Mobile Phone as Pedagogical Tools: Are Teachers Ready?

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Abstract

This study examined the teachers' perceptions on the implementation of mobile learning via mobile phone at schools. The sample for this study comprised thirty eight teachers who were teaching Information Technology (IT) subjects from various primary schools in Penang, Malaysia. A quantitative survey was administered to the respondents whereby results indicated that the adoption of mobile learning via mobile phone at schools was not perceived well among respondents. Moreover, respondents also were quite skeptical about future of mobile learning should it be implemented at their schools. The article concludes with emerging concerns which may have implications for future studies, specifically on whether or not mobile phone can effectively be adopted as teaching and learning tools for Malaysian mainstream schooling.

Keywords: mobile learning, mobile phone, teachers, perceptions, Malaysia, schools

1. Introduction

Education system throughout the world now is in fact, changing. With the proliferation of technology that offers robust opportunities to educational fields, the learning environments are now becoming more innovative, interactive and effective. The role of technology in education is undeniably significant. Research findings over the past decades have provided some evidences as to how the rapid changes in technology have positively affected education. The use of internet in giving wider access of information (Fodje, 1999, p.3), the role of weblogs in creating an excellent computer-mediated communication linkage (Huffaker, 2005, p.96) and the advantage of videoconferencing in providing a diverse range of classroom setting for students' observation (Pickering and Walsh, 2011, p.106) are some examples of how education can benefits from the use of technology. In other words, technology opens the door to learning in ways which are impossible in the traditional classroom setting (Mason et al., 2000).

1.1 Mobile Technologies for Education

Another emergent paradigm in the ever-growing educational technology globally is mobile technologies. Mobile technologies include portable and personal handheld devices, such as laptops, personal digital assistants (PDA), smart phones and mobile phones. Trifonova and Ronchetti (2003) referred mobile devices as any device that is small, autonomous, and unobtrusive enough to accompany people in their life. The small and user-friendly interface of mobile devices help people to interact with each other via voice communication or text messaging, act as tools for people to access contents, or even useful for learning purposes (Trifonova and Ronchetti,2003). In other words, the unique characteristic of the aforementioned technology itself has made it a potential tool for future education. As been highlighted by Peters (2007), mobile technologies can significantly reduce people's dependence on fixed locations, and thus have the potential to revolutionize the way people work and learn. In fact, some other evidences from a range of studies also indicate the potential of mobile technologies in assisting teaching and learning process. According to Suki and Suki (2009), mobile devices are educationally interesting because they offer several communications channels on one device, cheaper, have comparable functionality with desktops or laptops, and also provide wireless access to educational materials. Siau and Nah (2008) explained

that applications of mobile technology into curriculum design are helpful in providing greater flexibility for students, as well as improving interactivity in the classroom. The most authentic joy of learning via mobile devices is that, it allows learners to learn at anytime and anywhere (Seppälä and Alamäki, 2002). Above all, the use of mobile technologies in education has contributed in providing greater efficiencies in learning, increased support for personal development, better communication and greater exposure to technology (Eschenbrenner and Nah, 2007). This prevalence exploitation of mobile technologies in education is called mobile learning or usually termed as m-learning.

Mobile learning is a learning method that provides learners with capabilities to get instant learning contents just by the tips of their fingers. The ubiquitous feature of mobile devices which distinguish them from other learning tools has made mobile learning to be increasingly recognized in educational institutions. For instance, the mobility and immediacy of mobile learning has offered new communication opportunities to students and changed their learning attitudes (Wentzel, van Lammeren, Molendijk, de Bruin, and Wagtendonk, 2005). Nowadays, the spread of mobile learning at higher education institutions has been markedly growing. As been highlighted by Seppälä and Alamäki (2002), the opportunities mobile learning creates have been recognized and spreading to universities. Kim, Mims and Holmes (2006) also explained that there are an increasing number of colleges and universities which are adopting mobile technologies as teaching and learning tools. While the benefits of mobile learning for higher institutions are widely recognized by academics and practitioners alike, there are some studies which discussed the potential of mobile learning for school education. Melzer, Hadley, Glasemann, and Herczeg (2006) reported their experiences with the KiMM (Kids in Media and Motion) initiative where schools students participated in preparing content of mobile learning. Other than that, some studies also showed that there are various applications which could be designed for school students through mobile learning, such as for scaffolding learning about bird-watching (Chen, Kao, and Sheu, 2003), learning between schools and museum (Sharples, Lonsdale, Meek, Rudman, and Vavoula, 2007), and vocabulary learning (Lu, 2008). Evidences gathered suggested that mobile learning has focused attention on its potential applications for school education.

