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Born in a Peasant Family, Dr. A.D. Shinde was known as a visionary educationist. Inspite of being a Chartered Accountant, he spent most of his life as a teacher and administrator. He established Chh. Shahu Institute of Business Education and Research (SIBER) and was the patron of South Asian Journal of Management Research (SAJMR). The Institute imparts Master of Business Administration (MBA), Master of Computer Application (MCA), Master of Social Work (MSW), Master of Environment Management (MEM) and certain Diploma courses. In addition to these the M.Phil in Commerce and Management, Economics, Social Work and Sociology is also being offered. Now Dr. Shinde is not with us.

We can talk many imbibed quality in him. He was a visionary and led a modest life style. He inspired many people and strengthened their lives. He was a role model of many people.

I worked under his guidance for about a quarter century beginning of my earlier carrier till his departure. I found in him the thirst for research. He was also concerned about quality research and the outcome is South Asian Journal of Management Research.

He is also responsible for establishing Vasantraodada Patil Institute of Management Studies and Research, Sangli, College of Non-Conventional Vocational Courses for Women, Kolhapur, Dinkarrao Shinde College of Education, Gadhinglaj and Radhabai Shinde English Medium School, Kolhapur.

He had a clear goal and a vision and was able to manage the complex situation from time to time. He was equally able to influence the followers towards reaching the vision. His ability to articulate his vision towards development of the Institute needs to be remembered the most.

His aura of Charisma, and optimistic view helped him to develop the legend he left before the people. Leaders typically make the difference. We the editorial members, management body, faculties and non-teaching staff salute him. We pray for him. Let his soul rest in peace.

Dr. Babu Thomas
Editor

Profiling Training and Information Needs of Hospital Decision-Makers: Some Lessons from the Portuguese Experience

Fernanda Nogueira*, Chris Gerry and Francisco Diniz

CETRAD/Departamento de Economia, Sociologia e Gestão, Escola de Ciências Humanas e Sociais,
Universidade de Trás-os-Montes e Alto Douro, Av. Almeida Lucena, 1, 5000-660
Vila Real, PORTUGAL
E-mail: nogueira@utad.pt; cgerry@utad.pt, fdiniz@utad.pt

Abstract

The main aim of the present paper is to identify the main components that determine the profile of the typical hospital decision-maker and to ascertain their priority training and information needs. To this end, using interview and questionnaire techniques, an attempt was made to specify the career-long training pathways and the corresponding training and information "requirements" and "acquisitions" of hospital decision-makers, along with their perceptions regarding their role in hospital decision-making (in general) and the role of training and information in that process (in particular).

Key words: Hospital decision-makers; Information; Professional profiles; Public sector management; Training

1. Introduction: recent advances in decision-making theory

In an increasingly globalised world, even the most visionary of observers has been surprised by the speed at which information is produced and transmitted, and the rate at which technology has advanced. In this context, the population at large faces a wide range of new challenges and, for this reason, society (in general) and clients of public services (in particular) have come to demand services that are always up-to-date and that are delivered in an increasingly professional manner at constantly improved levels of quality. Whenever people experience a radical shift in their circumstances, there is a stimulus – both in the public and the private sectors – to rethink and re-evaluate current processes and practices, as well as the ways in which problems are defined and resolved. As the implications of a globalised world unfold before our eyes, our bombardment from all sides with all manner of information reaches almost insupportable levels, the daily life of each citizen (at least of the most developed countries) comes to exemplify ever more closely not only the hyper-connectedness predicted in McLuhan's concept of the global village, but also the sense of growing perplexity and alienation that accelerated change implies. It should come as no surprise that globalisation also subjects the organisational models hitherto employed in the private and, increasingly, the public sectors, to critical assessment and constant change (Ackroyd, 1995;

Gerry and Nogueira, 2000).

As citizens of the same global village, administrators are obliged to constantly reflect on, rethink and adjust each aspect of their management practices, regardless of their nationality, branch of activity, area of specialist knowledge or position in the organisational hierarchy. Clearly the public sector is not exempt from the influences of the new demands that professionals face – not only regarding the appropriateness and adaptability of their accumulated skills and competencies, but also the efficiency of the management practices they currently adopt. Nor can they readily ignore the calls for greater decision-making autonomy and social justice, aimed not only at achieving a faster pace of administrative modernisation in general, but more specifically at facilitating the emergence of new policies, and at fostering greater convergence between the management practices inherent in current public policies and the more "entrepreneurial" approaches offered by the private sector (Drucker, 2000).

