

Chapter 15

A Proposed Framework for Designing Sustainable Communities for Knowledge Management Systems

Lakshmi Goel

University of Houston, USA

Elham Mousavidin

University of Houston, USA

ABSTRACT

Despite considerable academic and practitioner interest in knowledge management, success of knowledge management systems is elusive. This chapter provides a framework which suggests that KM success can be achieved by designing sustainable communities of practice. Communities of practice have proven to have significant economic and practical implications on organizational practices. A growing body of literature in KM recognizes the importance of communities that foster collaborative learning in organizations and almost all KMS have a 'network' component that facilitates connecting people in communities of practice. Evidence has shown that communities have been a key element in KMS of many companies including Xerox PARC, British Petroleum Co., Shell Oil Company, Halliburton, IBM, Proctor and Gamble, and Hewlett Packard.

INTRODUCTION

Despite considerable academic and practitioner interest in knowledge management (KM), success of knowledge management systems (KMS) is elusive (Akhavan et al., 2005; Hammer et al., 2004). There is a considerable body of literature

that has studied factors for KMS success. Jennex and Olfman (2005) provide a review of KMS success literature and propose a comprehensive framework for evaluation of KMS success. In this chapter, our goal is to contribute to this line of research by identifying how these success factors may be achieved. Specifically, we restrict our

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scope of inquiry to a certain type of knowledge management systems; those that are designed to support communities of practice (CoP).

Prior literature that has sought to identify important factors in KM success has adopted either the individual level of analysis (e.g., Bock et al., 2005; Kankanhalli et al., 2005), the organizational level of analysis (e.g., Brown & Duguid, 2000), or the technological level of analysis (e.g., Markus et al., 2002). We propose an approach that incorporates research on individuals, organizations, and the technology pertaining to knowledge management to suggest a set of design principles for sustainable communities of practice. Communities of practice have proven to have significant economic and practical implications on organizational practice (Brown & Duguid, 1999, 2000). A growing body of literature in knowledge management recognizes the importance of communities that foster collaborative learning in organizations and almost all knowledge management systems have a ‘network’ component that facilitates connecting people in communities of practice. Evidence has shown that community has been a key element in knowledge management systems of many companies including Xerox PARC, British Petroleum Co., Shell Oil Company, Halliburton, IBM, Proctor and Gamble, and Hewlett Packard (Brown & Gray, 1995; Cohen, 2006; Cross et al., 2006; McDermott, 1999a, 1999b).

Attributes of communities of practice, which we believe determine the success or failure of KM initiatives, have been thus far under-researched. KM can benefit from literature in virtual communities that looks at what properties of a community make it sustainable. These properties can then be viewed as a blueprint of what a community needs to have to achieve its function of fostering collaboration and hence, generating knowledge. In sum, this research is intended to help practitioners arrive at how best to design communities in KMS in order to achieve KM success.

KMS success models provide a strategic level process approach to achieving success. KMS suc-

cess factors provide a means for evaluation of KMS success. Our goal is to suggest how these success factors could be achieved at an operational level. We draw on Jennex and Olfman’s (2005b, 2006) work to arrive at a list of eight success factors that are applicable to our conceptualization of a KMS that supports CoPs. Table 1 below provides a list of these factors.

This chapter is structured as follows. In the next section we present a review of literature in knowledge management, KM success, and communities of practice. The literature helps provide the theoretical basis for our research. Our research methodology section follows the literature review. We elaborate on the process and method for arriving at our design recommendations, and discuss each recommendation in detail. We next provide a discussion, and conclude with our suggestions for future research.

LITERATURE REVIEW

The primary goal of this research is to contribute to literature in KM success. We provide a brief review of literature in knowledge management and knowledge management success to summarize the state of current research. We then focus on the

Table 1. KMS success factors adopted from Jennex and Olfman (2005b, 2006)

Success Factor	Description
SF1	Identification of users, sources, knowledge, and links
SF2	Clear articulation of knowledge structure
SF3	Motivation and commitment of users
SF4	Senior management support
SF5	Measures for assessment of appropriate use
SF6	Clear goal and purpose
SF7	Support for easy knowledge use
SF8	Designing work processes to incorporate knowledge capture and use

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