Knowledge Management: At a Cross-Way of Perspectives and Approaches

Anabela Sarmento, Associate Editor
ISCAP/IPP, Portugal

Knowledge can be described as being the combination of data and information, to which is added expert opinion, skills and experience, resulting in a valuable asset which can be used to aid decision making. Knowledge may be explicit and/or tacit, individual and/or collective (CEN, 2004). According to this definition, knowledge can be perceived either as a (1) “discrete, objective, largely cognitive entity” (Newell et al., 2002, p. 3), susceptible of being classified as tacit (unarticulated expertise and experience) and explicit (knowledge formalized and expressed) (Nonaka & Takeuchi, 1995) or (2) as socially constructed and embedded in practice (knowledge as a process).

These two different, but complementary, perspectives will lead to the development of different approaches of Knowledge Management (KM). An organization embracing the first perspective (knowledge as a discrete entity) will develop knowledge stores and will try to capture the organization’s knowledge by software. An organization adopting the latter perspective (knowledge as a process) will give more importance to the process of knowing and knowledge creation and to the context that made this creation possible. Knowledge will be considered as existing in the minds of the employees and not able to be captured. This means that managing knowledge becomes managing people and the interactions established among them (Newell et al., 2002).

Nevertheless, knowledge and its management cannot be polarized either under one perspective (susceptible of capture, codification and transfer) or under the other (recognizing it as a human process) but should be seen and understood as at the confluence of several sciences and disciplines, each contributing to the comprehension of this concept.

The management of knowledge involves several activities. They include the identification, sharing, distribution, use of technology to capture, manipulate and locate knowledge, utilization, building and exploiting intellectual capital (CEN, 2004; Wiig, 1999). According to the Comité Européen the Normalisation (CEN, 2004, p. 6), knowledge management is the “management of activities and processes for leveraging knowledge to enhance competitiveness through better use and creation of individual and collective knowledge resources.”

KM includes several perspectives, some of which focus on knowledge sharing among individuals or on its distribution. The use of technology is also emphasized to capture, manipulate and locate the representation of knowledge. Other perspectives focus on knowledge related to information management (corresponding to the coding
and classification of recorded material — explicit knowledge — embedded in artifacts, structures, systems and repositories, without trying to understand how business value is perceived and created) or on the use and application of knowledge to improve the enterprise’s operational and overall effectiveness. The other is built on exploiting intellectual capital to enhance the enterprise’s economic value (Wiig, 1999).

The roots of these different approaches and perspectives concerning knowledge and its management can be explained by the historic efforts built around this concept. Historically, there were at least four areas that regarded knowledge as an object of study (Wiig, 1999): (1) religion and philosophy trying to understand the role and the nature of knowledge as well as the permission of the individuals to think for themselves; (2) psychology, trying to understand the role of knowledge in human behavior; (3) economic and social sciences, trying to understand the role of knowledge in society and (4) organizational theory trying to understand work and its organization.

As one has seen, the knowledge management area has received contributions from several fields, each of them contributing with theories, tools, technologies and paradigms. Very often, these are approached separately, making it difficult to have an integrated view of the management of knowledge and the role played by information technology in support of the organization and development of competitive advantage. Furthermore, the field of KM has benefited from the contribution of practitioners, academics, consultants and policy makers. Although there have been contributions from several disciplines as well as from different professional experiences, somehow each of these remained isolated and it was only recently that interdisciplinary approaches to study knowledge management began to emerge.

KM has been approached by several disciplines, and among these we would like to highlight the organizational sciences and human resources management, computer science and management information systems, management science, psychology and sociology (Wiig, 1999; Maier, 2002). In the following paragraphs the contributions of each discipline is described.