Faced with these challenges, the managers of any type of undertaking are forced to acquire not only a greater capacity to handle information and knowledge, but also to practice greater flexibility in its management. Decision-making requires information, training, knowledge security, coherence and, of course, power (Pfeffer, 1994). The decisions taken with regard to the resources of any type of organisation – be they material, financial or human resources – is a key determinant of its

success or failure. Based on what has happened in other organisations, it is clear that there needs to be an improvement, renovation and updating of the decision-making skills of public sector managers to enable them to intervene more effectively in the new types of situations that they now routinely face: in short, they need to be invested with greater autonomy and more appropriate skills (Miller, 1996; Carapinheiro, 1998) if the public's expectations of greater effectiveness at lower costs/prices are to be met.

Regardless of the importance of the education, training and skills with which public sector managers might be equipped, these are not sufficient to ensure that decisions produce the hoped-for results. From a theoretical standpoint, according to Simon (1960), any real-world decision can be located anywhere on a continuum between (at one extreme) the entirely empirically-based decision and (at the other extreme) the wholly rational, scientific and programmed decision. Traditionally, decision-making theories have tended to focus on the latter (i.e. rational – scientific) end of the continuum, applying fundamental principles and criteria, logical processes and analytical techniques that are intended to lead – whenever possible – to rational and objective solutions. Theorists nevertheless recognised that this sought-for objective rationality is at best difficult to achieve and at worst a chimera, and have therefore adopted less absolutist concepts such as "subjective rationality" and "bounded rationality" for a number of reasons, including:

1. the unlikelihood of having access to complete information on which to base a comparison of all the alternatives and their likely outcomes;
2. the difficulties involved in conducting cost-benefit analyses of all the alternatives under consideration;
3. the problems of ranking alternative solutions either in terms of value or utility; and
4. the constraints imposed either by the internal or external environment in which the decision is to be made.

However, managers in general, and not least of all those working in the public sector, are constantly faced with the need to opt between alternatives, take decisions, and adopt defensible positions on the basis of their chosen course of action. However, decision-making in what might be called "contested and/or controversial environments" i.e. where the private sector also operates but under different rules and/or constraints, or where institutional structures are particularly rigid, or where the policies to be followed have already been determined, is particularly difficult – particularly if the manager or administrator does not have access to all the information and/or all the skills and training or for some reason is unable to use their information and training correctly (Mintzberg and Westly, 2001).

Many analysts take as their starting point decision-making as a learning process, and thereby attempt to transfer some of the basic ideas of the prescriptive school to the sphere of strategic planning based on information and training systems. The aim is to focus on the decision-making process and to analyse it from an evolutionary standpoint, applying the principles of logical incrementalism. Furthermore, an attempt is made to view decision-making as part of the overall process of organisational learning in which solutions are constructed by the organisation itself on the basis of a much wider range of competencies than merely technical inputs (Farnham and Horton, 1996; Mintzberg, 1995).

The search for specific mechanisms that might give rise to a more coherent and better integrated decision-making strategy has resulted in a new methodology that is deeply rooted in the information systems approach. The real aim of strategic decision-making is to use multiple information sources in order to lay claim to all that managers learn, drawing not only on the outputs of their day-to-day activities and on the results of dedicated research and assessment of their performance, but also on valuable insights that are derived from their own personal experience (Exworthy and Halford, 1999; Mintzberg, 1995). In other words, strategic decision-making means refining all the results of organisation learning into a new vision and a new direction for the organisation. Ward and Griffiths (1996) have identified three processes they consider to be crucial to the decision-making process and all of which are dependent upon substantial information inputs:

1. strategic planning that is systematic and comprehensive, and which permits an action plan to be developed;
2. strategic thinking that is creative, imaginative, enterprising and appropriate to the nature and mission of the organisation and which makes strategic planning viable; and
3. decision-making that is timely and conducive to pro-active initiatives whenever new challenges and opportunities emerge.

From this standpoint, a strategy can no longer be

seen as the exclusive result of the strategic planning process, but rather the product of a complex set of mutually permeable, interacting and interlocking processes that together contribute to the identification of a strategic decision that is both timely and pro-active, as Figure 1 (below) attempts to illustrate.

