Chapter 1.35

Instructors' Experiences with Using Groupware to Support Collaborative Project–Based Learning

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ABSTRACT

Today's business schools are looking for effective approaches to leverage technology to facilitate distributed learning and support collaborative group projects. Faculty need tools, methods, and best practices that can be adapted to support various learning models and learning objectives across academic disciplines. The application of groupware technology, Lotus Domino discussion databases, to support collaborative project-based learning is explored. From the instructor's perspective, a variety of uses for discussion databases are described, including supporting course logistics, supporting student teams, and extending learning beyond the classroom. Recommendations for effective implementation include technical support issues, use of team databases, maintaining contact with remote students, and faculty time commitments.

INTRODUCTION

Today's business schools are looking for effective approaches to leverage technology to facilitate distributed learning and support collaborative group projects. Faculty members need tools, methods, and best practices that can be adapted to support various learning models and learning objectives across academic disciplines.

This is, at least in part, in response to criticisms of the curriculum and teaching methods used in many business schools (Porter & McKibben, 1988). Neglect of problem-solving and communications skills, overemphasis of theoretical knowledge, and failure to provide students with an integrated, realistic view of how organizations operate are among the more serious criticisms leveled at higher education.

To address these and other criticisms, many business schools are in the process of redesigning both curricula and instructional methods. These efforts are targeted at improving both undergraduate and graduate education. One recurring theme that has emerged from these reforms is the use of teamwork and collaborative learning (Alavi, 1994). Along the same lines, many business schools have tried to use groupware technologies to support teamwork and collaborative learning. While many studies have either examined the effect of groupware technology on learning (Alavi, 1995, 1997; Morrissey, 1998) or reported results on students' acceptance of groupware technology (Chen et al., 2002; Chen & Lou, 2002; Van Slyke et al., 2002), few have provided recommendations based on the experiences of instructor use of this type of technology. The purpose of this article is to share our first-hand faculty experiences with using Lotus Domino discussion databases, a groupware technology, to build interactive Web sites that will enable learners to collaborate on the Internet in distributed settings.

LEARNING MODEL

This interactive Web site model is designed to support student-centered, project-based courses where faculty members serve as facilitators of student learning as opposed to providers of information. This model is based on the extensive research in problem-based learning that arises from a constructivist philosophical view of how learning occurs within or is constructed by the learner as opposed to being provided by external sources (Savery & Duffy, 1995).

The constructivist view of learning sees instruction as being learner-centered. In this view, better learning occurs when the learner is forced to make discoveries on his or her own, rather than being fed the information (O'Loughlin, 1992). In the constructivist world, the professor is more of a facilitator or mentor than a "sage on a stage." The instructor's role is to provide tools for helping the learners make discoveries and construct their view of reality. The learners pursue projects, which are designed to allow them to place their focus on finding relationships among concepts while putting the learner in a real-world context (Jonassen, 1993).

The collaborative model of learning builds on constructivism by assuming that additional learning can be achieved when knowledge is shared among students. The instructor's role is to maximize the sharing of knowledge among learners as opposed to controlling the content and delivery of material (Leidner & Jarvenpaa, 1995).

From this basis of collaborative learning, we have designed both single courses and team-taught, integrated, inter-disciplinary course clusters, both at the undergraduate and graduate levels, in which students are presented with a series of problems that they must work on in teams. This approach has been used both with traditional, residential students and with nontraditional, remote students.

The problems presented to students are specifically designed around a set of learning outcomes

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