

## Chapter 17

# E-Learning Methods and the Factors Hindering Their Usage: An Empirical Exploration

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### ABSTRACT

*In recent years, e-learning technology has been widely used in the academic institutes for supporting the effectiveness and efficiency of the students' learning and the educators' teaching, as a favored approach. However, regarding the student community, the extent to which e-learning technology is used, types of e-learning methods are being mainly used, as well as the barriers for enjoying the advantages of e-technology, remain interesting topics for the educators to explore. This chapter focuses on these issues through an investigation among the students within a higher education institute. The findings give an understanding regarding the usage of e-learning methods and the factors hindering the efficacy of their usage among the students. Also, a primary analysis on the usage difference between undergraduate and postgraduate students is presented.*

### INTRODUCTION

E-learning, brought about by the development of information technology and network systems, as a type of information and communication technology (ICT), has become a very popular method in

facilitating the educational processes (Siritongthaworn and Krairit, 2006; Bennet & Bennet, 2008; Wang, et al., 2009; Owens and Price, 2010) in many academic institutes as well as in other industries (Little, 2010). Academic instructors use e-learning methods as a powerful complementary tool to enhance their class teaching effectiveness and the effect of students learning. Furthermore

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many institutes currently offer distance learning courses and rely heavily on the e-learning methods as the teaching mechanism.

Researchers have argued that the e-learning methods have a positive effect on learning process (e.g., Alexander, 2001; Bose, 2003; Duffy & Cunningham, 1996). However, according to the authors' observation in their daily teaching, e-learning methods (hereafter simplified as e-methods, referring to the concrete methods contained in the major e-learning systems currently applied in the academic institutes) seem having not realized the expected benefits to all students. In order to understand the most frequently used e-methods by the students, and the frequency of these e-methods' usage as well as the barriers (hindering factors) for students using e-methods in their learning process, the authors conducted a survey among the students in an education institute. This paper presents the findings from this research.

The paper is structured in the following way. The next section describes the methodology employed in this research. This is followed by a brief description of e-learning and its related issues; investigation scenarios and the primary analysis are then considered and the paper ends with the conclusions and further research.

## **RESEARCH METHODOLOGY**

In order to achieve the research objectives, namely to find the most frequently used e-methods by the students, the frequency of these e-methods' usage as well as the hindering factors for students using e-methods in their learning process, three steps were followed.

Step 1, investigating the relevant literature, and based on the findings and understanding from literature, summarising the e-methods and possible hindering factors affecting the usage of them.

Step 2, a survey was conducted among current students, to find the most frequently used e-

methods and evaluate the hindering factors found from the literature through the users' (students') judgement. A further interview with students was also conducted for a further comprehensive understanding and triangulation of the survey findings.

Step 3, following the previous two steps, generalising the findings regarding the frequently used e-methods and the hindering factors of their usage, as well as the countermeasures to resolve the identified problems.

## **E-TECHNOLOGY IN FACILITATING LEARNING**

E-learning refers to the application and deployment of the network and digital technologies to facilitate and conduct learning and communication processes (Bose, 2003; Siritongthaworn & Krairit, 2006; Roffe, 2002; Henry, 2001) in different types of organizations. Among these organizations, educational institutes are taken as representative.

With the advance of the information technology, the conduction of instruction has been improved (Shim, et al., 2007), which gives the education institutes a powerful approach in helping the students' learning process. Within recent years, many higher education institutes have employed e-technology in their academic work (Siritongthaworn & Krairit, 2006; Bose, 2003; Alexander, 2001; Hadengue, 2005). The most popular e-learning technologies include WebCT, Blackboard and Moodle, etc. (Qi, et al., 2009). The e-methods, such as email, instant chatting, etc., commonly contained by them are the focused elements of this paper. In many institutes, e-methods are also used as a new strategy to enrich the learning effect obtained from long existing teaching approaches, namely face to face communication, etc.

It has been argued by academics that e-methods as a flexible approach (Bose, 2003; Siritongthaworn & Krairit, 2006) have advantageous aspects in enhancing learning effectiveness. By follow-

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