IRM PRESS
701 E. Chocolate Avenue, Suite 200, Hershey PA 17033-1240, USA ITB10187
Tel: 717/533-8845; Fax 717/533-8661; URL-http://www.irm-press.com

Chapter XI

Effective Integration of Computer-Supported Collaborative Learning into Knowledge Management Structures: A Model and an Evaluation Framework

Francisco Milton Mendes Neto
Federal University of Campina Grande, Brazil and
Serpro - Federal Service of Data Processing, Brazil
Francisco Vilar Brasileiro
Federal University of Campina Grande, Brazil

Abstract

Support for knowledge management (KM) requires mechanisms for creation, mapping and transference of knowledge. Many organizations use computer tools, like knowledge mapping tools, knowledge repositories, tools to support communities of practice and computer-supported collaborative learning (CSCL), to achieve these goals. In particular,

CSCL can support knowledge transfer at the same time that it improves the process of creating new knowledge. However, whole CSCL potential to transfer knowledge and foment learning is not being used adequately, mainly because of the lack of appropriate integration with other KM tools. In fact, there is a lack of guidance on how to effectively integrate CSCL into KM and how to evaluate the benefits of this integration. This chapter fills in this gap by proposing a model to improve KM through the consistent and effective integration of CSCL into the KM structure of organizations. It also describes a framework to evaluate the results of this integration.

Introduction

The main functionalities of an organizational knowledge management (KM) structure are: creation, mapping and transference of knowledge. *Knowledge creation* occurs in people's minds through the interaction between tacit and explicit knowledge (Joshi et al., 2002; Nonaka & Takeuchi, 1995). *Knowledge mapping* consists of the identification and classification of the existent organizational knowledge. This, in turn, is embedded in documents, repositories, routines, processes, practices, norms and, mainly, in people's minds. Finally, *knowledge transfer* consists of moving knowledge to where it can generate value. That is, to where it can be used to support the execution of some organizational activity (Davenport & Prusak, 1998).

Many organizations use computer tools to support the functionalities of KM structures. As for instance, we can cite: knowledge mapping tools, knowledge repositories, tools to support communities of practice, and computer-supported collaborative learning (CSCL) tools (Baloian et al., 2000; Guzdial & Turns, 1998; Hsiao, 1996; Joshi et al., 2002; Whitelock, 1993), among others.

These tools together support the three main functionalities of a KM structure. Some organizations use, among other tools, CSCL to transfer knowledge. Because of its focus on both communication techniques used and what is being communicated (knowledge content), CSCL can support knowledge transfer at the same time that it improves the creation process of new knowledge (Hsiao, 1996). We advocate that the judicious integration of CSCL into a KM structure