Chapter 9
Digital Technologies as Media to Transfer Knowledge in IT Firms

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ABSTRACT

During the last decade, improvements in information and communication technologies have made possible the transformation of knowledge transfer processes from purely informal to increasingly formal and more diverse communication mechanisms that enrich intra-organizational communication channels. In this chapter, the authors followed a case study approach to analyze three Mexican companies with the objective of understanding how companies in the IT sector are implementing digital technologies to achieve knowledge transfer in their organizations. The findings suggest that workers seek and choose tools that can be personalized and customized to adapt to their own needs. New digital technologies are proving to be a new and relevant channel of communication among people: therefore, these should be considered to be one possible way to motivate knowledge transfer at work.

INTRODUCTION

Organizations have always managed knowledge, although they have not always spoken of it in those terms. Early Knowledge Management (KM) initiatives treated knowledge as an object in an attempt to improve worker's productivity from an organizational perspective. Previous research regarding KM and its contribution to an organization's competitive advantage identify three main aspects. First, at the individual level, the employee is responsible for knowledge generation in the organization (Nonaka & Takeuchi, 1995). Second, at the organizational level, knowledge created in the organization should be transferred across the firm. Third, once all the members in the organization have received the knowledge, it should be integrated into the firm's knowledge base (Zárraga & García-Falcón, 2003:81) and improve or innovate organizational processes, activities, products and services.

The basic processes of KM include production, distribution, and use of knowledge and information. These KM processes are interrelated and, in many cases, cannot be separated. However, the present chapter focuses solely on analyzing the process of knowledge transfer, which relies on a greater tacit component. Organizations have been struggling to promote knowledge management initiatives within their members as knowledge is recognized as one of the main resources of a firm. However, technology enables individuals to transfer information in efficient ways; enhancing the communication between one another and facilitating the knowledge transfer process.

The most significant element that enables organizations to move toward an operation that facilitates knowledge transfer is the use of diverse communication mechanisms. Improvements in information and communication technologies have made possible the transformation of the knowledge transfer processes from purely informal to increasingly formal and more diverse communication mechanisms that enrich the intra-organizational communication channels (Zapata, Rialp & Rialp, 2009). Informal mechanisms, such as face-to-face communication, meetings, and communication systems that facilitate interaction among members of the organization, can improve the knowledge transfer process. Practice communities, for example, are a good opportunity to share organizational knowledge among members of the firm (O'Dell & Grayson, 1998). Other tools, such as document management systems, can only be helpful to locate specific information. In this type of tool, there is still missing a space where employees can use this information, share it, and discuss it with others. Cognitive and visualization tools, such as mind mapping software, do not address the social context of knowledge creation but are designed specifically for the solitary worker (Efimova, 2004). In addition to that, telecommuting and virtual offices have separated and reduced opportunities for informal face-to-face knowledge sharing. These facts provide us with a framework to suggest that workers seek and choose to use a tool that can be personalized, customized and adapted for their own needs. This preference for customized communication tools has become a challenge for firms that want to find ways for their employees to share their knowledge. New digital technologies can bring employees together to participate actively in a knowledge transfer process.

During the last decade, technology has facilitated knowledge transfer in organizations (Bennett, Owers, Pitt &Tucker, 2010). Furthermore, technology permits the workplace to be a virtual environment (not necessarily a physical place), where employees can work from different locations. The diversity in backgrounds of each individual in a virtual working environment makes knowledge transfer crucial in this type of environment (Wang & Haggerty, 2009).

New online technologies facilitate the human requirements that are essential during the knowledge transfer process; they provide opportunities for both formal and informal interaction, communication and collaboration with partners and customers/suppliers. This is because it is the employees who control the online content. A relative new concept is that of *ba* proposed by Kitaro Nishida; ba is a space that enables the emergence of relationships and the creation or transfer of individual and/or collective knowledge. This space can be physical, virtual, mental, or a combination. From the different classifications of this term, cyber *ba* is a virtual space of interaction in which explicit knowledge is converted to more complex knowledge; this is done through the acquisition of new explicit knowledge transferred throughout the organization (Nonaka & Konno, 1998).

Recent research has addressed the role of new digital technologies and how they have become essential for the knowledge transfer process in organizations. Furthermore, these have been identified as providing new opportunities that may facilitate the process by which experts share tacit and experiential knowledge (Panahi, Watson, & Partridge, 2013).

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