1676, and he died at the advanced age of 85 in 1690. His account gave the political information about the court life of Qutb Shahi Hyderabad. He narrated the court of Ibrahim Qutb Shah of Golconda in his account. He also gave a clue tothe meaning of the enigmatic name of the capital and says that while Aidr Abad or Hyderabad is the official name, the general public calls it Bagnagar or Baghnagar or the Town of Gardens.[7] Jean de Thevenot was born in 1633 and was in the Qutb Shahi dominion in 1666-67. He describes the city of Hyderabad with a certain amount of exactitude, and also the way the tombs of the Qutb Shahi Rulers were kept.[8]

Thevenot narrated the soldiers of Golconda in his account.[9]

"*The King of Golconda pays above Five hundred thousand Soldiers; and that makes the Riches of the Omras, because he who has pay for a thousand Men, entertains but Five hundred, and so do the rest proportionably. He allows a Trooper (who ought to be either a Mogul or Persian) ten Chequins a month, and for that pay, he ought ot deep two Horses and four or five Servants. A Foot Soldier of these nations hath five Chequins, and ought to entertain two Servants, and carry a Musket. He gives not the Indians above two or three Roupies a month, and these carry only the Lance and Pike. Seeing the late King gave his Soliders better pay than this do's, he was far better served: He entertained always a strong Army, and the number of Men he payed was always complete. By that means he easily hindered the Great Mogul from attempting anything against him, and was not tributary to him as his Son is.*"[10]

Thevenot also noted about the old Imadshahi territory Berar, which was under the Mughal Empire during Emperor Aurangzeb. The administration of Berar under the Mughal nobles had observed by Thevenot. He also visited in the journey to Ellora caves and the Khuldabad Rawza Sufi shrines in his route to Daulatabad. The province of Khandesh is to the south of Malwa, and the Mughals controlled it under the Berar province.

"*The province of Khandesh is to the south of Malwa, and they who have reduced the provinces, have joined to it Berar, and what the Mogul possesses of Orissa. These countries are of a vast extent, Full of Population towns and villages, and in all Mogulistan, few countries are so rich as this. The memoire have of yearly revenues', makes this province yield the Mogul above seven and twenty millions a year. The capital city of this province is Burhanpur; it lies in the Twenty Eighth degree of latitude, about fourscore leagus distant from Surat. The governor thereof is commonly a prince of the blood, and Aurangzeb hath been governor of it himself".*[11]

Old capital town and fort Daulatabad was also visited by Thevenot. He noted that, Daulatabad belonged then to Deccan, and was a place of great trade and political affairs. But at present the trade and court was at Aurangabad, whither Emperor Aurangzeb used his utmost endeavours to transport it, when he was governor thereof. In the other discussion about the political scenario of Deccan, Thevenot discussed about the Goa, Bijapur and Golconda. But since the Mughal became master of the northern places of this Deccan country, and of the towns of Bidar and Kalyani, it hathbeen divided between him and the Sultan of Deccan, who is only called king of Bijapur, and it is reckoned amongst the provinces of Hindustan, which obey the Great Mughal. It was bordered on the east by the Kingdom of Golconda on Maslipatan side, on the west by the province of Baglana and Bijapur, on the north by Balaghat, and on the south by Vijaynagara. The capital town of this province is at present Bidar, which belonged to Balaghat when it had kings and it hath some time belonged to Deccan sultanate Bahamani.

Bidar was a great town; it was encompassed with brick walls which have battlements, and at certain distances towers; they were mounted with great cannon, some whereof have the mouth three foot wide. There was commonly in this place a garrison of three thousand men, half horse and half foot, with seven hundred gunners; the garrison is kept in good order, because of the importance of the place against Deccan, and that they are always afraid of a surprise. The Governor lodges in a castle without the town, it is a rich government, and he who commanded it when Thevenot was there, was brother in law to King Shah Jahan, Aurangzeb's father; but having since desired the government of Burhanpur, he had it, because in the last war, that governor had made an army of the King of Bijapur, raise the siege from before Bidar. Thevenot narrated the all aspects of noble life and the court life in Deccan that time. Thevenot also narrated the journey with governor upon the road to Bidar, who was a Persian of a good aspect, and pretty well stricken in years; he was carried in a palanquin amidst five hundred horse men well mounted and clothed, before whom marched several men on foot, carrying blew banners charged with flames of gold, and after them came seven elephants. The governor's palanquin was followed with several others full of women, and covered with red serge, and there were two little children in one that was open. The bamboos of all these palanquin, were covered with plates of silver chamfered; after them came many chariots full of women, two of which were drawn by white oxen, almost six foot high; and last of all, came the wagons with the baggage, and several camels guarded by troopers. This province of Telengana is worth above ten million a year to the Great Mughal.[12]

Thevenot was written about the capital town of Hyderabad.

"*The capital city of this kingdom is called Bhagnagar, the Persians call it Hyderabad; It is fourteen or fifteen leagues from Bijapur, situated in the latitude of seventeen degrees ten minutes, in a very long plain, hemmed in with little hills, some cosses distant from the town, which makes the air of that place very wholesome, besides that, the country of Golconda lies very high. The houses of the sububs,which is very long, and stopped near the bridge which is at the farther end of it.*"[13]

Thevenot had written about the noble life of the Golconda Sultanate. He noted the *Omras* or *Umrao* or nobles were the great lords of the Qutb Shahi kingdom, who are for the most part Persians, or the sons of Persians; they are all rich, for they not only have great pay yearly of the king for their offices, but they make extreme advantage also by the soldiers, scarcely paying one half of the number they are obliged to entertain; besides that, they have gratifications from the king, of lands and villages, whereof he allows them the use, where they commit extraordinary extractions by the Farmers. These nobles generally make a very handsom figure; when they go through the town, an elephant or two goes before them, on which three men carrying banners are mounted; fifty or sixty troopers well clothed, and riding on Persian or Tartarian horses, with bows and arrows, swords by their sides, and bucklers on their backs, follow them at some distance; and after these come other men on horseback, sounding trumpets, and playing on fifes. After them comes the nobles on horseback, with thirty or forty footmen about him, some making way, others carrying lauces, and some with fine napkins driving away the flies, one of them holds an umbrella over his master's head, another carries the tobacco pipe, and others pots full of water in hanging cases of canes. The palanquin carried by four men, comes next with two other porters for change; and all this pomp in brought up by a camel or two, with men beating of timbals on their backs. When the Nobles please, he took his palanquin, and then his horse was led by him. The palanquin is sometimes covered with silver, and its canes or bamboos tipped with silver at both ends; smoking tobacco, or else chewing betel and areca, showing by that soft and effeminate posture a most supine dissoluteness.

The Nizam Shahi of Ahmadnagar in foreign travelogues: The foreign travellers, who visited Deccan from fifteenth to seventeenth century, have described some of the political events regarding to the Nizam Shahi of Ahmednagar. One has to be very cautious in accepting their versions. *Durate Barbosa*, chiefly supplies informationon political conditions of Nizamshahi Deccan. He visited Chaul and Danda Rajapur port of Nizamshahi Deccan.[14]

Malik Ambar

Courtesy: painting collection at Dr Babasaheb Ambedkar Marathwada University: History Department Museum, Aurangabad**]**

Caesar De Frederick, the Italian traveler who visited Deccan in 1563, has left for us an interesting account of his visit. Two years after the battle of Krishna, he visited the ruined and devastated town of Vijayanagar. He narrated the Deccan sultanate party against the Vijayanagar kingdom. His account translated and published in Purchas and His Pilgrims. Sir Thomas Roe also narrated the Mughal and Deccan conflicts in his account. He visited to Burhanpur, the headquarters of Prince Parvez, who was then conducting the Mughal operations against Malik Ambar of Nizamshahi of Ahmadnagar, and Roe's subsequent visit to the Mughal court, was also very useful. Although his journal has been regarded as the principal source for the history of Jahangir's reign, nevertheless, for our purposes his account was important because of two reasons. He clearly mentioned the position of Emperor Jahangir against Malik Ambar of Nizamshahi and the all War affairs in Deccan in details.

The diaries of Ralph Fitch and William Finch, who visited Deccan in 1583, and 1608, respectively, throw very little light on the political condition of this kingdom of Ahmednagar. But their accounts are important from the political point of view. Both of them mention about the political importance of Port Town Chaul under Nizam Shahi. In a similar way that, two major war of Chaul happened at Konkan against Portuguese with Nizamshahi of Ahmednagar. In similar way, Dutch traveller John Huyghem Van Linschotten, who came to Deccan in 1584 and lived at Goa for five years mention about the trade, politics which flourished at Bassien and Chaul, the dismemberment of the Bahamani Empire and the manners and customs of the Deccan people. Dutch travellers at the Nizam Shahi Kingdom Pieter Van Den Broecke and Van Ravestyn were the most important. Little is known about the latter, whereas the former was known to be a very outstanding figure in the early history of the Dutch East India Company, which he served from 1613 onwards. In 1617 he arrived in India to establish a factory at Surat. He however suffered many reverses in life got two extensions in the appointment at Surat and then after sixteen years of service, returned to his country. There he sat down to write an account of his voyages. His diary tells us very little of his nine years residence at Surat. He has given a good and interesting account of Malik Ambar and early life of Malik Ambar in his account. Malik Ambar established *Khirkhi* town (*Fetehnagar* / *Awarangabad*) in Deccan. Also he noted the Malik Ambar's victory over the Portuguese power at Dabhol Port. Van Den Broecke's manuscript of diary is preserved in the library of the University of Lydon.[15] These extract have been published in the Journal of Indian History by Mr. Moreland during British period.

Pietro Della Valle, who arrived in Deccan in 1623 and visited Cambay, Ahmadabad, Chaul Port, Goa and many other places in Deccan. He has left Italian travel account with very interesting narratives. He also talks of Nizam Shah who derived his title from the post he held under the Bahmanai Sultan; the battle of Bhatwadi, of Malik i Maidan cannon and of the assistance which Adil Shah and Qutb Shah gave to Nizam Shahis and a little of the early life of Malik Ambar. The most voluminous writer amongst the European travelers of the seventeenth century is Nicolo Manucci, who visited 1653 in Deccan, also wrote the book, *Storio De Mogor.* He noted the Nizam Shahi of Ahmednagar and the relations with Mughals. He recorded about the Chand Bibi and Mughal conflict in short.

References:

1. Jean Yves Le Guillou, *Le Voyage Au Dela Des Trois Mers D'Afanasij Nikitin 1466-1472,* Qubec, 1978.
2. Walther Kirchner, "Teh Boyage of Athanasius Nikitin to India, 1466-1472", American Slavic and East European Review, V, 1946, PP. 46-54.
3. Muzaffar Alam & Sanjay Subrahamanaya, Indo Persian Travels in the Age of Discoveries, 1400-1800, p.87.
4. Ibid, p.89.
5. Barbosa, Volume II, PP.113-15
6. Sherwani, H.K., (1974) History of the Qutb Shahi Dynasty, Munshiram Manoharlal Publishers Pvt. Ltd., Delhi, p.695.
7. Ibid, p. 696
8. Ibid, p. 700.
9. Kaul, H.K. (1980) Travellers' India: An Anthology, OUP, Bombay, p. 229.
10. Ibid.
11. Guha, J.P. (1976) India in the Seventeenth Century,Vol. II, Associated Publishing House, New Delhi, p.120.
12. Ibid, p. 138k.
13. Ibid, p. 161.
14. Radhey Shyam (1966) The Kingdom of Ahmadnagar, Motilal Banarsidass, New Delhi, p. 409.
15. Ibid, p. 411.

Impact of Covid-19 on Agriculture Sector and Innovative Agri. Action Plans

Ganesh A. Tekale
Assistant Professor Department of Economics, Kankavli College, Kankavli. Sindhudurg

Abstract:
This paper deals with the impact of Covid-19 on the agricultural sector. The analysis is organized at the global level, but it has a specific focus on India. First, it reviews the overall food supply situation in the world and India to assess the possibilities of food crises. As the restrictions imposed due to the lockdown are being lifted, it is an opportune moment to analyze the impact of COVID-19 on different sectors of the economy. A number of reports have pointed towards the possibility of contraction of Indian GDP in 2020-21. This is a worrisome indication, since a higher GDP contributes immensely towards achieving better living standards, reduced poverty as well as improvement in other socio-economic indicators. While other sectors are reported to be under significant stress, so it is important to analyze the impact on agricultural and allied sectors which provide likelihood to majority of the population in India.

Key Words: COVID, Economic loss, Agriculture, Market Prices.

Introduction:
Even today, a variety of human diseases are reported for unknown reasons. The virus has been found to be associated to many of these diseases, emphasizing the importance of ongoing search for new viruses. There are major difficulties when the new viruses do not respond to antibodies raised by known viruses. May not detect the selected virus, and virus-specific PCR methods may not amplify the new genome. In December 2019, cases of the death of a numerous people due to a unidentified pneumonia was in news from China. These people were having history of exposure to seafood market (wild life market) in Wuhan, Hubei Province. The novel corona virus, SARS-CoV-2, has been identified as a reason to the disease. The transmission from person to person is documented, and the disease named as COVID-19 by the World Health Organization (WHO) which is spreading rapidly nationally and internationally.

Since the beginning of the pandemic, no significant disruptions in the supply of food have been experienced so far. However, logistical challenges within supply chains, particularly cross-border and domestic restrictions of movement, as well as labor issues, may lead to disruptions in food supply, especially if they remain in place long-term. High-value, and especially perishable commodities, such as fresh fruit and vegetables, meat, fish, milk and flowers, are likely to be particularly affected. The health crisis has already resulted in job destruction in sub-sectors such as floriculture in a number of countries. There may be a further reduction in job quality in the sector and job destruction, especially at the base of the supply chain. Women and youth are likely to feel the impact more strongly, as they are particularly exposed to socio-economic vulnerability. Restrictions on movement may prevent farmers from accessing markets and result in food waste. In many countries, farmers are now unable to sell their produce in local markets or to local schools, restaurants, bars, hotels and other leisure establishments, which have been temporarily closed.

Research Methodology:
The study focuses on extensive study of Secondary data collected from various books, National & international Journals, government reports, publications from various websites which focused on various aspects of Agriculture.

Objectives:

- To highlight the impact of Covid-19 on Agriculture sector.
- To explain the Marketing of agricultural produce.
- To suggest policy measures for agriculture.

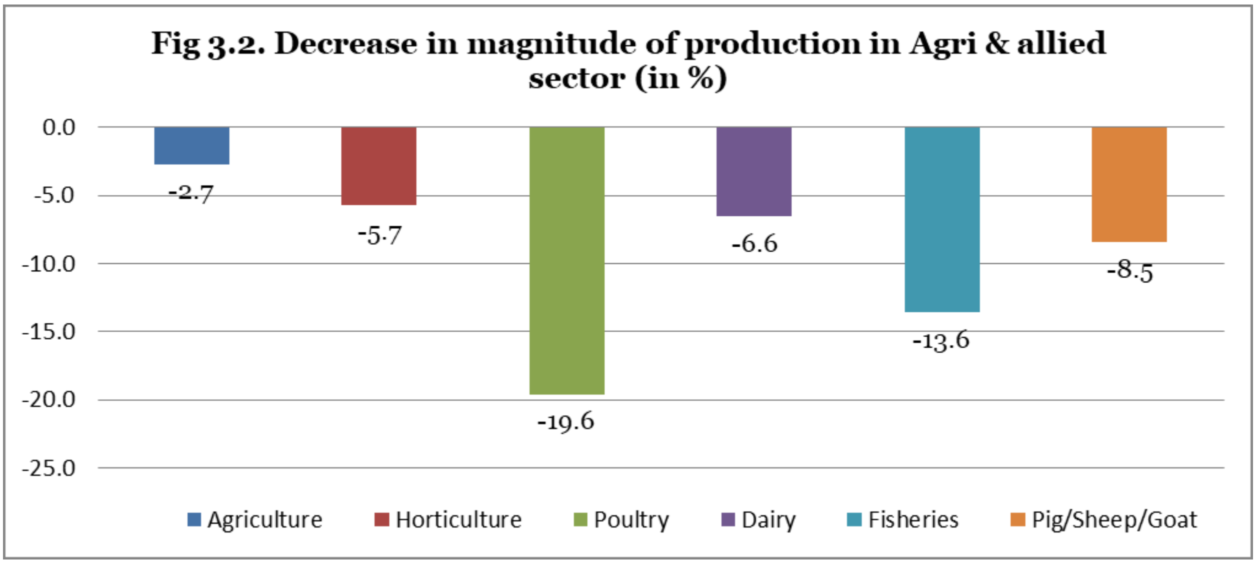
Why Agriculture Sector Matters?
The agricultural & allied sector carries immense importance for the Indian economy. It contributes nearly one-sixth to the Indian national income and provides employment to nearly 50% of the workforce. It is fundamental for ensuring food security of the nation and also influences the growth of secondary and tertiary sector of the economy through its forward and backward linkages. The performance of agricultural sector greatly influences achievements on many other fronts. For instance, World Development Report 2008 released by World Bank emphasizes that growth in agriculture is, on average, at least twice as effective in reducing poverty as growth outside agriculture. Agricultural growth reduces poverty directly, by raising farm incomes, and indirectly, through generating employment and reducing food prices. In other words, a thriving agricultural sector is a boon for most sectors of the Indian economy.

Effects on Agriculture sector-
As the spring sets in and season change the harvest season is around the corner the time when the crops are ready to harvest, time to wake up from the fogs of long winter spell. Farmers across north India, at this peak period of harvesting wheat, are in urgent need of combine harvesters. However, during the national lockdown imposed to curb the spread of COVID-19, there is no system in place for transporting these giant combine harvester machines that move across states which mostly come from Punjab. Due to the restrictions on movement, neither the machines nor the operators are able to reach farmers.

The vegetables like green peas, cucumber, cauliflower, cabbage, potato, etc. in Punjab is being harvested in bulk during these days and farmers are unable to move out to get the desired price for their vegetable crops. They are either dumping the production or opting to plough through the fields. It's that time of the season when the farmer harvest and sell vegetable crops of peas, the retailers are earning a quick buck by selling the vegetables at a high rate as they have enough pending stock

Impact on Production

At All-India level, agriculture production in almost half (47%) of sample districts was adversely affected by the impact of COVID-19.



Impact on Availability of Agri. Inputs

Due to restrictions imposed on movement of men/material and closure of shops, availability of agri. inputs viz. seeds (-9.2%), fertilizers (-11.2%), pesticides (-9.8%), fodder (-10.8%), etc. declined in the range of 9 to 11 per cent. At all-India level, 58% of sample districts were adversely affected in terms of availability of inputs.

Impact on Farm Gate Prices

Farm gate prices have not declined significantly in crop sector (-2.2%). However, prices in allied sectors had declined in the range of 2% to 18%. This decline was highest in poultry sector (-17.8%), followed by horticulture (-7.6%), dairy (-5.6%), fisheries (-4.8%) and S/G/P (-2.9%) sectors respectively, mainly due to supply disruption caused by restriction on movement of vehicles. On the whole, 54% of sample districts witnessed adverse impact on farm gate prices of agricultural produce.

Impact on Perishables

The impact on producers of perishables vegetables, fruits, milk, eggs and poultry has been even more severe than on the producers of cereals, pulses and oilseeds. The problems regarding perishables have been manifold.

Impact on Banking Services

As far as banking services are concerned, access to credit through term lending and KCC was adversely impacted in about 89 per cent and 59 per cent of districts, respectively. As regards to recovery, 94 per cent of sample districts were reported to have been adversely affected by the pandemic and consequent lockdown. However, a positive feature that emerged was that 63 per cent of sample districts reported an increase in digital transactions by the customers during the lockdown period.

Food Insecurity during the Lockdown

A survey conducted by Stranded Workers Action Network (SWAN) after completion of 32 days of the lockdown found that 50 per cent of the workers had food left for only one day and 72 per cent had food left for a maximum of two days. Out of the total surveyed workers, 82 per cent had not received any ration from the government (SWAN, 2020).

Policy Implications/Suggested Action Points

- Due to poor recovery, interest waiver for agri. term loan for at least one year may be provided by Banks
- Opportunities for mask making, sanitizers, direct delivery of food grains, vegetables, fruits may be encashed by SHGs and FPOs.
- Due to disruption in marketing of agri produce through *mandis* and rural *haats*, and reduced farm gate prices, the income stream of farmers have dwindled leading to poor recovery. Therefore, interest waiver for agri term loan for at least one year may be considered.

Conclusions:

By the above discussions one can reach following conclusion:

Lack of planning and preparation by the Central government for tackling the COVID-19 pandemic has dealt a massive blow to India's economy and has caused enormous hardships to working people of the country. As its rightly said "Everything can wait, but not agriculture" by Jawaharlal Nehru, the first Prime Minister of India That is something that should have been the motto during this time apart from health facilities.

