

The 8th International Scientific Conference
eLearning and software for Education
Bucharest, April 26-27, 2012
10.5682/2066-026X-12-126

**MOBILE LEARNING VIA MOBILE PHONES IN MALAYSIAN SECONDARY
SCHOOLS: SEVEN SIGNS OF PROMISES**

Mariam MOHAMAD, John WOOLLARD
University of Southampton, United Kingdom
E-mail: M.Mohamad@soton.ac.uk, J.Woollard@soton.ac.uk

***Abstract:** This study established the opportunities in implementing mobile learning via mobile phones to support English Language learning in Malaysian secondary schools. The findings were gathered from English subject leaders, ICT subject leaders, head teachers and deputy head teachers from 4 schools in the United Kingdom. In addition, the study also gathered the perspectives from English subject leaders, ICT subject leaders, head teachers, deputy head teachers from 9 schools in Malaysia and the officers in the Ministry of Education Malaysia. The study applies educational research and development (ER&D) evaluation methodology by Borg and Gall (1979) with interview as the research tool. It has been established that there are 7 signs of promises to implement mobile learning via mobile phones in Malaysian secondary schools. These are based on the following key points: (1) mobile phones as a viable teaching and learning tool to support English subject, (2) mobile phones as an affordable tool, (3) mobile phones as a common device among students, (4) mobile phones as a tool to be used in mainstream education in the future, (5) mobile phone as an engaging and motivational tool, (6) mobile phones as a tool to support various learning activities and (7) mobile phone as a tool to prepare students for their future. This study contributes towards the body of knowledge of mobile learning in Malaysia as a developing country where mobile learning is still in its infancy. It adds value in understanding the situation of mobile learning in Malaysia, which could be replicated to other developing countries in embracing the potential of mobile learning in mainstream education.*

***Keywords:** Mobile learning, Malaysia, Schools, Opportunities*

I. INTRODUCTION

In Malaysia, mobile phones or smart phones are predicted to be used in secondary schools from the year 2016 to 2020 [1]. Mobile phones through Short Message Service (SMS) technology has become the most preferred mode of learning to be applied in mobile learning curriculum in Malaysian secondary schools [2]. Furthermore, there is a potential to use smart phones in Malaysian schools [3]. There was also rising efforts in research projects which explore the affordances of mobile phones to support mainstream schooling in Malaysia [4] [5] [6]. There are opportunities to implement mobile learning via mobile phones in Malaysia. This paper discusses 7 sign of promises to deploy mobile phones in Malaysian schools. These are grouped around the following themes: English language subject support; proliferation of mobile phones; future teaching and learning tool; other subjects support; affordability; motivational tool and preparing students for the future with digital literacy.

1.1. Mobile phone in Malaysian schools: added value

The issue of English Language competency among Malaysian students has been a concern for many years. Thus, the Ministry of Education, Malaysia introduced various programme include: English for Teaching Mathematics and Science (ETEMS) and Upholding Bahasa Malaysia, Strengthening English (UBMSE) [7] [8]. The teaching and learning of English Language in Malaysian schools also utilises ICT. The use of browser-based teaching is an example of the ICT deployment [9].

To support the initiatives in improving English, it is also worthwhile embracing the affordances of mobile phones. Through mobile phones, SMS technology could be exploited to support students in practicing English [10]. Mobile phones are compact and would enable students to access their lessons regardless of time and place [11]. Mobile phones could also assist English Language learning through bite-sized lessons that learners could access in limited periods of time [12]. Through SMS technology, mobile lessons could be scheduled for regular delivery and would be beneficial for students who lack the motivation to learn [13]. Finally, mobile phones would also enable students to receive immediate feedback. Through SMS technology, students would be able to receive answers immediately, which would help them to become autonomous learners [14].

1.2. Mobile phone in Malaysian schools: alternative technology

It is a challenge to provide computer facilities for all schools in Malaysia [15]. Even though the government has invested billions of Malaysian Ringgit, some schools that still have inadequate computer facilities [16]. It is worthwhile for the Ministry of Education, Malaysia to consider a viable alternative, which is through the use of mobile phones. Mobile phones are becoming increasingly common in Malaysia. A recent survey conducted by Malaysian Communication and Multimedia Commissions on the Mobile Phone Users Survey 2009 indicated that, in Quarter 3, 2010, the penetration rate had reached 110.6% [17].

