An Empirical Investigation of Students’ Acceptance of OLAT as an Open Web-Based Learning System in an Egyptian Vocational Education School

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ABSTRACT

This study uses the Technology Acceptance Model (TAM) as a basic theory to address the factors that affect students’ acceptance of using the OLAT (Open Learning and Training) system in an Egyptian vocational education school. System quality and self-efficacy were incorporated as an extension to TAM in the research model. The data was analyzed by Partial Least Squares (PLS). The results show that perceived ease of use is the main variable linking external variables with perceived usefulness, attitude, and system usage. Moreover, it was found that the research model explained 66% of the variance in perceived ease of use, 80% of the variance in perceived usefulness, and 81% of the variance in attitude toward using OLAT.

Keywords: Open Learning and Training (OLAT), Partial Least Squares (PLS), Technology Acceptance Model (TAM), Vocational Education, Web-Based Learning System

INTRODUCTION

Education is fundamental to the improvement of societies by developing knowledge, skills, abilities, and social competencies. In the same stream, e-learning provides educational organizations with an enriched environment to develop the concern of both individuals and communities. Therefore, it is becoming more and more important to adopt information systems due to the potential educational and cost benefits (Lee, Yoon, & Lee, 2009). However, there are many different types of web-based learning systems on the education market, such as WebCT, Moodle, Ilia, Claroline, and OLAT. All these systems have common attributes; as Black, Beck, Dawson, Jinks, and DiPietro (2007) pointed out, the majority of e-platforms “are web-based to facilitate anytime, anywhere access to learning content and administration”.

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In fact, whereas some educational institutes have integrated web-based learning systems into their educational programs, the benefits of such systems are dependent on the success/failure of using these systems (Pituch & Lee, 2006). Thus, a considerable number of studies were conducted to examine the acceptance of various web-based learning systems, for example, WebCT (Pan, Sivo, Gunter, & Cornell, 2005; Sanchez-Franco, 2010), Moodle (Sánchez & Hueros, 2010; Sumak, Hericko, Pusnik, & Polancic, 2011), Blackboard (Liaw, 2008), and Cyber University system (Pituch & Lee, 2006).

On the other hand, the factors contributing to the acceptance or rejection of web-based learning systems are likely to vary with the kinds of technology, target user, and context (Mathieson, 1991; Moon & Kim, 2001). Additionally, the technological mediums which are used in Arab countries are produced by non-Arab designers without taking into the consideration some cultural interferences, which may impede the transfer of knowledge and learning outcomes (McLaren, 2007). Accordingly, while it would be difficult to design a web-based learning system in most Arab countries, at least in the short term, such efforts suggest that a better recognition of the factors of acceptance of a web-based learning system may make an extensive contribution to enhance learning and teaching. However, there is a lack of empirical examination of the adoption of web-based learning systems in the Arab world, though some research stand out, for instance, Abbad, Morris, and de Nahlik (2009) investigated some of the major factors that impact on students’ adoption of Moodle in Jordan. Moreover, Akinyemi (2003) examined the perspectives of some Arab students on web-based learning systems in Oman, and suggested that there is a need for further research in the area of adoption of learning systems. Closely, Vrazalic, MacGregor, Behl, and Fitzgerald (2009) explored 13 barriers for students in their e-learning experiences throughout using the web-based learning systems Moodle, WebCT, and Blackboard in the United Arab Emirates. Equally important, the researchers found virtually no research on identifying the factors affecting student acceptance of the OLAT system from any perspective.

This study seeks to bridge some of the gaps in the literature, specifically in the local context, by proposing a model based on the extension of the Technology Acceptance Model (TAM) (Davis, Bagozzi, & Warshaw, 1989) to examine empirically the factors that might impact student use of the OLAT web-based learning system.

**LITERATURE REVIEW**

**OLAT Web-Based Learning System**

Web-based learning systems also known as e-platforms or Virtual Learning Environments (VLE) have become an integral part of the educational landscape. One of the main benefits of using a web-based learning system is offering a great variety of channels and workspaces to facilitate information sharing and communication among participants during educational courses. The IEEE Learning and Technology Standard Committee defined a web-based learning system as “a learning technology system that uses web-browsers as the primary means of interaction with learners, and the Internet or an intranet as the primary means of communication among its subsystems and with other systems” (as cited in Ngai, Poon, & Chan, 2007, p. 252).

Nowadays, there are two kinds of web-based learning systems. The first is commercial, and the second is a free or so-called open web-based learning system. OLAT (http://www.olat.org) is a web-based learning system based on Java and completely free of charge. The initial development started in 1999 at the University of Zurich in Switzerland, where it is deployed on the main OLAT server as well as being maintained and supported by the Information Technology Department of the University of Zurich. OLAT proffers a personalized authoring and learning environment, groupware functions, powerful administrative course tools, and is compliant with e-learning standards such as Sharable Content Object Reference Model (SCORM) (Arnold & Fisler, 2010). Currently,
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