Within the field of organizational sciences it is possible to identify several contributions, the first one dealing with theories and methods addressing organizational change and management of the change process. It also offered an effort to improve an organization’s problem solving and renewal processes concerning the personal, interpersonal, structural, cultural and technological aspects, achieved mostly by an effective and collaborative management of the organizational culture. Organizational learning and organizational memory have also contributed to the development of organizational sciences. Organizational learning is based on the idea that change processes are linked to collective or interpersonal processes of learning. The idea behind organizational memory is that learning is not possible without memory. Memory is defined as a system capable of storing things, experiences, concepts beyond the actual occurrence, and of retrieving them at a later point in time. Another aspect contributing to knowledge management is the organizational culture. Culture can be described as comprising issues such as trust, norms and standards, unwritten rules, symbols or artifacts. A supportive organizational culture is considered one important factor for faster organizational learning or the implementation of a knowledge management initiative. The evolution of the organization also contributes with approaches trying to explain the processes and the effects of organizational learning and knowledge management. The human resources management also repre-
sent an important issue in knowledge management as it is people that create, hold and apply knowledge. It can also help to identify the knowledge base, knowledge barriers and gaps needed to define a knowledge management strategy; it is also well positioned to foster an organizational culture supportive for KM and ensuring the success of KM (Maier, 2002).

Computer science and management information systems provided a view of the organization as a knowledge and/or information processing system. Based on findings of cognitive psychology and using concepts such as attitude, personality and definition of the situation, as well as memory, this field develops a model to explain individual behavior. Systems theory aims the formulation of general laws and rules about states and behaviors of systems to explain the application of technology in organizations. The main contribution of artificial intelligence (AI) was the attempt to establish an analogy between human and computer problem solving. The use of technologies such as neural networks, genetic algorithms and intelligent agents were one of the main contributions of this field (op. cit.).

The management science has also contributed to the knowledge management area. Among the different contributions we would like to highlight the effort to make knowledge the basis of a new theory of the firm (Spender, 1996). According to this view, knowledge is considered a strategic asset (Zack, 1999). A critical capability of an organization can be described as being the speed and efficiency in integrating knowledge and in extending its knowledge base, which is critical for creating competitive advantage (Maier, 2002).

Psychology concentrates in the individual and group behaviors relating them with the cognitive and affective characteristics of people. Organizational psychology studies human behavior and experience in organizations and considers the system characteristics of organizations with different levels, such as individual, group or subsystem and organization. During the 80’s a new field emerged called knowledge psychology and it is characterized by its close connections to computer science and AI (op. cit.).

The contribution of sociology comes mostly from two branches: organizational sociology and sociology of knowledge. Organizational sociology analysis the structural similarities of organizations which are seen as social systems of activity. The field handles with a variety of perspectives and approaches to describe and interpret events and processes in organizations. The sociology of knowledge views knowledge as something socially constructed and encompasses theories of social construction of reality. These theories have great influence in the way organizational learning and knowledge management are conceptualized and implemented (op. cit.).

It is natural that from such a variety of perspectives and approaches, different ways of understanding the same reality could have emerged. Nevertheless, there has been little effort to bring these disciplines to talk, work and discuss together. Furthermore, in the late 90’s the human mind became an important research subject in the neurosciences (Damásio, 1999, 2003) after realizing that human experience cannot be directly mapped with the functioning of the brain. The human experience constitutes the knowledge that the individual possesses about him/herself and about the world that surrounds him/her. These are important issues for KM since they impact the motivation to share knowledge and to use it in all circumstances (including collaboration). However, due to the novelty of the research, the impact of the research results have not yet reached the KM field.

It is expected that in the near future, all these approaches, methods and perspec-
tives will be brought together and thus offer a holistic view of the same reality. As a matter of fact, knowledge cannot be seen either as a “discrete entity” or a “process of knowing.” It should be seen as the product and result of a mixture of all these fields.

References


Endnotes

1 Knowledge can be defined as a set of data and information (when seen from an IT perspective), and a combination of, for instance, know-how, experience, emotion, beliefs, values, ideas, intuition, curiosity, motivation, learning styles, attitude, ability to trust, to deal with complexity, to synthesize, openness, networking and communication skills, attitude to risk and entrepreneurial spirit to result in a valuable asset which can be used to improve the capacity to act and support decision making. Knowledge may explicit and tacit, individual and collective (CEN, 2004).