High penetration of mobile phones could be regarded as a positive sign that Malaysia has the potential to implement mobile learning in its educational system. Therefore, it is believed that mobile learning through mobile phones would have the potential to be used as an alternative teaching and learning tool. This is a positive indicator for the Ministry of Education, Malaysia to consider an alternative teaching and learning tool, such as mobile phones.

1.3. Mobile phone in Malaysian schools: complementing the government's vision

It appears that the implementation of mobile learning for English Language learning would complement the government's vision. Firstly, there might be a possibility of complementing Malaysian schools' ICT policy through the use of mobile phones. In an effort to enhance students' learning as well as to reduce the digital divide among schools, the Ministry of Education, Malaysia has introduced a policy to deploy ICT in schools [9]. According to Meleiseia *et al.* [18], mobile phones come under the umbrella of ICT. Therefore, it might be appropriate to utilise mobile phones as another ICT tool to support teaching and learning in Malaysian schools. Previously, television, another ICT device, has been deployed in Malaysian schools [19]. Mahamad *et al.* [20] believed that it is appropriate to embrace the use of mobile phones in Malaysian schools because it could increase the student's computer access ratio. The use of mobile phones in Malaysian secondary schools might also complement the vision of Malaysian Smart Schools. From the vision of the Smart School implementation, mobile technology is a tool that was intended to be used [21].

II. IMPLEMENTATION

The main objective of the study is to gather opinion from the experts in education regarding the development of the implementation strategy to support mobile phones deployment in Malaysian schools. The final policy document consists of two parts: Part 1: Mobile technology integration into the curriculum; and Part 2: Policy and procedure for mobile learning implementation. Part 1 is further divided into two subsections called "Mobile lessons" and "Resourcing mobile learning". "Mobile lessons" includes suggestions regarding the content and structure of the mobile lessons. "Resourcing mobile learning" includes suggestions for providing facilities to support English Language learning through mobile technologies. Part 2 of the implementation strategy is further divided into five subsections: "Implementation model", "Acceptable use policy", "Management and maintenance", "Specific roles for supporting mobile learning" and "Support for major stakeholders". The section pertaining to implementation model includes suggestions regarding the proposed strategy for helping

students acquire mobile devices. The “Acceptable use policy” covers the policies and procedures to guide students in using mobile technologies for learning. “Management and maintenance” includes the strategies for managing and maintaining the devices in the implementation. “Specific roles for supporting mobile learning” makes suggestions regarding the role of technical support, maintenance assistants and English subject leaders to support mobile learning implementation. Finally, “Support for major stakeholders” suggests approaches for supporting students, teachers and parents in the implementation. This policy and procedure are documented in a handbook entitled “Mobile learning in English Language learning: An implementation strategy for secondary schools in Malaysia” [22].

However, besides the evaluation, respondents’ perspectives towards the emerging issues in deploying mobile phones are also explored. The research design is based on the Educational Research and Development (ER&D) approach by Borg and Gall [23]. This study gathered opinion from the experts in education who were identified through a purposeful sampling strategy. The experts in education consulted are English subject leaders, ICT subject leaders, head teachers and deputy head teachers from the United Kingdom and Malaysia as well as officers from the Ministry of Education, Malaysia. The study used HyperTRANSCRIBE, QSR NVivo and Inspiration based on the 3 Cs of analysis: coding to categorising to concepts, to identify the themes through text analysis and visualisations of the concepts.

III. DISCUSSION

The study established that there are opportunities to implement mobile learning in Malaysia. The opportunities fields include: English language subject support; proliferation of mobile phones; future teaching and learning tool; other subjects support; affordability; motivational tool and preparing students for the future with digital literacy. Interviews established that the respondents are positive towards the possibility of using mobile phones to support English language subject in Malaysian schools. The pedagogical affordances of mobile phones raised by the respondents include; supplementing English subject outside classroom, supporting interactive learning, supporting drill and practice, supporting systematic learning, raising students’ confidence in learning English and encouraging students to become autonomous learner.

The proliferation of mobile phones also indicated that mobile phones have the potential to be utilised in mainstream schooling in Malaysia. A respondent stressed that it would be a waste if mobile phones are not considered to be used in education. Another respondent believed that it is inappropriate to discourage students from using mobile phones in learning activities because eventually it will become an ordinary tool for everyone. The respondents also have a vision that mobile phones could become a teaching and learning tool in the future. They were positive with the possibility of change in education. They believed that there will be changes in the policy at schools that will make it possible to implement mobile learning in Malaysian schools. They predicted that this would happen within five to ten years.

