

# Chapter 6

## E-Learning Service Delivery Quality: A Determinant of User Satisfaction

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### ABSTRACT

*E-learning systems have received considerable attention from researchers, educational institutions, and organisations for their anticipated benefits. The objective of e-learning systems is to provide students with educational services via electronic channels. User dissatisfaction is considered the main issue facing universities in regards to e-learning systems. Service Delivery Quality (SDQ) can be deemed an essential concern for management and customers. This research investigates the role of SDQ on user satisfaction on two levels: the effect of SDQ on user satisfaction, and the effect of each sub-dimension of SDQ on user satisfaction. This paper reports on a study which surveyed 720 external students at an Australian university. The findings highlight the critical role of SDQ on user satisfaction. Based on the results of structural equation modeling and content analysis, a set of recommendations was formulated. The aim was to help improve service delivery quality, user satisfaction, and greater overall success of e-learning systems.*

### INTRODUCTION

The education sector is significantly impacted by developments in information technology. New technologies have been widely adopted in this sector to enhance the quality and quantity of

educational services. E-learning systems have become the most used application in universities and educational institutions. In the USA, 90 percent of 2-year and 89 percent of 4-year public education institutions offered distance education courses in 2000-2001 with enrolments of 1,472,000 and 945,000 respectively out of total enrolment of 3,077,000 (Holsapple & Lee-Post, 2006). It is

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worth mentioning that transnational courses are delivered by most Australian universities through educational software (Shurville et al., 2008). Most of the United Kingdom universities are supporting educational services and students via Virtual Learning Environment (VLE) (Ogba et al., 2012). The use of these systems is not limited to universities but extends to include schools, government departments and private enterprises.

Educational services are the main product of educational institutions. Customers expect to receive high quality service. Service quality is commonly used as an indicator assessing course design, service delivery, and the success of e-learning systems. User satisfaction is considered one of the most important objectives for organisations. Due to the importance of user satisfaction, this indicator is used to evaluate the organisational performance together with other indicators.

The effect of service quality on user satisfaction has been studied before. However, these studies ignored the effects of the sub-dimensions of the service quality construct on user satisfaction.

## **Research Problem**

For students, the main expected benefits of e-learning systems are enhancing academic performance, educational satisfaction, social value, and career development. E-learning systems are dependent upon digital media and telecommunications, and any shortcomings may lead to user dissatisfaction. The issue of user dissatisfaction is related to other issues in service delivery quality. In this respect, Zeithaml states that “Too many companies are performing poorly in delivering service on the web, and a large part of this problem is the lack of complete understanding of what customers want in this medium” (2002, p. 135). Delivery problems are considered to be the main reason behind the failure of online services (Kuo et al., 2011). Based on these issues the research problem has been formulated:

*Does service delivery quality of e-learning systems impact user satisfaction? If so, which sub-dimensions of this construct affect user satisfaction?*

## **Research Objectives**

The main objective of this research is to identify the role of SDQ in enhancing user satisfaction, and the impact of each sub-dimension of SDQ on user satisfaction. The two indicators, SDQ and user satisfaction, are tested in the context of measurement models to investigate the ability of those two constructs to evaluate and measure the success of e-learning systems. The validity and reliability of the “E-S-QUAL and Re-E-S-QUAL” measure which was proposed by Zeithaml et al. (2002), and user satisfaction are examined in this study. Two models were examined to investigate the role of SDQ in user satisfaction at two levels: the effect of SDQ on user satisfaction and the effect of each sub-dimension of SDQ on user satisfaction. Students’ comments about the factors affecting the success of e-learning system were analysed using content analysis. Analyzing these comments enables identification and classification of the main issues faced by external students regarding e-learning systems. Based on the results of this research, recommendations and suggestions are offered with the aim of helping to enhance the performance of e-learning systems, and solutions are proposed to support service delivery quality and user satisfaction.

## **Literature review**

A literature review was undertaken of relevant contributions in the information systems and e-learning systems fields. Search parameters included service quality and user satisfaction and publications reviewed were within the period from 1970 to 2012. Google Scholar was used as it provides instant access to all database that were

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