In the formulation of a strategy, both the decision-making process, and the more intuitive processes (i.e. based on individual personal experience and on organisational learning) in which managers are involved contribute to the generation of "mental models" (Senge, 1990; António, 2003) or "subjective realities" that are the result of the interaction of successive cycles of organisational learning and other personal experiences, and which generate a continuous flow of information. In contrast to the classic prescriptive and essentially static approach to strategic planning based on fairly immutable principles, rules and outcomes, more recent models view the strategic decision-making process as dynamic, constantly being adjusted, based on rules that themselves change in line with the needs of the organisation and alterations in its external environment. Information in its most diverse forms not only influences but also alters decision-makers' attitudes and beliefs (i.e. their mental models); at the same time, newly-acquired skills and abilities strengthen and refine their knowledge, understanding and sensitivity (Du Gay and Salaman, 1996). This dialectical cycle (or spiral) operates both at the individual and the organisational levels, thereby incorporating new information, new skills and new synergies into the whole process.

However, and with regard to the specific aims of the present paper, it needs to be remembered that **the successful application of this new approach to strategic decision-making presupposes that we know who the decision-makers are.** Given that organisations are made up of people, each of whom have a particular personal and professional profile that has evolved over the course of their lives, it is not unreasonable to begin the more detailed discussion of the research presented here by trying to identify the main personal and professional traits that underpin different decision-making styles.

The purpose of these introductory comments has been to some extent to justify the hypothesis underlying the study presented here, namely that **the degree of difficulty with which public sector administrators and managers arrive at their decisions is more related to their capacity both to gain access to the information and training necessary for decision-making, as well as the knowledge necessary to make appropriate use of that information and training, rather than to the formal decision-making power with which they are invested.**

From this perspective the key question concerns not the relationship between power and decision-making, but rather the relationship between information/training and decision-making. In most research of this type relating to the information society, the key variables have tended to be knowledge and the information/training associated with its exercise. The degree of competitiveness that globalisation now demands of all organisations means that key decisions have to be made on the basis of appropriate and reliable flows of "high density" information that are quantitatively and qualitatively greater than ever before. Quite simply, organisations that are unprepared for this type of decision-making run the risk of being eliminated (Vaill, 1999; Campos, 2002). It is important to note, moreover, that the aim of this paper is not to make value judgements about the quality of decision-making in Portuguese hospitals, or to designate them as being either right or wrong, but rather to understand **how decision-making is viewed by the decision-makers themselves** and to establish **how well their professional and personal lives have prepared them – in terms of training and**

Fig. : Proactive and timely decision
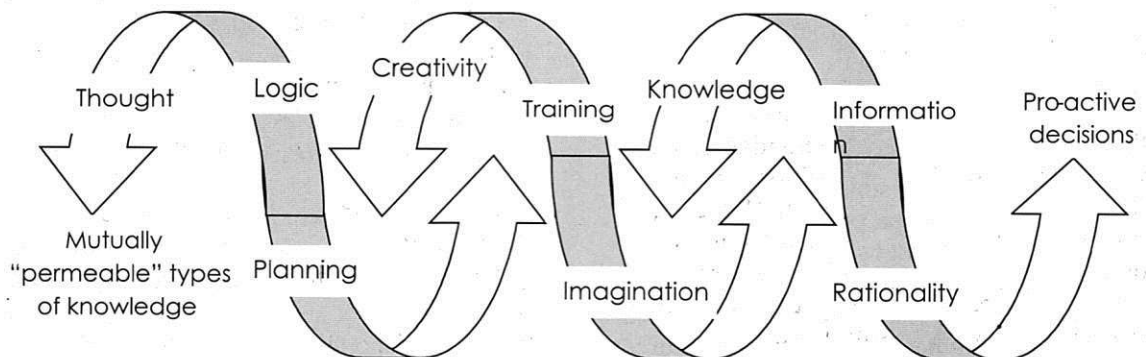
information – to participate in the decision-making processes in which they are currently involved.

2. Research methodology

Portuguese public and private sector hospitals were chosen as the object of this research into the influence of decision-makers' access and use of information and training over the decisions at which they arrive. In a relatively modest **doctoral** research project, it was not possible to interview the entire universe of hospital decision-makers; thus it was of particular importance to be rigorous in the selection of the sample of hospitals in which the questionnaires were to be applied, so as to cover an appropriately large number of hospitals that also was sufficiently representative of the universe. The Portuguese hospital system consists of a hierarchy of public and private institutions, some large, others smaller, some providing general/comprehensive medical care, others being more specialised. Table 1 below summarises the typology of institutions adopted in the research and the corresponding number of questionnaires programmed and actually undertaken.

