Chapter 12

Knowledge Management and Innovation: Mapping the Use of Technology in Organizations

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ABSTRACT

Nowadays it is generally recognized that technology has a not inconsiderable role in organizational knowledge management, inasmuch as it provides new forms for holding and exchanging information and knowledge in intra and inter-organizational contexts. The potential of technological means is therefore emphasized as tools supporting the various organizational processes related to knowledge, and questions arise concerning their comparative or relative relevance for increased innovation and creativity.

In a sample of 1275 individuals belonging to 50 Portuguese organizations, the use of technology plays an important part in terms of the organizational processes related to knowledge management, but this is limited above all to those which are formally instituted and based on knowledge of a mainly explicit nature. In addition, this chapter highlights the importance of management of organizational processes related to tacit knowledge, which emerges essentially from processes of social and discursive interaction involving organizational actors.

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INTRODUCTION

Organizations considered as advanced and competitive base their activities, the communication between people working in them and the relationship they form with other organizations, on information generated and managed by technology. Considering how organizational knowledge in this context is seen and managed, it is above all American organizations that tend to be perceived and presented as pioneers or leaders in the way they manage it through recourse to new information and communication technology (Takeuchi, 2001). In other words, there is selective attention to the way organizations have valued their knowledge resources and the diverse technological means they have available, from a perspective of joint, interactive and optimized management. Those that have been considered as adopting the best practices are found, in most cases, in the area of consultancy organizations – where knowledge corresponds to the product. In these organizations, there is indeed great attention given to “integration of organizational knowledge”, which means the development of activities directly related to the elaboration, structuring and ordering of databases, with categorization and formatting of documents and with the destruction of material considered obsolete. In this way an effort has been made to use information and communication technology (ICT) effectively and efficiently to acquire, document, make available, share and use knowledge in organizations (Sarmento et al., 2000). According to the organizational systemic perspective (O’Brien, 1993; Stoner & Freeman, 1992), importance is given to the availability and use of communication channels linking the diverse participants and through which processed information circulates. This will flow through the whole organization, forming a complex network, frequently referred to as the organization’s information system (Zorrinho, 1995). Therefore, as long as the appropriate infrastructure is established, information and knowledge can be easily distributed or transferred, both intra and inter-organizationally. As Davenport and Prusak (1998) highlight, as organizations interact with their environment, “they absorb information, turn it into knowledge, and take action based on it in combination with their experiences, values, and internal rules” (p. 52). This means that all organizations generate and manage their knowledge.

However, with knowledge being of vital importance for organizational functioning, it is not enough for its creation to occur spontaneously or for its management to be occasional, haphazard and non-deliberate. On the contrary, this implies conscious, systematic and intentional behaviour which must be operationalized within a set of formally instituted activities and initiatives. Therefore, according to Sousa (1999), knowledge management, as a management attitude, forms a process that integrates in organizational strategy the management of people and information and communication technology, with a view to promoting integrated organizational learning, using information gathered from colleagues, clients, suppliers, competitors, etc., so as to use the results of its treatment and synthesis at the right time and more quickly than the competition. In this sense, it is up to top management to make the first commitment regarding knowledge, and this should be reflected in the development of a set of processes aiming for and stimulating the acquisition (internal and external), systemization, retention and share of knowledge within its structure, in order to accelerate and improve problem-solving and decision-making. These processes, which are more cultural than technological, should stimulate a working environment that emphasizes and rewards the total commitment of all organizational actors to knowledge and the essential need to share it.

In this chapter, we seek to describe the contexts of the emergence of technology (and its use) in organizations, with a view to promoting innovation and organizational performance in the area of which knowledge management is particularly relevant. We stress the role played by human
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