Chapter II

Opportunities in Web-Based Teaching: The Future of Education

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Web-based teaching technology has become a popular tool for many institutions in this decade. It can be used for every educational level from K-12 to higher education and distance education in many different fields. In order to make these opportunities possible, there are many requirements, including sufficient funding, a strong technological infrastructure, hardware and software, good design and interface, operations, maintenance, training, and cooperation of every involved party. When these requirements have been met as a minimum condition, Web-based teaching can provide many benefits to students, teachers, parents, and educational institutions. It is one alternative of modern technology that has been developed to augment traditional learning and teaching at all educational levels.

> *"Books will soon be obsolete in schools. Scholars will soon be instructed through the eye. It is possible to touch every branch of human knowledge." (Cuban, 1986)*

Although this quotation is exaggerated in its scope, the proposition is still viable to some degree. Web-based technology presents modern-day educators with fascinating possibilities, which have never before been explored. Due to the growth of available technologies, the decreasing price of computing and communication, and the increase in the requirements for continuing education, our education has been changed from traditional book-based classroom learning to a virtual classroom with the addition of computer technology as a tool for learning and teaching. One important instrument that has become popular in education during this decade is Web-based teaching. Many institutions offer Web-based teaching because it is another technique they can contribute to students to enhance their learning. Also, teachers around the world can cooperate with one another in the preparation of curricula or in the exchange and transfer of knowledge and information.

Many educators and parents of students perceive that this computer technology will help students become more successful in school (Kook, 1997).

A brief overview of previous studies on Web-based teaching shows that most of the studies have discussed specific uses of the Web at a particular level of education or a certain theoretical viewpoint of Web-based teaching, as opposed to a more practical, broad-based implementation of Web-based teaching across all levels of education. The latter is what this chapter will focus on. However, some examples of those previous studies are the following: Neumann's study (1998) emphasizes the risks of e-education and the potential benefits of the Web. Patterson (1998) discusses a new school of thought that applies Internet to use in classrooms. Dumont (1996) explains how cyber education causes many challenges for both teachers and students. Rao (1998) discusses how faculty can add knowledge to teaching and research by using Web-based technology. Stefl-Mabry (1998) describes design in Web-based reading courses. Allen's paper (1998) focuses on the themes of multimedia and interaction. Ingram (1996) discusses cost as the main factor of selecting educational technologies. If educators select and develop the right technology, it will help them to enhance their teaching, encourage students to become more responsive and reduce costs. The paper of Gustafson and Thomsen (1996) focuses on Internet use in marketing and economic courses. For example, students can improve their knowledge in computer networks and telecommunications, writing, and they can increase involvement with teachers. Van Reeth and Coninx (1998) highlight the use of the Internet and networked multimedia in computer graphics education. Bell's paper (1998) explains how to integrate Web research into a current system of business on-line training. From these studies, which are concerned with specific aspects of Web-based teaching, we can anticipate that the Internet will become an important and popular tool for future education. However, unlike these studies that highlight specific technology, this chapter will concentrate on opportunities in Web-based teaching at a broad and practical level.

Opportunities of Web-based teaching can be used at every educational level from K-12 to higher education and distance education, in many different fields. In order to make these opportunities possible, there are many requirements, including sufficient funding, a strong technological infrastructure, hardware and software, good design, interface, operations, maintenance and training, sufficient time to adopt the new system and cooperation of every involved party. When these requirements have been met as a minimum condition, Web-based teaching can provide many benefits to students, teachers, parents, and educational institutions alike.

This chapter will be divided into three sections. The first section explains how Web-based teaching can be used at each educational level: K-12, college, and distance learning. The second section discusses the requirements that can make Web-based teaching a viable reality. The last section presents the benefits of Web-based teaching for young and adult students, teachers, parents, and institutions.

SECTION I: HOW WEB-BASED TEACHING CAN BE USED AT EACH EDUCATIONAL LEVEL: K-12, COLLEGE, AND IN DISTANCE LEARNING PROGRAMS

The learning process at each level is different; therefore, the purpose of using Web-based teaching is different for each. Educators must design a Web-based teaching system

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