Chapter XII

Interdepartmental Knowledge Transfer Success During Information Technology Projects

Kevin Laframboise
Concordia University, Canada

Anne-Marie Croteau
Concordia University, Canada

Anne Beaudry
Concordia University, Canada

Mantas Manovas
Concordia University, Canada

ABSTRACT

This article reports on a study that investigates the knowledge transfer between an information systems/technology (IS/IT) department and non-IT departments during IT projects. More specifically, we look into the link between the knowledge management capabilities of the IT department and the effectiveness and efficiency of the knowledge transfer to a client department. Knowledge management (KM) capabilities are defined by Gold, Malhotra, and Segars (2001) as the combination of knowledge infrastructure capabilities (structural, technical, and cultural) and knowledge processes capabilities (acquisition, conversion, application, and protection). Data collected through a Web-based survey result in 127 usable questionnaires completed by managers in large Canadian organizations. Data analysis performed using partial least squares (PLS) indicates that knowledge infrastructure capabilities are related to the knowledge transfer...
success, and more specifically to its effectiveness whereas knowledge processes capabilities are only related to the efficiency of such transfer. Implications of our results for research and practice are also discussed.

INTRODUCTION

Knowledge transfer (k-transfer) is a process through which one entity is affected by the knowledge of another (Argote, Ingram, Levine, & Moreland, 2000). K-transfer, a key element of KM research, has been shown to play a critical role in increasing a company’s productivity and helping it gain a competitive advantage (Argote & Ingram, 2000; Szulanski, 2000). From a market perspective, the transfer of knowledge between two groups establishes a provider-receiver relationship. As might be inferred from Lin, Geng, and Whinston (2005) interdepartmental transfer of knowledge allows for mutual benefits and represents the knowledge market within a firm.

Although the issue of intra-firm k-transfer has been addressed already (Gruenfeld, Martorana, & Fan, 2000; Gupta & Govindarajan, 2000; Hansen, 1999; O’Dell, 1998), there is a lack of research in interdepartmental k-transfer, in particular during IT projects. This research gap is especially significant since most IT projects are cross functional and interdepartmental (Hoopes, 2001, Sharda, Franckwick, Deosthali & Delahoussaye, 1998). The present research attempts to narrow this gap by empirically investigating interdepartmental k-transfer success during IT projects. The most obvious knowledge asset of the IT department lies in the conception, development, and exploitation of IT applications that support the business processes, characteristically examples of tacit knowledge (Edvinsson & Malone, 1997). However, the IT-related managerial skills constitute knowledge that must be transferred to the client department (as explicit knowledge) during any project if IT is to contribute to creating and sustaining a competitive advantage (Mata, Fuerst, & Barney, 1995). This emphasizes the importance of investigating further how KM capabilities can be fostered to successfully conduct an IT project that suits the needs of another business unit.

A capability is the “firm’s capacity to deploy its assets” (Maritan, 2001, p. 514). KM capabilities characterize a firm’s ability to build upon its current knowledge to scan for and recognize the value of new information, assimilate it, and apply it in order to create new knowledge (Gold et al., 2001). More specifically, KM capabilities are developed through the processes of combining and exchanging knowledge to foster the creation of new ideas and resources. They are enabled by the presence of the knowledge infrastructure capabilities, which are leveraged by the critical knowledge processes capabilities (Gold et al., 2001).

The present research aims at answering the following research question: Are KM capabilities of an IT department related to the success of knowledge transfer to non-IT department during an IT project? Although different authors point out that various aspects of such capabilities are essential to achieving k-transfer success (Nonaka & Takeuchi, 1995; O’Dell, 1998), none of them have actually empirically tested interdepartmental knowledge transfer. Given that IT projects are knowledge intensive, it seems appropriate to assume that some form of deliberate management of knowledge should be present in both the development and the implementation processes of such projects.

This paper is structured as follows: first, the theoretical background is reviewed. Next, the research objectives, variables, hypotheses, and model are presented. The third section describes the methodology used for this research project. The data analysis is followed by a discussion of the results. The last section addresses the limitations...
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