References:

1. *Vikas Rawal,Manish Kumar,Ankur Verma, Jesim Pais, COVID-19 Lockdown:Impact on Agriculture and Rural Economy, SSER Monograph 20/3, ISBN: 978-81-937148-7-4*
2. *Dr. Parveen Jain, Dr. Kanika Baghla and Dr. Rana Aditya Effect of corona / COVID19 on the agricultural sector in India, The Pharma Innovation Journal 2020; 9(5): 41-45*
3. *Agricultural Systems 185 (2020) 102954, Agricultural labor, COVID-19, and potential implications for food security and air quality in the breadbasket of India*
4. *R. Ramakumar, Agriculture and the Covid-19 Pandemic:An Analysis with Special Reference to India*
5. *Varshney, Devesh Roy, J. V. Meenakshi2 Impact of COVID‑19 on agricultural markets: assessing the roles of commodity characteristics, disease caseload and market reforms*
6. *Indian Economic Review (2020) 55 (Suppl 1):S83–S103 https://doi.org/10.1007/s41775-020-00095-1*
7. *Economic survey of maharashtra, 2020-21directorate of economics and statistics,planning department,government of maharshtra,Mumbai.*
8. *Department of Economic Analysis & Research, National Bank for Agriculture and Rural Development, Mumbai-August 2020*

Natural Tourism Places in satara district

Mr.Rama Goroba Kamble
Balasaheb Desai College,Patan, Tal- Patan Dist-Satara

Introduction:

Satara is a district place in Maharashtra so the place having local importance at the district level, developed through the fund of zillah Parishad planning department under 'c's category, Satara has a rich history where decedents of Shivaji Maharaj settled. During Peshwa s rules, almost three fourth of India was ruled from the princely state of Satara and Pune been administration capital. kaas plateau is one of the sites in the cluster of Sahyadri which is stretch in an area of 1142 hectares. As well as koyna wildlife sanctuary is also the site in the cluster list which is spread in 42335 hectares in Satara district this is a good journey for natural tourism development in Satara district during 2012 monsoon, the state forest department has been constructing barricades along the road to Kaas plateau, to restrict the movement of tourist and avoid trampling of flowering species

Kas Plateau (Kas Pathhar):

The Kaas Plateau is also known as the 'Kaas Patthar. It is situated in the Western Ghat Sahyadri range, 25 kilometers away from Satara city. The name Kaas originates from the Kaasa tree (Elaeocarpus glandulous). The major identity of the Leaves of this tree turns green to red as they mature. It gets white flowers only for Fifteen days in March. The area of the Kaas plateau is around 1,000 hectares.[1] During the months of August and September the plateau is full of wildflowers. These flowers bloom on their own and stay for about 2-3 weeks, depending on the monsoon and other weather factors. In 2012 it has been declared as Biodiversity World Heritage Site by The United Nations Educational Scientific and Cultural Organization. It has a small lake nearby, known as Kaas Talav. It is a natural tranquil which is surrounded by dense forests. Kaas Lake is situated on Kaas Plateau. The lake provides the most supply of drinking water to the old Satara city. This is also a famous picnic spot for the rainy season. The place has more than 850 different species of flowers. These include orchids, shrubs, Karvy, and carnivorous plants such as Drosera Indica.[2] Kaas Pathar is popularly known as the 'Plateau of Flowers'. It is one of the famous tourist attractions in Maharashtra and also a popular picnic spot among nature lovers during late monsoons. Kaas Plateau was formed by volcanic activities and is covered by a thin soil cover as a result of which, no vegetation thrives in the region. This area comes under a very high rainfall zone. Due to this, the flora and fauna of the region are quite unique. These unique ecological features made Kaas one of the hotspots of biodiversity. The Plateau is well known for its unique biosphere, high hill plateaus, and grasslands. During monsoon season, especially in the month of August, the Plateau comes to life with various types of flowers. Kaas Plateau overlooks the dense evergreen forests of the Koyna Wildlife Sanctuary and serves as the catchment area of the Koyna Dam.[3] This is also a heaven for bird watchers, as many species of birds can be spotted here. Kas Pathar attracts many tourists, scientists, and nature lovers. To control possible damage by excessive tourism, the Government has restricted the number of visitors to 2,000 per day. Walking through the flowers covering the Plateau is a wonderful experience. The month of August to October is the best time to visit Kas Pathar. Timings: 9 AM to 6 PM, Entry Fee: Rs. 50 per Person on Weekdays, Rs. 100 per Person on Weekends & on Public Holidays. The Kas Development Council was set up at the government level to work for the development of the scenic area, which should be recognized as a tourist destination.[4] A provision of Rs. 221.6 lakhs have been made for the conservation of biodiversity in Kas Plateau.[5]

Koyna Wildlife Sanctuary:

Koyna Wildlife Sanctuary is a wildlife sanctuary located in the Satara district. The sanctuary is nestled in the Western Ghats, covering an area of around 426.52 km2 and with an altitude ranging from 600 to 1,100 meters (2,000 - 3,600 ft). It was notified in 1985 as a wildlife sanctuary.[6] Koyna Wildlife Sanctuary has dense forests with three major sections, Vasota, Maharkhor, and Indavli Met, and the sanctuary is endowed with natural protective boundaries - Shivasagar Lake on one side, and the slopes of the Western Ghats on both sides. This protective cover has enabled the emergence of a diverse variety of flora and fauna in the sanctuary. The sanctuary has a diverse variety of fauna including tigers and panthers; gaurs and sambars; barking and mouse deer; pythons and cobras; common langurs and Indian Giant Squirrels. Many species of birds are found in the sanctuary including brown capped woodpecker; Asian Fairy Bluebird; and Crested Goshawk.[7] Over the last few years, biology researchers, zoologists, botanists, and their students from all over the country and abroad have been flocking to the Koyna Shivsagar Reservoir to study the rare animals, birds, and medicinal plants in the Western Ghats. There are many study topics in this sanctuary. But the oppressive conditions of the wildlife department place many restrictions on these practitioners.[8] This ban should be relaxed. Koyna Sanctuary is a dense green forest in the Western Ghats for tourists. Koyna Dam Shivsagar Reservoir Railway, Deul Plateau, Konkanwada, Kandati Valley are the attractive places of Koyna Sanctuary. There are also forts that bear witness to history. Vasota, Bahirgad, Jangli Rajgad also attract scholars. About 23,000 tourists visit this sanctuary every year. Through this, tourism is boosted and local people get employment. In the last few years, however, the oppressive conditions of the wildlife department have created employment problems for the locals. No one should be involved in politics in its development and conservation. Besides, tourists are expected to be aware of the animals, birds, insects, trees, shrubs, vines, and medicinal plants not only in the state but also in the country.[9]

conclusion:

From the point of view of natural tourism, we get to see the Kas Plateau and its diverse plant species as well as the biodiversity of Koyna Sanctuary. Such natural boon places are attracting tourists and contributing to the tourism development of Satara.

References:

1.Shinde M.S. Environmental ISSUE "KAS PLATEAU AND HIS LAKE "Role of NGOS in Environmental protection and conservation, Indian journal of applied research Volume: 4, issue,6 June 2014 pp.489-490

2. Langekar Jagdish Ramchandra, Satara Jilhyatil Prakashniya Sthale , Vijay Mudranalay , Wai 2003 PP.26-27

3.Phadake Aditya, satarachya mulkhat, snehal Prakashan, pune 2007 pp.129

4. Daily Aikya Newspaper. Date- 08-10-1988

5. Government Resolution (GR), state Government of Maharashtra, date. -15-12-2012

6. Langekar Jagdish Ramchandra, Satara Jilhyatil Prakashniya Sthale , Vijay Mudranalay , Wai 2003 PP.59-60

7. Wagh Arjun And Shinde Rani, Wonderful Places in Satara District of Maharashtra: Tourism Potential, International JOURNAL of Researches in Social Sciences and Information Studies, 2017. PP.35.

8. Phadake Aditya, satarachya mulkhat, snehal Prakashan, pune 2007 pp.126

9. Daily lokmat Newspaper. Date- 06-12-2018

Allauddin's Invasion and Halt at Ellichpur

Dr. Prof. Gajendra B. Dhawale

Asst. professor & Head of Department History, Arts, Science & Comm. College.,Chikhaldara, Dist. Amravati

Introduction

Number of Muslim soldiers but Malik Nusarat who was on the watch and ward of Deogir Islamic Expansion In The Deccan: At the time of the Khaljis, there existed four independent Hindu Kingdoms in the Deccan and the Peninsula. Immediately to the south of the Satpura Hills lay the Kingdom of deogire of which Berar (Ellichpur) was a province, The Kingdom of warrangal or Telingana adjoined Deogiri on the south-east, To the south of it, the kingdom of Dvarvatipur of Dhhorvasamudra was governed by a branch of the Yadavas of Deogir Known as Hoysla dynasty. In 1290 Ala-ud-din governor of the province, of which Kara.[1] he Son in law of Jalal-ud-din Firoj Khilji reigning emperor of Delhi. having assembled an army ostensibly for the purpose of punishing a refractory Hindu chief on the borders of his province, suddenly invaded the Deccan without the knowledge or consent of his uncle. He objective was devagiri, of the wealth of which kingdom he had heard in the course of his forast in Central India He 25 February 1296 March from Kara to Canderi and thence across the Satpudas to Ellicpur.[2] where he halted for Two days. Berar, with its capital at Ellicpur formed one of them. The land revenue of the whole tract was assessed at seven crores of assessment seems to have white tankas of 175grains each, or about Rs.35,00,000.[2] The first Historical king of the Yadavas was Dridhaprachara. Bhillama, after a severe struggle succeeded in establishing his own rule throughout Maharashtra. His Kingdom extended south wards to the river Krishba. In 1187, A. D. he founded Deogir or Devagiri and made it his capital Deogir was famous for its strength. This was the last Hindu Kingdom to rule over the central Deccan, In the north Jalaluddin Khalji established his own rule in 1290 A. D. The contemporary ruler of Deogir in the south was Ram Deo. Alluddin Khilji . the nephew of Jalaluddin was them the governor of Kara-9Allahaba). It is stated that allauddin Khaaliji was Very much displeased with his wife as her relations troubled him. His mother in law Malika-I-Jahan espoused her daughter's cause and supported her in opposing Allauddin. Therefore, he decided to establish an independent kingdom beyond the Khalji dominion where he might live in peace. for one reason or the other. he sought his uncle's approval for invading chanderi explaining that it would be in the imperial in Firest of the Khaljs.

Alla-ud-din Khilji Attack on Deogeri

Allauddin witgh four thousand horses and two thousand foot- soldiers and with necessary equipments moved into the Deccan in 1294 A. D[3] After two months he reached Ellichpur (Berar).4 The expedition was taken without the knowledge of the king and his mission was kept a secret. Here he gave out that he had left his uncles' service and was on his way to Rajahmundry in the southern Telingana where he would join the service of the Kakatia ruler. The governor of ellichpur provided him every facility during his stay in the city. According to firishta he halted near for a few days and left it by night and reached unhindered. In the vicinity of Deogir (Daulatabad at a place called Lasur. As Fortune favored him many of the Raja's soldiers had accompanied the eldest son of Ramchandra on a pilgrimage. Anyhow, Ramdeva raised three to four thousand troops and dispatched them to Chati Lasur to obstruct the passage of the enemy. The yadava soldiers were easily defeated and the invaders pursued them up to the gaiter of the fort. Ramdeva.[4]

In sheer distress took refuge in the citadel. Aladdin found the way clear and entered the city. Get took into custody the principal merchants and other leading citizens. Here again Aladdin impressed on the people that his force was a small one. but an army of 20000 horses was following him. Raja Ramdeva took the matter seriously and believed that it was a preplanned invasion. Therefore, he started negotiations with a Aladdin The latter found the overtures of peace suited his demands and if the accepted them he would be able to effect his withdrawal easily. It was agreed upon between him and Ramchandra that Allauddin would get 50 pounds of gold. Several pounds of pearls. Some valuable shafts in addition to 40 elephants, a few 1000 horses, and other booty which was also agreed that after fifteen days the prisoners of war would be released.[6] The Capital would also be vacated by the Khalji soldiers.

Immediately after the conclusion of the treaty between Raja Ramdeva and Allauddin. Shankar-Deva the son of the Raja came to know about the humiliating peace. He was then hardly six miles away from Deogir. He was prepared to fall upon the enemy atone. Ramdeva sent a message tlo him not to attack the invaders and it was not proper to exchange swords with them, But shankar deva disregarded his fathers directive on the ground that his force was double than that of the invaders. He sent his men to Allauddin asking him to unload all the booty which he had collected., Allauddin captured the messengers and blackened their faces Appointing Malik Nusrat with one thousand soldiers to watch Deogir, he himself marched against Shankar Deva.[5]

The latter gave him a good fight and might have succeeded in killing a large rushed to the battle field in time. The Hindus thought that the fresh army of 20,000 soldiers of Shankar Deva lost their never, broke their ranks and fled, Allauddin rushed to the citadel The king's relatives captured in the fight were paraded in the capital in chains. Ram Deva decided to seek help from his neighboring Rajas in vain The khalji soldiers fell short of the provisions and found it very difficult deal with the brewing situation. In these circumstances Ram deva reopened negotiations. Now a very humiliating treaty was imposed by the victor, By it Ram Deva agreed to pay a ransom of 600 mounds(man) of gold, 7 mounds of pearls, 2 mounds of jewelries, 1,000 mounds of silvers, 4,000 pieces of silk cloth and of province of Ellichpur (berar) Which was to be administered by his or Raja's officials which would to be decided later on at his own convenience and benefit. on his part, he agreed Allaudddin to release all the prisoners of war and the factious army of 20000 soldiers to be turned back. Thus after the stay of 25 days Allauddin returned to Hindustan with the valuables mentioned in the treaty.

According to Tarikh- I- Ajmjadia, while returning to his province Allauddin again halted at Ellichpur, As stated in the account, Allauddin had a dream by means of which he had come to knew about the wealth of the Deogir and of passing Berar into his hands. Shah Abdur Rahman Ghazi appeared in the dream to tell him that he would gain a great victory ad come in possession of much wealth. Rahman was the reputed scholar saint who had fought against the Raja of Ellichpur. In this stubborn fighting the Raja as well as the saint lost their river. He traced out the places of burial of Dullah Rahman and his other fellow palki- swars. Since that time Muslim inhabitants revere these saints. Allauddin Khalji came to power in 1296 after killing his uncle and father-in –law. He sent his chief amir Malik Kafur to attack deogir There was a pretex that Ramchandra hak given refuge to his enemy Karnadeva of Gujarat. Raja of Deogir had also failed to pay the tributes of Ellichpur for three successive Years. Malik Kafur invaded Deogir in 1307 and ravaged the capital mercilessly. The Raja was captured and sent to Delhi. Ramchandra was detained for six months and then released with all honors, He was given the title of Rai rayan with the permission to use a white umbrella (Chatri Sufi) . For the rest of his life, Rai Rayan remained a faithful vassal of the sultanat and regularly paid the agreed tribune. A Turkish governor was also appointed at Ellichpur to meet any future trouble. When Sanghan deo (Sangam deo) enthroned himself he repudiated the over lordship of Allauddin Khalji The manual tribute was also stopped. Therefore Malik Kafur again marched in 1312 against the Deogir ruler. The Raja Shankar Deva was defeated and inhumanly put to death The Kingdom was annexed and Malik Kafur himself stayed for about 3 years at Deogir, Qutbuddin Alvi was appointed in Berar to organize its administration The Great mosque which still stands at Deogir was built by Malik Kafur, It is regarded as the monument of the establishment of Islam in the south Allauddin died in 1316 A D party strife and anarchy following Allauddin's death encouraged Harpal Devo to raise the standard of revolt and declaring himself independent and occupied the different post already conquered by the Khaljis. Mean while Muvarak khan (later known as qutbuddin Muvarak shah) third son of Allauddin became the sultan of Deljhi. In 1318 th sultan set out for Deogiri to deal with the situation and chastise the Raja. On the approach of the sultan, Harpal Deva fled buit was captured and was flayed alive and his head was hanged at the gate of the fort. Thus the effort of the last Raja of Deogir was crushed. Military posts were established throughout Maharashtra and Muslim Jagirdars were appointed to organize the administration. Imadul- Mulk – Governor of Berar in Elichpur.

After this Imadul Mulk Turkman was appointed sare Lashkar of Berar and Qutlag Khan as governor of the whole of Maharashtra. The former resided at Ellichpur. Quila Ark a Bhadkal (Bargahe kul). Their headquarters still, can be seen in ruins. The Idgah and the jama Masjid of Ellichpur were also built during the tenure of Imadul Mulk's governorship. Establishment of the Bahmani Sultan

References :

1. *Habib- Nizam,:A Comprehensive History of India. The Delhi Sulitanate p. 402*
2. *Kulkarni G. T. :History of Midval Maharashtra'MRS&S Mandal ,First Ed. Mumbai p.1*
3. *Burnni Ziya-ud-din' :Tarikhe Firozshi' p.220-222*
4. *Elliot, w.: History of India as Told by his own Historiyens 1866, Account by was London Vol. III p. 40*
5. *Amravati District:Gazetteers, Bombay ,First Edition, 1911 p.36*
6. *Mohmad Kassim ferista,. ,: Tarikhe Ferists Vol. I Mumbai p. 167*
7. *kale Y. M., Varhadacha Etihasa, Buldhana , 1924 P.81*

Indianness As Reflected In the Novels of R.K. Narayan

Miss. S. R. Jadhav

Assistant Professor, Department of English, Kankavli College, Kankavli, Tal-Kankavli, Dist-Sindhudurg

R.K.Narayan's novels reveal the Indian life, its culture, traditions, values, spiritualism etc. He is completely Indian both, in spirit and thought. Though he uses English as a medium of expression, Indian culture, traditions, customs, faith and overall Indianness is deeply rooted in him. His characters, scenes, settings, locations reflect the essence of Indianness. R.K.Narayan has always given a clear and faithful picture of India through his fiction. So in his literature we can see the contemporary society with its virtues and vices. Though his art form and language is western, the theme, atmosphere, situations and scenes are purely Indian.

Keywords: Indianness, traditions, customs, sacrifice, religious beliefs, myths, family institution etc.

This paper aims at depicting Indianness as reflected in the novels of R.K.Narayan.

In the 1930's, there was a trio-the three bright stars, luminaries, namely Mulk Raj Anand, R.K.Narayan and Raja Rao. These writers have written on themes like freedom from foreign rule, East-west relationship, the social-economical problems etc.

R.K.Narayan, one of these luminaries also depicted the social life in India through his novels. R.K.Narayan, full name Rasipuram Krishnaswami Iyer Narayanswami, born in 1906 and died in 2001. He belongs to the age when India was fighting for freedom. He started writing from his childhood. He always observed the life of the people around. Later he used those characters in his fictions. He had a passion for journalism and he chose journalism as his career. He wrote for newspapers as well as magazines. He wrote 15 novels, 5 volumes of short stories, a number of travelogues and a collection of non-fiction, English translation of Indian epics and the memoir, 'My Days.'

R.K.Narayan is a traditional storyteller. He follows the Indian tradition of story-telling. He has an easy flow of words. He evokes laughter but that too simple and genuine laughter. Narayan's characters are both types as well as individuals. Indian ethos, culture, social life, beliefs, religious practices, values, principles, myths, spiritualism all these factors which can be called as the essence of Indianness are beautifully woven by R.K.Narayan in his themes.

'Malgudi' is the place that symbolizes R.K.Narayan's India. It is an imaginary creation with its distinct and unique characters in it. Readers find different characters like Swami, postmen, shopkeepers, beggars, spongers etc in this village. This village is in the process of transition from semi-agricultural town to a big city. It has been presented in his work realistically. All the ten novels and most of the short-stories are set in Malgudi. What happens in Malgudi happens all over the country, in every town and village. Narayan's 'Malgudi' is a metaphor of India. It is a microcasm of India.

As G.M.A. Christy mentions in his essay,

"In almost all the novels of Narayan, Malgudi is also a character. Malgudi represented Indian in many aspects. The influence of changes of modernity over India has been narrated by Narayan with the help of his fictional town. But Narayan has kept his characters within the grip of culture. The Malgudian society and its tradition represent the society and the tradition of India as a whole." (1)

His Indianness is further seen in the recurring characters of sadhus, sanyasis, and swamis used by him in his novels. He has also exploited many superstitions, rituals and Indian beliefs .The Indian people from ancient times always had faith in sadhus and gurus. They have so much faith in such sadhus and gurus that even the fraud and cheat people can deceive them. The character of Raju in 'The Guide', though forced by destiny to be Swami, villagers easily start believing him, worshipping him, providing food and offerings upon him. They accept him as a spiritual guide. At the time of crisis they look at him as their savior. We can also see 'Chandran' from the novel 'Bachelor of Arts', after being not able to get married to Malathi, he loses all the interest in studies and life and starts wandering in different villages. Chandran would get food as people respect a Sanyasi and willingly feed him. Whenever he becomes tired, he gets a free lift on a cart or a bus. He was treated with respect by the villagers and they would offer fruits and food to him. . In 'The Guide', when the drought situation was there, the reaction given by the villagers is typically Indian, their speculations are Indian. All of it shows that India is a country where science and superstitions, knowledge and ignorance exist together. They suggest Raju to take up fasting so that it will rain. Indian people are very religious and they have complete faith in religious sayings. 'Narayan' from 'The Vendor of Sweets' is well versed in Hindu ideals. All his work have the flavor of Hinduism. The character of 'Jagan' reads 'Bhagvad Gita'. The 'Bhamasura' myth provides a background to the novel, 'The Man Eater of Malgudi'. Hindu legends, myths, the stories from 'Purana' and 'Epics' from base of many of R.K. Narayan's novels. Nataraj the central character from 'The Man Eater Of Malgudi', is a deeply religious man. He hangs a picture of Goddess Laxmi in his parlour and believes that its due to the grace of the Goddess that he is so prosperous. He offers prayers to Sun-god.

Spiritualism is one more aspect of Indian philosophy. The sacrifice of life for social and spiritual good is doctrine of Indian philosophy. The heroes in Narayan's novels are seen constantly struggling to achieve maturity and it has been depicted very minutely. In the novel, 'The Guide', Raju's acceptance to do fast to end the drought shows his acceptance to the traditional norms. He decides to do what the society wants. Raju undertakes fasting not because he believed in it but just as an act of self purification. He gives away his narrow mindset, self-seeking tendency. He identifies himself with the society, recognizes the need of the villagers and becomes ready for the sacrifice. This shows spiritual growth of Raju. Thus he sacrifices his life for the villagers. Raju's death and his faith, symbolizes man's faith in Indian tradition.

In case of Raju from 'The Guide', Sharan remarks in his study,

"In the course of his ordeals, he changes himself thoroughly and accepts the challenges of reality. He plays his role of a holy man with a ring of sincerity and embraces death at the end of the novel. Thus, 'Railway Raju', the guide becomes a 'spiritual guide' and all his imperfection and impersonation turn into a real act of self sacrifice." (2)

The character of Chandran from the 'Bachelor of Arts',after wandering in different villages as sanyasi finally accepts the life as it is and this ultimate acceptance of life within the social and religious framework is also a measure of spiritual maturity.

Indian society is known for the family institution. The bond that the family members share with each other that is the foundation of Indian family institution. Of these realtions , the father-son relation is of great importance.

Dr. Raghukul Tilak says,

" Parental love is one of the more significant refrains in Narayan's fiction. There is no character in Narayan's fiction so vile that is not moved by love for children, at least his own." (3)

R.K.Narayan gives a vivid description of Raju's family and inter family relations. His relation with his father and his mother is described. At the end of the novel, when Raju sacrifices for the village, the whole village becomes his family. Also the family relationship is depicted with reference to Velan who has the responsibility of marrying off his sister.

