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Analysis of Knowledge Management and E-Learning Integration Models

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Abstract

The development of knowledge management (KM) and e-learning (EL) naturally brings both disciplines closer and encourages integration. There are several models that offer possible ways of such integration. With the goal to develop practically applicable integration solution for specific organization, existing integration models are analysed in this paper. The main criterion for analysis is application of integration model in the enterprise. Model analysis shows several different theoretical approaches for integration that are tied to specific goals and needs of organization. The more general approach is to base integration on common ground, which is identified as learning.

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Keywords: Knowledge Management; E-learning; Integration models.

1. Introduction

Knowledge management and e-learning are developed as recognized, self-contained disciplines for years. By shifting focus on knowledge as the main resource of organization, these disciplines are gaining more and more interest. With further development, synergistic relationships should increase between KM and EL[1]. Some of these relationships are quite evident, because both disciplines: Deal with knowledge capture, sharing, application and generation; Have important technological components to enhance learning; Contribute to building a continuous learning culture; Can be decomposed into learning objects.

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Several conceptual, technological, organizational and content barriers are hindering close integration of KM and EL[2–8]. By overcoming them we may expect clear benefits for disciplines and increased quality, convenience, diversity and effectiveness within an organization[9–11].

There are several theoretical approaches for connecting both disciplines. They are described in literature as KM and EL integration models[6,7,10,12–15]. To develop practically applicable integration solution for specific organization it is necessary to understand these integration approaches. The main goal of this paper is to analyze existing integration models. The main criterion for analysis is application of integration model in the enterprise.

To describe connection of KM and EL domains, terms "integration" and "adoption" are used with very close meaning. In this paper term "integration" is used to describe situation when KM and EL are two equal, parallel operating disciplines. Their common, consistent implementation and usage is *integration* of knowledge management and e-learning. Term "adoption" will be used, when one discipline is the basis for another, approaches and tools from another discipline are tailored and used to increase its efficiency.

The structure of the paper is following. KM and EL integration models are analysed in Section 2. The results of model analysis are presented in Section 3. The conclusions contain a summary of the main ideas of the paper.

2. KM and EL integration models

KM and EL integration models found by author are presented in this section. Models are ranged by date of publication.

2.1. KM and EL technology integration model

Woelk's and Agarwal's model helps to understand the EL and KM technology integration capabilities with the aim to capture, organize, and deliver traditional courses and large bodies of knowledge [12]. Knowledge management can be analyzed for understanding the role of knowledge management life cycle and the knowledge flow in the organization. Model is based on Nonaka and Takenuchi SECI model of knowledge conversion with four phases - socialization, externalization, combination and internalization[16]. Two more phases are added to SECI model - cognition and feedback. For each of the knowledge management phase e-learning technologies are providing their own improvements. Knowledge management phases with e-Learning enhancements are shown in Figure 1. Knowledge Holder can create explicit knowledge and store it in a knowledge repository or transfer his tacit knowledge to Knowledge Seeker through socialization.

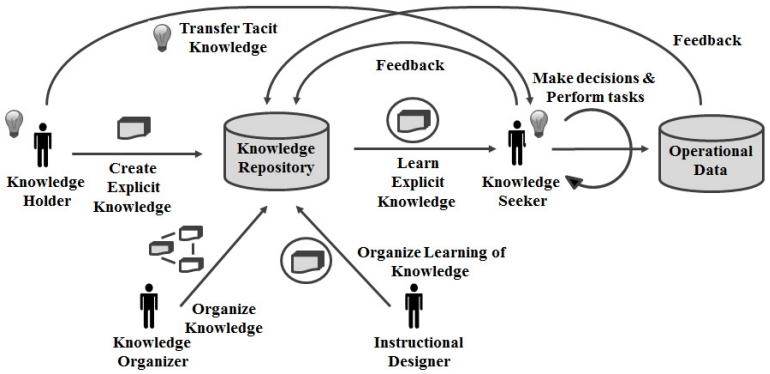

Fig. 1. Knowledge management phases with e-Learning enhancements[12].

The Knowledge Organizer and Instructional Designer are persons or software programs. The Knowledge Organizer is responsible for linking knowledge bodies or other improvements. The Instructional Designer is responsible for preparing knowledge for learning needs by adding assessments and assignments. The Knowledge Seeker gains the explicit knowledge by selecting them from knowledge repository. The Knowledge Seeker uses his