E-Learning System’s Acceptance: A Comparative Study

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ABSTRACT

The major limitation for adopting e-learning systems is students and teachers perceptions of such applications. EduWave is a system implemented in Jordan, to be used by teachers, students and other stakeholders in public schools in the country. This study tried to contrast the perceptions of students and teachers and conclude to future agenda for improving the success chances of such systems. The research utilized results from two empirical studies, with 2 surveys applied to both teachers and students to probe their opinions regarding the obstacles facing EduWave utilization, the advantages and disadvantages of the system, the functionalities used, and the factors influencing the adoption. Results supported the original Technology Acceptance Model (TAM), with significant prediction of intentions to use EduWave through perceived usefulness and perceived ease of use for both teachers and students. Also, teachers and students results did not support the role of trust in the process. Conclusions and future work are stated at the end.

Keywords: E-Learning, EduWave, Jordan, Perceptions, Public Education, Students, Surveys, Teachers

1. INTRODUCTION

Technology plays an important role in the learning process. The developments in Internet applications and web-related technologies have contributed to the growing rate of e-learning use (Male & Pattinson, 2011). E-learning can be defined as the use of network technologies to create, deliver, and facilitate learning, anytime and anywhere. It includes training and delivery of learning content to learners and practitioners through the guidance of experts in real time (Siddiqui & Masud, 2012). With the growing popularity of e-learning, it suffers from traditional learning issues plus issues of quality assurance, improvement, and enhancement (Cheng, 2012).

It is important also to support all stakeholders in the e-learning process; teachers, students, parents, and other parties in the educational system. Thus, it is important to explore how these stakeholders view e-learning systems especially in developing countries. The issues faced by e-learning systems become more potent when they are administered by public firms. E-learning brings many advantages to the edu-

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Educational system when compared to traditional learning (Teo, Luan, Thammeter & Chattiwat, 2011). E-learning systems allow students to access educational materials electronically without the need to be in the classroom. Also, e-learning systems can be personalized to meet learner’s preferences, interests, and knowledge background (Shishehchi, Banihashem, Zin & Noah, 2012).

Based on the previous introduction, it is important to adopt e-learning systems and support their use and effectiveness. The premise of this study is to see if teachers perceive learning management systems the same as students see them. The system under investigation is the EduWave learning management system, which is implemented in Jordan and many Arab countries. The system is the major e-learning system used by the Ministry of education in Jordan.

The following section will cover the literature related to e-learning. The following section will explore the details of EduWave and its functionalities, followed by a short description of the research method. The fourth section will cover the data analysis and discussion followed by conclusions and future work.

2. E-LEARNING SYSTEMS

Electronic learning (e-learning) became a necessity for the success and prosperity of education. Although e-learning became a necessity, still many universities and schools are not adopting it fully. Education depends on face-to-face interaction between teachers and students, where technology became a channel for interaction and rich communication (Abu-Shanab, Ababneh & Momani, 2013). Also, the Internet bridged the place and time gap and facilitated the teaching/learning process. E-learning is the utilization of computing technology in universities and schools to facilitate education. Some modes of integrating technology into learning are becoming more popular like: information exploration, coordination, mental tools integration, web-based cooperative learning, problem-oriented integration strategies, information technology (IT) integration and learning assessment, and a technology integrated education (named energy education), where students are adaptive learners (Liao & Chen, 2010).

E-learning refers to distributing learning materials and lectures by teachers to students through a communication channel (Vlahovic et al., 2011) to execute all required tasks by teachers as well as learners through supporting the interaction among them easily, which results in a better usability of the e-learning system (Muhammad et al., 2011). Many learning theories were used, in the context of e-learning, in physical classroom situations and have been adopted and validated like: learning in an adaptive community, collaborative learning, scaffolding, and scenario learning (Tsai, 2011).

Adopting e-learning systems is related to the extent to which users are willing to use e-learning system for the purposes it was designed for. Timothy Teo developed an E-learning Acceptance Measure (ELAM) which presents an alternative to existing measures of e-learning or online learning by emphasizing on students’ perception of web quality, self-efficacy, or attitude towards the Internet (Teo, 2011). On the other hand, Tarawneh, Tarawneh and Alzboun (2011) proposed a set of measures for an e-learning system; these include: performance, features, reliability, conformance, durability, serviceability, aesthetics, and perceived quality. The experience of the Hashemite University in Jordan emphasize that e-learning can be a strategic tool where some of its output products are rented and sold in other countries in the Arab region (Harb & Abu-Shanab, 2009).

Mbarek proposed a theoretical model that includes antecedents of e-learning effectiveness grouped under two major factors; individual antecedents (motivation to learn and computer self-efficacy); and perceptual antecedents (perceived ease of use and perceived usefulness). The model is based on the social cognitive theory, and technology acceptance model (Mbarek, 2011). Liu and Hwang (as cited in Crawford & McKenzie, 2011), mentioned that E-learning
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