Nataraj from 'The Man Eater Of Malgudi' , has a very happy domestic life. He lives with his loving wife and only son named Babu. He is a responsible father and caring husband. Even Chandran's father in 'Bachelor Of Arts' belongs to earlier age. Chandran runs away from the home and returns back, even then he does not say anything but he ages in the eight months. One of the important point to be noted here is the relationship , the wordless bond that the parent and son share with each other.

Dr.Raghukul Tilak mentions,

"He has a great regard for family ties and pities of the home and the family. Human relationships, particularly domestic relationships, occupy a central place in his novels." (4)

Another Indian trait which is seen in his novels is hospitality. India is extremely hospitable. Raju and his mother took care of Rosie, without questioning her . In the same way Velan and the villagers arrange for the meals of the swami. Same is the case with Chandran, where people fed him for being a Sanyasi.

Narayan's women characters can be divided into two types. First one is typical Indian wives who are simple,dutiful,loving, caring and obedient. They are religious and traditional in their ways. Their primary concern is the welfare of their children and husbands. Such characters are Raju's mother in 'The Guide' and the mother of Chandran. The second class of women characters are more modern, more unconventional or butterfly type of women. Such is Rosie in 'The Guide'. Rangi in the 'Man Eater Of Malgudi' represents cruder type.

There are number of female characters in his novels who tolerate the tyranny of their husband. 'Rosie' in 'The Guide', though she is modern and not meek nor submissive like other heroines shows her Indianness in the attitude of resignation she adopts when Raju was arrested for the crime of forgery. She has relation with Raju but on the other hand she is pulled by middle class morality. She is like any other wife who gives importance to her husband.

The protagonists and the characters in Narayan's novels are rooted in Indian culture and philosophy. Malgudi itself is a combination of modernism and traditionalism.In 'Swami and Friends', Swaminathan and his friends struggle to protectIndian culture. Chandran In 'Bachelor Of Arts' is concerned about the misinterpretation of the Indian history by the imperialists. He stands against demolition of Indian history by British rule. 'Waiting For Mahatma' which was written after seven yeaes of gandhiji's assassination, is all about Gandhian philosophy. Sriram reaches to the height of true satyagrahi in this novel. Bharati from ' Waiting For Mahatma' and Jagan from ' The Vendor Of Sweets' are influenced by Gandhian thoughts.

We as readers come across many scenes and situations that are Indian. The Cobra dance , the devdasis ,the 'mela' like atmosphere etc. In many ways the theme, the characterization, the language, the locality, the values and philosophy his novels reflect Indianness. The poverty, the illiteracy, the ignorance of India is also depicted with a personal touch. Typical Indian thoughts, emotions are very well expressed by R.K.Narayan in a foreign language.

References:

1) *Agnihotri, G.N. Indian Life And Problems In The novels Of Mulk Raj Anand, Raja Raoand R.K. Narayan. Meerut: Shalabh Publishing House, 2009*
2) *Dr. Raghukul Tilak. A Critical Study Of R. K. Narayan's The Man Eater Of Malgudi,New Delhi, Rama Brothers Pvt. Ltd., 2011*
3) *Dr. Raghukul Tilak. A Critical Study Of R.K.Narayan's The Vendor Of Sweets, New Delhi, Rama Brothers Pvt. Ltd.,2007*
4) *Dr. Raghukul Tilak. A Critical Study Of R.K.Narayan's The Guide, New Delhi, Rama Brothers Pvt. Ltd.,2011*
5) *G.M.A. Christy, The Concept Of Indianness In R.K. Narayan's 'The Guide', The Dawn Journal, Vol.4,No.2, July-December2015.*

'Journal of Research & Development'
A Multidisciplinary International Level Referred and Peer Reviewed Journal, Impact Factor 5.13, ISSN: 2230-9578, April-2021,
Volume-11, Issue-8 "Recent Trends in Social Sciences"

Dr. B. R. Ambedkar and His Rich Martial Background: The Mahar Community

Dr. Madhuri Chougule
Department of History and Archaeology, Karnatak University, Dharwad

Introduction:

Mahar is a caste-cluster, or group of many endogamous castes, living chiefly in Maharashtra and in adjoining states. They mostly speak Marathi, the official language of Maharashtra. The Mahar community was believed to constitute a large percentage of the total population of Maharashtra - by far the largest, most widespread, and most important of all the region's officially designated Scheduled Castes. Traditionally, the Mahar lived on the outskirts of villages and performed a number of duties for the entire village. Their duties included those of village watchman, messenger, wall mender, adjudicator of boundary disputes, street sweeper, and remover of carcasses. They also worked as agricultural labourers and held some land, though they were not primarily farmers. The Mahars were unified by the eminent Indian statesman, social reformer, jurist, economist, historian and father of Indian Constitution, Dr. Bhimrao Ramji Ambedkar, who urged them to militant political consciousness and to great educational improvement. Before his death in 1956, Dr. Ambedkar and hundreds of thousands of his Mahar followers converted to Buddhism in protest against their Hindu caste status. Despite their low status in the Hindu society, the Mahars in fact, have a great martial past and were historical warriors and fighters, who had caused the rise and fall of kings and dynasties, in their time. Dr. Ambedkar, having been born in this caste rose to become a leader, not only to his community, but also to the entire nation and the world. Therefore, this paper tries to trace the influence of the Mahar upbringing on Dr. Ambedkar and his influence on the Mahar community in return.

Dr. Ambedkar's Life and Background:

Dr. Ambedkar was born in a family of untouchables, originally hailing from Konkan, a part of the present State of Maharashatra. The term untouchable needs some elaboration. It is a well-known fact that the social organisation of the Hindu society has been based on the theory of Chatur Varna and Chatur Varna means the division of society into four classes or Varnas: the Brahmins, the Kshatriyas, the Vaishyas and the Shudras. Those belonging to the last named major Varna are popularly known as untouchables. Although scholars and historians differ as to the precise origin of this peculiar stratification of the Hindu society, it is generally agreed that in the early Aryan period, the caste system did not exist. It was only later when the system of division of labour came into being among the Aryans that the society was divided into four different castes. But it has to be emphasised that these castes were not based on the accident of birth but on the occupation in which a person was actually engaged. Thus, those who performed the religious ceremonies and mastered the Vedas came to be known as the Brahmins, those who took up arms to fight against their rival Aryan tribes or the original inhabitants of India popularly known as the Dravids came to be known as the Kshatriyas; those who engaged themselves in trade and commerce became the Vaishyas; and those who performed the inevitable menial tasks were known as the Shudras. Many scholars and historians endorse the view that this was purely a functional arrangement. Those who support this view quote instances from Hindu mythology which relates the cases of a Shudra or a Kshatriya attaining the status of a Brahmin by virtue of acquiring knowledge or performing saintly acts. It is emphasised that later on, at some unknown point of history, this original stratification of the society assumed a rigid from in which birth became the sole criterion for determining the caste of a person. For instance, even a person not possessing the barest knowledge of the scriptures continued to be considered a Brahmin, merely because he happened to have been born in a Brahmin family. With the passage of time, this process of the stratification of the Hindu society got further intensified as each Varna got further subdivided into castes and sub-castes. This process also affected the Shudras, who were split up into hundreds of sub-castes with different names and settled in one part or the other of this vast country of ours. Dr. Ambedkar was born in one such caste of the Shudra community called the Mahars. The Shudras, at the time of Dr. Ambedkar's birth were not only treated as untouchables, but also those who should not be heard or seen. The degradation and indignity heaped upon them by the so called upper castes though differed from one part of the country to another were never absent. Even in those parts or pockets of the country where there was a certain degree of tolerance towards them, they were never accepted as a part of the society. Thus at least one out of every four Hindus remained for all practical purposes, outside the pale of the Hindu society. It is one of the inexplicable paradoxes of the Hindu society that this state of affairs was sanctioned by a religion which preached the existence of God in all things; both animate and inanimate. Anyway, the study of this paradox should be left for others. The scope and purpose of this paper is to throw light on the life and work of Dr. B. R. Ambedkar.

As stated earlier, Dr. Ambedkar was born in a Mahar family originally hailing from Konkan. His ancestral village, Ambavade, was situated in the Ratnagiri district of Maharashtra. The Mahars of Konkan were among the first of the untouchables to come into contact with the Europeans, as the Portuguese first landed in Konkan. His family enjoyed a certain degree of distinction and prominence, as it provided the bearers of the Palki or Palenquin of the village Goddess. Ambedkar's family followed the preachings of Kabir, the well-known social reformer and rebel of Varanasi. It seems that this background greatly influenced the philosophy and deeds of Dr. Ambedkar. A brief description of the relevant social and economic scene of this period of the rural Maharashtra would not be out of place here. During the Maratha regime the village officers which included Patil, Kulkarni, Desai, Nhavi(Barber), Sutar(Carpenter), etc., were assigned specific duties for the performance of which they were given revenue free lands. With the advent of British the old system of payment through Watan lands was abolished and was substituted by paid officers who were given regular salaries. Only the Mahars were kept out of the new administrative system. One of its direct effect was that the ex-Patils, Kulkarnis etc., who had been relieved of their official duties, were allowed to retain their lands. They had to pay only a nominal revenue on their Watan lands. In addition to it, the government started paying lakhs of rupees to the descendants of these village officers, though they had no duties to discharge towards their village. That is how the upper caste Hindus were placed in an advantageous position.

On the other hand, the Mahar(untouchable) Watandars, and practically every Mahar was a Watandar, were adversely affected. The British did not abolish their duties as before, but the concessional land revenue of "judi" as it was called, was not extended to them. Instead, their land revenue was increased. This matter was examined by the government in 1874, and an Act was passed which laid down that Watan lands could not be alienated nor could burden on them be increased unless it was in the interest of the Mahar Watandars themselves. However, the Mahar Watan system was a system of heartless exploitation.

Thousands of Mahars suffered even greater hardships. There were innumerable villages in the province where the Mahars settled on their outskirts had to do all the jobs assigned to them without the benefit of Watan land or any other sort of payment. In fact, It was nothing short of forced labour. Nevertheless, the usefulness of this community was so obvious to the villagers that the Mahars also known as Veskars, meaning the watchmen, could not be completely ignored. Mahar performed a number of useful functions. Their daring, courage, determination, faithfulness, loyalty and honesty were qualities which had always been held in high esteem by the village population. They were always consulted by the sarpanch to settle any dispute that arose in the village and formed a part of the local panchayats even though they were made to sit on the ground to denote their caste status.

The Martial Mahars

Mahars were also great fighters. The martial history of the Mahars dates back to ancient days when these robust and redoubtable men roamed around the jungles of Western India(now Maharashtra). That was how they developed the capacity to suffer all sorts of hardships and became good soldiers, Chhatrapati Shivaji, who perfected the system of guerrilla warfare and was the principal destroyer of the Mughal Empire recognised the great fighting qualities of the Mahars and recruited them in his army. Shidnak, Mahar Sardar in Swai Madhav Rao's army, earned a great name as an audacious and daring warrior. Later on, the East India Company which successfully fought against the army of the Peshwa, also recruited soldiers from amongst the Mahars. The last battle between the Peshwa and the British was fought at Koregaon in the Pune district. A column at Koregaon raised by the British to commemorate the Battle of Koregaon, the last battle fought between the Peshwa and the British, bears the names of the soldiers who fell in that battle. Nine out of ten names are those of Mahars.

After Independence, the Mahar Regiment acquired the unique distinction of being in the fore-front in every battle. In every single battle, the Mahars gave abundant proof of their valour, tenacity and patriotism. General K. V. Krishna Rao, Colonel of the Mahar Regiment (retired), writes in his book the "History of the Mahar Regiment" (1981): "I have had the good fortune of personally commanding the Mahars in war......and in counter-insurgency operations. The lasting impression that has been left on me is that a Mahar soldier is indomitable in spirit. And the Mahar officers always proved to be worthy leaders of these excellent men".

He also revealed that he met Dr. B. R. Ambedkar on a few accasions when he was of the rank of a Major. According to him, Dr. Ambedkar insisted that the Mahar Regiment should live up to its high reputation of gallantry, endurance, courage and daring. Dr. Ambedkar also told him that it was due to his concerted efforts that there was fresh recruitment of the Mahars in the fighting arms of the Indian armed forces and recounted their daring deeds and their long history of soldiery. Rich martial background of Dr. Ambedkar's ancestors played an important role in the formation of his character. Both Dr. Ambedkar's grandfather and father were army men. His father, Ramji Sakpal served in the British Indian Army. Dr. Ambedkar was born on April 14, 1891 at Mhow Cantonment, near Indore in Central India (now in the State of Madhya Pradesh) where his father was posted at that time. There is an apocryphal story that a saintly relative of Ramji Sakpal who had renounced the World, predicted that the child to be born would leave a permanent mark on history. Dr. Ambedkar, the 14th child of Ramji Sakpal, was named Bhim, after the well-known brother of Pandavas. Interestingly, his mother's name was also Bheema Bai. She hailed from a comparatively well-to-do family of the village of Murhad in the Thane(then Thana) district of the then Bombay Presidency. Her family had also a tradition of military service. Thus both from the paternal and maternal sides, Bhim Rao Ambedkar inherited martial qualities.

Conclusion:

When Dr. Ambedkar converted to Buddhism at Nagpur in 1956, many Mahars were among those of his followers who chose to do the same. As Buddhists, they gave up their traditional Hindu occupations and sought to redefine their social status. Ambedkar died about two months after this mass conversion. At the same spot, after his cremation, more Mahars were converted to Buddhism. Now, this community is the third most populous in Mumbai.

Therefore, we see that the rich martial background of the Mahar community had a deep impact on the personality of Dr. Ambedkar, in his growing years on one hand, and his leadership and height helped the Mahar community to come out of their caste restrictions and become free to explore their great potentials by embracing Buddhism. This is a great example to show that a man is both shaped by the society and shapes it himself.

Reference :

1. *B. R. Ambedkar; Castes in India; their Mechanism, Genesis and Development, Indian Antiquity, May 1915*
2. *B. R. Ambedkar; Annihilation of Caste, Thacker Bombay 1937*
3. *Keer, D – B. R. Ambedkar, Life and Mission, Popular Bombay 1962*
4. *Kuber, W. N. - B. R. Ambedkar, A Critical Study, PPH New Delhi 1973*
5. *Kuber, W. N. - B. R. Ambedkar, A Biography, Govt. of India Publication New Delhi 1978*
6. *Lokhande G. S – B. R. Ambedkar, A Study in Social Democracy, Sterling New Delhi1977*
7. *Robin, J. – B. R. Ambedkar and His Movement, Ambedkar Society Hyderabad 1965*
8. *Tope, T. K. – B. R. Ambedkar Maharashhtra Information Centre, New Delhi, 1964.*
9. *Govt. of Maharashtra Education Department - Bombay, Source Material on B. R. Ambedkar and the Movement of Untouchables, Vol. 1. 1982.*

The Life and Works of V. T. Rajshekar - on Cultural Identity and Caste Hegemony

Dr. Jagadish Asode
Department of History and Archaeology, Karnatak University, Dharwad.

Abstract

Dalit-Bahujan-Ambedkarite writers have come to the fore of literary studies and culture studies in the recent years. These writers reveal in their writings various factors that propel actions like caste hegemony, caste discrimination and caste apartheid. Their writings also address themes like self-expression, and search for identity. These writers represent the sentiments and issues of Dalits in India, about 85% of the population in India and many more in other parts of the globe. Indian writers of Dalit ethnicity also form a peculiar majority who articulate experiences of marginalization despite being the ethnic majority in India.

This paper is an attempt to look closely at one prose work of V.T. Rajshekar, 'Aggression on Indian Culture', to see how the writer mobilizes his language and social analysis to locate the instances of upper caste hegemony and apartheid in the form of untouchability and casteism respectively. Attempts are here made to find out how Rajshekar attacks both upper caste hegemony and caste based discrimination in domains such as society, politics, culture, religion and law. Rajshekar, in this selected prose work which is a collection of his essays, interviews and reflections, tries to show that in Indian context, caste is the common denominator or the base structure on which the super structures like politics, law, religion and social institutions are built. Readers find that Rajshekar is attacking this very base of Indian society to show how the related aspects such as religion, morality, social values and media are lopsided or biased.

The proposed research paper makes an attempt to investigate selected prose writings of V.T.Rajshekar to understand his protest against the Brahminical social order and dominant castes in India. The study also focuses on the link between his prose writing and his continuous negotiation of Dalit identity against the backdrop of cultural, political and economic hegemonies. The basic task of the research is to identify the axes and the locations of cultural identity of Dalit and protest that the writer generates to negotiate the experiences of caste hatred, exploitation, violence and discrimination. The study leads to the interdisciplinary stance.

Key words: Cultural identity, caste hegemony, caste apartheid, Brahminical Social Order, Dalit ethnicity

The Life and Works of V. T. Rajshekar

This paper aims to briefly sketch the life and thoughts of V. T. Rajshekar. In this an attempt is made to analyse the writings of V. T. Rajshekar. The method involved in this study are mainly historical and Biographical study and Historiographical review of his selected journals and works.

Vontibettu Thimmappa Rajshekar popularly known as V. T. Rajshekar (b.1932) is a prolific writes, radical thinker and a great journalist of international repute. He belongs well to do family of bunt caste of Vontibetten Beedu place of South Canara district, Karnataka. His father's name was P. S. Thimmappa Shetty, who retire as a collector of South Canara district. As a journalist he has served the Indian Express (Daily) for about 25 years. He is a founder editor of the famous monthly called "Dalit Voice", a radical mouthpiece of Dalit-bahujan Communities of India in the contemporary period. The first time met Dr. Babasaheb Ambedkar in 1954 at Banglore and took an interview for the "The Times of India", daily. He published the same in the aforesaid paper, which was not tolerant by some of his colleagues there. But this opposition created lot of curiosity in him. Then, he started reading more and more about Dr. Ambedkar and works. Thus, he became ardent follower and advocate of Dr. Ambedkar and his philosophy. In fact, he was a radical Marxists, who got influenced by the Dalit- Bahujan emancipation movement of Dr. Ambedkar.

His "Dalit Voice" paper gave him new image as journalist and channel to the Dalit-Bahujan awakening as well as a plat form to the Dalit-Bahujan intellectuals from 1980's to present day. The release by The Human Right, Watch described these Papers as India's most widely circulated Dalit Journal and it is a voice of the Depressed People of India against all forms of injustice and discriminations. Whether caste or class, gender etc. Along journalism he had written several books, pornographies and gender etc. His famous books includes: *The Black Untouchables of India*, *Dalit Movement in Karnataka* and *Nation Within Nation*. In 1905 he was honoured with the "International Award", by the London Institute of South Asia (LISA) for his famous work, "Caste- a Nation within the Nation". Thus the first part of paper briefly sketches the biography of Sri. V. T. Rajshekar and second and third critically examines the editorials and writings in Journals, books and etc., with view to provide a historiographical survey of the same.

V.T. Rajshekar on Cultural Identity and Caste Hegemony

Caste has been a much thought about but least discussed issue in Indian society. Academicians, scholars, social scientists, politicians and lawyers in India have not really given justice to the discourse on caste. This is mainly because of the prevalent view that caste is an uneasy reality of Indian society. Secondly, people refrain from a discourse on caste because of fear of the reaction from the upper castes and lower castes. Hence an articulation of caste and caste based philosophy has been very rare. Further, since caste in India is also closely related to the political practices, many scholars keep away from discussing caste for the fear of political backlash. Surprisingly, university centers which are supposed to promote liberal thinking and debate, keep caste out of their academic agenda. Consequently, there are very few conferences and seminars held in India that discuss caste and the evil effect of caste hegemony though there are ample number of such gatherings which deal with issues such as gender inequality, class consciousness and the issues of linguistic minorities.

Aggression on Indian Culture, published in 1988, is an investigation into the cultural identity of Dalits. It is a tightly written work in four chapters, composed as a thesis with a clear conclusion in the fourth chapter. The first three chapters deal with the ideas of Dalit culture and they also explain how Dalits are denied cultural identity in India. These chapters also raise the question – is there a pan Indian culture? Rajshekar also considers casteism as a kind of cultural hegemony and thereby gives a cultural interpretation of caste. He also considers the class struggle in India in terms of the culture-war between dominant culture and subordinate culture. Last but not the least, *Aggression on Indian Culture* also explains how culture becomes a tool in the hands of the ruling class. In effect, Rajshekar provides a Marxist and Ambedkarite interpretation of culture.

The book carries a "Foreword" in which Rajshekar tries to define culture by explaining that it is a complex dynamic phenomenon that deals with the past, present and future of a set of people. He gives a broad-based inclusive definition of culture:

Culture then is life itself, it evidently would have to be made up of the different individual components that human existence is made up of: food and clothing, language and other forms of expression, customs and traditions, religion, morality and ethics – indeed life style itself. (1988:4)

Subsequently, he tries to explain how culture is a complex notion in a multicultural society like India. According to him, India has many cultures and many nationalities though it has projected a dominant cultural tradition. He criticizes this dominant cultural tradition by explaining that it does not represent the tribal and other social segments. He argues:

The dominance or otherwise is only dictated by the ruling class culture, which since the last 3,000 years or so happens to be the Aryan culture. The highly advanced pre-Dravidian and Dravidian cultures were driven into the hills and forests-the last surviving examples of them being the tribals of India. (1988:5)

Rajshekar is of the opinion that a vibrant cultural face of India can also be seen in the rural Dalit villages though it is not often represented in mass media and literature. He reminds the readers that there is a significant Dalit culture which is outside the national mainstream culture that does not get represented. He points out:

The *mahua*, the *baul*, the spirit worship, the cutting of tender chicken at Mariamma's feet and countless such events – a veritable celebration of life – keep the real culture very much alive. But the problem is despite the fact that these original inhabitants are over 85% of India's population, their "culture" is not noticed in the mass media. Because media does not belong to slaves who have no right to claim any culture which only the rulers can possess. (1988:5)

Rajshekar considers the Aryan culture as the dominant culture of India which tries to assimilate and Hinduize other cultures. He considers this form of cultural hegemony very predatory. He mentions that Indian culture has to be understood beyond the culture of the upper caste to understand the culture of suffering, the culture of casteism, the culture of being betrayed and the culture of Untouchability.

