Information Management and Knowledge Management – are Portuguese Organizations Feeling the Difference?

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Abstract: Although there are some works trying to clarify the difference between Information Management, IM, and Knowledge management, KM, the distinction between those concepts is far from being well understood in the business community.

This lack of clarity increases with the fact that some KM literature authors use the two terms indiscriminately, others argue that KM includes IM, and still others define them independently, but relating them. For instance, some authors say that KM has two ages, the first corresponding to IM, aiming to store, explore and transfer explicit knowledge; the second aiming to explore, improve communication and innovation, focusing the need to manage tacit knowledge, moving from transmit to learn, becoming a social activity and not only a technological one.

Nevertheless there is a growing interest in KM and organizations say they are doing it, and even in many large, and some small, organizations a new corporate executive is emerging – the chief knowledge officer, CKO. Are they different from the chief information officers, CIO? Are organizations really making KM? Is there, in practice, any difference between KM and IM?

To provide some answers to these questions, this paper presents empirical evidence of how IM/KM is practiced in some Portuguese organizations. Based on an exploratory study conducted in four Portuguese organizations, the paper describes the practices that are being developed in those organizations, discussing them in order to answer the questions: How do organizations interpret the concepts of IM/KM, do they think they are different? Which IM/KM processes they develop? Which computer based systems are used to support those processes? Who leads IM/KM and which skills are necessary to those executives?

Keywords: Information Management, Knowledge Management

1. Introduction

The most fundamental assumption about the concept of knowledge management is that knowledge is a resource amenable to control and management (Hislop, 2009). With this assumption in mind, one can ask whether there is any difference between knowledge management, KM, and information management, IM, as information can also be seen as a resource amenable to control and management. One can even ask to what extent knowledge can be managed. Does it make sense to speak about KM and IM in an organizational context?

Some authors have tried to clarify the difference between Information Management, IM, and Knowledge management, KM, the distinction between these concepts is far from being well understood in the business community (Bouthillier & Shearer, 2002; Suliman, 2002). Focusing on ICT, King (2007) states that a significant difference between many knowledge management systems, KMS, and information management systems, IMS, is that KMS may be less automated, in that they may require human activity in their operation.

Are these concepts, as used today in business language, being properly used? When organizations talk about KM, do they distinguish IM from KM? In what way?

Even in the literature one can notice a lack of consensus on these issues. There are authors who only speak about KM, associating IM with a first era of KM. The purpose of creating new knowledge, and not only providing access to information useful in decision making, is something commonly identified in the literature to distinguish KM and IM. Considering that there is some overlap between these concepts it is understandable that, in practice, it is difficult to identify goals and projects for each one of them.

The main objective of this work is to identify the gap between what the literature says about these concepts and what organizations are doing, focusing on the Portuguese context, in order to

understand Portuguese organizations' current KM/IM capabilities and initiatives. In particular this work aims to answer the following questions:

Can Portuguese organizations distinguish IM from KM? What does distinguish IM from KM for Portuguese companies? Are Portuguese organizations carrying out KM or IM projects? Do they know how to categorize their projects? What kind of computer-based systems are they using to support IM and KM?

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This paper is organized as follows: the next section, drawing on a literature review, discusses the concepts of IM and KM. The third section briefly describes the methodology, and the fourth presents and discusses the results. Finally, some conclusions are drawn.

2. Information Management versus knowledge management

Information and knowledge are concepts that are widely used in today's society, and more significantly in the organization and management literature, and even within the business community.

The evolution of information technologies, the substantial increase in computer systems use and the amount of information stored in databases, or even videos, texts and emails, together with the need for innovation and competitiveness, are the factors that have launched these two concepts for the scope of organizations.

While the concept of information in an organizational context is by no means new, the same is not true about knowledge. It was, previously, only associated with people.

Much has been written about information and knowledge (Davenport, Long, & Beers, 1998; Prusak, 1997; Nonaka & Takeuchi, 1995) and many definitions can be found. Although there is still a lack of consensus, it is already accepted that these concepts are strongly related.

We can say that information is a conceptual representation of reality that enables communication between people. In turn, knowledge includes information, experiences and thought, processes of the individual himself, being created and acquired through a learning process, allowing men to take action.

Polanyi (1983) distinguished tacit knowledge from explicit knowledge; it can be said that explicit knowledge is what we commonly call information (Chilton & Bloodgood, 2008; Grant, 2007). Using these concepts Nonaka & Takeuchi (1995) speak about the SECI model of knowledge creation: socialisation, externalisation, combination and internalisation.

Bearing all these, closely related, concepts in mind, we can deduce that Information Management and Knowledge Management should also be strongly interrelated; we may even question whether it makes sense to talk about IM and KM (Bouthillier & Shearer, 2002; Suliman, 2002).

IM is usually understood as a practice that aims to increase organizational effectiveness by providing timely information of value, ie quality, quantity and therefore usefulness. To obtain timely information it is necessary, on the one hand, that the information is organized and available whenever it is required to be used. In addition, to have value, information should not be redundant or inconsistent. Therefore, IM should also be concerned with ensuring that the information provided is not redundant or inconsistent.