In order to minimise the risk of under-representing one or more of the types of hospital identified above, particularly in advance of evidence relating to the availability of hospital staff to attend face to face interviews with the researcher, the number of questionnaires undertaken in each institution had to correspond in broad terms to its dimensions (defined in terms of overall employment and/or occupation of beds and/or the range of services offered). Thus the number of questionnaires undertaken broadly corresponded to the size of the institution, which in turn reflected the corresponding presence or absence of specific technical and managerial functions as Table 2 indicates:

The questionnaire schedule was aimed more at collecting qualitative responses than quantitative data, mainly because this approach is more conducive to successfully characterising the meanings decision-makers attach to their actions (in particular) and the world of workplace human interaction (in general) than approaches that focus exclusively on quantitative modelling and highly focussed statistical interpretation. Data collection included both the primary data derived from the 53 extremely detailed questionnaires undertaken (consisting of both closed questions and opportunities for more open responses); simultaneously, interviews were conducted with a wide range of key individuals with specialised knowledge of the sector. Complementary secondary data was also collected from official sources and published research referring either to the specific institutions being analysed and/or more broadly to the health sector as a whole. The data collection covered a relatively long period of time (October 2002 – September 2003), in line with the availability of decision-makers in each institution.

Given that the methodology adopted focussed on the collection and detailed analysis of key decision-makers' opinions, indirect (i.e. postal or

Table 1 : Questionnaires planned and undertaken by type of hospital

Type of institution	N° in sample	N° of questionnaires		
		planned	undertaken	coverage (%)
Small hospitals	2	10	15	150
Medium sized hospitals	2	20	15	75
Large hospitals	2	20	15	75
Specialist hospitals	1	10	8	80
Total	7	60	53	88

Table 2: Questionnaires planned and undertaken by decision-makers' position in the professional hierarchy

Professional function	N° of questionnaires		
	planned	undertaken	coverage (%)
Administrators	28	22	79
Medical staff	13	13	100
Nursing staff	13	5	38
Other personnel	6	13	217
All groups	60	53	88

similar) methods of data collection were rejected in favour of face-to-face contact in which a common questionnaire was applied and a subsequent interview undertaken using common guidelines. One major concern in designing the questionnaire was how to adequately and accurately express the opinions of decision-makers regarding key areas of their work and responsibilities. From among the various approaches available, the Likert model was chosen, which provides 5 gradations of approval or disapproval of a given statement, ranging (for example) from "never", through "rarely", "sometimes" and "often" to "always". This approach allows answers that reflect differing degrees of (dis)agreement to be registered in a standard form. Notwithstanding its drawbacks – mainly the fact that respondents tend to be drawn to the mid-range responses –under the circumstances and with the research aims in mind, it appeared to offer the best available solution for most of the subject on which decision-makers were to be questioned. Respondents were obliged to answer using only the gradations provided on the simple (and perhaps naïve) grounds that, as senior decision-makers, they should not be allowed the luxury of answering "I don't know".

The questionnaire schedule covered a wide range of variables relating to the main aims of the study and reflecting the various concerns raised by key theorists, the author's and other researchers' observations regarding the administrative reality of hospitals, as well as issues that were raised in interviews with key informants. On this basis, the guidelines used in data collection can be divided into two parts: (1) the personal and professional pathway followed by the decision-maker, with particular emphasis on the acquisition of training and access to information; and (2) perceptions and practices in the context of hospital decision-making.

The first part of the questionnaire schedule, as its title suggests, had the aim of eliciting personal information regarding the respondent him/herself, particularly in regard to the educational and training pathway followed to date. In addition to permitting the sample to more clearly disaggregated and categorised, these data also helped to identify how the respondent had arrived at the decision-making responsibilities held at the time of the study. The second part of the schedule aimed at collecting details of the decision-making process in which the respondent was involved as a result of the responsibilities explicit in his/her administrative and/or managerial functions. Figures 3 and 4 below summarise the major groups of variables on which data were collected during fieldwork.

