



**Chapter XV**

**Leveraging Distance  
Education Through the  
Internet: A Paradigm Shift in  
Higher Education**

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In a global knowledge-based economy, with an ever-growing demand for learning, the Internet is seen as a vehicle for promoting effectiveness in teaching and reaching wider audiences. The number of online courses and programs offered by traditional higher education institutions, as well as new players in the education industry, has been increasing at an exponential rate. Yet the implementation of distance education through the Internet involves much more than a change of medium from face-to-face classroom interaction to an environment free of time and place constraints. Institutions are faced with the challenge of redefining their strategies to incorporate the e-learning paradigm. This chapter provides an overview of the different models that have emerged, and addresses the key issues that need to be resolved for integrating Internet-based learning in traditional universities. The breadth of strategic, administrative, academic and technological concerns encountered through the evolution of an Internet-based education system, from its inception to implementation, are discussed and illustrated by the e-learning initiative of Middle East Technical University in Turkey.

## INTRODUCTION

The history of distance education can be traced back to the mid-Nineteenth century, when correspondence courses for teaching foreign languages by mail emerged in Europe. A hundred years later, televised courses heralded a new era. Distance courses were now enriched through sound and motion, and students were able to view classroom settings in their own homes. Commercial television stations started broadcasting university courses; a number of universities such as the University of North Carolina at Chapel Hill setup their own television stations. Televised instruction paved the way to the success of Open Universities. The advent of videocassette recorders, and later, CD-ROMs further removed the time constraint imposed by television program schedules. But it is the pervasiveness of the Internet in all facets of society that set the stage for the biggest revolution in distance learning and higher education.

The Internet has redefined the boundaries and promise of distance education by enabling the concurrent obliteration of time and place restrictions. Distance education through the Internet presents unprecedented opportunities for learners as well as providers of education. Learners can follow courses at anytime and from anywhere, at their own pace. Providers can reach a much wider and diverse population of learners than ever before, increasing their outreach and productivity. The use of new technologies also offers providers the potential to strengthen the quality and effectiveness of instruction.

However, distance education over the Internet entails much more than just a change of medium for the delivery of instruction. There are many stakeholders involved, each with a different perspective and set of priorities. The change is one that deeply affects the university as an institution, and the instructor and the student as individuals. For the university, the transition to an Internet-based learning environment requires a restatement of institutional missions and priorities, a revision of conventional structures. For the instructor and student, online courses represent a shift in educational philosophy and instructional design as the emphasis moves from “teaching” to “learning,” leading to a student-centered rather than instructor-based system. The challenge for higher education is to find the best way to adjust to this paradigm.

Over the last few years, there has been an exponential growth in the number of courses, certificate and degree programs available through the Internet. In the United States (U.S.), the percentage of post-secondary institutions using the Internet as the predominant mode of delivery for distance education almost tripled from 1995 to 1998 (National Education Association, 2000). These trends are expected to continue due to several reasons:

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