Nowadays, the success of IM is closely related to the proper use of information technologies and, for this reason, the profiles of IM experts (CIO – Chief Information officers) are strongly associated with technological skills (the traditional IT worker having database and networks knowledge).

Knowledge is intrinsically linked to the learning process. Learning is the articulation of new information, obtained with the mental process specific to each individual. Thus, KM should care about

creating environments where knowledge creation is a reality. Learning, with knowledge creation, is recognized in the literature as being crucial for innovation.

In the literature, KM is often related to management and organizational performance objectives, and does not have a technological component as strong as IM; KM has a human and social component, which is not present in IM.

Although KM does not necessarily have a technological component, there are many automated tools, KMS, that support KM processes in organizations (Pinto, Morais, & Lopes, 2005). A significant difference between KMS and IMS is that while IMS typically require that humans make choices in the development phase and then operate automatically, KMS involve human participation in the operation phase (King, 2007).

Following the authors who argue that KM can be equated with the implementation and use of particular IMS and those who focus on methods of managing knowledge, via people who possess and utilize knowledge, we believe that IM can be viewed as a subset of KM. The main differences between IM and KM are presented in table 1.

Table 1: Differences between IM and KM

	IM	KM
Aim	Provide information for decision making	New knowledge Creation
Type of knowledge	Explicit	Tacit
Key processes	Create and store	Share and acquire
Model of knowledge creation	Externalisation and Combination	Internalisation and Socialisation
Focus	Information Technology	People
Types of support systems	IMS	KMS

3. Methodology

This study aims to present empirical evidence of how IM/KM is practiced in some Portuguese organizations. It takes a qualitative approach to the collection and analysis of the data.

The study was conducted in four organizations. The organizations were chosen from among large organizations in the north of Portugal, the area where the researchers live. An introductory letter explaining the aim of the study and inviting the organizations to participate in this study was sent, in April 2009, to eight organizations. Four of them agreed to participate and in June 2009 the interviews were carried out. The researchers prepared an interview guide which included the main points to be addressed, given the questions raised. The questions were generated based on a previous work developed by the researchers in the aim of a Ph.D. project (Pinto, Lopes, & Morais, 2006). In this project a study was conducted in Portugal based on a survey sent to one hundred of the main Portuguese organizations in May 2005, with the aim of to know the current practices of the Portuguese organizations relating KMS usage and IC measurement (Pinto, Morais, & Lopes, 2005).

The persons being interviewed were general managers or managers of information systems departments. The choice of the kind of people to interview was based on the skills of CIO/CKO indentified in the literature.

4. Results and discussion

In this section the data collected in the four organizations, Organization1, Organization2, Organization3 and Organization4, is presented and discussed.

Organization1 is one of the main public transport companies in the Greater Porto area.
Organization2 is the largest European contract manufacturer of personal care, cosmetics, over-the-counter pharmaceuticals and household products, and a leading supplier of tinplate and plastic packaging solutions.

Organization3 is a retail company with two major partnerships in the shopping centre and telecommunications sectors. It is the food retail market leader in Portugal.

Organization4 works in the telecommunications, media and software and systems integration areas, playing an active role; it is one of the main telecommunications companies operating in Portugal.

The data collected in the interviews is presented in tables 2 and 3.

The first row of table 2 addresses the question of the distinction between Information Management and Knowledge management. We wanted to understand how organizations interpret the concepts of IM/KM.

The second row focuses on what organizations say about really doing IM and KM, and the third row on why they are doing it. Whether there is a new corporate executive and how it differs from the chief information officers is summarised in row four.

The last row in table 2 describes the kind of projects developed, classifying them as IM or KM projects.

Table 2: IM/KM in Portuguese organizations

	Organization1	Organization2	Organization3	Organization4
Distinguish IM from KM	Yes There was a clear focus on different targets	Yes Consider broader KM	Yes	No Do not have a sense of the distinction between IM and KM
Do IM/KM	Yes	Yes Not clearly	Yes With greater emphasis on IM though increasingly recognizing that both are important	Do IM but there is nothing systematized about KM
Why IM/KM	Restructuring of the company, preparing it for a new position	Align business processes across divisions and creating tools for users to raise the level of knowledge	Meet the needs of the organization's processes, but each department is responsible for its own management	There is a principle, underlying the entire organization, that the creation and sharing of knowledge is a necessary prerequisite for the developers to raise the level of knowledge
CIO/CKO	No KM by Process Manager IM by Director of Organization and Information System Department	No	No	No There are only Systems analysts, Project Managers and Programmers
IM/KM Projects	Yes Initially these two types of projects were indistinguishable. They began as IM and more recently evolved to KM, seeing IM as a tool to support KM Today it is recognized that KM projects mainly focus on collaboration and sharing by allowing knowledge creation	Yes Initially IM and recently KM	Yes	Only IM. There are no systematic KM projects

The table above shows that all organizations, with the exception of organization 4, do IM and KM. Yet all acknowledge the existence of IM practices before KM, recognizing that there are differences, although the two are strongly related.