The extremely high number of variables on which data was collected (233) was due to the fact that there was no pre-existing research on this subject that might have allowed the elimination of some variables found elsewhere to have been of limited relevance. As a result, it was decided to initially investigate the maximum number of variables relating to all the above-mentioned dimensions, thereafter eliminating those that were statistically proven to less significant. These apparently less important variables would nevertheless still be available for future reference and possible comparative analysis.

The codified results of the questionnaires were processed using standard SPSS™ software. In the first phase, all the initial exploratory analysis of hospital decision-makers was undertaken, which essentially involved calculating the frequencies of key variables. For the data collected on decision-makers' perceptions of decision-making processes, in addition to the calculation of median values, recourse was made to the Kruskall-Wallis test whenever the interpretation of a particular group of variables demanded it. Factorial analysis was subsequently employed with a view to reducing the number of variables to be taken into account. The PROBIT model was then applied to the factors identified in the previous stage of the analysis in order to estimate the principal components of hospital decision-makers' profiles. Finally, Zellner's iterative process (as incorporated into the SURE technique) was used in order to confirm the robustness of the conclusions (Zellner, 1962).

Fig. 2: Operationalised dimensions permitting the identification of the key components in the hospital decision-maker's profile

Professional pathway of the decision-maker	Aspects of hospital decision-making
• Personal characteristics	• Perception
• Initial and complementary education/training	• Involvement
• Professional career pathway	• Planning/formulation
• Nature/content of present/past functions	• Execution/implementation
• Related information and training needs	• Evaluation
• Human relations in the workplace	

Fig. 3: Aspects of the training and information needs profile of the hospital decision-maker

A. Personal characteristics. Age; gender; workplace; how appointed; professional category/post; type of contract.	*D. Nature and content of work.* Nature of the tasks undertaken; degree of autonomy in these tasks; level of satisfaction from performing these tasks; attitudes adopted in unpredictable situations.
B. Initial and complementary education and training. Basic course of study; year graduated; motivation for choosing course of study; extent to which expectations were fulfilled; complementary training; relationship between training and function.	*E. Training and information needs.* Academic studies undertaken for health sector purposes; academic studies undertaken for function performed; professional training undertaken for health sector purposes; professional training undertaken for function performed.
C. Career/professional pathway. Choice of profession; date professional career began; other professional activities; when hospital functions began; extent to which expectations fulfilled.	*F. Human relations in the workplace.* Extent and frequency of socialising; personal investment in human relations; intensity of general and close cooperation; basic values governing workplace relations.

Fig. 4: Dimensions taken into account in the evaluation of hospital decision-makers' perceptions of the decision-making process

A. Involvement. Level of participation; hierarchical position; skills and capacities; basic concerns; analytical processes employed; autonomy vis-à-vis national health service; type of decisions taken; type of information used.	*B. Planning/Formulation.* Which aims are defined? Who defines aims? How much influence is exerted by internal actors? External actors? What are the key conditioning factors?
C. Execution/Implementation. What are the priority decisions? How are decisions put into practice? The origins and contribution of unplanned decisions; the degree of articulation between decisions; resource availability. What are the main sources of finance?	*D. Evaluation of the decision.* What are the main evaluation criteria? Who defines them and at what hierarchical level? What types of results are evaluated? What data are used in evaluation? What resources are evaluated?

3. Results

In our contacts with key informants at the beginning of the research, a number of traits of hospital decision-makers were clarified. Nevertheless, a number of characteristics remained unknown until the fieldwork began. In the first group of results discussed below, six sub-groups of variables are identified: (1) personal characteristics; (2) initial and complementary education/training; (3) career/professional pathway; (4) nature and content of work; (5) information and training needs; and (6) human relations in the workplace. The second group of results is dedicated to identifying the type of understanding that the three levels/types of decision-makers (top, middle and lower level) have of their involvement in the decision-making process, as well as their perceptions of the different phases of this process in the organisations in which they work (involvement, planning/formulation, execution/implementation and evaluation). In the third and final group of results, the main characteristics of hospital decision-makers' profiles are presented, based on the preceding analysis.

As the summarised results in Figure 5 indicate, the sample consists of individuals with high levels of technical training and knowledge related to the health sector and poor levels of training and information-access related to the management functions they perform. In Figure 6, the sample's perceptions of the decision-making process are presented.