The first chapter of the book examines the cultural paradigms embedded in Hinduism to show how Hinduism creates a false polarity of 'pure' and 'impure' in aesthetics and poetics. Rajshekar indicates that those who control this dominant culture will not even make 15% of the total population. He also cautions the readers about the hegemony of language in culture. For instance, he reminds that the people who know English in India are less than 2% and over 50% of the populations are below the poverty line. He indicates that 50% of SC (Dalits) are agricultural labourers and many others work as rickshaw pullers, head load workers, construction labourers, and *bidi* workers. Rajshekar is of the opinion that the life and the sensibility of these Dalits subjects are not reflected in the cultural texts produced in India.

To illustrate this argument, he gives an analysis of the newspaper reading population in India. He indicates, with the help of statistics, that only 2.5 crore people read newspapers regularly in India. This indicates that the newspaper reading population is only 2.5%. Subsequently, he argues that this 2.5% of population take over the cultural expressions of India and hence, they represent Indian culture only in terms of industrialists, journalists, professionals, bureaucrats, judiciary, films, entertainment and sportsmen, traders, bankers, educationists, religious and trade union leaders, scientists etc. This shows that life, art and customs of the Scheduled Castes and Tribals and Backward Castes are rarely reflected in the dominant culture.

Rajshekar feels that culture is often the essence of human life and by controlling culture it is possible to preserve certain privileges of the upper caste. He comments:

Culture constitutes ideas, values, and ethics. This is the basis of every religion. Life and preservation of life constitute the essence of religion. So from this angle, we will examine the cultural and philosophical tradition of "Hinduism" or Brahminism. (1988:9)

Rajshekar clearly states that Hinduism, as a religious practice, does not recognize the values of democracy. Its caste hierarchy has kept 70% of the population in illiteracy and poverty. Under these circumstances it is very difficult to imagine Dalits and the oppressed to have their culture. Rajshekar also gives evidence for the upper caste political conspiracy. He points out that Jagjivan Ram was denied Prime Minister ship because he was an untouchable. In a land where people are denied their human rights, the only culture that would be visible is that of aggression.

Rajshekar also considers whether Hinduism recognizes the three basic premises of democracy – equality, liberty and fraternity. He tries to prove that the dominant religion in India, Hinduism, has stopped practicing these values of democracy and it has created a cultural rift between the caste Hindus and the untouchables. He explains that the caste exists in India in terms of the cultural divide:

Untouchables a dirty lot, tribals troublesome. Only the upper caste are cultured, merited and fit to rule. An upper caste person may say this situation no longer exists in today's India. This is a false statement. Kashmir is the standing example of a daily bloodbath. (1988:12)

According to Rajshekar the only visible cultural expression in India is that of conflict. He argues that India is a land of religious war, linguistic war and caste war. He evokes the myth of Parashuram who had killed everyone and had thrown his axe into the Arabian Sea. He indicates, this story is the foundation of Brahmin-kshatriya conflict which never ended in independent India.

Rajshekar attacks the cultural propaganda of Hinduism and indicates that in contemporary India there are no sufficient cultural forms through which ordinary human experience can be articulated .He says, "The Brahmins, the chief salesmen of this religion, have divided all human experience such as time, space, things, and people into pure and impure."

Subsequently, Rajshekar exposes the hegemony embedded within the polarity of the pure and impure. He indicates how the concept of time which is one of the tangible ways of understanding one's experience, is divided into good time and bad time and how this Brahminical division of time is imposed upon God fearing masses:

Time is divided into pure and impure. A new Prime Minister is sworn in only after a Brahmin priest fixes an "auspicious" time. During the *rahu kala* nothing should be performed. India became independent at the stroke of midnight (Aug, 14, 1947) because the Brahmin priests found no other "auspicious time" for such a historic event. Tamil Nadu Chief Minister M. G. Ramachandran's plane's arrival (he was returning from a treatment in USA) in Madras was delayed (1987) by 15 minutes to avoid the *Rahu kala*. (1988:13-14).

Rajshekar points out similarly how the same Brahminical binaries divide space, objects and even people into two categories. For instances, the spatial dimension of the development of a city or town into pure areas and the *cheri*, the dirty slum where the Untouchables live, is a clear case of determining one's living experience in terms of pure space and impure space. Similarly, he points out how food habits and even colours are divided into pure and impure in Indian culture to privilege the Brahmins. For Instance, he points out how vegetarianism is popularized as something pure and meat eating as something impure. He also reminds that this division is not just confined to things and time, but extends into a classification of human beings.

Myths, stories and puranas have established the belief that a Brahmin is sacred and holy so he alone can be in the sanctum of a temple. Many temples in India still deny entry to Dalits and non-Hindus. He points out how Jagjivan Ram was not allowed to unveil the statue of Sampurnananda because he was a Dalit and was considered impure. He reminds the readers that culture of Hinduism with its religious practices, myths and puranas are obsessed with the binary of purity and pollution. To expose this hypocritical classification, he reminds the readers that the Ganga, the purifier has dead bodies floating in it.

Rajshekar indicates that Hinduism has taken over the control of cultural production in India and thus, in a way, has given Hinduism control over politics and the economy too. He explains the relationship between cultural production and power relations:

This division of things into "pure" and "impure" gives enormous power to those who divide. Who can divide things into pure and impure? Only the Brahmin so he becomes the most sacred and hence the most powerful. (1988:14)

Reference :

1. *V. T. Rajshekar; Ready Reference to Revolutionaries*
2. *V. T. Rajshekar; Caste a Nation Within the Nation*
3. *V. T. Rajshekar; Datit the Black Untouchables of India*
4. *V. T. Rajshekar; Know the Hindu Mind*
5. *V. T. Rajshekar; India's Intellectual Desert*
6. *V. T. Rajshekar; Brahminism*
7. *V. T. Rajshekar; How Mark Failed in Hindu India*

Role of Education in Cultural Nationalism: Swami Vivekananda's Perspectives

Miss. Manali B. Momaya
Department of History and Archaeology, Karnatak University, Dharwad

Abstract:

"*Education is the manifestation of the Divine Perfection already existing in man", said Swami Vivekananda. For him, the sole purpose of education is "man-making"- i.e. converting mere creatures into human beings, by bringing out the vast knowledge that is hidden in their souls. Soul is the component which every man possesses besides his mind and body, and in this itself lays the essence of life according to his Vedanta Philosophy.*

Today, mankind is facing a cultural crisis, as Vivekananda had predicted long back. Our modern education system has become too mechanical and lacks a definite goal. More number of educated people have started considering 'Geeta' as a mere verse and 'Vedas' as a collection of some folk-songs. They try to master the knowledge of the entire world, outside of their own country, but they don't have enough knowledge of their own ancestry and forefathers.

Swami Vivekananda argues that, a person who doesn't realize the greatness of his own culture and country, can neither be expected to respect the rest of the world, nor to use his knowledge of it, for anyone's good. Only a person who has a keen understanding of his country's glorious past will be patriotic enough to end his life rather than indulge himself in any misbehavior that would put the country to shame in the eyes of the universe.

Further, he contends that many educated youth of today, who have studied the history of other western countries, feel that India has no such history, but that is wrong. India has the right kind of history, based on its geographical situation and the goals of its society. However, it is the fault in the education system that it has not been able to teach our history with as much zeal as it has the other histories.

He says that, a country's culture is its identity. This must be inculcated in the students on the primary basis. This would foster a sense of self-confidence and nationalism in them, which would eventually help them give their best for their country's real progress - which lies in education. Education must help the students to know themselves first, and not the world outside, and to know oneself, it would be wise to understand the culture and context of one's own family, region and country. Thus, education has to impart cultural knowledge and try to realize 'Unity in Diversity' and in doing so, enhance the feelings of cultural nationalism. Even in the present days, his philosophies and views hold good, and some of them have found expression in this paper. The relevant ideas have to be implemented in Modern Education System, for the better of the world.

Key Words: *Education, Man-making, Vedanta Philosophy, Cultural Crisis, History, Identity, Unity in Diversity, Cultural Nationalism*

Introduction:

"Education is the manifestation of divine perfection, which already exists in man[1]"

This quote by Swami Vivekananda is in fact, a summary of his vision about education. Swami Vivekananda (1863-1902), a great thinker, yogi and philosopher of India, emphasizes on education, which according to him signifies "man-making", and considers it the very mission of his life. This paper, analyzes Vivekananda's views on education, and endeavours to focus on the basic theme of his philosophy viz., the spiritual unity of the universe and to examine his contribution to development of Cultural Nationalism, through education. Vivekananda realized that mankind is passing through a crisis. The tremendous emphasis on the scientific and mechanical ways of life is fast reducing man to the status of a machine. Moral and religious values are being undermined. The fundamental principles of civilization are being ignored. Conflicts of ideals, manners and habits are pervading the atmosphere. Disregard for everything old is the fashion of the day. Vivekananda seeks the solutions of all these social and global evils, through education[2]. With this end in view he feels the dire need of awakening man to his spiritual self, wherein he thinks, lies the very purpose of education.

The Problem of Modern Education: The Cultural Crisis:

According to Swami Vivekananda, the modern Indian Education System is nothing but a machine that produces educated fools who have no faith, no hope and no trust in mankind. Modern education system emphasizes only on the subject and is very mechanical. It teaches the students, the fundamentals of science, the history of the whole world, but fails to teach them the message of Vedas and the essence of Indian Culture. Today's youth don't have any knowledge of their own traditions, and for them, Geeta is only a verse, and Vedas, a collection of hymns. They don't know the history of their own forefathers, and cannot be expected to know about the glorious past of their country. Swami Vivekananda contended that the country which did not respect its own history had no future. But, even though India has a glorious past, many educated fools deny the fact. They feel that only the western nations, western culture and western institutions have contributed to the world history. But, we are sorry to say that they are terribly wrong in thinking so. India is the country that has given the message of Bhagvad Geeta to the whole world. We have a very great history, both in peace and in war. The greatest war in the history of the world, as we may call it, the Mahabharata, in Kurukshetra, took place in India and Gautam Buddha and Mahavira who taught the principles of Ahimsa to the world, were also born in

India itself. So, it is foolish to think that India has not contributed to the world history. Further, Swami Vivekananda says that, a person who doesn't know his own identity can do no good to the world, even if he knows everything about it. Swami Vivekananda argues that, a person who doesn't realize the greatness of his own culture and country, can neither be expected to respect the rest of the world, nor to use his knowledge of it, for anyone's good. Only a person who has a keen understanding of his country's glorious past will be patriotic enough to end his life rather than indulge himself in any misbehavior that would put the country to shame in the eyes of the universe.

Further, he contends that many educated youth of today, who have studied the history of other western countries, feel that India has no such history, but that is a wrong notion. Let's take one example: We Indians eat rice and the English don't. Does that mean the English die of hunger, or are anything less than us? Definitely not! Then why and how can we allege that India is backward if it does not have or follow certain things or practices that they do. India has the right kind of history, based on its geographical situation and the goals of its society. We must understand this. However, it is the fault in our education system that we teach the histories of other countries with a sense of awe, while we don't have the same attitude for our own history. We praise other cultures, while we only find out the faults in ours. Child-marriage, exploitation of women, dowry, etc have been the problems of all societies of the world, but while teaching the history of other countries, we don't point out to that. It's good to know our weaknesses, but better to know also, our strengths. Hence the education system should change its outlook and work with a definite goal, to impart more knowledge of our own culture and religion first, and then about the world. It should not merely make people educated, but make them cultured, nationalistic and self-confident.

The Objectives of Education according to Swami Vivekananda:

Swami Vivekananda points out that the defect of the present day education is that it has no definite goal to pursue. A sculptor has a clear idea about what he wants to shape out of the marble blocks; similarly, a painter knows what he is going to paint. But a teacher, he says, has no clear idea about the goal of his teaching. Swami Vivekananda attempts to establish through his works and deeds that the end of all education is "Man-Making" - (that is to convert mere creatures into human beings by bringing out the vast knowledge that is hidden beneath their ignorance, as we have understood it). He prepares the key of this man-making education in the light of his overall philosophy of Vedanta. According to Vedanta, the essence of man lies in his soul which he possesses in addition to his body and mind. This soul is a reserve of immeasurable knowledge and invincible perfection. Swami Vivekananda thus defines education as the manifestation of the perfection already in man. The aim of the education system is to manifest in our lives, our perfection, which is the very nature of our inner-self. It is not to gain external knowledge, but to develop the inner-instincts, that would make the man complete. Thus, Education has to work in the direction of making individuals realize their own self, their own culture, traditions - the greatness of it all - and not just mechanical knowledge, that would fetch them nothing other than a job and some money.

Aims of Education according to Swami Vivekananda:

- According to Swami Vivekananda, education must aim at reaching perfection.

The prime aim of education is to achieve fullness of perfection, already present in a child. According to Swami Vivekananda all material and spiritual knowledge is already present in man covered by a certain level of ignorance. This ignorance had been a major problem in India, and Swami Vivekananda tells in his work "Awakening India" that the only difference he found between the people of India and the developed European Countries was their education system. Our education must aim at evading this ignorance and bringing out perfection in Indians.

- The aim of Moral and Spiritual Development

According to Swami Vivekananda, a nation's greatness is not only measured by its parliamentary institutions and activities, but also, by the greatness of its citizens. But the greatness of citizens is possible only through their moral and spiritual development, which education should foster. Moral and Spiritual development is the most important criteria of our culture also, and while undergoing cultural crisis, education can be the best saviour.

- The aim of Character Development

According to Swami Vivekananda, character development is a very important aim of any education. For this, he emphasized the practice of Brahmacharya which fosters development of mental, moral and spiritual powers, leading to purity of thoughts, words and deeds. Indian Culture has strongly upheld Brahmacharya since times immemorial, and also incorporated it in the Varnashrama system as the time for learning. However, in the modern scenario, this principle is fast fading away, and the youth have no regard for it. Swami Vivekananda argues that without purity of mind, thoughts and deed, education cannot be complete, nor can our culture be safe-guarded, and being citizens of this outstanding country, we must respect our culture.

- The aim of development of Faith in one's own self, Shraddha and a Spirit of Renunciation:

All through his life, Swami Vivekananda exhorted the individual to keep full confidence upon their powers. They should inculcate a spirit of self-surrender, sacrifice and renunciation of material pleasures, for the good of others. Education should foster all those qualities in the individual. He gave this call to his countrymen "Arise, Awake and Stop not, till the goal is achieved". He helped them to realize their real strength, that was on par with people of any other country, thus making them feel proud of their great nation.

- The aim of Unity in Diversity:

The true aim of education is to develop the sense of Unity. Swami Vivekananda has further asserted that physical and spiritual worlds are one. Their distinction is an illusion (Maya). Education should develop this sense which finds unity in diversity. This is also the essence of Indian Culture, which is a melting pot of all religious and ethnic institutions. Besides spiritual unity, education must also develop sense of National Unity, by making the youth aware of the real aim of our culture.

- The aim of Religious Development

To Swami Vivekananda religious development is an essential aim of education. To him, each individual should be able to search out and develop the religious seeds embedded in him and thus find the absolute truth of reality. Our country is the birthplace of several major religions, and though they may differ in their means, their ends are the same. In fact, by studying Indian religion, the youth can understand the greatness of our nation, and what we have contributed to the world, with our religious watchwords of 'Satya, Ahimsa and Vishva Bhratrutva' (Truth, non-violence, Universal Brotherhood). This realization alone is enough to make the youth of India proud of our history and develop a sense of nationalism and love for their country in them.

The Kind of Education System Swami Vivekananda dreamt for in India:

Since we have considered already, what must be the aims and objectives of our education system, we must also understand, what elements Swami Vivekananda wanted to be incorporated in our education system.
1.Swami Vivekananda wanted an education system that could increase mental strength, enhance intellect and make the individual independent; an education that promoted the evolution of character and personality. 2. Religious knowledge to create self-awareness and spiritual well-being 3. Practical knowledge to bring out the courage, tolerance and perfection of thoughts, words and deeds, present in the individual 4. Moral knowledge to improve one's behaviour, concentration, purity, knowledge-seeking attitude, grasping power and respect for teachers and everybody else and to enhance his hope in humanity. 5. Knowledge of Sanskrit, besides regional languages and mother tongue, in order to sustain our culture and make the messages of our holy books more comprehensible for every common man. 6. Social knowledge that promotes co-operative and harmonious behaviour and the feelings of Universalism and brotherhood. 7. Education that boosts self-confidence, self-introspection and self-sacrifice for the nation. 8. Education for every common man, in order to bring about equality and for the real progress of the nation - that lies in the quality of its people. 9. Education for Women, who are equal to men in all respects and who have an equal share in the development of the nation. 10. Nationalistic Education - that creates a national awakening, and is based upon the principles and culture of the nation. A child must be taught in such a way that, our culture is in the foundation and even after studying all the cultures of the world, it must be able to be proud of our own culture. This is very important because the progress of any nation depends solely on education - its quality and the educated citizens.

Thus, Swami Vivekananda believed in an education system that aimed at all-round development of individuals, with a special emphasis on Indian Culture and Religion as the base of it all, in order to develop a nationalistic attitude that is invincible and without second thought or doubt.

Why Swami Vivekananda Emphasized on Education:

Swami Vivekananda believed that Youth were the real strength of the nation. But, even in his own times, he saw that this strength was becoming disoriented and aimless. He contended that youth alone can work for the progress of the nation as they have adequate amount of time, energy and maturity required for nation-building. The youth, who called themselves educated were attracted to the foreign culture and others who had real concern for India, were poorly educated in most cases (This is just a general statement, and there are exceptions in it). For this kind of a problem, Swami Vivekananda considered our education system responsible. He firmly argued that education should be available for one and all, and that it should work for the proper orientation of the strength of Youth of the nation to make the task of nation-building easier and less time-consuming. For this, he thought that the vast knowledge of our great scriptures, that is hidden in the deep forests in the huts of some sanyasis and bound in the shackles of the very-difficult Sanskrit language should be set free and made available to each and every Indian. For this purpose, Education was the only instrument that he could think of. So, he emphasized on education more than anything else, in the process of nation-building and for the proper use of man-power for the same purpose.

How he wanted Education to promote culture:

Swami Vivekananda wanted Education to promote Indian culture in such a way that besides gaining knowledge, we also gain respect and faith. He believed that the Bhakti movement that took place in the medieval India under Shankara, Ramanuja and Madhwa also aimed at revival of Hindu Culture, but soon after the death of its propagators, or say, a century later, it lost its existence, once again in the conflicts of the society. This was because, they all tried to bring up the lower castes only by giving them knowledge - in their own languages - but couldn't teach them Sanskrit, which would have given them respect also. Because Sanskrit is considered as one of the most sacred languages, it had become a Jagir of the Brahmins or the so-called upper castes. So, to bring about equality or revival of culture, it was not so necessary to impart right knowledge as it was to impart it in the right way. Sanskrit should have been taught to them, and the Bhakti movement would never have faded, contended Swami Vivekananda. Teaching in Regional languages would surely bring faster results, but not the required amount of respect and consideration from the upper echelons of the society. Today a number of countries who claim to be developed, whose citizens have vast amount of knowledge, but behave in inhuman and animalistic ways. Then what is the use of all that knowledge? When they don't have a culture to be proud of, then their knowledge is as much a show off as their civilization. He says that why don't all castes in India come together and spend money on Sanskrit education? Give thoughts to the people in their language. That will help them grasp knowledge. But also teach them Sanskrit. That will help them absorb Indian culture in their blood. In this way, when Sanskrit becomes nationalized, then each Indian would be a nationalist, according to Swami Vivekananda.

Relevance of Swami Vivekananda's thoughts in modern Indian Education System:

Today, India is changing rapidly, and there is a need for the education system to change too. For India to develop in the true sense, India must safeguard her culture, and this can be done only by her children, we the citizens of India. For this, education system can be used, by slightly modifying it. We have some of the best institutions, best teachers and best syllabi. However, the change is required in our outlook. In an era where only engineering and medicine are considered sacred jobs and History is left to the mercy of people who don't find place anywhere, we must understand that History is the mother of all subjects, and is as much important for others as for its student. So, it should be made more interesting, more Indian-friendly, highlighting the positive practices of our culture more than the negative ones. Philosophies of great men like Swami Vivekananda must be inculcated in students, not as lectures or theory, but in practice. Only when this change is brought, then will India develop at her best speed and in her best way. Even Sanskrit must be made a compulsory part of curriculum, to uphold our culture and create faith for our traditions in our youth, right from the beginning. This would not only help them enhance their intellect, but also to develop a sense of Indianness. This is what is the need of the hour - A little bit of knowledge, a lot of self-confidence and an invincible faith in Indian Culture.

Conclusion:

Our country is the birthplace of one of the oldest civilizations on earth. It is the origin of some of the greatest religions that have sustained themselves through the centuries of universal conflicts. We have a diverse but united culture that has remained intact, even after going through so many changes. However, the number of people respecting and following it is becoming lesser and lesser. This could be due to many factors, upon which we would not like to deliberate in this paper. However, if India has to survive with all her grandeur, her culture has to be safeguarded. Swami Vivekananda was one of the great personalities of our country who showed deep concern in this direction, and gave a call to the youth, the social-reformers and the educationists of India, to join hands in the work of Nation-building. He laid special emphasis on education because he had witnessed the social and political conditions of so many countries, and the major reason that he found for the development of other countries and the backwardness of our country was the difference in the education-system and literacy. Swami Vivekananda propagated his Vedanta philosophy and gave a detailed and systematic plan for Indian Education system, if we would wish to sustain our culture. Even today, he is regarded as one of the founding fathers of modern Indian philosophy, and his ideas can never lose their applicability. He has planted the seeds for change in the Indian soil long ago, and it has started growing; it is a small plant now, but it is our duty to water it, with our sweat and blood, so that it grows into a huge tree with a million branches that shelter the whole world, and India emerges as a world-leader.

