Chapter IX

A Structured Method for Evaluating the Management of a Knowledge Management System Implementation

Charlie C. Chen  
Appalachian State University, USA

Rong-An Shang  
Soochow University, Taiwan

Albert L. Harris  
Appalachian State University, USA

Zhi-Kai Chen  
ASUSTek Computer, Inc., Taiwan

ABSTRACT

A knowledge management system (KMS) project transcends functional departments and business partners. The success of KMS implementation is highly contingent upon a well-orchestrated integration of multiple systemic contexts, such as communication channels, user involvement, power structure among stakeholders, corporate culture, project champion, interorganizational networks, etc. These organizational factors are embedded throughout the life cycle of a KMS project and within an organization. Understanding the influences of these organizational factors to the success of KMS projects can provide lessons for systems developers and management to increase the success rate of system implementation. The study is based around AMC, a major Taiwanese motor company faced with the challenge of deploying a knowledge management system. Over a period of 3 years (1999-2002) structured interviews were conducted to examine organizational factors contributing to the success of KMS efforts in AMC. The major emphasis of this chapter is to apply the concepts of structuration
Evaluating the Management of a Knowledge Management System Implementation

theory to assess the interaction of corporate management with users of a knowledge management system. Our findings suggest that management and users must be engaged in a sustained and reciprocal communication method when implementing a KMS. The pattern of communication, power structure, sanction power, and degree of cooperation are dynamically changed during the interaction process. Therefore, it is important to maneuver these factors into a win-win situation for management and users to successfully implement a KMS. Practical implications resulting from this research provide feasible real solutions to improve the relationship between users and management during a KMS implementation. Theoretically, this chapter contributes to the growing body of knowledge management (KM) literature from the structurational theory perspective.

INTRODUCTION

The extensive research investigating the field of knowledge management (KM) has primarily emphasized the philosophical or practical perspective. The philosophical perspective illustrates the concepts and procedures used to manage organizational knowledge (Choi et al., 2008; Guo and Sheffield, 2008; Davenport, 1997; Nissen & Espino, 2000; Nonaka & Takeuchi, 1995; Polanyi, 1962; Quinn, Anderson & Finkelstein, 1996; Seviby, 1997). The consensus reached by organizational members can lead to common perceptions and actions in the process of establishing knowledge management based on the grounded theory (Kjaergaard and Kautz, 2008). Employees’ positive aggressive attitude and collaborative efforts can enhance organizational learning, thereby improving business performance (Chen, 2007). User involvement in developing KM systems can increase the rate of success from the social-technical perspective (Patrick and Dotsika, 2007). The practical perspective suggests prescriptions for management of organizational knowledge (Davenport & Prusak, 1999; DeLong & Fahey, 2000; Ruppel & Harrington, 2001). One case study finds that a firm can accelerate the process of new product development by simultaneously promoting the formation of a horizontally integrated network between internal and internal communities (Shibata and Kodama, 2007). Few KM studies have addressed the impacts of human-to-human interaction on the implementation of knowledge management systems (KMSs). This area of study is the primary focus of scholars interested in adopting a new information system (Lyytinen & Ngwenyama, 1992; Orlikowski, 1996). There is also a notable shortage of well-grounded theory and methodology on how to address the organizational aspects, social aspects, and issues relevant to a knowledge management system implementation.

Baskerville and Pries-Heje (1999) identified five general theories about KM: (1) intellectual capital theory; (2) knowledge economy theory; (3) core competence management; (4) dumb-sizing; and (5) knowledge alliances. The first two theories view KM from the perspective of information economics; the other theories view KM from the perspective of strategic information system (IS) theory. This study adopts the latter view and regards knowledge as a resource for a firm’s competitive advantage. Employees’ tacit knowledge and explicit knowledge are important pieces of organizational knowledge. Unless employees create and share their knowledge, individual knowledge cannot be amplified and elevated into organizational knowledge. Without extracting, combining, and applying individual knowledge and other knowledge embedded in organizational culture, routines, policies, documents, etc., a firm cannot utilize intangible “know-how” to compete successfully in the market (Grant, 1996; Nelson & Winter 1982). KMSs are being integrated into organizations.