In summary, it can be concluded that decision-makers perceive (1) that they exercise a certain degree of autonomy over the use and distribution of resources; (2) that difficulties exist in elaborating and fulfilling planned activities, and in keeping within budgetary limits; (3) the availability and appropriateness of technical resources, as well as the training available to both technical and managerial staff, leave much to be desired; (4) their institutions' services have low visibility both internally and externally; (5) client/user participation levels are low; (6) there is excessive financial dependency on public funding; and (7) policy is excessively government-led, with little or no real receptivity to inputs from the professions.

Fig. 5: Personal and professional pathway: summarised results of key factors

	Factor analysed	Summary of results of sample of 53 decision makers
A.	Personal characteristics	Aged 28 -64 (average 48 standard deviation 7.9), predominantly male, all occupying senior positions in the hospitals where they worked.
B.	Initial and complementary education and training	Graduates (1971-1981), with an average of 22 years of education, with mainly sectorally-focussed complementary training. Mainly chose their courses out of personal vocation, but educational expectations mainly not satisfied. Strong connection between past training and current functions.
C.	Career/profess-ional pathway	Chose profession out of vocation. Mainly began career in the sector, though 32% exercise other (mainly entrepreneurial) activities, of which half in private medicine. Most entered pre sent institution 1990 -99 and have between 1 -32 years of service.
D.	Nature and content of work	Technical functions (doctors/nurses) based on training and, in the case of managers, related to the post held. Have relative autonomy in both technical and res ource related decision -making. Satisfaction restricted to technical outcomes. Tend to deal with unpredictable situations via help of colleagues and superiors.
E.	Training and information needs	Feel little/no need for further academic sector -related train ing but some need for further function -related training. Have sufficient access to professional information and training but aware of substantial shortfalls with regard to exercise of their administrative/management functions.
F.	Human relations in the work-place	Socialise through daily contact with colleagues and make their personal investment mainly in work context. Feel that there are many with whom cooperation is possible and that the level of cooperation is high. Loyalty is the guiding value in their workplace relations.

Table 6 : Principal components of the personal-professional profiles of hospital decision-makers

Characteristics (or Components)	Profile I (24%)	Profile II (57%)	Profile III (19%)
A. Unmodelled variables			
Age	<39	39-45	49-59
Gender	Female	Male	Male
Hospital unit	Large	Small	Medium
Hierarchical position	Base-line managers	Intermediate managers	Top managers
Education/training	*Técnico Superior 1*	*Técnico Superior de Saúde* [3]	Administrator/Director
Views re. participation	Participatory	Rather non-participatory	—
B. Modelled variables			
Category	Positive sign	Negative sign	—
Complementary training	Positive sign	—	—
Inter-institutional relations	Positive sign	—	Positive sign
Career pathway	—	Positive sign	—
Training/information needs	—	Negative sign	—

1) The aim of applying factorial analysis to each of the dimensions previously presented was to minimise the number of variables used, while retaining the maximum information possible. It should be stressed that factorial analysis was not applied to Dimension 1(personal characteristics) given that a number of nominal variables were concerned. This being the case, the process of reducing the number of variables under consideration began with Dimension II – initial and complementary education/training.

2) The Técnico Superior and Técnico Superior de Saúde constitute , respectively, the basic levels of graduate entry into the administrative hierarchy of the Portuguese civil service (in general) and in the national health service (in particular).

4. The profile of the hospital decision-maker

On the basis of the analysis of the perceptions of the decision-making process held by hospital administrators and managers, we concluded that there existed significant differences in terms of both the type of opinions expressed by each group of decision-makers, and the feelings they had regarding the extent and quality of their participation in this process. Whether there were significant differences between the personal-professional profiles of those with differing perceptions of hospital decision-making remained to be investigated. The analysis shifted to the identification of the principal characteristics of these profiles, based on the training- and information-related professional pathway each person had followed. New variables that had emerged from the preceding factorial analysis were examined using a PROBIT regression model (Greene, 2000) and the robustness of the results was tested using Zellner's iterative method (See Table 3).

5. Summary of results

There seems little reason to doubt that an appropriate level and degree of control exercised over the functioning and performance of an organisation – be it public or private – requires a combination of ingredients that are not necessarily always found to coincide in time and space. More specifically, it may be the case that those responsible for the implementation of key decisions, and the subsequent monitoring and evaluation of their effects are unable to simultaneously enjoy legitimacy within the organisation and fulfil their tasks with the appropriate level of technical-professional competence. Legitimacy is an essentially political ingredient of the decision-maker's art and should not be confused with the mere representation of the interests either of professional groups or government entities. Technical competence requires a continuous "apprenticeship" and permanent professional commitment that, for a multiplicity of reasons, often tends to evaporate over the course of a long career.