Reference

1. Swami Vivekananda; *The Complete Works of Swami Vivekananda, Volume 4, Writings : Prose, What We Believe In;* 2016; Advaita Ashrama; Belur Math
2. Roy, Sudipa Dutta; *Education in the Vision of Swami Vivekananda;*2001; Web Article - https://www.esamskriti.com/
3. Swami Vivekananda; *The Complete Works of Swami Vivekananda, Volume3, Lectures from Colombo to Almora; The Future of India;* 2016; Advaita Ashrama; Belur Math
4. Swami Vivekananda; Volume 3; *The Future of India; op.cit.*
5. Swami Vivekananda; *The Complete Works of Swami Vivekananda, Volume2, Practical Vedanta and OtherLectures; Practical Vedanta - Part II;* 2016; Advaita Ashrama; Belur Math
6. Bhat, Mohammad Sayid; *Swami Vivekananda;* Pg. 35; *https://www.cukashmir.ac.in/*
7. Swami Vivekananda; *Volume 4; The Education That India Needs; op.cit*

'Journal of Research & Development'
A Multidisciplinary International Level Referred and Peer Reviewed Journal, Impact Factor 5.13, ISSN: 2230-9578, April-2021, Volume-11, Issue-8 "Recent Trends in Social Sciences"

Flower Cultivation and Marketing in Solapur District, Maharashtra, India

Ranjana Rathod[1] Dr. Balu Rathod[2]

[1]Assistant Professor, Department of Geography, Nowrosjee Wadia College, Pune,

[2]Assistant Professor, Department of Geography, Kankavli College, Kankavli, District- Sindhudurg,

Abstract

Agricultural marketing refers to the resources that go into getting a crop from the farm to the customer. These services include preparing, arranging, directing, and handling agricultural products in such a way that growers, intermediaries, and consumers are satisfied. Planning production, growing and harvesting, grading, packing and shipping, transport, storage, agro- and food processing, market knowledge, distribution, advertisement, and selling are only a few of the interconnected activities involved. Flower cultivation is regarded as a profitable and high-returning agricultural industry.

Keywords: *Cultivation of flowers, Marketing activities, Solapur district, floriculture, Employment.*

Introduction

India's 'flower strength' continues to expand, with the country now ranking as the world's second largest grower of flowers. Flowers are integrally linked to the social fabric of life. Flowers, as God's adorable conception, are appropriate for all occasions, including birth, marriage, and death. Flowers were once insignificant in terms of economics. To satisfy one's aesthetic desires, one would grow flowers. Flowers were occasionally sold for sale to meet people's specific needs. With the passing of time, people's lifestyles have changed dramatically, resulting in the commercialization of flower cultivation. Floriculture means the cultivation of flower and ornamental plants within the garden and arable land (Biswas, 2013) for commercial purposes (Mishra and Mishra, 2016). India has managed to increase the production of flowers which are having a huge potential for export (Prakash and Muniyandi, 2014). Flowers are one of the most lucrative products, with one of the best returns of any specialty crop. The traditional flowers like marigold, jasmine, chrysanthemum, china aster, crossandra, tuberose, rose petals occupy nearly two thirds of the total area and forms the backbone of Indian floriculture, which is mostly in the hands of small and marginal farmers (Sindhu and Saha, 2010). India's climatic conditions are ideal for growing a wide variety of flowers in different zones. In terms of floriculture, Tamil Nadu, Karnataka, Andhra Pradesh, West Bengal, Maharashtra, Gujarat, and Delhi are the main developed states. Maharashtra is the leading floriculture province. In Maharashtra's horticulture market, floriculture is now on the growth agenda. Flowers have long been revered and used by humans to beautify their climate, as well as as symbols of romance, ritual, worship, and medicine, in addition to promoting the reproduction of flowering plants. Flowers have played a significant role in our lives throughout history.

Study Area

In the Indian state of Maharashtra, the Solpaur district is located. Solapur district has latitudes ranging from $17^{0}10'$ N to $18^{0}\,32'$ N and longitudes ranging from $74^{0}\,42'$ E to $76^{0}\,15'$ E.

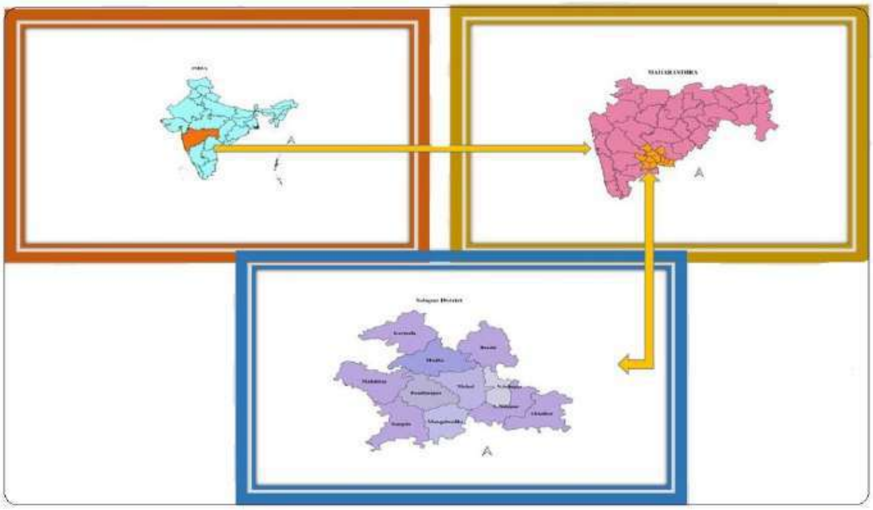


Figure 1: Location map of the study area.

The district's east-west and north-south lengths are approximately 200 and 150 kilometres, respectively. According to the 2011 census, the total population of Solapur district is 43,15,527 and the geographical area is about 14,895 sq. km divided into 11 tahsils (Barakade and Sule, 2011). Among the 35 districts in Maharashtra, it ranks fourth in terms of area (4.88 percent) and seventh in terms of population (4.51 percent). Since the study area is in a rain shadow, the district's average annual rainfall is 584.3 mm.

Concept of Floriculture

Floriculture, also known as flower farming, is a branch of horticulture concerned with the cultivation of flowering and ornamental plants for use in gardens and floristry. Bedding plants, flowering plants, foliage plants or houseplants, cut cultivated greens, and cut flowers are all examples of floriculture crops. Traditional and modern flower crops are used in floriculture.

A) Loose Flower :-

Flowers have traditionally been cultivated in open fields in India and Maharashtra. The traditional way of farming is open field planting. In open field flowers are also known as Loose flowers. i.e. Jasmine, Marigold, Rose, Tuberose, Aster, Hibiscus, Chrysanthemum etc.

In this study region, there was a lot of loose flower production. As a result, loose flowers in local markets are in high demand.

B) Cut flowers :-

Cut flowers have recently captured the attention of urban culture. The majority of Non-traditional flowers are cultivated in controlled environments, i.e. Gerbera, Carnation, Dutch rose, Chrysanthemum, Gladiolus, Orchids, Lily etc. It is typically cut from the plant and used as a decorative item. In this research area, there were very few green houses. Cut flowers are always imported from other district markets as a result.

Importance Of Flowers

Flowers are essential in nature because they can feed insects, birds, livestock, and humans; they can also provide natural medicines for humans and some animals; and they can help a plant reproduce by attracting pollinators from the outside. Plants would be simply green without flowers, and the earth would be a duller place. Plant Reproduction – The flower is the plant's reproductive organ. That is what produces the fruit or vegetable that we consume (following pollination). It's also where the seed is made, ensuring that more of the same plant grows in the future.

Flowers Of Medicinal Importance

In recent years, modern scientists have been drawn to the indigenous system of medicine, especially Ayurveda, in search of cures for a variety of difficult diseases. The World Health Organization has stated that herbal medicines meet the health needs of approximately 80% of the world's population, especially millions of people living in large rural areas of developing countries. The effectiveness of plant medicines relative to the adverse side effects of most modern medications has resulted in a recent revival of plant remedies.

The Scope Of Floriculture

The scope of floriculture is related only to the Information Technology Industry in terms of global reach, and it is expanding at a rapid pace. Floriculture is both an industry and a reliable source of income. Floriculture is a very common marketing trend right now. Flowers are used in all private banks, large hospitals, corporate houses, and event management firms.

Area And Production Of Flowers In Solapur District

The area under flower cultivation in the Solapur district is small due to the rain shadow, but with a little effort, flower production can be increased. Irrigation services, flower plant quality, fertilisers, as well as pesticides, all need the attention of flower growers in high output. Floriculture is a profitable industry.

Area and Production of Flowers in Solapur District

Sr. No	Flowers	Area (in Ha)	Production (In Tonnes)
1	Rose	59.86	1400.45
2	Marigold	197.85	2698.85
3	Chrysanthemum	86.48	520.88
4	Jasmine	9.13	47.57
5	Tuberose	19.35	317.7
6	Gerbera	0.7	12.29
7	Carnation	0.15	0.15
8	Gladiolus	1.96	8.81
9	Gaillardia	17.21	193.47
10	Other flowers	56.46	892.2
Total		**449.15**	**6092.3**

Source: Socio-Economic abstract of Solapur district 2010-11

Landholders are classified into three categories based on the scale of their holdings: small, medium, and large. Many with a strong financial position take advantage of new technologies to increase their profits. Owing to a lack of funds, the remaining are unable to come up with them because they are not using new technology. Natural disasters such as excessive rainfall, drought, and cyclones are other issues that all farmers, regardless of financial standing, must deal with. Another issue facing producers is a lack of education. They can't find the right soil or crop. Flowers are sensitive to being sold in a short period of time, so preservation is a concern. Due to a lack of accessories to conserve the flower, growers are forced to look for a market for their product. In terms of marketing, the grower faces several challenges, including quality control, packaging, cold storage, and time and price management. The grower's income is boosted by high price fixing, but he doesn't have the same opportunity in marketing. It is the responsibility of merchants and middlemen.

Marketing Of Flowers

Flower marketing in India is currently very disorganised. Flowers are brought to wholesale markets, which are often located in open yards, in most metropolitan cities with a wide demand potential. The majority of the produce is purchased by a few large flower merchants, who then sell it to local retail outlets after a substantial markup. Retail florist shops are often found on the side of the road, with various flowers set in big buckets. However, there are some strong florist showrooms in the metros, where flowers are held in regulated temperature conditions and value-added service is prioritised. The government is now investing in the establishment of auction platforms as well as well-organized florist shops with improved storage facilities to extend shelf life. Flowers are usually packaged and transported from the output canter to wholesale markets in a rather unscientific manner. The flowers are packed in old gunny bags, bamboo baskets, simple cartoons, or simply wrapped in old newspapers and transported to markets by road, rail, or air, depending on the type.

The mode of transportation is determined by the distance between markets and the amount of goods to be transported. Flowers are usually picked in the evenings and transported by overnight trains or buses to neighbouring cities.

Solapur Market yard: Flowers Price

Sr. No.	Name of Flowers	Min-Max price Price /Rs (Per Kg)	Duration
1	Rose	80-300	Yearly
2	Marigold	20-200	Yearly
3	Chrysanthemum	80-250	Winter
4	Tuberose/Nishigandha	100-300	Yearly
5	Jasmine/ Mogra	100-800	Summer
6	Gerbera	15-20 Rs Per item	Yearly
7	Gaillardia	15-30 Rs Per bunch	Yearly
8	Kakada	20-120 Per packet	Rainy and winter
9	Aster	3-4 Rs Per item	Rainy and winter
10	Lilium	15-20 Rs Per bunch	Rainy and winter

Source: Compiled by Researcher

Infrastructural And Marketing Facilities For Floricultural Products:

Farmers in the Solapur District have expressed a strong desire to grow a large variety of loose and cut flowers. Off-season output advantages, when combined with demand advantages, offer a lot of space for remunerative rates. Consumers of flowers who live far away from production areas have no direct interaction with growers. Various intermediaries, such as forwarding agents, cooperative societies, wholesalers/commission agents, and retailers, fill this void between producers and customers. They collaborate to provide various marketing services. These organisations are an important part of the system because they develop the mechanics for determining rates, different arrangements and connections, and ensuring the flow of goods and services. The marketing channels used by the survey respondents for the sale of flowers. The marketing chain between the production point and the market in Solapur Market Yard is fairly well-functioning. Flowers from remote growing centres make their way to the flower market through middlemen and, in some cases, personal efforts.

Farmer → Solapur market → Local Market → Flower Stalls → Consumers

e flow of goods and services, these organisations are an integral part of the system. The marketing networks that respondents to the survey used to sell flowers.

Marketing Efforts:

The florists make no special marketing attempts because the larger ones are well-known in the city due to word-of-mouth publicity. Emerging internet-based orders, on the other hand, necessitate web-advertising. Although there are few attempts made in terms of advertisement or other marketing aspects, it has been observed that tie-ups with wedding halls, hotels, and corporate offices are frequently used to maintain the company.

Storage Requirements/ Conditions:

With small florists, flowers are usually stored in standard room conditions with a two-day shelf life. Because of their age, the flowers do not suffer a significant price drop during this period. Large florists, on the other hand, often see stock remaining for 6-7 days, resulting in a price depreciation of nearly 50%.

Production Problems

More than 60% of growers said they didn't know how to use the new up-to-date processing methods. Inadequate and timely supply of dependable plant material. Furthermore, the lack of skilled labour, especially during times of unique operations, impedes production efficiency. Most growers do not schedule their crops according to the festive seasons or the needs of target markets, and as a result, they are unable to obtain remunerative prices. As a result of the gap in the implementation of production technology, the majority of growers are not adopting the recommended package of practises, resulting in low production efficiency.

Problem Of Floriculture Marketing In Solapur District

Marketing is the exchange of money for the actual transfer of ownership of a product from the manufacturer to the customer. As a result, any producer requires someone to agree to buy his goods. Traders, market functionaries, middlemen, intermediaries, and direct customers are all words used to describe the above group of people. Apart from the general issues mentioned earlier, the floricultural marketing sector in the area is plagued by a number of issues. These issues can be classified into the following categories:

- Market-yard related problem.
- Marketing problem.
- Infrastructural problem
- Pricing problem resulting in distress sale.
- Transportation problem.
- Problem of market regulation.
- Availability of labour
- Sources of finance

Growers are forced to rely solely on local intermediaries. At a competitive or remunerative price, the markets are unable to absorb the entire arrival. As a result, the farmers bear the brunt of the consequences.

- Infrastructural problem
- Poor transportation network
- Problem of market regulation
- Wastage and risk

Conclusion

Individual growers in the Solapur district practise small-scale floriculture due to the high cost of production inputs, especially imported plant material, and the district's scattered and small land holdings. The study found that the area of flower cultivation in Maharashtra's Solapur District remained constant throughout the study period, but that flower cultivation fluctuated. Farmers knowledge of proper post-harvest handling, packaging, storage, and transportation has not yet advanced to a sophisticated level. They are unfamiliar with modern marketing techniques.

References

1. *Barakade, A. J., and Sule, B. M., 2011. Rainfall variability in Solapur district of Maharashtra: A geographical study. Review of Research, Vol. 1 (2), pp. 1-4.*
2. *Biswas, N. K., 2013. Floriculture concentration zone of Nadia district, West Bengal.*
3. *International Journal of Humanities and Social Science Invention, Vol. 2 (1), pp. 14-17.*
4. *.Sindhu, S.S. and Saha, T.N. (2010). Research Highlights and business opportunities in floriculture. Hariyana Journal of Horticulture, 39(1&2):30-41.*
5. *.Mishra, N. K., and Mishra, D. P., 2016. A study on entrepreneurial challenges of floriculture in Odisha. International Journal of Computer Engineering in Research trends, Vol. 3 (8), pp.419-424.*

Address
'Ravichandram' Survey No-101/1, Plot, No-23,
Mundada Nagar, Jalgaon (M.S.) 425102

Received 5 October 2020
Revised 12 October 2020
Accepted 12 October 2020

Impact of purchasing practices, supplier relationships and use of information technology on firm performance

Suhas Suresh Ambekar
Symbiosis International, University Symbiosis Centre for Management and Human Resource Development, Pune, India and Research Scholar, Department of Commerce and Management, Shivaji University Kolhapur, Kolhapur, India

Umesh Deshmukh
Department of Operations, CHH Shahu Institute of Business Education and Research, Kolhapur, India, and

Manoj Hudnurkar
Department of Operations and Analytics, Symbiosis International University Symbiosis Centre for Management and Human Resource Development, Pune, India

Abstract

Purpose – The study aims to establish an impact of supplier relationship and information and communication technology through purchasing practices on firm performance.

Design/methodology/approach – Review of relevant literature resulted in constructs, namely, supplier relationships, information and communication technology, purchasing practices and firm performance. A survey of 179 manufacturing companies through structured questionnaire was conducted. The responses were analysed through structural equation modelling using the partial least squares method.

Findings – It is observed that the firm performance is directly influenced by purchasing practices and indirectly by supplier relationships and information technology. The use of information technology in materials management affects supplier relationships and purchasing practices both.

Practical implications – The study provides a model for purchasing practitioners by highlighting the importance of supplier relationship management. Though the firms are running after improving technology, it can only affect firm performance through proper purchasing practices.

Originality/value – The study provides empirical evidence to the practical notions that exist in purchasing practitioners.

Keywords Supplier relationship, Firm performance, Information technology, Purchasing practices

Paper type Research paper

1. Introduction

The growing complexities and significance of supply chain attracted attention and strategic significance of the supply side of the chain. With these changes, purchasing function gained importance from being just a clerical function to assuming strategic presence in

International Journal of Innovation Science
Vol. 13 No. 1, 2021
pp. 118-130

1757-2223
DOI 10.1108/IJIS-10-2020-0182

management of organisations. Subsequently, companies started improving purchasing performance to gain competitive advantage (Gangurde and Chavan, 2016). Purchasing holds a paramount importance in cost of supply chain, as about 60% of the total supply chain expenses go into procurement activities (Brandmeier and Rupp, 2010). With the shift in role of purchasing from clerical to strategic function, integration of company efforts for purchasing gained significance. Various operational excellence techniques are now part of purchasing function. Companies have started using just in time (JIT) principles in purchasing for benefit of buyers as well as suppliers. Use of these methods has benefitted the buyers directly in terms of reduced costs and suppliers indirectly (Dong *et al.*, 2001).

The purchasing practices are affected by supplier-related practices as well as use of technology. The improvement in quality management in purchasing can be influenced by supplier collaborations, empowered teams and information technology. The information systems like online ordering, electronic data interchange (EDI), information sharing in supply chain play an important role in purchasing practices (Hemsworth *et al.*, 2005). The investments in technology are increasing, but literature doubts the direct impact of information technology on firm performance (Pérez-López and Alegre, 2012). However, there are studies confirming the role of information technology in improving purchasing, supplier relations and related activities, which in turn impact firm performance (Su and Gargeya, 2012; Hwang and Min, 2015). Firms are moving to purchase related information systems to support complex vendor relations and integrating purchasing function with other functional areas (Hemsworth *et al.*, 2005). The supply chain success is, thus, affected by implementation of information systems in purchasing practices. The digitisation of purchasing practices can simplify routine tasks, complex decisions and firms can focus on strategic activities and profitability measures (Bienhaus and Haddud, 2018).

The improved role of purchasing in strategic management of firm is influencing firms' growth and shareholders' value (Thrulogachantar and Zailani, 2011). The current-day purchasing practices focus on integration of supplier relations and information technology to improve firm performance. The strategic purchasing stimulates competitive advantage with the help of long-term, close supplier relations and promoting information sharing across the supply chain, which can result in mutual gains (Chen *et al.*, 2004). Both manufacturing and service firms can achieve internet-based supply integration by improving their information technology (IT) capabilities (Liu *et al.*, 2015). The integration of supply chain practices, including supplier selection and collaboration, procurement practices with that of information systems, influence the operational performance significantly (Bayraktar *et al.*, 2009).

In the light of the existing relationships among supplier relations, information and communication technology to that of purchasing practices, this study aims at understanding the effect of purchasing practices supported by supplier management and IT on the performance of the firm. The study takes an empirical approach by investigating the purchasing practices of manufacturing firms and impact on performance. The conceptual model includes supplier relations and information and communication technology interaction with purchasing practices. This model is tested using the partial least squares (PLS)-based structural equation modelling. The study found a significant impact of purchasing practices on performance. IT affects both supplier relations and purchasing practices directly and the firm performance indirectly.

The paper is organised as follows. Section 2 reviews literature and develops hypotheses for study. In Section 3, research methodology used for the study is explained. The section thereafter presents results of data analysis using PLS-based structural equation modelling. The next section discusses the findings of the study and provides implications. Finally, the conclusion section summarises the study with presenting the limitations.

2. Literature review and hypotheses development

Purchasing is an important strategic function capable of developing competitive potential through supply management (González-Benito, 2007). The level at which purchasing is involved in strategic process determines the type of purchasing practices and their impact on business performance (Chen *et al.*, 2004). A sustainable supply network develops sustainable firms. Manufacturing companies, especially automotive and heavy manufacturing, depend more on their suppliers for parts and subassemblies (Tate *et al.*, 2012). Hence, supplier management in such sectors becomes an important function.

The literature explores relations of the purchase practices with the performance of a company. Some of the relations expressed in literature review are purchasing practices affecting performance of a firm (Dong *et al.*, 2001; Gangurde and Chavan, 2016), supplier relations affecting performance (Borade and Bansod, 2010; Ebrahimipour *et al.*, 2016) and influence of IT on performance of a company (Mishra *et al.*, 2013; Fuchs and Otto, 2015). The literature also contributes contradicting views stating purchasing capabilities are more influential on performance as compared to purchasing practices (González-Benito, 2007). The purchasing practices are imitable and can impact the performance of a firm if the purchasing capabilities support business strategies. The competence of the purchasing department is the integration of how purchasing achieves its objectives and to what extent the purchasing function integrates with business strategy (González-Benito, 2007).

Purchasing practices have higher interaction with supplier management, and thus, supplier management can be seen as one of the core competencies of purchasing function (Brandmeier and Rupp, 2010). Studies have shown a relationship of supplier integration or management to purchasing or procurement (Brandmeier and Rupp, 2010; Tate *et al.*, 2012). Supplier management affects the purchasing function's performance. Integration of other operations techniques as JIT with purchasing function can result in improving the performance of the suppliers and buyers both (Dong *et al.*, 2001). The long-term cooperative relationships with suppliers supported by communication and information exchange are result of strategic purchasing (Chen *et al.*, 2004).

