Chapter XVI
Reflective E-Learning Pedagogy

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ABSTRACT

The number of learning opportunities that are technology mediated (e-learning) is increasing as institutions of higher learning discover the value of technology in reaching larger numbers of students. The challenge for those instructors who implement such technology in higher education is to correctly apply pedagogy that has been successful in student learning to these new delivery methods. In some cases, new pedagogy is being created. For successful facilitation of knowledge to take place, instructors must make students partners in the process, help them learn to reflect about their activities, and focus on course outcomes rather than the technology itself. We will share key e-learning pedagogy from different areas of specialty (mathematics education, special education, and instructional technology) in higher education.

INTRODUCTION

Dewey (1933, p. 35) says: "While we cannot learn or be taught to think, we do have to learn how to think well, especially how to acquire the general habit of reflecting." Institutions of higher education are realizing the value of the tech-mediated approach (e-learning) as a way to engage learners at a distance as well as enhance courses that meet with the instructor in the traditional setting (Edwards, 2005). While technology has made this a viable teaching alternative, the instructor has to make a concentrated effort not to let the technology overwhelm the teaching objectives of

the course. Instructors must engage the learners as collaborators in the process. New e-learning pedagogy includes discussions of what to do if technology fails and how to address students' concerns about isolation from other learners. This means constructing a new way of thinking and reflecting on their own instruction, while maintaining the traditional emphasis on course objectives.

When examining e-learning through the lens of constructivism, it is important to understand the motivation of those involved, both the instructor and the students (Vygotsky, 1987). When students are asked to engage in problem solving that is relevant to their culture, true learning is constructed (Santmire, Giraud, & Grosskopf, 1999). Students in teacher education programs must examine their own culture and learn to reflect on their knowledge, skills, and dispositions. The instructor may use this reflection as a way to evaluate growth both in terms of the e-learning environment and the course content. In this chapter, we will discuss (1) roles of the instructor and the student in e-learning, (2) key pedagogical approaches to increasing students' ownership in e-learning, and (3) reflection as a means of evaluating a student's growth in e-learning.

BACKGROUND

Learning from a distance is not new. For well over 100 years, universities have offered alternatives to visiting the main campus for classes. The first of these, in the United States, was offered by Pennsylvania State University in the form of correspondence by mail courses in 1892 (Shearer, 2004). There is always a demand for access to university classes close to home. Many institutions offer distance as well as face to face instruction. In 2000–2001, 90% of public 2-year and 89% of public 4-year institutions offered distance education courses (National Center for Education Statistics, 2003). A technology-mediated (e-learning) course is one that may incorporate a variety of technology-based educational strategies: synchronous and asynchronous collaborative communication, project/activity-based learning, and Web-based interaction and feedback (Edwards, 2005). It may take place in a wholly online environment or in a combination of online and face-to-face interactions. Technology has made e-learning an attractive option, but technology does not insure successful implementation of coursework (McVay, Snyder, & Graetz, 2005).

According to Russell (1999), there are over 200 studies on technology for distance education that report no significant difference in student learning when technology, instead of traditional classroom approaches, are used to deliver course instruction. This research shows that students achieve similar outcomes despite different uses of media. So the value of technology-mediated learning needs to lie in convenience to the students, not in trying to boost their achievement over peers receiving typical instruction.

E-learning is essentially different from traditional education in that it requires changes in pedagogical approaches (Miller & King, 2003; Moore & Kearsley, 1996). One of the most frequently pointed out concerns about e-learning is the sense of isolation and lack of human contact among its users (Baek & Barab, 2005; Baek & Schwen, 2006; Hara & Kling, 2000). When students do not fully interact with the instructor and other classmates, they do not have ample opportunity to learn content. Interaction among the class community members is vital to the success of e-learning (Moore & Kearsley, 1996; Palloff & Pratt, 2001).

A great deal of research supports constructivist and student-centered pedagogical approaches (Anderson, 2004; Baek & Barab, 2005; Baek & Schwen, 2006; Bonk, Kim, & Zeng, 2006; Carr-Chellman, Dyer, & Breman, 2000; Miller & King, 2003) as ways of increasing students' ownership and responsibility, which contribute to the improved quality of learning. One of the