Mobile phones also have the potential to support other subjects and various learning activities. Respondents suggest that mobile phones can be used as an alternative tool to support learning as well as to become a medium of information. The respondents also recognised the affordances of mobile phones to support mobility and interactive learning. Moreover, the mobile phone is also perceived as an affordable tool that should be explored to support teaching and learning purpose. Respondents believed that deploying mobile phones would be cost effective compared to desktop computers. Respondents also highlighted the affordances of mobile phone as an engaging and motivational tool. The respondents were positive that mobile phone would help students to become engaged in their learning activities. They also believed that with the element of fun in using the mobile phones, it would encourage students to be motivated to study. Finally, mobile phones are also perceived as a tool to prepare student with digital literacy. This would help them to survive in the corporate world in the future.

IV. CONCLUSION

The significance of utilising mobile phones in mainstream schooling have been discussed in the academic literature. The study established that there are 7 signs of promises to implement mobile learning in Malaysian secondary schools. Mobile phones are identified as a viable teaching and learning device to support English language subject in Malaysian secondary schools. This supports the literature which highlights the potential of utilising mobile phones in English Language learning [10] [11] [12]. As an affordable and a common device among students, mobile phones would also have the opportunity to be deployed in Malaysian schools in the future. The affordability and proliferation of mobile phones was confirmed by Malaysian Communications and Multimedia Commission [17]. In addition, Siraj and Saleh [1] also highlighted the opportunity to utilise mobile phones in Malaysian schools in the future. The study also established that mobile phone is an engaging and motivational tool which could support teaching and learning in Malaysian schools. This is similar to the opinion by Saran and Seferoglu [24]. Drawing from the findings established in this study, mobile phones are not only suitable to support English Language subject, it is also suitable to support other subjects and learning activities in Malaysian schools. This was similar to the findings by Kolb [25]. Finally, the study also established the feasibility of utilising mobile phones to prepare Malaysian students with digital literacy. The study is parallel to the literature by Hague and Williamson [26] about the potential of mobile phones in supporting digital literacy.

There is a potential for Malaysian schools to implement mobile learning, although it might not happen without challenges. Literatures highlighted the issues to implement mobile learning via mobile phones; misuse, digital divide and management and maintenance [27][28][29]. There is a need for a proper solution to address these issues so that mobile phones will be regarded as an ordinary learning tool in Malaysian schools.

References

- [1] S. Siraj and M.P. Saleh, "Aplikasi teknologi dalam pengajaran dan pembelajaran peringkat sekolah menengah: jangkaan masa depan (Technology application in teaching and learning at secondary school: a future projection)", *Journal of Educational Research*, 23, 2003, pp.123-139.
- [2] M.R.T.L. Abdullah, and S. Siraj, "M-Learning curriculum design for secondary school: A needs analysis", *World Academy of Science, Engineering and Technology*, 6(6), 2010, pp. 1638-1643. Available at: <http://eprints.utp.edu.my/4001/1/v66-253.pdf> (Accessed: 21 February 2012)
- [3] UNESCO (United Nations Educational, Scientific and Cultural Organization) *How Will ICT Change the Future of Education*, 2010. Available at: <http://www.unescobkk.org/information/news-display/article/how-will-ict-change-the-future-of-education/> (Accessed: 21 February 2012)
- [4] S. Mahamad, M.N. Ibrahim, and S.M. Taib, "M-learning: A new paradigm of learning mathematics in Malaysia", *International journal of computer science & information Technology*, 2(4), 2010, pp. 76-86.
- [5] D. DeWitt and S. Siraj, "Design and development of a collaborative m-learning module for secondary school science in Malaysia: addressing learner's needs of the use and perceptions of technology", *Procedia-Social and Behavioral Sciences*, 2(2), 2010, pp 471-475.
- [6] Sim, H., 2004. Learning simple grammatical concepts through SMS. Unpublished Master's thesis. University Malaya, 2004.
- [7] *English for Teaching Mathematics and Science (ETEMS) Official Portal*. Available at: <http://www.tutor.com.my/etems/> (Accessed: 21 February 2012)
- [8] Ministry of Education Malaysia, 2009. Press Conference – Upholding Bahasa Melayu, Strengthening English Language: New Offer by Malaysian Educational System. Available at: <http://www.moe.gov.my/?id=169&aid=566&lang=en> (Accessed: 21 February 2012)
- [9] Ismail, S., 2008. ICT and school linkages. *ICT Conference 2008*, Kuala Lumpur, Malaysia 10-12 March. Available at: <http://www.scribd.com/doc/11003700/MALAYSIA-ICT-and-School-Linkages> (Accessed: 21 February 2012).
- [10] Dawson, D., 2007. Handheld technologies for mobile learning. Leicester: Niace.
- [11] Quinn, C., 2000. mLearning: mobile, wireless, in-your-pocket learning. *LineZine*. Available at: www.linezine.com/2.1/features/cqmmwiyp.htm (Accessed: 21 February 2012)
- [12] Kenning, M.M., 2008. *ICT and Language: From Print to the Mobile Phone*. Victoria: Palgrave Macmillan.
- [13] Naismith, K.; Lonsdale, P.; Vavoula, G. & Sharples, M., 2004. Literature Review in Mobile Technologies and Learning. NESTA Futurelab Series. Report 11, Bristol: NESTA Futurelab.
- [14] Savill-Smith, C.; Attewell, J. & Geoff Stead, G., 2006. *Mobile Learning in Practice*. London: Learning and Skills Network

