Chapter 4.14
Student Decision Making in Technology Application

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ABSTRACT

This study investigated factors that influence students' decision-making processes in selecting a classroom or online course, student technology skills and experience, and concerns students have about Internet integration. Students completed a survey questionnaire and Web-based pretests and posttests. A Likert scale instrument was completed by students in both a control group and an experimental group. Independent two-sample t-tests and an analysis of covariance (ANCOVA), using the initial score as the covariate, were conducted. Level of significance (alpha) was set at .05 to achieve statistical significance for all analyses. Both groups in this study were full-time, on-campus students with access to the same technology resources. Findings reveal that students' perceptions and experiences were quite similar.

INTRODUCTION

Educational reform is exerting pressure on prospective and experienced teachers to model authentic teaching and to demonstrate understanding and knowledge of various instructional techniques and tools. Teachers are being trained or retrained to reduce the lecture-and-listen styles of instruction that have traditionally been used and to enhance their facilitation of appropriate student-centered instructional methods. Technology is one of the new teaching and learning tools that teachers are expected to use. As more schools invest in technology and students increasingly obtain technological sophistication, teachers are

expected to not only demonstrate technology competency but also be effective at integrating technology into their teaching.

The use of technology as an instructional tool and medium is usually determined by the pedagogical style adapted by the instructor (Shovein, Huston, Fox, & Damazo, 2005). However, during a time when active student participation in the learning process is receiving widespread attention, educators must consider student learning preferences and technology abilities when planning a course delivery format. Various factors determine students' preferences and perceptions about technology application in both classroom and online environments. In this study, the authors studied the factors that influence students' decisions to learn in a classroom vs. an online setting. In addition, the authors also examined students' technology skills and concerns about Internet integration within classrooms.

INSTRUCTIONAL ENVIRONMENT

Participation in Web-enhanced classrooms or online distance learning is influenced by student motivation, technology experience, learning styles, and learning expectations (Shovein et al., 2005). According to Shin and Chan (2004), education level, online learning experience, and Internet skills affect student participation in online learning.

Many institutions of higher education are using Web-based instruction for classroom and distance education (Falvo & Solloway, 2004). Various online course management systems have evolved within the last decade and have been widely adapted by educational institutions. Course management systems such as Blackboard™, WebCT™, and Desire2Learn™ have been used in classrooms to supplement learning and as an online distance education delivery medium. In a comparison study of two online course management systems, Storey, Phillips, Maczewski, and

Wang (2002) revealed that ease of technology use and access to technology are important considerations when deciding whether to use technology. Buzzell, Chamberlain, and Pintauro (2002) stated that both Web-based and classroom learning are effective instructional environments.

Advocates of online learning mention the flexibility that online learning provides. Although online learning offers flexibility, it is not yet regarded by many educators as an appealing replacement of classroom learning; therefore, the significance of flexibility should not override other factors that affect learning such as student learning styles and technology skills. Atan, Rahman, and Idrus (2004) recognized the benefits of Web-based instruction such as increased opportunities for using different instructional strategies, use of multimedia, improved communication and interaction, and easy access to course materials; however, they also argued that the impact of a traditional course delivery system supercedes that of online learning.

Due to the time and technology skills needed to manage online classes and to teach and support students, online learning is more demanding and involved than is generally assumed (Shovein et al., 2005). Atan et al. (2004) observed that, "distance education learners need constant reminders regarding learning strategies, time management skills, motivation, and discipline" (p. 105). Students require online support for successful online learning. Although concerns about the effects of technology on learning and course management are raised when teaching online, the presence of technology in traditional classrooms also calls for a reassessment of classroom management practices. The physical space in classrooms and disruptions of student learning by the Internet require new classroom management styles (Lim, Pek, & Chai, 2005).

Effective integration of the Internet requires careful consideration of individual learner differences and needs. If online learning is to be integrated into campus-based courses because of the potential of the Internet as an effective learn-

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