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Acceptance of Mobile Learning by University Students

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Abstract

Resting on the use of mobile device which is increasingly popular around the world, mobile learning in fact extends the reach of education to all social-economic levels independent of location and time, indicating a new opportunity for education industry development. Nonetheless, there is still a lack of a comprehensive understanding regarding the factors affecting the adoption of mobile learning. Based on information systems/mobile commerce acceptance literature, this study developed an integrated model to predict the acceptance of mobile learning by university students. This model hopefully provides a framework for future research, and will serve as a basis for our future survey and analysis of data.

Keywords: Mobile learning; User adoption; Acceptance.

1. Introduction

As an emerging paradigm in a long tradition of technology-mediated learning, mobile learning is defined as the acquisition of any knowledge and skill through the use of mobile technology, anywhere, anytime that results in an alteration in behavior (Geddes 2004). Currently, mobile learning is emerging as a promising market for education industry. On one hand, from a technology perspective the tipping point for mobile learning is coming closer as technology improves and standards emerge (Quinn 2008). On the other hand, the number of potential users of mobile learning is keeping increased, as a wide scale proliferation of mobile devices in fact extends the reach of education industry to all social economic levels covering all age groups from toddlers to seniors.

Whilst there is a growing interest from both academic and business communities, the issues regarding how to promote learner's adoption of mobile learning seem to be largely unsolved, and thereby posit to be a challenge for services providers. For instance, according to Corbeil and Valdes- Corbeil (2007), the availability of various mobile devices for students does not guarantee their use for educational purpose. Consequently, there appears to be an urgent requirement to understand the factors influencing user's behavioral intention in order to retain developing cost and make the services acceptable and to be used. And while the process of technology acceptance has

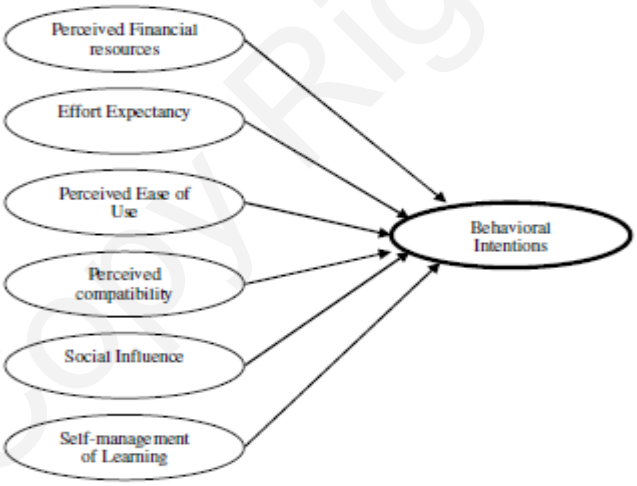
been widely studied in an organizational context, there is hence a need to explore the potentiality of current acceptance theory in a social context alike. In this sense, this paper attempts to fill a gap in the literature by deepening the understanding related to technological acceptance issues within a social context while the user behavior with a new role—learner. The reminder of paper is structured as follows. In the next section, we review the literatures in the context of mobile services adoption and discuss the necessities to embed additional factors associated with the unique characteristics of mobile learning in order to explain learner's behavioral intention. This is followed by a description of the research model and related ingredients. Finally, conclusion and future work are briefly reported.

Therefore, the main purpose of this research was to investigate the acceptance of mobile learning by university students and identify the factors that predict behavioral intention to use mobile learning. The findings of this research can not only help m-learning service providers develop better user-accepted m-learning systems and promote the new information technology (IT) to potential consumers, but also provide insights into the research on m- learning service adoption.

2. Model Development

Model that is used to guide this study are shown in Fig. 1, which shows that the perceived financial resources, Effort Expectancy, perceived ease of use, perceived compatibility, social influences, and Self-management of Learning are possible determinants of behavioral intentions to use m-learning service.

Figure 1: Research Model for mobile learning



2.1. Perceived Financial Resources

Perceived financial resources is the extent to which a person believes that he or she has the financial resources to use the information system, and it has been shown to be an important factor in IS adoption studies (Mathieson et al. 2001). They discovered that hardware/software and money resources are significant for users in adopting an IS. According to Wang et al. (2006), perceived financial resources in this study are defined as the extent to which an individual believes that she/he has the financial resources required to use m-learning service.

2.2. Effort Expectancy

Effort expectancy is conceived as the degree of ease associated with the use of the particular information system. Effort expectancy is closely related to perceived ease of use in TAM. To the extent that promoted effort expectancy leads to improved performance, effort expectancy should have a direct effect on performance expectancy and intention to use. Also, Chiu and Wang (2008) indicated that effort

expectancy was positively associated with performance expectancy and behavioral intention in the e-learning context. In addition, Marchewka et al. (2007) argued that this construction can be important in determining user acceptance of information technology.

2.3. Perceived Ease of Use

Extensive research over the past decade provides evidence of the significant effect of perceived ease of use on usage intention, either directly or indirectly through its effect on perceived usefulness (Agarwal & Prasad, 1999; Davis et al., 1989; Venkatesh, 1999, 2000; Venkatesh & Davis, 1996, 2000). In order to prevent the "under-used" useful system problem, m-learning service systems need to be both easy to learn and easy to use. In addition, an easy-to-use m- learning system could make potential users tend to believe that the system matches their existing values, needs, and experiences.

