Chapter III

Distance Learning Technologies

There are many technologies that can be used to support distance education and training. Some are used as supplements to traditional classroom environments; others are used as complete replacements for traditional lecture-based courses. While each technology might be better suited for one type of environment than another, it is important to consider its relative advantages and disadvantages. For example, some of them provide almost no interaction or communication between the learner and the instructor, or between learners. Some technologies provide limited contextual information besides the lecture material, while others provide the interested learner with a wealth of additional information. Consistent with chapter two, we must also note that some technologies allow for more flexibility by providing asynchronous support for learning, allowing learners to work at their own pace, while others are limited to a synchronous learning environment that also provides more communication possibilities. This chapter presents an overview of the various technologies that are being used in distance and distributed learning.

What is meant exactly by technology? The term includes those tools that provide access to education or training, such as telecommu-
communication networks, computers, or books. These are referred to as delivery technologies (Clark, 1994). There are also tools that influence the learning experience of learners such as tests, tutorials, exercises, help guides or examples and these are referred to as instructional technologies (Clark, 1994) or teaching strategies (also including lectures, group and individual projects, drills and experiential work). The term instructional technology used in this chapter encompasses all combinations of tools to deliver and enhance learning. The ideal technology for an organization depends on the particular course, the audience, the financial means of the organization, and its existing technology infrastructure. Table 3.1 presents an overview of the advantages and disadvantages of the DL technologies presented in this chapter.

**COMPUTER-BASED TRAINING**

Computer-based training has regained popularity in organizations in recent years. Other terms often used to refer to a similar set of tools include computer-based tutorials and computer-based teaching. Computer-based training involves training courses that are offered on a computer, typically distributed on CD-ROM or diskettes. An ideal situation is to offer the course on CD-ROM while allowing the users access to the hard drive to save data for actual hands-on practice. CBTs can be used as media for tutorials or complete lectures. Learners using CBT courses are able to study the material for the given course at their own pace. Many corporations are equipped with learning labs. A typical learning lab is configured with computers on desks separated by dividers, and a library of courses. As employees require training, they can reserve space in the room and sign up for the particular course of interest to them. Often, these CBT courses can be used as preparation or follow up to more traditional classroom workshops.

In the past, CBT courses were accompanied by textbooks, whereas today most of these courses are supplemented with on-line material. In recent years, CBT courses have increasingly been developed for multimedia delivery. Interactive multimedia instructions allow learners to read text, view (images or videos), and hear information, while they practice their knowledge on interactive exercises using the computer. Interactive multimedia courses can be developed with a number of commercially available tools and software packages. Tools
Related Content

Establishing Successful Online Distance Learning Environments: Distinguishing Factors that Contribute to Online Courses and Programs
Lynne Schrum and Angela Benson (2002). *The Design and Management of Effective Distance Learning Programs* (pp. 190-204).
[www.igi-global.com/chapter/establishing-successful-online-distance-learning/30294?camid=4v1a](www.igi-global.com/chapter/establishing-successful-online-distance-learning/30294?camid=4v1a)

The Role of Learning Objects in Distance Learning
[www.igi-global.com/chapter/role-learning-objects-distance-learning/11994?camid=4v1a](www.igi-global.com/chapter/role-learning-objects-distance-learning/11994?camid=4v1a)

Adaptive Device Context Based Mobile Learning Systems
Haitao Pu, Jinjiao Lin, Yanwei Song and Fasheng Liu (2011). *International Journal of Distance Education Technologies* (pp. 44-56).
[www.igi-global.com/article/adaptive-device-context-based-mobile/49716?camid=4v1a](www.igi-global.com/article/adaptive-device-context-based-mobile/49716?camid=4v1a)
Adult Illiteracy
www.igi-global.com/chapter/adult-illiteracy/11736?camid=4v1a