

# Chapter XXX

## Key Aspects of Teaching and Learning in the Online Environment

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### ABSTRACT

*Delivery of Postsecondary Career and Technical Education (CTE) classes by distance learning has increased dramatically in the last decade as students and workers strive to juggle busy work schedules, school, and family obligations. The trend to offer CTE classes by distance education, especially by e-learning (delivered through electronic means) is rapidly increasing requiring instructors in the face-to-face classroom to make a quick transition to e-learning. Instruction by e-learning requires different practices, theories of teaching, design models, and methods of delivery. The key aspects of teaching and learning in the e-learning environment are discussed with scenarios for application.*

### INTRODUCTION

E-learning is a type of distance learning that is provided through an electronic means. Distance learning is a structured learning experience where students and their instructors are in dif-

ferent places. Distance learning is a broad term that includes instruction through video tapes, CDs, audio conference or video conferencing, television, DVDs, paper materials sent by mail, telephone, or use of instruction through the Internet whereas e-learning is delivered only by

electronic means. In this chapter, e-learning refers to distance learning through the Internet. The National Center for Educational Statistics (2006) shows 32% of US adults enrolled in educational programs in 2004-05 did so by one of these distance learning means. Allen and Seaman (2003) found approximately 3.2 million college students took at least one course online (e-learning) and this was an increase from the previous year by 1.1 million. Colleges and universities are looking to e-learning as a cost-effective delivery mode of education, delivered mostly asynchronously; higher education is turning to this method of delivery of programs to counter building new buildings and crowded classrooms. E-learning provides a learning opportunity for students that has:

- Increased opportunities for reflecting on and refining ideas
- A greater degree of learner control over instructional materials
- Flexibility permitted by unrestricted access to course materials.
- Richer levels of interaction, both in relation to the materials and in the opportunities presented for active learning by means of conferencing and collaborative learning activities (Stansfield, McLellan, and Connolly (2004).

Rovai, Ponton, and Baker (2008) have created a model of the ideal e-learning environment. The learner is at the center of the learning environment and pulls from a wide variety of resources to learn online. The instructor manages the learning experience with a Course Management System (CMS) also referred to as a Learning Management System (LMS) or a Virtual Learning Environment (VLE). The student is the navigator choosing his or her resources as needed, all online. Libraries are accessible online as well as all functions of the colleges and universities (registration, counseling, advising, tutoring, and technical help). For the e-learning program to be successful, the

learner ought to have easy access to all of these resources and online interaction with the instructor and other students. While the CMS sets up the learning setting for the student and controls the delivery of many resources, the student needs to be self-directed and to have access to a fast and reliable Internet server.

Moore and Kearsley (2005) have created a model of distance education that describes the component process and the elements of a distance education system. Their model is appropriate regardless of the size of the distance education system and shows the need for:

- A source of knowledge that is to be taught and learned
- A subsystem to structure this into materials and activities for students (courses)
- Another subsystem that delivers the courses to learners
- Teachers who interact with learners as they use these materials in making their knowledge
- Learners in their different environments
- A subsystem that monitors and evaluates outcomes to facilitate interventions where failures occur
- An organization with a policy and a management structure to link these different pieces (pp. 10)

## **BACKGROUND**

The potential of a boom in e-learning in the near future in Postsecondary Career and Technical Education raises a difficult question for professional educators, will students learn as much by e-learning as they do in a face-to-face classroom? Russell (1997) and Dean, Stahl, Sylwester, and Peat (2001) compiled over 248 studies of distance learning versus a traditional classroom setting and found no significant difference between the two in the matter of test results and interviews of

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