Naturally, it would be interesting to know which individuals make up the three profiles identified in this study. In order to attain this objective, some of the as-yet untransformed variables were re-examined. This procedure led to the following conclusions:

1) Profile I consisted of decision-makers who appeared to be the most concerned about gaining access to the training and information considered necessary for their administrative functions. Consequently, they had more positive/optimistic

view of their involvement in the decision-making process – or, at least, they considered that their greater participation was a legitimate aspiration on their part, due to the investment they had made in gaining further training and in keeping professionally well-informed. Profile I had the following characteristics: female, under 39 years of age, with a professional category of at least *Técnico Superior* level, working in large hospitals, typically at the base-line management level. Certain social phenomena that have emerged in organisations of all types may partly explain this result. On the one hand, in recent years there has been a much greater flow of (in particular, well-qualified) women into the labour market and a greater willingness of certain organisations to appoint women to positions of significant decision-making responsibility. On the other hand, large hospital units are typically sited close to the larger centres of information-supply and training-provision, and this may have been a factor in women being more successful than before in attaining and retaining decision-making positions.

2) Profile II consisted of decision-makers whose training and access to information related more to the sector in which they work than to the functions they perform. They tended to be male, aged between 49 and 59, with a professional category of at least *Técnico Superior de Saúde* level, working in small hospitals, typically at the intermediate management level. The fact that they have complementary training relating to the health sector and not to their management responsibilities makes it difficult for them to accurately identify their real role in decision-making, and leads to a sense of dissatisfaction with a process in which they believe they barely, participate – if at all. Interestingly, the viewpoint adopted by Profile II decision-makers is in stark contrast to the conclusions that would be drawn by any disinterested observer of the process in the hospitals in question or, indeed, any impartial analyst of the content of the questionnaires and interviews of the decision-makers involved. One of the key aspects of these results is the fact that many of the administrators in question appeared to have deliberately withdrawn from some of the key managerial tasks in their organisations; furthermore, it was in this group that was to be found the majority of those staff who had opted to engage in entrepreneurial activities related to the health sector in parallel with their hospital duties. These results also raise an interesting question regarding how best to involve and motivate health professionals with this training/information profile.

3) Profile III consists of those who over the course of their careers have accumulated training

and information relating both to the health sector and to their managerial functions. The group is predominantly male, aged between 49 and 59, of Administrator/Director status (i.e. at the top of the decision-making hierarchy), and working in medium-seized hospitals. The experience and information accumulated over a long career provides them with a clear appreciation of their real role in the decision-making process, leading them to evaluate their participation very positively.

The three profiles summarised above correspond to three distinct positions regarding the importance (or otherwise) of training and information as a means not only of personal advancement and realisation, but also of "decisional" learning at the organisational level.

At one extreme of the continuum, we have a group consisting mainly of young women whose motivation is based on the conscious recognition that they need to actively and permanently deploy knowledge and information in the taking of decisions and in the forecasting of their consequences. Consequently this group manifests particular concern with regard to life-long training and the establishment and maintenance of productive inter-institutional relations. As such, they could be seen as constituting the most promising "future" for hospital administration, management and decision-making.

At the other extreme, we find the "wise old heads" of the profession, who have acquired a clear and comprehensive view of what hospital decision-making has been, is today and perhaps what it could be tomorrow. While this group undoubtedly has the required legitimacy, leadership and power, in principal, it also has the strategic vision, rationality, information and training necessary for high quality hospital decision-making. In summary, they have all the key facets of knowledge inherent in and essential to hospital decision-making and recognise the relative importance of the various cognitive inputs necessary for the development of each of these dimensions of the task. They, too, are concerned with organisational learning and inter-institutional synergies, but are coming to the ends of their careers.

Between these two extremes, corresponding to "future promise" and the "best of the past", respectively, we find the "other" decision-makers. However, this does not constitute the typical heterogeneous intermediate or residual category that often occupies middle ground in any essentially dualistic continuum: its members have quite distinct traits. They are basically concerned with their own professional and personal pathways and the fact that their knowledge, beliefs and attitudes are predominantly patient-oriented they often forego or even scorn training related to the decision-making processes in which they are objectively involved.