- [15] Ramlan, R., 2002. Innovative Management in Education, The Malaysian Perspective: The Smart School Management System, Key Factors in Effective Implementation. *The Second International Forum on Education Reform*, Bangkok, Thailand, 3 September.
- [16] Ministry of Education Malaysia, 2008. Kad Laporan Pelan Induk Pembangunan Pendidikan 2006-2010, Kuala Lumpur: Ministry of Education. Available at: http://www.moe.gov.my/galeri_awam/selidik/2008/2008_BTMK_8_2023_7331.pdf (Accessed: 14 May 2010)
- [17] Malaysian Communications and Multimedia Commission, 2010. Fact & Figures (Statistics & Record). Available at: http://register.skmm.gov.my/facts_figures/stats/index.asp (Accessed: 6 July 2010)
- [18] Meleiseia, E., Lee, M.N.N., Fengchu, M., Dios, B.V.D.D., Tan, L.C., Perapate, T., Siribodhi, T., Schmid, H., Woramunee, M., Chakapun, P., 2007. The UNESCO ICT in Education Programme. Available at: <http://unesdoc.unesco.org/images/0015/001567/156769e.pdf> (Accessed: 21 February 2012)
- [19] Abdullah, A.T.S., 2006. Deconstructing secondary education: The Malaysian Smart School Initiative. *10th SEAMEO INNOTECH International Conference*, Quezon City, Philippines, 15-17 November. Available at: <http://www.seameo-innotech.org/ic06/download/Azian%20Abdullah%20-%20full%20paper.doc> (Accessed: 20 September 2011).
- [20] S. Mahamad, M.N. Ibrahim, & S.M. Taib, S.M, "M-learning: A new paradigm of learning mathematics in Malaysia", *International journal of computer science & information Technology*, 2(4), 2010, pp. 76-86
- [21] The Smart School, 2005. Available at: <http://www.msomalaysia.my/codenavia/portals/msc/images/pdf/ss-roadmap.pdf> (Accessed: 21 February 2012)
- [22] Mohamad, M. Mobile learning in English Language learning: An implementation strategy for secondary schools in Malaysia. Available at: https://eprints.soton.ac.uk/300062/1/Mobile_learning_in_English_Language_Learning_An_implementation_strategy_for_secondary_schools_in_Malaysia.pdf (Accessed: 21 February 2012)
- [23] Borg, W.R., & Gall, M.D., 1979. Educational research: An introduction. 3rd edn. New York: Longman.
- [24] M. Saran & G. Seferoglu, "Supporting foreign language vocabulary learning through multimedia messages via mobile phones", *Hacettepe Universitesi Journal of Education*, 38, 2010, pp. 252-266
- [25] Kolb, L., 2008. Toys to Tools. Eugene: International Society for Technology in Education.
- [26] Hague, C. & Williamson, B., 2009. Digital literacy across the curriculum. Futurelab Handbook. Bristol: Futurelab
- [27] Quinn, C.N., 2011. Designing mLearning: Tapping into the mobile revolution for organizational programme. California: Pfeiffer.
- [28] Ariffin, S.A., 2011. Mobile learning in the institutions of higher learning for Malaysia students: culture perspectives. *International Conference on Advance Science, Engineering and Information Technology*. Putrajaya, Malaysia, 14 -15 January.
- [29] Mifsud, L., 2002. Alternative Learning Arenas-Pedagogical Challenges to Mobile Learning Technology in Education. *IEEE International Workshop on Wireless and Mobile Technologies in Education 2002*, Vaxjo, Sweden, 29-30 August.