

A MOBILE LEARNING MODEL FOR INFRASTRUCTURE UNIVERSITY KUALA
LUMPUR (IUKL)

By

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Mobile learning has as one of the most popular Learning tools, and it has attracted the attention of most Internet users; Mobile technologies provide learners with flexibility and ubiquity to learn anytime and anywhere via wireless Internet. However, far too little this research has been conducted to investigate factors that contribute towards students' Intentional Behavior to use of mobile learning in IUKL. This study aims to analyze the factors of Mobile learning on student learning in IUKL University Malaysia. To achieve this, a survey research method was used, and the results were analyzed by SPSS. A sample of 360 students selected from IUKL University and data was collected to test against the research model using Correlation and coefficient analysis. Research findings show most student intention to use the mobile learning based on 4 factors Performance expectancy, Effort expectancy, Social influence and Technology competency. Results also indicate that 50.28% respondents were male and 49.72% respondents were female. The researcher recommended guidelines for the use of mobile learning in for students in IUKL contribute to easy access of learning materials for Students. These guidelines aim to create a balance between the Mobile learning and academic activities of students to avoid setbacks in the learning of the students.

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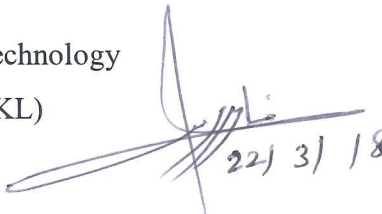
To my friends, who stood beside me throughout the period of my study, and lastly, to my family who for supporting me spiritually and financially throughout my life in general.

APPROVAL

This project paper was submitted to the Senate of Infrastructure University Kuala Lumpur (IUKL) and has been accepted as partial fulfillment of the requirement for the Master in Information Technology. The members of the paper Examination Committee were as follows:

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DECLARATION

I declare that the thesis is my original work except for quotations and citations which have been duly acknowledged. In addition, I declare that it has not been previously, and it is not concurrently, submitted for any other degree at Infrastructure University Kuala Lumpur or at any other institutions.



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CHAPTER 1

INTRODUCTION

1.1 Introduction

Over the past years of mobile phones, mobile learning has trace back the through history far beyond the development. The term Mobile Learning has particular implicate for various groups, that suggest as a subset of E-Learning, instructive innovation and gab education, that focuses on learning over settings and learning with mobile. Despite the tremendous growth and potential of wireless devices and networks, mobile e-learning or mobile learning (M-learning) is still in its infancy and in an embryonic stage (Motiwalla, 2007). M learning has a wide range of definitions and is known by various names, similar to M-Learning, U-Learning, customized picking up, learning while mobile, customized learning, anytime learning, and handheld learning. One meaning of mobile learning is, "any kind of discovering that happens when the student is not at a settled, foreordained area, or discovering that happens when the student exploits the learning openings offered by mobile phone technologies.

Mobile learning provides new affordances to the learner, such as learning that is personalized and not hindered by temporal or environmental constraints (Crompton 2013). The primary keys for achievable development in these days of Education. Education has turned out to be important on the world including development, development and immature nations too. This is because of the expanding features of the world which subjects the nations to the weight of rapidly making up for lost time with whatever is left of the world as far as developing innovation, business, and research also wears. Largely, instructive settings differ starting with one place then onto the next as the standard of training is high-developed nations, while education in developing nations is described as being low in quality, standard and thin conceivable outcomes of school participation in distinguish regions because of the high cost of training and less windows of chance after graduation. Furthermore, this research will investigate on how mobile