6. Discussion and conclusions

In summary, we can conclude that the decision-makers of Profile 1 consists predominantly of health sector decision-makers who have the technical training and/or information necessary for decision-making, but lack the training and/or information necessary for decision-making relating to their day-to-day duties. The same decision-makers have the training and/or information necessary to act at the inter-institutional level and, in general terms, to fulfil their overall management aim.

Furthermore, the decision-makers of Profile II only have the technical training and/or information necessary to function in the health-related sector. This being the case, they have a substantial demand for management training and/or information in order to be able to support decision-making inherent in the management of the specific services for which they are responsible, in addition to tasks of a technical nature that they need to perform in health related activities. Thus the managers that make up this particular Profile have an undeniable need for training and information related to the theory and practice of decision-making.

Finally, the decision-makers in Profile III dispose of the training and/or information necessary both for health-related functions and for the management functions they currently perform, and so their perceived needs (as identified in the research) tend to be those related to the permanent

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3) It should be noted that the direction of causality is not totally clear here: does the emergence of entrepreneurial opportunities cause people to withdraw from managerial tasks in the hospital? Or does a real or imagined sense of non-participation in hospital decision-making encourage people to look for other ways of satisfying not merely their material ambitions, but also a need for recognition and/or self-affirmation (i.e. via self-employment)? In either case, it is probable that in answering questions (in)directly relating to this issue, a degree of self-justification is involved – i.e. "I'm fulfilling myself personally and financially through entrepreneurial activities because I cannot achieve this in my main occupation".

4) At the present moment, the Portuguese government is considering the integration of health service users' organisations in the National Health Council.

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updating of their knowledge in the overall sphere of management and decision-making.

The contributions made by the present study can be summarised as follows: above all, it has contributed to the broader debate on the training and information needs of different types of hospital administrators and, more specifically, to our understanding of the real world of hospital decision-making. The results of the analysis may help those involved in hospital management to:

1) more clearly understand their real role and their degree of participation in the decision-making process;

2) reorient their life-long training with a view to improving performance in all management tasks;

3) adjust the hospital management structure and system so as to identify more clearly and objectively "who decides what", and this in turn may help managers to determine what should be their optimum degree of participation in the successive steps of hospital decision-making; and

4) introduce mechanisms more conducive to stimulating a review and reform of training and information processes in hospitals, with particular regard to the needs of present and future senior decision-making staff.

In fact, complex problems such as hospital decision-making can only be resolved as part of a continuous learning and adjustment process both at the individual and institutional levels. Investment decisions and the contracting of key services obey different logic in the health sector compared to other areas of public administration. In many cases, the hospital is simultaneously a provider of its own services, a buyer of outside services, entrepreneur, as well as prescribing institutional and individual solutions through its professional staff i.e. making micro- and macro- decisions that impact on people's quality – and quantity – of life (Harding and Preker, 2003). Those availing themselves of the service as patients do so outside the decision-making process.

This unique situation demands that a well-structured internal strategic planning be established – a challenge that is far from easy to meet unless a rigorous and well-thought-out methodology is employed. More concretely, by abandoning the classic bureaucratically-obsessed administrative model, and by applying a more training- and information-oriented approach to the professional and career development of health staff, it may be possible to develop a more flexible, dynamic, responsive, participatory system more conducive to improved health-related activities i.e. satisfying final users' needs as a contribution to optimising overall social welfare.

As far as training is concerned, one of the ways of overcoming the current problems of the health service may be to prioritise those new types of complementary and continuing training that are able that are capable of contributing most immediately, effectively and visibly to the decision-making skills of those involved in hospital management, whether their initial training has been in medicine, nursing, management or any other area. To miss this opportunity would be to condemn health services to yet another generation of decision-makers whose initial and complementary training barely (or only poorly) equips them to deal with the managerial demands of the sector.

With reference to information needs of different types of hospital decision-makers, the same problems could be mitigated via the creation of effective and genuinely pluri-disicplinary teams at key levels of hospital decision-making. However, for the creative exchange of knowledge to be effective, the information available has to be accurate, timely, complete, coherent, well-founded and cross-checked, a prerequisite that strongly suggests the need to rethink the organisational structures on the basis of which today's health institutions function.

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