2.4. Perceived Compatibility

As mentioned earlier, among the innovation diffusion factors, only relative advantage, compatibility and complexity are potential determinants of innovation adoption (Tornatzky and Klein, 1982). However, relative advantage and complexity are conceptually overlapped with TAM's perceived usefulness and perceived ease of use, respectively (Moore and Benbasat, 1991). Thus, the two innovation attributes were excluded from the current research model. Perceived compatibility in this study is defined as the extent to which m- learning service is perceived to be consistent with the users' existing values, previous experiences, and needs. Previous empirical research also indicate that perceived compatibility has a significant influence on perceived usefulness (Wu and Wang, 2005) and behavioral intention to use electronic/mobile commerce systems (Wu and Wang, 2005).

2.5. Social Influence

The social influence is defined as the degree to which an individual perceives that important others believe he or she should use the new system. Social influence is also included in the TAM and TPB as a determinant of behavioral intention. Prior studies suggest social influence is a strong predictor of behavioral intention to use particular IS (Venkatesh and Davis 2000). As the decision of learner is also influenced by others, such as peer students or instructor (Miller et al. 2003), it is rational to include social influence into the research model.

2.6. Self-Management of Learning

Self-management of learning refers to the extent to which an individual perceives he or she is self disciplined and enables to engage in autonomous learning (Smith et al. 2003). Indeed, the need for self direction, or self-management of learning, runs clearly across the distance education and resource based flexible learning literature (Evans 2000; Smith et al. 2003). In terms of mobile learning, as McFarlane et al. (2007) pointed out, the increased learner autonomy and personalization posit a heightened requirement for appropriate self-direction learning capability, such as capabilities of locating and evaluating resources, critical thinking and reflecting on their own learning. As a result, self-management of learning is included into our model.

3. Conclusion and Future Work

Based on IS/m-commerce acceptance literature, this study presented and validated an integrated model for predicting the acceptance of mobile learning by university students. The results indicated that the perceived financial resources, Effort Expectancy, perceived ease of use, perceived compatibility, social influences, and Self-management of Learning are possible determinants of behavioral intentions to use m-learning service. The findings of this study provided several crucial implications for m- learning service practitioners and researchers.

References

[1] Agarwal, R. et al, 2000. Research report: The evolving relationship between general and specific computer self-efficacy – An empirical assessment. Information Systems Research, Vol 11, No 4, pp. 418–430.

[2] Chiu, C. M. and Wang, E. T. G., 2008, Understanding Web-based learning continuance intention: The role of subjective task value. Information & Management, Vol 45, No 3, pp. 194-201.

[3] Davis, F. D., 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, Vol. 13, No 3, pp. 319–339.

[4] Davis, F. D. et al, 1992. Extrinsic and intrinsic motivation to use computers in the workplace. Journal of Applied Social Psychology. Vol. 22, pp. 1111-1132.

[5] Corbeil, J. R. and Valdes-Corbeil, M. E., 2007. Are you ready for mobile learning?, Educause Quarterly, Vol. 30, No 2, pp. 51-58.

[6] Geddes, S. J., 2004. Mobile learning in the 21st century: benefit for learners. Knowledge Tree e-journal: An ejournal of flexible learning in VET, Vol. 30 No.3, pp.214-28.

[7] Marchewka, J., Liu, C., and Kostiwa, K. (2007) An Application of the UTAUT Model for Understanding Student Perceptions. Using Course Management Software. Communications of the IIMA. 7(2), 93-104.

[8] Mathieson, K., Peacock, E. & Chin, W. (2001). Extending the Technology Acceptance Model: The Influence of Perceived User Resources, The DATA BASE for Advances in Information Systems, 32 (3), 86-112.

[9] McFarlane, A. et al, 2007. Mobile learning: Research findings: Report to Becta. Available from: http://partners.becta.o-rg.uk/upload-dir/downloads/page_ documents/ research/mobile _learning_july07.pdf, retrieved on: March 5, 2008.

[10] Miller, M. et al, 2003. Predictors of Engagement and Participation in an On-line Course. Online Journal of Distance Learning Administration, Vol. 6, No. 1.

[11] Moore, G. C., I. Benbasat. 1991. Development of an instrument to measure the perceptions of adopting an information technology innovation. Inform. Systems Res. 2(3) 192–222.

[12] Quinn, C., 2008. What's the (m) point? Available from: http://blog.learnlets.com/wp/?p=287, retrieved on: March 10, 2008.

[13] Smith, P. J. et al, 2003. Towards identifying factors underlying readiness for online learning: an exploratory study. Distance Education, Vol 24, No 1, pp. 57–67.

[14] Tornatzky, L. and Klein, K. (1982). Innovation Characteristics and Innovation Adoption-Implementation: a Meta Analysis of Findings. IEEE Transactions on Engineering Management, Vo . 29 (1), pp. 28-45.

[15] Venkatesh, V. and Davis, F. D., 2000. A theoretical extension of the technology acceptance model: four longitudinal field studies. Management Science, Vol 45, No 2, pp. 186–204.

[16] Venkatesh, V. et al, 2003. User acceptance of information technology: toward a unified view. MIS Quarterly, Vol. 27, No 3, pp. 425–478.

[17] Wang, Y. S. et al, 2006. Predicting consumer intention to use mobile service, Information Systems Journal, Vol 16, No 2, pp. 157-179.

[18] Wu, J.H. and Wang, S.C. (2005) "What drives mobile commerce? An empirical evaluation of the revised technology acceptance model", Information & Management, Vol. 42, No. 5, pp. 719-729.

[19] Wu, Y. L. et al, 2007. Using UTAUT to explore the behavior of 3G mobile communication users. 2007 IEEE International Conference on Industrial Engineering and Engineering Management. Singapore, pp. 199-203.