REFERENCES

- Abachi, H. R., & Muhammad, G. (2014). The impact of m-learning technology on students and educators. *Computers in human behavior*, 30, 491-496.
- Altameem, T. (2011). Contextual mobile learning system for Saudi Arabian universities. *International journal of computer applications*, 21(4), 21-26.
- Ally, M., & Prieto-Blázquez, J. (2014). What is the future of mobile learning in education?. *International Journal of Educational Technology in Higher Education*, 11(1), 142-151.
- Ali, A., Alrasheedi, M., Ouda, A., & Capretz, L. F. (2015). A study of the interface usability issues of mobile learning applications for smart phones from the users perspective. arXiv preprint arXiv:1501.01875.
- Alexander, B. (2004). Going nomadic: Mobile learning in higher education. *EDUCAUSE Review*, 39(5):28-35. 17, 20
- Arpaci, I. (2015). A comparative study of the effects of cultural differences on the adoption of mobile learning. *British Journal of Educational Technology*, 46(4), 699-712.
- Beetham, H., & Sharpe, R. (Eds.). (2013). *Rethinking Pedagogy for a Digital Age: Designing for 21st Century Learning*. Routledge. BrckaLorenz, A., Haeger, H., Nailos, J., & Rabourn, K. (2013, May). Student Perspectives on the Importance and Use of Technology in Learning. *In Paper Presented At The Annual Forum Of The Association For Institutional Research*.
- Baran, E. (2014). A review of research on mobile learning in teacher education. *Journal of Educational Technology & Society*, 17(4), 17.
- Cavus, N. (2011). Investigating mobile devices and LMS integration in higher education: Student perspectives. *Procedia Computer Science*, 3, 1469-1474.
- Ciampa, K. (2014). Learning in a mobile age: an investigation of student motivation. *Journal of Computer Assisted Learning*, 30(1), 82-96.
- Chen, H. R., & Huang, H. L. (2010). User acceptance of mobile knowledge management learning system: Design and analysis. *Educational Technology & Society*, 13(3), 70-77.

- Liaw, S. S., Hatala, M., & Huang, H. M. (2010). Investigating acceptance toward mobile learning to assist individual knowledge management: Based on activity theory approach. *Computers & Education*, 54(2), 446-454.
- Mtebe, J. S., & Raisamo, R. (2014). Investigating students' behavioural intention to adopt and use mobile learning in higher education in East Africa. *International Journal of Education and Development using Information and Communication Technology*, 10(3), 4.
- Mathieson, K. (1991). Predicting user intentions: comparing the technology acceptance model with the theory of planned behavior. *Information Systems Research*, 2(3), 173-191.
- Naismith, L., Lonsdale, P., Vavoula, G., and Sharples, M. (2004). Literature review in mobile technology and learning. futurelab report 11. Retrieved Dec. 4ht, 2012, from http://www.futurelab.org.uk/resources/documents/lit_reviews/Mobile_Review.pdf. 1, 3, 9, 10, 12, 17, 18, 33
- Park, Y. (2011). A pedagogical framework for mobile learning: Categorizing educational applications of mobile technologies into four types. *The International Review of Research in Open and Distributed Learning*, 12(2), 78-102.
- Park, S. Y., Nam, M. W., & Cha, S. B. (2012). University students' behavioral intention to use mobile learning: Evaluating the technology acceptance model. *British Journal of Educational Technology*, 43(4), 592-605.
- Sharples, M., Taylor, J., & Vavoula, G. (2010). A theory of learning for the mobile age. In *Medienbildung in neuen Kulturräumen* (pp. 87-99). VS Verlag für Sozialwissenschaften.
- Song, H. S., Murphy, A., & Farley, H. (2013). Mobile devices for learning in Malaysia: Then and now. In *Electric Dreams: 30th ascilite Conference* (pp. 830-834). Macquarie University.
- Shin, W. S., & Kang, M. (2015). The use of a mobile learning management system at an online university and its effect on learning satisfaction and achievement. *The International Review of Research in Open and Distributed Learning*, 16(3).

- Sarrab, M., Elgamel, L., & Aldabbas, H. (2012). Mobile learning (m learning) and educational environments. *International journal of distributed and parallel systems*, 3(4), 31.
- Sung, Y. T., Chang, K. E., & Liu, T. C. (2016). The effects of integrating mobile devices with teaching and learning on students' learning performance: A meta-analysis and research synthesis. *Computers & Education*, 94, 252-275.
- Şad, S. N., & Göktaş, Ö. (2014). Preservice teachers' perceptions about using mobile phones and laptops in education as mobile learning tools. *British Journal of Educational Technology*, 45(4), 606-618.
- Tan, J.B. (2013). Students' Adoptions and Attitudes towards Electronic Placement Tests: A UTAUT Analysis. *American Journal of Computer Technology and Application*, 14-24.
- Thompson, R. L., Higgins, C. A., & Howell, J. M. (1991). Personal computing: Toward a conceptual model of utilization. *MIS Quarterly*, 15(1), 124-143.
- Sarrab, M., Al-Shih, H., & Rehman, O. M. H. (2013). Exploring major challenges and benefits of m-learning adoption. *British Journal of Applied Science & Technology*, 3(4), 826.