

## Chapter 12

# Cost Estimation in E-Learning Design Project Management

**Mediha Tezcan**  
Anadolu University, Turkey

### ABSTRACT

*The Internet is a revolutionary development of dimensions equivalent to those of the Industrial Revolution. All aspects of life are being radically influenced by this, sectors are being re-structured, professions are being re-defined, and modes of handling business, economy, education, public administration, politics, entertainment, and culture are being changed. Inclusion of the internet in the education technologies has led to radical changes in both formal education and also in remote education. E-learning, instructional design, and project management are three important concepts of increasing significance. In this chapter, the cost estimations aimed for the preparation of project management plans of e-learning systems, including education design, are discussed. Cost estimations aimed for project management, cost management, e-learning, education design, organization characteristics of e-learning systems, issues to be taken into consideration in e-learning project management, and preparation of e-learning project management plan preparation are made. The economic impacts of e-learning instructional design project management are discussed.*

### INTRODUCTION

The distance education, which had first been implemented as correspondence education, in time has evolved into the web-based distribution of educational information, as a consequence of the evolutionary level of change in technology. The new distance education practices of our day include e-learning practices.

E-learning may be defined as an advanced education method, developed based on the features and resources of the new digital technologies, in addition the other available learning materials which are suitable for an open and flexible learning environment, providing a well-designed, interactive, simplified and learning focused learning environment to everyone, everywhere, anytime and under any circumstances (Khan, 2004).

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In line with the global economic crisis, the number of poor people in the world is steadily increasing. Thousands of people, for example those who are in financial difficulty, those who have special circumstances, the unemployed and those who want to increase their knowledge levels in the competition environment, are demanding e-learning services. Meanwhile, the governments are also supporting e-learning, since they are unable to allocate adequate budgets for education. Socio-economic conditions are increasing the significance and sustainability of e-learning. Thanks to the new technologies, e-learning is finding more widespread use among the world education.

In e-learning; the education technologies, in addition to allowing the students the opportunity to study anytime, anywhere, in any way they wish, are also enabling the learning processes through their rich instruction designs, tools and resources. Benefiting from project management, the e-learning institutions are implementing many instruction design activities, which are quite complex, in a planned and programmed manner.

In this study, project management, its characteristics and cost management have been handled first of all. The e-learning and instructional design theory has been defined. The organization structure of the e-learning system has been interpreted. A cost estimation study has been made to identify the cost elements in e-learning instructional design and the project management plan. E-learning designs made by project management allow for the efficient use of the scarce resources in the economy.

## **BACKGROUND**

This study includes the cost estimation in e-learning project instruction design. Correlations have been established between three different scientific areas; i.e. e-learning, instruction design and project management. The development of these scientific fields may be summarized as follows:

E-learning is a distance education model offered to the educational sciences by the communication and information technologies. The changes in the technologies during the 20<sup>th</sup> century have also influenced the distance education models. The first implementation of distance education is correspondence education (by letters). The second distance education model includes educational television broadcasts. The third model of distance education comprises live educational broadcasts and the entry of the computers into the education field. In the fourth model of distance education, the internet enters into the field of education and includes the flexible learning methods where student-teacher interaction is initiated. The fifth model of distance education is actually the second model of e-learning applications. It has two-way audio-visual communication environments. Meanwhile, the sixth model of distance education includes the 21<sup>st</sup> century education technologies and the third generation e-learning practices (Caladine, 2008; Cooolly & Stansfield, 2006).

Project management started in the 1950's and its development is discussed up until the present moment. The project management discipline has initially emerged in the defense industry and the field of aviation. While it was a course being taught only in the industrial engineering schools until the 1990's, it has become a mandatory course in many engineering schools in our day. Currently, project management practices are not being solely used by physical sciences, but are finding widespread use among social scientists also. In the 21<sup>st</sup> century, we have begun to observe the application of project management as a requisite among the planned activities (Cleland & Gareis, 2006; Gollubits, 2008).

The first applications related to instructional design have been initiated 20 years ago. It has been influenced by the evolutionary developments in technology. The e-learning institutions are also intensively benefiting from the innovations provided by technology in instructional design.

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