The investment in information and communication technology for improving supply chain efficiency has risen to a great extent. The use of technology improves operational performance with lesser lead-times, proper demand management, cost reduction and better service levels (Fuchs and Otto, 2015). IT applications have improved channel integration with better data accuracy and reduced delays in purchasing. The managers can hold inventories just in case because of real-time information access and quality information (Mishra *et al.*, 2013). The impact of IT investment on firm performance has contradictory opinions in literature, but it is also observed that IT does not directly affect supplier integration (Wang *et al.*, 2018). This may be because IT implementation is an internal process. Also, investment in IT may not matter in a firm's profitability (Shah and Shin, 2007).

With growing strategic role of purchasing, purchasing practices are needed to be aligned with a supplier's total costs. Innovative purchasing practices can improve supplier capability (Thrulogachantar and Zailani, 2011). Information sharing across channel members in supply chains is seen as a prominent factor in developing collaborative supply chains. Moreover, the perceived risk of transactions and cost can be reduced with IT (Hudnurkar and Rathod, 2017). Technological support along with the focus on developing long-term collaborative relationships is responsible in improving suppliers' satisfaction towards buyers (Hudnurkar and Ambekar, 2019). Hence, the purchasing practices are difficult to isolate from the effect of supplier relations and use of technology. The literature provides purchasing practices, supplier relations and information and communication technology use as distinct constructs. The items associated with these constructs are presented in Table 1. Firm performance can be measured in terms of operational parameters in specific or financial parameters in general. The conceptual model of the study using the stated constructs is shown in Figure 1.

Purchasing is considered as a strategic function in a manufacturing company. The purchasing practices as procuring material of right quality at right price, vendor evaluation and management lead to reducing the cost of materials as well as improving quality of input. This, in turn, improves sales and profits for a company. Hence, this relationship is stated in a form of hypothesis as:

H1. Purchasing or procurement practices significantly affect firm performance.

Managing suppliers is an essential task of purchasing. The purchasing function is dependent on suppliers. Hence, it is proposed that supplier relationship management influences purchase practices. So, the hypothesis is framed as:

H2. Supplier relationship significantly affects the purchasing or procurement practices.

Investments in IT help in improving purchasing practices as well as impact the supplier relationships. The direct relationship of IT investments to performance is questioned in literature (Shah and Shin, 2007). Hence, two hypotheses are proposed as:

H3. Information and communication technology significantly affects purchasing practices.

H4. Information and communication technology significantly affects supplier relationship.

3. Methodology

The conceptual model based on literature review proposes four hypotheses and tested using PLS-based structural equation modelling. The data were collected by using a survey method with the help of a structured questionnaire. The questionnaire was developed using the theoretical constructs defined in previous literature. As the variables to be measured represent purchasing practices and allied functions, they are measured on a five-point Likert scale. The scale is coded from 1 – practices not followed at all to 5 – practices are followed to a great extent. To know the sample frame for the study, the Centre for Monitoring Indian Economy (CMIE) Prowess IQ database was used. The products produced by the companies are iron metal, auto components, heavy machinery, light machinery, electrical and nonelectrical equipment, generators, engines, foundry, casting, machine tools, packaging machinery, automobile ancillaries, non-electrical machinery, forging or die-stamping machines and hammers, piston rings, bearings, stainless steel ingots, fuel injection equipment spares. The total number of companies contacted were 179. This is the total sample frame available for study. The questionnaires were administered personally along with contacting the respondents through emails. Due to non-availability of complete information and lack of response, 41 responses were discarded. A total sample size for primary data collection was 138. The selected companies represent manufacturers of all the types of products available in study population. The discussion with the respondents helped in understanding current issues and obstacles in implementing the material management practices. The respondents of the study included materials managers, purchase managers, supply chain executives of the organisations under study.

Table 1.
Constructs and associated manifest variables used in the study

Construct	Manifest variables	References
Purchasing (PUR)	Purchasing from many suppliers in one location Top management of the company emphasises the strategic role of sourcing function Developing long-term relationships with key suppliers Focus on quality than on price in developing new suppliers Use of e-procurement for purchasing materials Request suppliers to provide the cost breakdown to analyse the cost drivers Following global sourcing methods for purchases	Truong *et al.* (2017), Li *et al.* (2006); Bayraktar *et al.* (2009)
Supplier relationship (SUP)	Frequent interaction with suppliers Discussion and problem-solving jointly with suppliers Helping suppliers to improve their product quality Active participation of key suppliers in new product development Including key suppliers in planning and goal-setting activities A separate vendor development department	Attia and Eldin, (2018); Gorane and Kant (2016), Bayraktar *et al.* (2009)
ICT	Extensive use of MRP/ERP software for managing materials Electronic transfer of purchase orders and invoices to suppliers Advanced information systems for tracking and/or expediting shipments Direct computer-to-computer links with key suppliers Use of RFID technology to track raw material and finished goods inventory	Gorane and Kant (2016), Bayraktar *et al.* (2009)
Firm performance (FP)	Improved sales Reduced inventory levels Improved profitability Better operational efficiency	Bayraktar *et al.* (2009), Ou *et al.* (2010); Su and Gargeya (2012); Attia and Eldin, (2018)

The questions on materials management practices were analysed using structural equation modelling (SEM) through the PLS method. The method is used for multivariate analysis where the constructs are represented by unobservable or latent variables. As the practices cannot be measured directly, they are latent constructs and hence analysed using SEM. The confirmatory factor analysis is performed to analyse the conceptual model relations in the hypotheses. The sample includes multiple respondents from each organization under study (Basu and Bhola, 2016) to ensure completeness of data and avoid bias. The respondents were contacted personally by the researchers to avoid non-response bias (Kortmann *et al.*, 2014).

A pilot was conducted to assess face validity of the instrument. The items are selected based on their frequency of appearance in the literature. Feedback from purchasing executives of companies and academicians in this area is obtained and necessary changes made. The impact of supplier relationship, IT and purchasing practices is studied on firm performance. Four constructs with 22 manifest variables are included in the structural model.

4. Results

The first step of analysis resulted in four constructs and 22 items (Table 2). The structural model was first checked for its validity and reliability. The factors having eigenvalues more than 1.0 are retained (Field, 2000). Also, it is seen that the factors extracted at least account for 60% of the total variance (Ambekar and Hudnurkar, 2017). The four constructs accounted for 73% of the explained variance. The factor loading value (greater than 0.5) is used to retain variables (Kaiser, 1960; Basu and Bhola, 2016). Factor analysis of the manifest variables when loaded to the constructs of the study is represented in a form of factor loadings in Table 2. As all of the factor loadings are above 0.6, it passes the convergent validity of the factors.

To test the conceptual model through SEM, the PLS approach is used for testing the measurement model. The PLS approach is gaining considerable attention in areas like operations, strategy and innovation. This method is useful for complex models with relatively smaller sample size (Kortmann *et al.*, 2014). Moreover, PLS does not require the data to be normally distributed.

Table 3 demonstrates the construct reliability and validity. It can be observed that Cronbach's α and composite reliability values are greater than 0.7, and the average variance extracted is greater than 0.5, which indicates that the constructs in the measurement model are reliable (Hair *et al.*, 2013). Cronbach's α and composite reliability represent internal

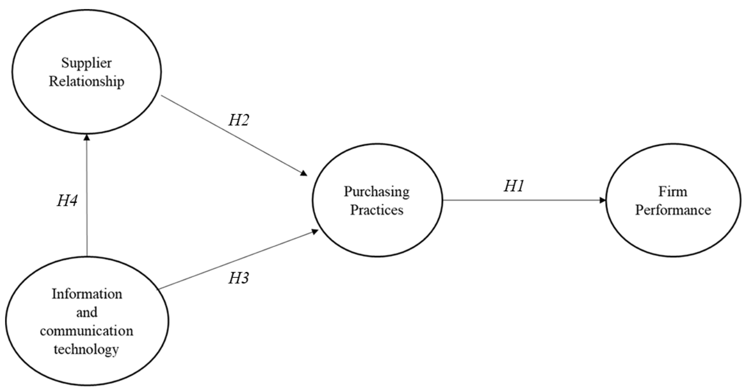


Figure 1.
Conceptual model of the study

Table 2.
Factor loadings

Manifest variable	SUP	LIM	Constructs PUR	ICT	FP
SUP1	0.856				
SUP2	0.640				
SUP3	0.767				
SUP4	0.869				
SUP5	0.827				
SUP6	0.852				
PUR1			0.874		
PUR2			0.816		
PUR3			0.868		
PUR4			0.872		
PUR5			0.781		
PUR6			0.846		
PUR7			0.914		
ICT1				0.898	
ICT2				0.867	
ICT3				0.881	
ICT4				0.876	
ICT5				0.795	
FP1					0.813
FP2					0.804
FP3					0.851
FP4					0.818

consistency of the constructs. As the AVE values are greater than 0.5, they represent convergent validity (Hudnurkar *et al.*, 2019).

The discriminant validity confirms the uniqueness of factors and also checks whether each factor measures distinctive elements. The discriminant validity is tested using inter-construct correlation and average variance extracted (AVE). The square root of the AVE for each construct should be higher than correlation with any other construct (Eckstein *et al.*, 2015). The factors identified should not have higher correlation among them and should represent a distinct factor. Table 4 provides the values for inter-construct correlation and square root of AVE. It can be seen that the values of square root of AVE are higher than correlations between constructs. Thus, the constructs have discriminant validity, and each construct expresses a unique scale of measurement.

The hypothesised relationships of the constructs are tested using structural model with the help of the PLS method. The results of the PLS-based structural model are shown in Figure 2. The PLS model is tested for its goodness of fit using the standardized root mean square residual (SRMR) value. It is the standardized difference between the observed correlation and the predicted correlation. A value of SRMR less than 0.08 is generally

Table 3.
Construct reliability and validity

Construct	Cronbach's α	Composite reliability	AVE
SUP	0.890	0.917	0.649
PUR	0.938	0.950	0.729
ICT	0.915	0.936	0.746
FP	0.841	0.893	0.675

considered a good fit (Hu and Bentler, 1999). The current model has SRMR value as **0.071**, which represents that the model has a good fit.

The composite measures of manifest variables are used as observable indicators of the exogenous latent construct ICT and endogenous latent constructs SUP, PUR and FP. The R^2 values of endogenous constructs are moderate to high, to understand the significance of relationship, t-statistic values and p-values are to be used.

Table 5 represents the results of structural model with path coefficients, t-statistics and p-values for the hypothesized relationships. It can be observed from Table 5 that *H1*, presenting relationship between purchasing practices and firm performance, is significant.

Constructs	SUP	PUR	ICT	FP
SUP	**0.806**@			
PUR	0.795	**0.854**@		
ICT	0.754	0.851	**0.864**@	
FP	0.591	0.640	0.610	**0.822**@

Note: @Square root of AVE

Table 4. Discriminant validity

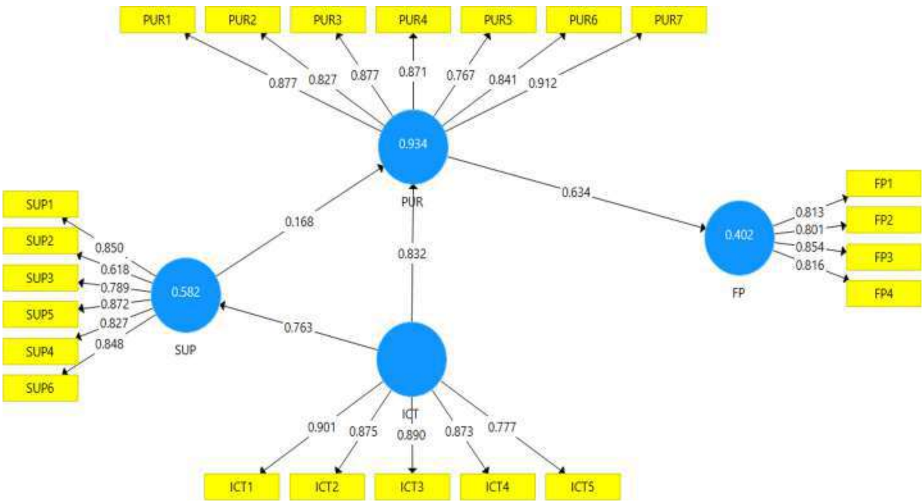


Figure 2. Structural model with path coefficients

Hypothesis	Path coefficients	SD	t-statistics	p-value	Result
PUR → FP (H_1)	0.634	0.087	7.318	0.000	Significant**
SUP → PUR (H_2)	0.168	0.098	1.721	0.086	Significant*
ICT → PUR (H_3)	0.832	0.092	9.032	0.000	Significant**
ICT → SUP (H_4)	0.763	0.083	9.207	0.000	Significant**

Notes: **Significant at $\alpha < 0.01$; *Significant at $\alpha < 0.1$

Table 5. Path coefficients, t-statistics and testing of hypotheses

This states that the firm performance is significantly affected by the purchasing practices. *H2*, presenting the relation between supplier relationships and purchasing practices, is moderately significant at $\alpha < 0.1$. Supplier relationships may not impact purchasing to great extent, as it is a hygiene factor in purchasing. *H3*, presenting relationship between IT and purchasing is also significant. With the increased dependency of firms on technology, purchasing practices are also evolving. *H4*, stating relation between IT and supplier relationship, is also found significant. The technology is, thus, bringing new avenues for information sharing across supply chains.

5. Discussion

Purchasing practices in manufacturing firms are gaining strategic importance. The impact of purchasing practices on firm performance is proven in the literature (Gangurde and Chavan, 2016). The literature also discusses the role of supplier relationships (Brandmeier and Rupp, 2010) and IT (Fuchs and Otto, 2015) in purchasing function. The integration of supplier relationships, information and communication technology and purchasing function to affect the firm performance is the sole objective of this study. The study explores the role of suppliers and technology in purchasing and their combined effect on performance.

The exploration of literature resulted in defining the four constructs and associated manifest variables. The construct of purchasing practices was measured through number and location of suppliers, methods of purchasing, factors influencing buying, role of top management, etc. The supplier relationship was observed through frequency of interaction with suppliers, discussion and problem-solving jointly with suppliers, support to improve their product quality, participation in new product development and presence of separate vendor development department. The information and communication technology construct is measured by use of enterprise resource planning/material requirement planning (ERP/MRP), electronic transfer of purchase orders and invoices, advanced information systems for tracking and/or expediting shipments, direct computer-to-computer links with key suppliers and use of radio-frequency identification (RFID) technology. The firm performance is measured as operational performance, including efficiency and inventory levels, along with financial performance like improved profitability and improved sales.

The conceptual model using these constructs was tested with PLS-based SEM. The hypotheses stating interrelationship of the constructs and impact on the performance of the firm were tested on a data set collected from manufacturing companies in India. Information and communication technology is found to impact both supplier relations and purchasing practices. The role of information sharing in supply chains is inevitable and paves the way towards strategic purchasing (Chen *et al.*, 2004). This finding from literature is supported by the study model where information and communication technology (ICT) was found to impact supplier relations by adding transparency in transactions. ICT also affects purchasing practices to impact the methods to become more efficient and economical along with improving the speed of transactions. This finding supports the literature findings confirming role of ICT in improving purchasing and firm overall performance (Su and Gargeya, 2012; Hwang and Min, 2015). There are contradicting studies as well stating insignificant role of ICT in firm performance (Shah and Shin, 2007). But, the study model describes indirect impact of ICT through purchasing.

Supplier relations are considered to be an important factor in purchasing function, but the study found that there is weak significance of supplier relationships on purchasing in improving firm performance. As supplier relationship management affects inventory performance, it also expected to affect purchasing performance. Many companies consider supplier management is a responsibility of the purchasing department. The success of the procurement function depends upon supplier integration and support strategies (Brandmeier and Rupp, 2010). In the industries like manufacturing, the impact of supplier relationship and engagement is higher on purchasing (Tate *et al.*, 2012). Long-term supplier relationships are also a determining factor in global sourcing (Golini and Kalchschmidt, 2011). The current model shows weak significance of supplier relations on purchasing practices. As managing suppliers is considered to be part of purchasing and a hygiene factor, the indirect impact on firm performance is observed to be weak. On the other hand, some studies state that innovative purchasing practices can improve supplier capability (Thrulogachantar and Zailani, 2011).

The impact of purchasing practices on the firm performance is direct and significant. The operational and financial measures of firm performance are influenced by purchasing practices. This finding coincides with the literature (Dong *et al.*, 2001; Gangurde and Chavan, 2016). The role of purchasing is, thus, shifting from a clerical function to strategic function and is affected by the advancement in technology. The advent of technology and big data influenced the practices used by companies in the purchasing function. The technology is improving efficiency, effectiveness and quality of purchasing activities. Technology is used to improve information sharing along supply chain, which in turn impacts both buyer and supplier organisations. The long-term relations are preceded by information sharing and succeeded by improved performance of the system. The literature also presents contradictory views stating the importance of purchasing capability over practices (González-Benito, 2007). The practices are imitable, but capabilities are rare resources of the firm.

5.1 Theoretical implications

The study provides a model integrating supplier relations, IT and purchasing to impact the firm performance. There are isolated studies exploring impact of these functions individually, but this is one of its kind study integrating these functions. The construct ICT affects supplier relationships and purchasing practices directly and firm performance indirectly. There are studies stating investments in IT are part of internal process and may not directly affect supplier systems (Wang *et al.*, 2018); however, the current study confirms the impact of IT application on supplier relationships. The study confirms the impact of purchasing practices on firm performance. The study sample is from manufacturing companies, so the impact of cost savings in purchasing is significant in the total cost of manufacturing.

5.2 Managerial implications

The study provides integrated model of purchasing practices that can be used to impact performance of the firm. The manufacturing companies need to coordinate efforts in incorporating technology in supplier management and purchasing together to create an effective system. The technology improves transaction transparency and builds long-term supplier relations. Supplier relationships are considered integral part of purchasing function, but improving supplier capabilities can be advantageous for building purchasing capability of the firm.

6. Conclusion

The aim of study is to provide an integrated purchasing model that encompasses application of IT in purchasing and supplier relations management. The purchasing function has evolved over years and needs to be seen as a strategic function in manufacturing organisations. Though the role of purchasing in cost-related aspects is well appreciated, its role as long-term business strategy is still being explored. The industry is undergoing drastic change because of the advancement in technology, which is affecting the purchasing and allied functions as well. The study provides empirical evidence on the impact of IT on purchasing and supplier relationships. Though the investment in technology is an internal process, the impact can be seen on supply chain partners. Technology is bringing innovative and efficient ways of executing purchase-related functions as well as information sharing across channel members. Long-term supplier relations can affect business performance, if dealt strategically. The technological innovations are helping the companies to achieve improved relations.

The study tests the relationship of purchasing with performance empirically and proposes that the purchasing practices directly affect firm performance. The role of IT and supplier relations is indirect with the firm performance and influences the purchasing practices directly. Building purchasing capability should be objective of manufacturing firms by enhancing supplier capabilities. The investments in IT are to be seen positively to improve supplier relations.

As the study contributes to purchasing management practices, there are some limitations associated with the study. The study sample involves only a small set of manufacturing companies and hence limits generalisation of results. The measurement of constructs is based on the views expressed by executives of the sample organisations, which may have some bias. The study can further be extended by adding other constructs associated with purchasing performance like inventory management and logistics. There is a need to study impact of purchasing practices on supplier relations as well.

References

Ambekar, S. and Hudnurkar, M. (2017), "Factorial structure for six sigma project barriers in Indian manufacturing and service industries", *The TQM Journal*, Vol. 29 No. 5, pp. 744-759.

Attia, A. and Eldin, I.E. (2018), "Organizational learning, knowledge management capability and supply chain management practices in the Saudi food industry", *Journal of Knowledge Management*, Vol. 22 No. 6, pp. 1217-1242.

Basu, R. and Bhola, P. (2016), "Impact of quality management practices on performance stimulating growth: empirical evidence from Indian IT enabled service SMEs", *International Journal of Quality and Reliability Management*, Vol. 33 No. 8, pp. 1179-1201.

Bayraktar, E., Demirbag, M., Koh, S.L., Tatoglu, E. and Zaim, H. (2009), "A causal analysis of the impact of information systems and supply chain management practices on operational performance: evidence from manufacturing SMEs in Turkey", *International Journal of Production Economics*, Vol. 122 No. 1, pp. 133-149.

Bienhaus, F. and Haddud, A. (2018), "Procurement 4.0: factors influencing the digitisation of procurement and supply chains", *Business Process Management Journal*, Vol. 24 No. 4, pp. 965-984.

Borade, A.B. and Bansod, S.V. (2010), "Study of vendor-managed inventory practices in Indian industries", *Journal of Manufacturing Technology Management*, Vol. 21 No. 8, pp. 1013-1038.

Brandmeier, R.A. and Rupp, F. (2010), "Benchmarking procurement functions: causes for superior performance", *Benchmarking: An International Journal*, Vol. 17 No. 1, pp. 5-26.

Chen, I.J., Paulraj, A. and Lado, A.A. (2004), "Strategic purchasing, supply management, and firm performance", *Journal of Operations Management*, Vol. 22 No. 5, pp. 505-523.

Dong, Y., Carter, C.R. and Dresner, M.E. (2001), "JIT purchasing and performance: an exploratory analysis of buyer and supplier perspectives", *Journal of Operations Management*, Vol. 19 No. 4, pp. 471-483.

Ebrahimipour, V., Maleki Shoja, B. and Li, S. (2016), "Supplier selection considering product structure and product life cycle cost", *International Journal of Quality and Reliability Management*, Vol. 33 No. 5, pp. 654-675.

Eckstein, D., Goellner, M., Blome, C. and Henke, M. (2015), "The performance impact of supply chain agility and supply chain adaptability: the moderating effect of product complexity", *International Journal of Production Research*, Vol. 53 No. 10, pp. 3028-3046.

Field, A. (2000), *Discovering Statistics Using SPSS for Windows: Advance Techniques for the Beginner*, Sage Publications, London.

Fuchs, C. and Otto, A. (2015), "Value of IT in supply chain planning", *Journal of Enterprise Information Management*, Vol. 28 No. 1, pp. 77-92.

Gangurde, S.R. and Chavan, A.A. (2016), "Benchmarking of purchasing practices using Kraljic approach", *Benchmarking: An International Journal*, Vol. 23 No. 7, pp. 1751-1779.

