



Chapter 9

ERP-Based Knowledge Transfer

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Enterprise Resource Planning (ERP) is an enterprise-wide package that tightly integrates all necessary business functions into a single system with a shared database. The implementation of ERP entails that business knowledge incorporated in the basic architecture of the software package is transferred into the adopting organization. This article investigates how organizational-specific requirements and technology constraints inherent in the software package interact in this knowledge transfer process. In-depth interviews, process analysis and documentation analysis are used to analyze the early implementation stage of ERP. The results conclude that the visible knowledge in the business process from the ERP package is compulsorily transferred into the organization along with business rules inherent in the process due to the process automation, the cross-functional nature of ERP package and limited flexibility of the package. The results also suggest that organizational adaptive capability of role and responsibility redistribution, development of new types of required knowledge and a different knowledge structure in the organization will internalize these standardized processes into business routines that will give a competitive edge.

This article provides a new angle of adopting ERP in an organization, and contributes to a better understanding of competitive advantage based on

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process knowledge when standardized business processes are implemented in an organization.

INTRODUCTION

Transfer of knowledge has been an important topic in management literature. Sometimes, the issue arises in the form of transferring best practices in multinational corporations when they transfer accumulated knowledge of headquarters to new foreign affiliates (Ghoshal and Nohria, 1989; Gupta and Govindarajan, 1991; Kogut and Zander, 1993). At other times, it becomes an issue of transferring technology, business processes and best practices inside the firm (e.g., Argote, 1999).

As more and more companies are implementing Enterprise Resource Planning (ERP) systems in their organization, the issue of knowledge transfer comes in a different format. While customization is not impossible, the broad scope and close connectivity of all related functions makes the customization very costly for any implementation of ERP (Davis, 1998). This high cost and long implementation process lead most organizations to align their business processes with functionality provided from the ERP. According to Forrester Research, only five percent of organizations among Fortune 1000 companies purchased an ERP application and customized it to match their business process (Davis, 1998). Therefore, the implementation of ERP entails taking the business model around the package (Slater, 1998). In other words, business knowledge incorporated into the basic architecture of the software is transferred into the adopting organization.

The article is a part of longitudinal study based on an ERP implementation at the University of Nebraska. From an in-depth analysis of this early stage of implementation, we are particularly interested in how organizational-specific requirements and technology constraints inherent in the software package interact in the knowledge transfer process. The findings will contribute to a better understanding of competitive advantage based on process knowledge when standardized business processes are implemented in the organization.

KNOWLEDGE TRANSFER OF BUSINESS PROCESSES

Can knowledge be transferred when business processes are mapped and imitated? If so, what knowledge is transferred and what is not? One important step in answering these questions is to understand the difference in business processes. Brown and Duguid (1991) presented two different views of work: canonical and noncanonical. Canonical practice, based on an abstract representation of the organization, originated with Taylor's scientific management where complex tasks

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