The alignment with the goals, processes and competitiveness of the organization appear as the main reasons for doing IM/KM. None of these organisations have a CIO/CKO. Skills associated with the area of management and IT are mentioned as being relevant to IM/KM managers. This can lead us to consider that both areas of knowledge are important to these professionals. All organizations acknowledge having IM projects and three also mention the development of KM projects, although one of those three says nothing about these types of projects. It is funny to see that Organization1, as we mention in Section 2, recognizes IM as a subset of KM. This organization cites collaboration systems as an example of KM projects.

KM and IM are often supported by computer-based systems, namely by knowledge management systems, KMS, and information management systems, IMS. Table 3 presents a list of the systems in use in these four organizations. They are classified as KMS and IMS according to the answers provided by the managers.

Table 3: Use of IMS/KMS in Portuguese organizations

		Organization1	Organization2	Organization3	Organization4
Computer based Systems	KMS	Purchasing platform System for sharing project with designers and contracts project evaluation System for performance analysis and contractual indicators Social Networks Web-site	ERPs Workflow e-learning	Intranet Cooperative portals e-learning Workflow Business Intelligence	Knowledge maps Cooperative portals Innovation support system
	IMS	Document management system Applications of remote monitoring and dynamic inventory		ERP Data warehouse EAI Transportation Management System Document management system Suite Microsoft Office	Business Intelligence Document management system Workflow Competency management system

All of the types of KMS most referred to in the literature are used by these four organizations, which reveal, at least, knowledge of their existence/use, although their classification as KMS or IMS may not be the most accurate.

Internet Supported Systems where collaboration and hence learning is possible are mentioned by all companies. Performance analysis systems are used in almost all of the organizations. These examples indirectly show they are being used within the scope of KM and IM, respectively, as the former are aimed at the sharing and creation of knowledge and the latter at the availability and access to the right information for decision making.

In this study we note that there is already some awareness of the differences between IM and KM in the companies studied. Organization1 is the most aware and knowledgeable about the differences, and it is also the best in using this new terminology. Organization3 also distinguishes IM from KM, however we note some lack of precision in the answers. They state that, in practice, they do not distinguish them. Both recognise the focus of KM on knowledge creation and sharing.

Regarding the process of knowledge sharing, Organization3 associates it only with e-mail exchange; however Organization1 is concerned with the development, through social networking, of environments to share knowledge, reinforcing the need for sharing opinions and experiences.

Organization4 performs the worst in terms of distinguishing IM and KM. Organization2, despite saying IM and KM are different, shows a focus on information management and a lack of precision in identifying the differences between the two concepts. In spite of listing examples of KMS used in the company, we note that these are only used in information management. The excess of data and lack of valuable information for business is a problem for this organization. We can say that in practice this company does not distinguish IM from KM very well, or IMS from KMS.

We can say that Organization1 correctly distinguishes KMS from IMS. In Organization3 we notice some lack of precision. During the interview some confusion was noted, for example, the implementation of an ERP system was described as a KM project. Organization4 clearly does not distinguish IMS from KMS.

The difficulties in implementing IM or KM projects listed by companies 1 and 3 were:
- Transforming information into knowledge
- Promoting sharing processes
- Using the most adequate technology
- Promoting the necessary changes in the organization, in the organizational culture and in the management
- Involving top management
- Lack of time to share knowledge

These are the difficulties commonly cited in the bibliography as the main problems when developing KM projects.

We can conclude that these organizations have few difficulties when developing IM projects, but that they still need to improve and change some practices to develop successful KM projects.

It is not surprising that organizations 2 and 4 do not share those difficulties, since they show lower levels of maturity for the implementation of IM and KM.

Organization1 recognises that activities related to KM are holist activities and that it is necessary to align KM projects with the organizational strategy. The manager even stated: "*Information management and knowledge management need to have a very close and connected existence, an organizational and strategic coherence*".

Although KM is practiced in some organizations, it is only related to knowledge creation and sharing and never to innovation and organisational competitiveness as referred in the literature.

5. Conclusion

Supporting knowledge creation and sharing across organizations is not a new concept. However, it is important to be aware that this is not the same as information creation and sharing, especially if we are referring to the support information technology can give to those processes. If IM and KM are so different, why are the terms often misused?

IM is a reality in the organizations studied; it is well rooted and there are lots of projects being developed. We can say that they have reached a satisfactory level of maturity. The same is not true for KM; although the organizations selected are some of the largest in Portugal, only one has a higher level of maturity, considering that KM needs to be strongly related to organizational strategy.

We believe that KM is going to be, in short term, a concern for Portuguese organizations, representing a shift from a focus on information to a focus on the individuals that create and share knowledge.

This study has shown that organizations distinguish IM from KM, but that there may still be some lack of precision and knowledge regarding these two practices. Not all organizations see the need to carry out these two practices, and IM appears to have a higher level of maturity. They all recognize the role of IT in supporting IM or KM projects, however there is a lack of precision in their classification (IMS/KMS).

We found that there is still no CIO/CKO with specific skills to manage those practices. This role is associated with management and IT skills. In future work it will be important to study the skills necessary to carry out these practices. Are these practices not achieving the appropriate level of effectiveness because they are not led by professionals with the necessary skills?

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