Chapter 20
An Empirical Analysis of Mobile Learning Acceptance in Puerto Rico's Higher Learning Institutions

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ABSTRACT

This empirical research article employs a quantitative research methodology based on existing research on the Technology Acceptance Model (TAM) to model how college students in Puerto Rico perceive, accept and reject mobile learning technologies before university implementation. This study identifies the factors, perceptions, and attitudes of mobile learning acceptance at the individual level. The TAM themes included in this study are: attitude (A), behavioral intentions (BI), ease of access (EoA), ease of use (EoU), external influence (EI), quality of service (QoS), student readiness (SR), university support (US) and usefulness (U). The article's objective is to examine the determinants and behavioral intentions to use M-learning in higher learning institutions in Puerto Rico. By understanding the determinants, universities, and organizations that deliver educational content can develop intervention programs aimed at increasing user acceptance of M-learning.

INTRODUCTION

Technology acceptance has remained an area of continued research, due to technology's continued evolutions. Currently, there is a vast increase in the use of mobile devices and services throughout the world on a social-economical level and geographical locations. The implementation of M-learning technology exhibits an element of uncertainty with decision makers regarding the aspects of adoption. The uncertainty stems from the complexity of users forming attitudes and intentions towards mobile learning technology before any efforts of actual use are applied. The actions towards usage and intentions to use

are formed after the introduction of new technology, thus actual usage may not be directly related to or a consequence of the attitudes and intentions to use (Davis, Bagozzi, & Warshaw, 1989). This case study applies the theoretical basis of TAM to explain the impact of external variables such as systems objectives, design, computer self-efficacy and training on the subjective beliefs i.e. behavioral aspects, attitudes toward use, and actual system use (Davis, 1989; Ibrahim & Jaafar, 2011). The objective is to analyze the determining factors of user acceptance and its correlation with M-learning technology in Puerto Rico to develop a predictive path model.

Background of Study

The researcher identified a gap in the literature between the students' acceptance of technology and universities in Puerto Rico (teachers and decision makers) thus conformed into the underlining objectives of examining the social influences and cognitive process of the end user to achieve acceptance. The researcher conducted a quantitative case study of 150 participants through a questionnaire to discover, identify the most influential factors of technology acceptance and capturing the student's perceptions and attitudes that impact mobile learning acceptance in Puerto Rico's higher learning institutions utilizing the key constructs from previous TAM studies adhering to the core principles.

The questionnaire contained grouped questions and factors that assist the prediction of M-learning acceptance. The study was descriptive in nature and formulated to describe the distribution of perceptions. The respondents answered 38 questions on a 7-point Likert scale ranging from strongly disagree (1) to strongly agree (7) and three open-ended questions that were optional. The qualitative questions were only used to better understand the student's perceptions and attitudes towards mobile learning in that region of Latin America.

Problem Statement

The evolution of interconnecting mobile technologies is generating new trends in education forcing entire educational networks to transition from traditional approaches into a new era of technology-based learning. Mobile technology is driving M-learning initiatives that support and promote the collaboration between students and instructors forming a learning environment with faster communications and sharing of information resources (Huang, 2014). Technology has proven to be a positive impact on the education system as it plays a significant role in today's educational processes, economy, retrieval of information and communication.

For M-learning to be successful, students must experience the logical steps of accepting mobile learning activities. Institutions must focus on the design, evaluation, understand the new generation of student needs, how culture play a significant role, mobile devices, and how these factors impact the determinants of students' acceptance of mobile learning as an education model. As a result, this research study identifies several impacting factors of students' acceptance and adoption of mobile learning then examines how the factors will influence universities during the promotion and implementation of mobile learning initiatives.

According to Zhao and Frank (2003), educational systems lay on top of technology resources, which may counteract against the benefits of using the technology such as underdeveloped software, interface problems, thus making the user experience undesirable reducing the chances of a successful implementation (Accuosti, 2014). As a result, academic institutions must require a prerequisite of understanding the

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