Golini, R. and Kalchschmidt, M. (2011), "Moderating the impact of global sourcing on inventories through supply chain management", *International Journal of Production Economics*, Vol. 133 No. 1, pp. 86-94.

González-Benito, J. (2007), "A theory of purchasing's contribution to business performance", *Journal of Operations Management*, Vol. 25 No. 4, pp. 901-917.

Gorane, S.J. and Kant, R. (2016), "Supply chain practices: an implementation status in Indian manufacturing organisations", *Benchmarking: An International Journal*, Vol. 23 No. 5, pp. 1076-1110.

Hair, J., Tomas, G., Hult, M., Ringle, C.M. and Sarstedt, M. (2013), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, SAGE Publications.

Hemsworth, D., Sánchez-Rodríguez, C. and Bidgood, B. (2005), "Determining the impact of quality management practices and purchasing-related information systems on purchasing performance: a structural model", *Journal of Enterprise Information Management*, Vol. 18 No. 2, pp. 169-194.

Hu, L.T. and Bentler, P.M. (1999), "Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives", *Structural Equation Modeling: a Multidisciplinary Journal*, Vol. 6 No. 1, pp. 1-55.

Hudnurkar, M., Ambekar, S. and Bhattacharya, S. (2019), "Empirical analysis of Six sigma project capability deficiency and its impact on project success", *The TQM Journal*, Vol. 31 No. 3, pp. 340-358.

Hudnurkar, M. and Rathod, U. (2017), "Collaborative practices with suppliers in Indian manufacturing multinationals", *Journal of Global Operations and Strategic Sourcing*, Vol. 10 No. 2, pp. 206-231.

Hudnurkar, M. and Ambekar, S.S. (2019), "Framework for measurement of supplier satisfaction", *International Journal of Productivity and Performance Management*, Vol. 68 No. 8, pp. 1475-1492.

Hwang, D. and Min, H. (2015), "Identifying the drivers of enterprise resource planning and assessing its impacts on supply chain performances", *Industrial Management and Data Systems*, Vol. 115 No. 3, pp. 541-569.

Kaiser, H.F. (1960), "The application of electronic computers to factor analysis", *Educational and Psychological Measurement*, Vol. 20 No. 1, pp. 141-151.

Kortmann, S., Gelhard, C., Zimmermann, C. and Piller, F.T. (2014), "Linking strategic flexibility and operational efficiency: the mediating role of ambidextrous operational capabilities", *Journal of Operations Management*, Vol. 32 Nos 7/8, pp. 475-490.

Li, S., Ragu-Nathan, B., Ragu-Nathan, T.S. and Rao, S.S. (2006), "The impact of supply chain management practices on competitive advantage and organizational performance", *Omega*, Vol. 34 No. 2, pp. 107-124.

Liu, H., Huang, Q., Wei, S. and Huang, L. (2015), "The impacts of IT capability on internet-enabled supply and demand process integration, and firm performance in manufacturing and services", *The International Journal of Logistics Management*, Vol. 26 No. 1, pp. 172-194.

Mishra, S., Modi, S.B. and Animesh, A. (2013), "The relationship between information technology capability, inventory efficiency, and shareholder wealth: a firm-level empirical analysis", *Journal of Operations Management*, Vol. 31 No. 6, pp. 298-312.

Ou, C.S., Liu, F.C., Hung, Y.C. and Yen, D.C. (2010), "A structural model of supply chain management on firm performance", *International Journal of Operations and Production Management*, Vol. 30 No. 5, pp. 526-545.

Pérez-López, S. and Alegre, J. (2012), "Information technology competency, knowledge processes and firm performance", *Industrial Management and Data Systems*, Vol. 112 No. 4, pp. 644-662.

Shah, R. and Shin, H. (2007), "Relationships among information technology, inventory, and profitability: an investigation of level invariance using sector level data", *Journal of Operations Management*, Vol. 25 No. 4, pp. 768-784.

Su, J. and Gargeya, V.B. (2012), "Strategic sourcing, sourcing capability and firm performance in the US textile and apparel industry", *Strategic Outsourcing: An International Journal*, Vol. 5 No. 2, pp. 145-165.

Tate, W.L., Ellram, L.M. and Dooley, K.J. (2012), "Environmental purchasing and supplier management (EPSM): theory and practice", *Journal of Purchasing and Supply Management*, Vol. 18 No. 3, pp. 173-188.

Thrulogachantar, P. and Zailani, S. (2011), "The influence of purchasing strategies on manufacturing performance: an empirical study in Malaysia", *Journal of Manufacturing Technology Management*, Vol. 22 No. 5, pp. 641-663.

Truong, H.Q., Sameiro, M., Fernandes, A.C., Sampaio, P., Duong, B.A.T., Duong, H.H. and Vilhenac, E. (2017), "Supply chain management practices and firms' operational performance", *International Journal of Quality and Reliability Management*, Vol. 34 No. 2, pp. 176-193.

Wang, G., Feng, T., Zhao, X. and Song, Y. (2018), "Influence of supplier trust and relationship commitment on green supplier integration", *Sustainable Development*, Vol. 26 No. 6, pp. 879-889.

Corresponding author
Suhas Suresh Ambekar can be contacted at: suhas_ambekar@scmhrd.edu

Journal of Research and Development

A Multidisciplinary International Level Referred and Peer Reviewed Journal

1 June-2021 Volume-11 Issue-14

On

Sustainable Development Goals: Initiatives, Execution and Challenges

Published by- Principal, Dr. Prof. H. B. Rathod, Gramin (ACS) Mahavidyalaya, Vasantnagar (Kotgyal), Tal. Mukhed

Mukt Shabd Journal

UGC CARE GROUP - I JOURNAL

ISSN NO : 2347-3150 / web : www.shabdbooks.com / e-mail : submitmsj@gmail.com

Certificate ID : MSJ/1273

UGC APPROVED

IMPACT FACTORS 4.6

DOI:09.0014.MSJ

crossref member

CROSSREF.ORG THE CITATION LINKING BACKBONE

CERTIFICATE OF PUBLICATION

This is to certify that the paper entitled

"RISK ANALYSIS IN SOFTWARE DEVELOPMENT BASED ON ARTIFICIAL INTILLIGENCE (A.I.): MODERN APPROACH"

Authored by

Dr. Bhoite S.D., Professor

From

SIBER, India.

Has been published in

MUKT SHABD JOURNAL, VOLUME IX, ISSUE VI, JUNE - 2020

Sumit Ganguly
Editor-In-Chief
MSJ
www.shabdbooks.com

Recent Trends in
Programming Languages
ISSN: 2455-1821
Volume 8, Issue 1, 2021
DOI (Journal): 10.37591/RTPL
STM JOURNALS
http://computers.stmjournals.com/index.php?journal=RTPL&page=index

Review RTPL

Extract Entity and Attributes from User Requirements by Applying on Natural Language Processing (NLP) Model

Bhoite Sudhakar D[1,*], Budake R. D.[2]

Abstract

Automatic generation of entity and attributes from end user requirement reduces cost, time and complexity of software development process. The main aim of this research work is to transform user requirement to Natural Language Processing (NLP) for reducing the ambiguity, inconsistency and incompleteness, and finally extract entity and attributes. This study discusses some initial experiments which are encouraging further research to help in improving the software development process. It focuses on planning of software development, software requirement analysis and further it leads to design of software. During software development, it undergoes and seems to face different types of risks. As in planning phase, different user requirements need to be collected and next systems requirements are to be considered. As end user requirements are in the form of various shapes and sizes, proposed module NLP aims to automatically convert information stored in natural language to machine understandable form. The module mainly focuses on extraction of knowledge from unstructured data to structured format. Module tries to understand user requirements using NLP and lists out entity and attributes. Module is capable of creating SRS document and helps in knowing

'Journal of Research & Development' A Multidisciplinary International Level Referred and Peer Reviewed Journal,
Impact Factor-7.265, ISSN: 2230-9578, 1June-2021, Volume-11, Issue-14,
Sustainable Development Goals: Initiatives, Execution, & Challenges

Sustainable Development Goals: Progress and Implementation

Dr. C. S. Kale
Assistant Professor, CSIBER, Kolhapur
E mail:cskale@siberindia.edu.in

Abstract:
India has played a prominent role in developing the sustainable development goals. The progress and mechanism in India to monitor the achievement of SDG and the major findings of Sustainable Development index 2020-21 are discussed.The various articles, publications, websites are referred.

Keywords:
Sustainable development goals, SDG India Index, Sustainable development report, environment crisis

Introduction

Sustainable development can be defined as an approach to the economic development of a country without compromising with the quality of the environment for future generations. It means the development which removes environment crisis, improve the life of the people at the bottom of the pyramid.

In September 2015 the UN General assembly adopted 2030 Agenda for Sustainable development. It consists of 17 Sustainable development goals which are converted to 169 UN targets. The goals are meant to achieve the development of all.

The year 2016 marked the first year of the implementation of the SDGs.

Sustainable Development Goals

The 17 sustainable development goals (SDGs) to transform our world are given below

1. No Poverty
2. Zero Hunger
3. Good Health and Well-being
4. Quality Education
5. Gender Equality
6. Clean Water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9 Industry, Innovation and Infrastructure
10. Reduced Inequality
11. Sustainable Cities and Communities
12. Responsible Consumption and Production
13. Climate Action
14. Life Below Water
15 Life on Land
16 Peace and Justice Strong Institutions
17 Partnerships to achieve the Goal

Implementation in India

The requirements for the successful implementation of Sustainable development goals include

a) Collective efforts of all the stakeholders of the society
b) Collaborative efforts and good governance at all the levels of the central and state government.
c) Sponsoring schemes which will bring in quality education, provide clean water and sanitation ,reduce poverty and hunger etc

Niti Aayog the think tank of the government is responsible to track the progress of the implementation and

'Journal of Research & Development'
A Multidisciplinary International Level Referred and Peer Reviewed Journal, Impact Factor 7.265, ISSN: 2230-9578, April-2021, Volume-11, Issue-8 "Recent Trends in Social Sciences"

Impact of COVID 19 On E Commerce in India

Dr. C. S. Kale
Asst. Professor, CSIBER Kolhapur

Abstract:
The Indian E commerce has been one of the biggest beneficiaries of the pandemic, Many Indians were introduced to online shopping during the pandemic for the first time and found it to be convenient. Large number of users and increasing use of broadband spread the e commerce activities to smaller towns and villages. This paper studies about how Covid 19 impacted e-commerce business and discusses some of the strategies adopted by e commerce players. Trends observed in e commerce are also discussed The paper is based on secondary data. The articles in journals and business magazine are referred to study the im-pact of Covid 19 on E Commerce.

Key words: *E Commerce, non-contact format, first time users, Unified Commerce, Digital transactions*

Introduction:
The worldwide spread of the COVID-19 pandemic has disrupted how people buy products and services and how they perceive e-commerce. The standardized lockdown rules across India and the growing hesitation among consumers to go outside and shop for essential goods have tilted the nation towards e-commerce.
Consumers have switched from shops, supermarkets, and shopping malls to online portals for the purchase of products, ranging from basic commodities to branded goods. Work from home increased the demand for laptops, headphones, furniture consumer electronics items etc. there was a rise in the demand for personal grooming products , masks, sanitizers etc. Learning from home was the trend this year for school and college students. The e commerce companies had the initial problem in completing the deliveries in the initial lockdown as transportation and men movement stopped. The challenges which the pandemic brought to life for various companies and service providers were majorly those of manpower as people were back home, transportation as making products available across borders became a problem, cost which skyrocketed during this time and supply chain..Apart from posing challenges, Covid-19 was as a blessing for many platforms as it resonated the message of 'Digital is the way to go', promoted contextual buying and helped create more content as demand grew manifolds.Digital wallets (40 per cent) followed by credit cards (15 per cent) and debit cards (15 per cent) were the most popular payment methods online in 2020. E Commerce capability is no longer limited to just traditional websites, and physical retail has blended with the digital world. The shop floor is now in the palm of our hands and consumers expect the same hassle free and convenient shopping experience whether they are purchasing in app, through their social feeds or in the real world. The Indian E commerce has been one of the biggest beneficiaries of the pandemic, Many Indians were introduced to online shopping during the pandemic for the first time and found it be convenient. Large number of users and increasing use of broadband spread the e commerce activities to smaller towns and villages.

Trends in E commerce: The trends in e commerce observed during the lockdown are discussed below

64% were first time shoppers: Among all the new users on its platform about 64% were first time shoppers and completely new to e commerce platform.

Online commerce in India are expected to touch $200 billion by 2026 Amazingly, the performance of the ecommerce industry surpassed all expectations. Red Seer in its report said the gross ecommerce sale starting from mid-October till November 2020, touched $8.3 billion as compared to $5 billion in 2019. It had earlier estimated that the festive season would bring in $7 billion in gross sales. In a similar vein, Unicommerce, an ecommerce focused SaaS company, said the industry had reported 56 percent growth in order volume as compared to the festive season last year. The increasing order volume also led to a 50 percent growth in gross merchandise value (GMV), as compared to last year's festive season.
China is the largest e-commerce market in the world, with a value of around $672 billion. According to IBEF, the market opportunities for online commerce in India are expected to touch $200 billion by 2026 from $30 billion in 2017. The report also states that the Indian e-commerce industry is expected to overtake its US counterpart to become the second-largest market for e-commerce in the world by 2034.

Boost from Tier-II cities and beyond: The festive season also saw increased participation from consumers belonging to Tier-II cities and beyond, a view shared by many observers across the industry. Flipkart, at the conclusion of this year's festive season sale, said the company recorded over 666 million visits during the Big Billion Days sale, and 52 percent of these were from the Tier-III cities and beyond. Even RedSeer Consulting noted that the festive season for this year saw 88 percent customer growth from last year, driven by about 40 million shoppers from Tier-II+ cities.

Emergence of Direct to Consumer (D2C) brands: This trend shows that smaller companies with its own range of products do not depend on large online marketplaces anymore for reach or access to customers. By Smart positioning of products along with innovative marketing campaigns the organizations are able to build their own customer base

Use of voice assistant and vernacular interface in multiple languages to assist online buyers: Flipkart witnessed the growth of 50% soon after the lock down with Tier 3 region and beyond registering 65% growth

Sustainable Development Goals: Progress and Implementation

Dr. C. S. Kale
Assistant Professor, CSIBER, Kolhapur
E mail:cskale@siberindia.edu.in

Abstract:
India has played a prominent role in developing the sustainable development goals. The progress and mechanism in India to monitor the achievement of SDG and the major findings of Sustainable Development index 2020-21 are discussed.The various articles, publications, websites are referred.

Keywords:
Sustainable development goals, SDG India Index, Sustainable development report, environment crisis

Introduction

Sustainable development can be defined as an approach to the economic development of a country without compromising with the quality of the environment for future generations. It means the development which removes environment crisis, improve the life of the people at the bottom of the pyramid.

In September 2015 the UN General assembly adopted 2030 Agenda for Sustainable development. It consists of 17 Sustainable development goals which are converted to 169 UN targets. The goals are meant to achieve the development of all.

The year 2016 marked the first year of the implementation of the SDGs.

Sustainable Development Goals

The 17 sustainable development goals (SDGs) to transform our world are given below

1. No Poverty
2. Zero Hunger
3. Good Health and Well-being
4. Quality Education
5. Gender Equality
6. Clean Water and Sanitation
7. Affordable and Clean Energy
8. Decent Work and Economic Growth
9 Industry, Innovation and Infrastructure
10. Reduced Inequality
11. Sustainable Cities and Communities
12. Responsible Consumption and Production
13. Climate Action
14. Life Below Water
15 Life on Land
16 Peace and Justice Strong Institutions
17 Partnerships to achieve the Goal

Implementation in India

The requirements for the successful implementation of Sustainable development goals include

a) Collective efforts of all the stakeholders of the society
b) Collaborative efforts and good governance at all the levels of the central and state government.
c) Sponsoring schemes which will bring in quality education, provide clean water and sanitation ,reduce poverty and hunger etc

Niti Aayog the think tank of the government is responsible to track the progress of the implementation and

Aayushi International Interdisciplinary Research Journal (AIIRJ)

Peer Reviewed And Indexed Journal

ISSN 2349-638x

Impact Factor 7.149

Website :- www.aiirjournal.com

Theme of Special Issue

Sustainable Development in Science, Social Science and Languages

Aayushi International Interdisciplinary Research Journal
ISSN 2349-638x
Special Issue No.88
30th May 2021

Disclaimer

Research papers published in this Special Issue are the intellectual contribution done by the authors. Authors are solely responsible for their published work in this special Issue and the Editor of this special Issue are not responsible in any form.

A Study of Pre and Post Impact of Merger on Bank Financial Performance with Special Reference to Merger of Dena Bank and Vijaya Bank into Bank of Baroda

Dr. Mahesh D. Chougule
Assistant Professor of Commerce
Shivraj College, Gadhinglaj

CS.Dr.Krishnat H.Chougale
Assistant Professor Finance & Accounts
CSIBER, Kolhapur

Abstract

Bank is a financial institution, which performs various functions like accepting deposits, lending loans to individuals and to business concerns. No economy will develop without a stable and efficient banking system. India is the world's largest emerging economic giant and from the past few years, India's banking system has grown very rapidly. Indian banking industry is witnessing the roll out of new banking models. Among them the merger of weak and loss incurring banks with the large banks is under serious debate. Mergers enable banks to expand their geographic presence, improve synergies, compete with global banks, and absorb non-performing assets from weakened banks. As a result of mergers Banks will gain brand identities, new regions, and correspondent product ranges. While understanding the merging of Indian banking system it is also necessary to learn its pre-merger financial scenario and its impact on bank financial performance. The paper is an attempt to assess the pre-merger scenario of the three banks and its impact on bank's financial performance with special reference to merger of Dena Bank and Vijaya Bank into Bank of Baroda which came into effect from 1st April, 2019.

Key Words: *Bank Merger; Bank of Baroda; Dena Bank; Vijaya Bank; Pre-Merger Scenario; Impact on Financial Performance.*

Introduction

Banks are financial sector corporations which work as mediators between savers and borrowers by offering a wide range of financial services in order to alleviate capital shortages and serve as a reflection of economic growth. A well-functioning bank stimulates productive investments, mobilizes dispersed savings, and diversifies risk, while a poorly-functioning bank is an impediment to economic growth, causing economic uncertainty, and therefore mergers are generally preferred.

A merger is a corporate agreement made by two or more firms to come together and unite into one entity under a new name. Mergers allow an organization to share content, technologies, personnel, and other assets, thus enhancing the company's overall strengths. The integration also aids in the reduction of weaknesses and the achievement of a strategic advantage in the industry.

A bank merger is a situation in which weaker banks combine forces with healthier banks in order to capture market share and limit competition while safeguarding stakeholders' interests. The merger is part of the administration's attempt to consolidate the banking system in order to address the credit risk issues. However, the challenge lies in ensuring that the merger's consequences are managed prudently. As a result, the methodology of briefing enacted by the leaders and managers of the concerned banks at both the pre-merger and post-merger stages is also a significant factor for the successful outcome of a merger.

Rationale of the Study

The present study is an attempt to analyze the financial performance of the three public sector banks (Bank of Baroda, Dena Bank and Vijaya Bank) before the announcement of merger and after the announcement of merger to understand the reasons of merger and to know the impact of merger on financial performance of Bank of Baroda.

Objectives of the Study

1.To study the pre and post-merger financial scenario of selected banks.

2. To analyze the impact of merger on bank's financial performance of with the help of multiple financial parameters.

Research Methodology

The research paper with the title "A Study of Pre and Post Impact of Merger on Bank Financial Performance with Special Reference to Merger of Dena Bank and Vijaya Bank into Bank of Baroda" is done on the basis of descriptive analysis method, based on secondary sources. The data has been collected from the sources such as official database of Reserve Bank of India, annual reports published by the three concerned banks, books, magazines, journals, research papers, websites and other published information.

Data Analysis & Interpretation

Pre-Merger Financial Scenario of Bank of Baroda, Dena Bank and Vijaya Bank:

1) Net Profits:

Table No. 1(Rs. In Crores)

Year	2013-14	2014-15	2015-16	2016-17	2017-18
Bank of Baroda	4,541.08	3,398.44	-5,395.54	1,383.14	-2431.81
Dena Bank	551.66	265.48	-935.32	-863.62	-1923.15
Vijaya Bank	415.91	439.41	381.80	750.49	727.02

(Source: Annual Reports FY 2013-14 to FY 2017-18)

From the above table and chart it is clear that, BoB and DB were suffering from downward trend of net profit during the study period. During the financial year 2015-16 BoB suffered heavy net loss which was -5,395.54. The reason behind this was that there were rise in the interest expenses as well as in the operating expenses. Again during the next year BoB was successful to gain net profit of 1,383.14. DB was continuously faced net losses from FY 2015-16. However, VB was exception to this. VB was successful enough to maintain net profits during this period. VB recorded highest net profit of 750.49 during FY 2016-17 in the entire study period; as there was rise in other income and also operating expenses were less during that financial year as compared to previous year. This suggests that overall earning capacity of three banks was not up to the mark during pre-merger period.

2) Earnings per Share:

Table No. 2(Rs. in Crores)

Year	2013-14	2014-15	2015-16	2016-17	2017-18
Bank of Baroda	107.38	15.83	-23.89	6.00	-10.53
Dena Bank	14.40	4.94	-15.50	-11.89	-18.06
Vijaya Bank	7.64	5.11	4.44	7.57	6.83

(Source: Annual Reports FY 2013-14 to FY 2017-18)

As shown in table No. 2, Earnings per share of BoB had decreased from 107.38to 15.83 in FY 2014-15. The reason behind the same is that during FY 2014-15 the value per share was restructured to RS. 2 from Rs.10. This resulted in rise in number of shares keeping the equity capital as it is. Again during FY 2015-16, it came down up to -23.89. Table and chart are also showing downward trend of EPS of DB during 2013-14 to 2017-18. During FY 2015-16 DB noted negative EPS as -15.50 while the same for the previous FY year it was positive. This is because DB had experienced net losses during the FY 2015-16; however, was able to earn profit during FY 2013-14. Vijaya Bank had managed to maintain positive EPS during this period and it was relatively consistent as compared to that of BoB and Dena Bank. Due to fall in the revenue earned by these three banks, Earnings per share were also not satisfactory. This indicates that before merger, banks have been failed to satisfy their shareholders.

