

Chapter 3.12

Collaborative E-Learning Using Semantic Course Blog

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ABSTRACT

Collaborative e-learning delivers many enhancements to e-learning technology; it enables students to collaborate with each other and improves their learning efficiency. Semantic blog combines semantic Web and blog technology that users can import, export, view, navigate, and query the blog. We developed a semantic course blog for collaborative e-learning. Using our semantic course blog, instructors can import the lecture course. Students can team up for projects, ask questions, mutually discuss problems, take the comments, support answers, and query the blog information. This semantic course blog provided a platform for collaborative e-learning framework. In this chapter, we described some collaborative e-learning and semantic blog technology, and then we introduced functions, implementation and how collaborative e-learning appears in semantic course blog.

INTRODUCTION

The World Wide Web demonstrates a new era for e-learning; it can disseminate knowledge around the world in near-real time. E-learning provides learning resources in electronic media and makes them available anywhere, and anytime. In the last few years, the Web has been increasingly used to not only share existing knowledge, but to create opportunities for knowledge-generation through collaboration. Collaborative learning's biggest impact occurs when the technology enables an individual person, students, or parties to build their understanding collaboratively on the Web. Many students find that their learning is most effective when they actively construct knowledge during group social interaction and collaboration. In this article, we demonstrated the collaborative e-learning using semantic course blog. Through the semantic course blog, instructors can import the lecture course; students can team up for project,

ask the questions, mutually discuss the problems, take the comments, support the answers, and query the blog information. Students and instructors can use semantic course blog as a collaborative e-learning platform. In this article, first we describe some collaborative e-learning concepts. Then we introduce the relevant technology. Third, we show our semantic course blog architecture. After that we present our implement method and some collaborative e-learning usage in semantic course blog. Finally, we present our conclusions and propose future work.

COLLABORATIVE E-LEARNING

E-learning delivers many enhancements to the teaching and learning experience. Collaborative learning change the learning technology; it enables individual person, students or parties to build their understanding collaboratively on the Web. E-learning provides learning resources in electronic media and makes them available anywhere, anytime. Many students find that their learning is most effective when they actively construct knowledge during group social interaction and collaboration. These approaches have various calls like social constructivism, social learning, and collaborative learning, or aggregated learning. The theories of social constructivist epistemology and Vygotsky's *zone of proximal development* provide a rigorous study of pedagogies. Garrison's study (1993) was implemented, a theoretical framework for collaborative learning in an online environment, and the research study provided results that supported and extended a theoretical framework from the perspective of social constructivism. Harasim and her colleagues, Hiltz, Teles, and Turoff (1995) repeated and supported conferencing as an ideal environment for collaborative interaction. They stated:

"These shared spaces can become the locus of rich and satisfying experiences in collaborative learning, an interactive group knowledge building process in which learners actively construct knowledge by formulating ideas into words that are shared with and built on through the reactions and responses of others".

Henri and Rigault (1996) described this medium as a framework for true collaborative group work in distance education. Ragoonaden and Boredeau (2000) found that some students resented having to communicate with others whose work habits were different from theirs. Collaborative e-learning provides more intense communication than face-to-face groups. If the students have the social pressure and the greater freedom to express their views and ideals in Internet, they can have better performance in learning. In collaborative e-learning, instructor can easily view input from students, make assessments online and, in most cases, full of audits of the learning cycle for later analysis. These ways of learning activities are also extremely effective for instructor to use them for collaboration at college or other learning areas.

Collaborative e-learning (Lindsay, 2007) contains following items:

- Collaboration occurs in a group of geographically different students and/or learners (and possibly diverse) who have a mutual goal.
- Collaboration occurs when collaborators actively interact, discuss, synthesize and then construct new knowledge (in the form of original work).
- Collaboration occurs as students and teachers share the decision making process.
- Collaboration occurs as meaningful friendships are made that become relevant in the context of learning.

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