3) Total Assets or Total Capital and Liabilities:

Table No. 3(In Rs. Crores)

Year	2013-14	2014-15	2015-16	2016-17	2017-18
Bank of Baroda	659,504.53	714,988.55	671,376.48	694,875.42	719,999.77
Dena Bank	124,863.49	129,920.55	133,441.64	129,530.52	120,859.80
Vijaya Bank	137,358.61	142,643.09	145,408.74	154,881.58	177,632.05

(Source: Annual Reports FY 2013-14 to FY 2017-18)

The table number 3 indicates total assets or total capital and liabilities of the three banks (BoB, DB and VB) during the period of 5 years (FY 2013-14 to FY 2017-18). By observing this table and chart, we will understand that total assets or total capital and liabilities of the BoB are much higher than that of DB and VB. Also total assets or total capital and liabilities of DB and VB are relatively in similar range. BoB is showing alternate rise and fall in total assets/ liabilities up to FY 2016-17. While it gone up to Rs. 719,999.77 Crores during FY 2017-18. Dena Bank's total assets/ liabilities had increased during FY 2014-15 and FY 2015-16 than its previous year but it declined afterwards. However total assets/ liabilities of VB were growing continuously from 137,358.61 to 177,632.05 during this study period. This explains that Bank of Baroda's business scale was very huge as compared to that of Dena Bank and Vijaya Bank.

Post-Merger Impact on Financial Performance of Bank of Baroda:

Table No. 4(In Rs. Crores)

Sr. No	Particulars	Pre-Merger (FY2018-19) As on 31st March, 2019	Post-Merger (FY2019-20) As on 31st March, 2020
1.	Net Profits (Rs. Crores)	433.52	546.19
2.	Earnings per Share (Rs.)	1.64	1.36
3.	Total Assets or Total Capital and Liabilities (Rs. Crores)	780,987.40	1,157,915.52
4.	Total Debt to Owners Fund Ratio (%)	15.37	14.46
5.	Current Ratio	0.05	0.06
6.	Asset Turnover Ratio	0.07	0.08
7.	Net Profit Margin Ratio	0.87	0.71
8.	Credit Deposit Ratio (%)	80.27	77.38
9.	Current Account Saving Accounts Ratio (%)	35.03	35.28
10.	Net Interest Margin (%)	2.36	2.37
11.	Net operating Profit per Share (%)	187.68	164.22
12.	Net Non-performing Assets Ratio (%)	3.33	3.13

(Source: Annual Reports FY 2013-14 to FY 2017-18)

Merging of the financial institutions is cumbersome and not an easy task in terms of consolidating the accounts, infrastructure, management and marketing policies etc. of merging bank. The merger of Dena Bank and Vijaya Bank with the Bank of Baroda is seen as a rescue mission for Dena Bank. The merger of Dena Bank and Vijaya Bank into Bank of Baroda came into effect from 1st April, 2019. The uniting emphasizes on consolidating and group action smaller banks with larger banks. This amalgamation reflects the Government's emphasis on consolidating and reforming public-sector banking, as well as dealing with growing issues such as non-performing assets (NPAs) and loan defaults. With the above study, it becomes possible to find out various reasons for this merger from the financial perspective.

These reasons primarily include continuous decline in the net profit of these banks, inability to satisfy shareholders though earnings, consistently heavy use of internal source of fund, finding difficulty in meeting short term obligations, inefficient use of assets to generate desired turnover, increase in operating and non-operating expenses which results in fall in net profit margin, inefficiency in converting deposits in productive lendings, inability to take benefit of low cost source of fund, fall in operating profits and lastly and very importantly rising problem of non-performing assets. Another important reason for merger was the merged entity or the new entity is having the total business of around Rs. 1,482,325 lakh crores and as the result of this merger this particular bank or the new entity created had become the 3rd largest bank in India. Apart from this, post-merger study of one year of BoB revealed that, there was no significant change in many financial parameters of the bank because yet newly merged entity is going through instability which is very obvious at the initial stage of merger.

Conclusion

However, one think is that, as a result of merger total asset base of new entity has increased and nearly becomes doubled along with this the lending capacity of the bank is also increased. Apart from this because of combined operations, there will be fall in the operating expenses of the banks which help in improving the overall profitability of bank and will bring economies of scale in the banking operations of Bank of Baroda. Also being big bank can be able to attract more Current account and Savings account (CASA) deposits. In spite of this one challenge the bank is facing is the challenge of integration of technology platforms and cultural variations of these organizations which may effect on the financial performance for some period. However improved operating efficiency and improved capacity to raise resources will help Bank of Baroda in improving financial efficiency. Therefore, in near future there is possibility that, Bank of Baroda will be able to overcome most of the financial deficiencies. Thus this move of consolidation and merger of Dena Bank and Vijaya Bank into Bank of Baroda may be of short term pain. However it will be gaining deal in long run.

Recommendation

After the completion of one year for the merger of Dena Bank and Vijaya Bank into Bank of Baroda, it is not showing huge difference in the financial parameters as compared to its previous financial year. This is probably because of instability due to lengthy and complicated consolidation process. However, there is tremendous scope for improvement in the financial performance with the availability of huge productive resources.

References

1. (2019, February 20). Retrieved from Bank of Baroda- India's International Bank: https://www.bankofbaroda.in/writereaddata/Images/pdf/BOB-Amalgamation.pdf
2. About Us Bank of Baroda India's International Bank. (n.d.). Retrieved from Bank of Baroda, India's International Bank: https://www.bankofbaroda.in/
3. About Us: Dena Bank- Bank of Baroda. (n.d.). Retrieved from Dena Bank- Bank of Baroda: https://edena.bankofbaroda.in/viewsection.jsp?lang=0&d=0,1
4. About Us: Vijaya Bank-Bank of Bank. (n.d.). Retrieved from Vijaya Bank-Bank of Baroda: https://evijaya.bankofbaroda.in/About-Us/Inception#
5. Alice C. Lee, C.-F. L. (2006). Encyclopedia of Finance. Ukraine: Springer.
6. Dr. K.S. Meenakshi sundaram, A. K. (2020). Bank of Baroda Merger in India: Pre-Merger Scenario Analysis. International Journal of Advanced Science and Technology, 3935 - 3944.
7. Kambar, P. (2019). A Study on The Consolidation And Merger Of Public Sector Banks (PSB) In India: Issues And Challenges. International Journal of Social Science and Economic Research , 4326-4334.
8. Kothari, R. (2017). Financial Management- A Contemporary Approach. Jaipur, Rajasthan: SAGE Publications LTD.

9. Naveen Kumara R, V. V. (2019). A Study on the Impact of Pre and Post Bank Merger Announcement on Stock Price Movements. International Journal Of Research And Analytical Reviews (IJRAR), E-ISSN 2348-1269, P- ISSN 2349-5138.
10. Sanjay Sharma &Sahil Sidana 2017, 'Impact of SBI Merger on Financial Condition of SBI' (ICRTTIEI-17)ISBN: 978-93-86171-74-0
11. Devaraj appa S. 2012, 'Mergers in Indian Banks: A study on Mergers of HDFC Bank Ltd & Centurion Bank of Punjab Ltd.' International Journal of Marketing, Financial Services & Management Research ISSN 2277 3622.
12. Anand, M., & Singh, J. (2008). Impact of merger announcements on shareholders' wealth: Evidence from Indian private sector banks. Vikalpa, 33(1), 35-54.
13. Ansari, S., Uprety, M., & Purohit, A. (2019). A Study on the Impact of Pre and Post Bank Merger onStock Price Movements of Bank of Baroda. Journal of the Gujarat Research Society, 21(16), 546-549.
14. Azeem Ahmad Khan. (2012). Merger and Acquisitions in the Indian Banking Sector in post liberalization regime. International Journal of Accounting and Financial Management Research, Vol.2,Issue 1, Mar. 2012, pp.1-18.
15. Kumar, N.S. & Tamizharasi, D. (2019). An Event Study on the Reaction of Stock Returns to Merger Announcements: A Special Reference to Bank of Baroda, Dena Bank & Vijaya Bank Merger. International Journal of Management and Social Sciences (IJMSS), Vol.8 (2.5), 40-44.
16. Sai, V., & Sultana, S. T. (2013). Financial Performance Analysis In Banking Sector-A Pre & Post Merger Perspective. Journal of Research In Management & Technology, 2.

Annual Reports

1. Annual Report of Bank of Baroda for FY 2013-14 to 2019-20
2. Annual Report of Dena Bank for FY 2013-14 to 2019-20
3. Annual Report of Vijaya Bank for FY 2013-14 to 2019-20

Peer reviewed Journal Impact Factor: 5.13 ISSN-2230-9578

Journal of Research and Development

A Multidisciplinary International Level Referred Journal

April-2021 Volume-11 Issue-8

Recent Trends in Social Sciences

Address
'Ravichandram' Survey No-101/1, Plot, No-23,
Mundada Nagar, Jalgaon (M.S.) 425102

Journal of Research and Development

A Multidisciplinary International Level Referred and Peer Reviewed Journal

April-2021 Volume-11 Issue-8

On

Recent Trends in Social Sciences

Published by- Principal, Kankavli College, Kankavli (Maharashtra)

CONTENTS

A Study on Impact of Goods and Service Tax on Hotel Industry in Kolhapur Region

CS.Dr.Krishnat H.Chougale[1] Dr.Mahesh Chougule[2]
[1]Assistant Professor Finance & Accounts,CSIBER, Kolhapur
[2]Assistant Professor Accounts & Finance, Shivraj College, Gadhinglaj

Abstract
Goods and Service Tax (GST) is an indirect tax (or consumption tax) imposed in India on the supply of goods and services. It is a comprehensive multistage, destination-based tax. Comprehensive because it has subsumed almost all the indirect taxes except few. Multi-Staged as it is imposed at every step in the production process, but is meant to be refunded to all parties in the various stages of production other than the final consumer. And destination-based tax, as it is collected from point of consumption and not point of origin like previous taxes. Goods and services are divided into five different tax slabs for collection of tax -0%, 5%, 12%, 18% and 28%. However, petroleum products, alcoholic drinks, and electricity are not taxed under GST and instead are taxed separately by the individual state governments, as per the previous tax regime. There is a special rate of 0.25% on rough precious and semi-precious stones and 3% on gold. In addition access of 22% or other rates on top of 28% GST applies on few items like aerated drinks, luxury cars and tobacco products. Pre-GST, the statutory tax rate for most goods was about26.5%, Post-GST; most goods are expected to be in the 18% tax range. The study found that there is significant certain impact of GST implementation on hotel industry at Kolhapur city. The study concluded that GST in hotel industry will attract more consumers to consume hotel service and also enhances revenues to the Government.

Key Words: GST, Hotel Industry & Kolhapur City

Introduction

Rapid urbanization, growing knowledge of Western lifestyles, more people joining the labor force and larger disposable revenue are some of the components that have contributed to restaurant industry growth. As an outcome, we are waiting in queues over the weekend at most restaurants. Customers, after consuming food and other services from restaurants, they pay for it and most of us are not even aware of the components included in the bill. Many find it hard to pay attention to their food bill. Previously, we find Service Tax, Service Charge and VAT are being added over and above the food value. But after the introduction of GST, the rates are vastly different from the previous one. With effect from 1st October 2019, varied GST rate for varied type of eating outs are provided such as railway restaurant (5%), standalone restaurant (5%) standalone outdoor catering services (5%), restaurant within hotels which vary according to the room tariff (5% and 18%). It reduces the amount paid to hotels by the customers by way of tax. Under the new regime, GST brings joy for consumers and restaurant owners alike.

Rationale of the Study

GST take the service industry by storm and most of us are unaware of its implications, especially on the hotel industry Hotel industry is one of the most cripplingly taxed sectors with numerous cascading taxes (VAT, service tax, luxury tax, etc.) growing into a huge tax rate of 20-30 per cent, essentially eating away at operating costs and rising income. Even though the government has introduced the bill and set out a date for its roll-out, still it does not have enough clarity on its implementation. It is necessary for the government to provide clear guidelines as to how the accounts need to be maintained and returns to be filed. In addition, the hotel industry may have fear regarding increase in payment of taxes in future and may result in competition from Asian market. Hence, the study has been undertaken to identify the influence of GST on Hotel Industry at Kolhapur city. It identifies the pros and cons of GST implementation with respect to hotel industry.

Objectives of the Study

1. To examine the pros and cons of GST with respect to Hotel Industry.
2. To analyze the positive or negative influence of GST on Hotel Industry at Kolhapur city.

Hypothesis

H1 There is a significant impact of respondent's opinion and satisfaction towards GST implementation at Kolhapur city.

Research Methodology

This study aims to investigate the impacts of GST on Hotel Industry at Kolhapur city. The study is empirical in nature. The study collects data from 100 hotels by using structured scheduled interview method. Secondary data was gathered from books, magazines and from websites which have published the information regarding GST and its impact on hotel sector. The sampling technique adopted for the study is disproportionate stratified random sampling method. The analysis such as descriptive statistics and multiple regression analysis are applied.

Data Analysis & Interpretation

Pros and Cons of GST on Hotel Industry

Pros

- GST implementation reduces administrative steps and creates more opportunities to streamline the taxation of the economy.

- Reducing food bill taxes attracts more customers and creates revenue to the government.
- The removal of a lot of entries from the accounts book under name of various taxes leads to fasterprocessing of a transaction.

Cons

- Though the bill has been introduced by the government there is a great deal of ambiguity on its implementation. The government should provide clear guidelines on how accounts have to be compelled for maintenance and filling of returns.
- The tax bracket for luxury hotels is simply too wide.
- Small hotels need skilled assistants to work on GST. They have to bear extra charges for hiring specialist or training the old one.

Descriptive Statistics

Data Analysis and Interpretation

Scale	Mean		
	3 Star	4 Star	5 Star
GST is effective	3.73	3.59	3.62
Easy to understand	3.52	3.67	3.74
Taxation condition	3.50	3.45	3.49
Profit margin	3.63	3.37	3.37
Customer increases after GST	3.49	3.43	3.72

(Source: Primary Data)

From the above table, the mean value of 3 star, 4 star and 5 star hotels are below 4.00; which means the hotel owners have good opinion on the implementation of GST regime.

Regression

H0 There is no meaningful impact of respondent's opinion and satisfaction towards GST implementation at Kolhapur city.

H1 There is a significant impact of respondent's opinion and satisfaction towards GST implementation at Kolhapur city.

Multiple Regression Analysis

Multiple R Value	R Square Value	Adjusted R^2 Value	F Value	Standard Error	P Value
0.896	0.806	0.795	97.177	1.413	0.001**

(Source: Primary Data)

Note: **Denotes correlation is significant at 1% level.

Since the p value is less than 0.01, the null hypothesis is rejected at one percent level of significance. Hence the linear combination of opinion of respondents towards GST implementation is significantly related to their satisfaction on GST implementation (F = 97.177 and P = 0.001**).

The above table revealed that the respondents' satisfaction on GST implementation can be predicted at R2 = 0.806; which denotes that 80.4% of the observed variability in respondents' satisfaction on GST implementation can be significantly explained by the opinion of respondents towards GST implementation. The remaining 19.6% is not explained which means that the rest 19.6% of the variation of respondents' satisfaction on GST implementation is related to other variables which are not depicted in this model.

Conclusion

The study originate that there is a significant positive impact of GST on hotel industry in Kolhapur city. Hence, it was determined that the mantra of GST One Nation One Tax Policy creates a standardized price for the services offered by the hotels, provides lower tax rate and precise and easily understandable bill for the customers. These benefits increase the consumer consumption of hotels which in turn create more employment opportunities in hotel industry and also lead to enhanced revenues to the government.

Recommendation

Based on the analysis, it is clearly found that the mean value of 3 stars, 4 stars and 5 stars hotels are below 4.00; which means the hotel owners have good opinion on the implementation of GST regime. Since, GST is considered as a long term benefit for India, in future, the favoritism of GST towards hotels may subject to change positively.

References

1. *Dr. M. Subha Priya, P. P. (n.d.). An Empirical Study on Impact of GST On Hotel Industry at Chennai City. Journal of Emerging Technologies and Innovative Research.*
2. *Jonathan, 2. D. (5; September 2017). Impact of GST in hotel and restaurants. International Journal of Academic Research and Development .*

3. *Krishna, A. (n.d.). V. S. Datey (9th Edition 2019). GST Ready Reckoner. IOSR Journal of Business and Management (IOSR-JBM) .*
4. *Sharma, 1. D. (06, 2020). Impact of GST on Hotel Industry. International Journal of Psychosocial Rehabilitation , 14.*
5. *Abraham, A., & Dr. Mathew, T. (2019). A Study on the Impact of Goods and Services Tax Reform on Hotels in Kerala. International Journal of Management Studies, 6(1), 54-61.*
6. *Akshay R. Rakhunde, Dr. Priti Rai. (2019). Effect of GST in Hotel Industry (Nagpur). International Journal of Scientific Research in Engineering and Management (IJSREM), 3(10), 1-7.*
7. *Aswathy Krishna & Divya. M.S, Aashish C.I (2018). A study on GST and its effect on hotel industry.*
8. *IOSR Journal of Business and Management (IOSR-JBM), 4-5. https://taxguru.in/goods-andservice-tax/gst-impact- servicesector.html*
9. *Panwar, D & Patra, S. (2019). Impact of Goods and Services Tax on the Restaurants and Food Service Businesses in India. International Journal of Applied Business and Economic Research, 15(23), 203-213.*
10. *Poonam M. (2017). Goods and services tax in India: AN. 6th International Conference on Recent Trends in Engineering, Science and Management.*
11. *https://www.gst.gov.in*
12. *https://www.taxmann.com*
13. *https://taxguru.in*
14. *https://cleartax.in*

Impact on Human Resource Due To Covid-19

***Shaikh Reshma Fazlur Rehman*[1] *Dr. Anant P. Jadhav*[2]**
[1]*Research Student, Swami Ramanand Teerth Marathwada University, Nanded*
[2]*Associate Professor, College: N.W. College, A. Balapur, Nanded*
(Swami Ramanand Teerth Marathwada University, Nanded)

Abstract

The COVID-19 pandemic is considered as the most crucial global health calamity of the century and the greatest challenge that the humankind faced since the 2nd World War. In December 2019, a new infectious respiratory disease emerged in Wuhan, Hubei province, China and was named by the World Health Organization as COVID-19 (coronavirus disease 2019). A new class of corona virus, known as SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) has been found to be responsible for occurrence of this disease. As far as the history of human civilization is concerned there are instances of severe outbreaks of diseases caused by a number of viruses. According to the report of the World Health Organization (WHO as of April 18 2020), the current outbreak of COVID-19, has affected over 2164111 people and killed more than 146,198 people in more than 200 countries throughout the world. Till now there is no report of any clinically approved antiviral drugs or vaccines that are effective against COVID-19. It has rapidly spread around the world, posing enormous health, economic, environmental and social challenges to the entire human population. The coronavirus outbreak is severely disrupting the global economy. Almost all the nations are struggling to slow down the transmission of the disease by testing & treating patients, quarantining suspected persons through contact tracing, restricting large gatherings, maintaining complete or partial lock down etc. This paper describes the impact of COVID-19 on society and global environment, and the possible ways in which the disease can be controlled has also been discussed therein

Keywords : Human Resource , Pandamic, Covid-19, prevention.

Introduction

Corona is a single stranded RNA virus that had its roots into the world from almost 60 years since its discovery in late 1960s. Corona viruses belong to the Corona viridae family in the Nidovirales order. The nomenclature of the Corona virus is named after the crown-like spikes on the outer surface of the virus structure. The virus has been infecting animals like chickens and pigs but there was no major human contraction to humans. Earlier, the allied viruses of the same family like the Severe acute respiratory syndrome coronavirus SARS-CoV in 2003, Human corona virus HCoV NL63 in 2004 HKU1 in 2005 Middle east respiratory (MERS) in 2012, have shown their outbreaks and now the novel version of this virus has presented a threat of unmatched severity. According to the classification of International Taxonomy of Viruses (ICTV) has referred this novel pathogen as SARS-CoV-2 (formerly known as 2019-nCoV) in 2019. The first case was identified in the city of Wuhan, a Chinese seafood market and since then it has been exponentially increasing with an evident human to human contact via respiratory droplets while sneezing and coughing. The mode and transmission and other related details about the virus continue to be updated in every few weeks, leading to enhanced uncertainty. During this period most of the research has been focused on understanding and preventing transmission; exploring treatment options and issues with global governance. However we think that the psychological impact of this pandemic like stress and anxiety among the general population is also a grave concern. A study from China suggesting that more than half of the participants had a significant psychological impact of the COVID-19 pandemic. Another recent study from Denmark reported psychological well-being as negatively affected. In the United States nearly half were found to be anxious as per the survey conducted by the American Psychiatric Association. The same has not been studied in Indian population systematically; except anecdotal discussions and case reports.

In Indian subcontinent, as of 30 March 2020, according to the Ministry of Health & Family Welfare (MoHFW), a total of 1071 COVID-19 positive cases (including 49 foreign nationals) were reported in 27 states/union territories. These include 99 cases that were cured / discharged, one person who has migrated and 29 deaths. Hospital isolation of all confirmed cases, tracing and home quarantine of the contacts is on-going. In India, spread of the initial disease could be traced mainly to the foreign nationals who visited the country as tourists from the disease affected countries and secondly due to the mass immigration of Indian nationals from abroad; due to the fear of infection. As the pandemic outbreak in India was on-going, the Government of India took stringent measures to limit the cases by far in that stage only, by initiating a major lockdown pan-India and also by shifting the immigrants to the special quarantine facilities prepared by the Indian Military directly from the airports and seaports for a minimum of 14 days. Community health teams were also launched to spread awareness about the chances of spread and precautionary measures that one can use to protect themselves and others.

Review Of Literature

The study has been approved by the Institutional Ethics Committee at Institute of Liver and Biliary Sciences, New Delhi (letter no: IEC/2020/73/MA04). A cross sectional survey design was decided to assess the initial psychological impact of COVID-19, (fears worries and impairment in sleep). We collected data using an online (anonymous) survey platform (Survey Monkey) as per Indian Government's recommendations to minimise