Mobile phone is another handheld device which has been proposed by several researchers as the most suitable device to promote mobile learning (Suki and Suki, 2010; Keegan, Kismihok, Mileva, and Rekkedal, 2006; Prensky, 2005). According to Suki and Suki (2010), the mobility and ubiquity of mobile phone is the key factor which makes it a suitable medium for learning. For instance, it was also suggested by Seppala and Alamäki (2002) that mobile wireless phones are the most popular ones, whereby short message sending (SMS) is the most commonly used mobile application (Kim et al., 2006). Other than that, Kahveci, Sahin, and Genc (2011) also explained that device ownership determines users' perceptions toward its benefits for education. For the case of Malaysia, statistics have shown that, over seven years from 2004, the percentage of users with multiple hand phones in Malaysia has doubled from 12.8% to 28.5%. (Malaysian Communications and Multimedia Commission [MCMC], 2010). Moreover, the ownership of mobile phone among Malaysian in year 2011 exceeded 100% and thus implying that one Malaysian has at least one mobile phone (MCMC, 2011). Thus, these statistics signal the potential of utilizing mobile phone as teaching and learning tools in Malaysian school since the device ownership might not be a big issue. On the other hand, some literatures also discussed the drawbacks of mobile learning via handheld devices like mobile phone, as examples, the limitation of the screen size (Sharma and Barret, 2007), security issues (Kim et al., 2006), and limited adoption for educational use (Peters, 2007) .Though, it was argued by Armatas, Holt and Rice (2005) that mobile learning could be educationally beneficial to students if it has the ability to allow students to have same convenience as searching online materials, and create an effective communication medium to students.

From Malaysian perspective, mobile learning is still beginning to take its first steps in colleges and universities. Although still at infancy, there were some studies that proved the potential of mobile learning at higher education institutions in Malaysia. For instance, Ismail, Gunasegaran, Koh and Idrus (2010) conducted a research to study the satisfaction of distance learners in university towards mobile learning. It was found that most respondents were satisfied with mobile learning, where they highly agreed that mobile learning was helpful in assisting their learning process. Furthermore, a study by Abas, Peng and Mansor (2009) also revealed that the distance learners generally viewed mobile learning as beneficial, as well as being ready to embark on mobile learning. Most respondents agreed that mobile learning helps them to manage their time and be focus, flexible, motivated and interested in their learning (Abas et al., 2009).

1.2 Problem Statement

Regardless of such interests on shifting the higher institution environment through mobile learning, there is still a paucity of research investigating the implementation of mobile learning for schools in Malaysia. Nonetheless,

few studies did argue that mobile learning is also applicable for Malaysian school education. As an example, a study reported on implementing strategies for using mobile phones to assist English vocabulary learning in Malaysian secondary schools (Mohamad and Woollard, 2009). In proposing the deployment, three important themes have been identified by the researchers, which are pedagogy, stakeholders and technology planning, and management. However, certain issues were arisen in the research regarding the policy of mobile phones usage in schools, funding limitation, and administrative supports. It was then proposed that the Malaysian government needs to consider alternative ways to bridge the digital divide between schools by using much affordable technologies like mobile phones (Mohamad and Woollard, 2009). Another study by Mahamad, Ibrahim and M Taib (2010) reported the implementation of mobile learning in teaching mathematics for primary school students in Malaysia. It was found that mobile phones can be useful in learning mathematics since most students are familiar with mobile phone usage for various communication purposes. Even more interesting, it was reported by the Deputy Education Minister that students will be no longer being banned from bringing mobile phone to school starting from 2013 (Loo, 2012). Thus, these potentials signal the area of research that studies the potential of utilizing mobile phone as mobile learning tool in enhancing the pedagogical practices for Malaysian's mainstream schooling.

Realizing the potential of mobile phone for education in school, it is critical to study the opportunities which mobile learning via mobile phone might bring to improve the quality of teaching and learning. However, there is still a few of literature on the implementation of mobile learning via mobile phone, especially for Malaysian schools. Furthermore, of the studies reviewed, none focused on teachers' perceptions towards the utilization of mobile phones as tools to support teaching and learning process in schools. Whilst some studies reported on the potential applications, no studies specifically explored on factors which can influence school teachers' perceptions towards mobile learning.

1.3 Research Purpose and Questions

The purpose of this study was to add a Malaysian perspective to the international literature on adopting mobile phone as pedagogical tools for school education system. This study was intended to identify whether teachers who are familiar with mobile phone would see the educational benefits of such technologies. The study also sought to find whether age is factor that contributes to the way teachers use their mobile phones. In this way, an insight of teachers' perceptions towards mobile learning via mobile phone will be reported. Thus, the following research questions were proposed:-

a)   How do school teachers use mobile phones?

b)   Does age factor affect their usage of mobile phones?

c)   Do respondents agree on the use of mobile phone as pedagogical tools at schools?

d)   Do respondents believe the future mobile learning for teachers' profession?

e)   Is there a relationship between teachers' perceptions on pedagogical use of mobile phone and their usage of mobile phones?

2. Method

2.1 Participants

The subjects for this study were thirty eight teachers teaching Information and Technology (IT) subject from various primary schools in Penang, Malaysia. They were chosen because they were teaching technical-related subjects which relates to the frequent use of IT tools. Therefore, this constituted purposive sampling whereby respondents were selected because of their familiarity with the use of technology in teaching and learning process. Surveys were administered to them during Self Development Program conducted at the school. Of the 38 surveys sent out, all completed forms were returned, providing the researchers with a 100% response rate.

Table 1 summarized the demographic profiles of all respondents. Of those, 30 were female (78.9%), where 26.3% of total respondents were between 25 to 29 years old. 60.5% of respondents were Malay and most of respondents were married (86.8%). In terms of academic qualification, the highest levels achieved by most respondents were Degree (44.7%) and followed by Diploma (36.8%). Only 7.9% of respondents had achieved Masters Level. Overall, there were two distinct groups of respondents according to their year of service as teachers, which are 5 years and less (36.8%) and more than 20 years (26.3%).

Table 1. Demographic profiles

	Frequency	Percentage (%)
Gender		
Male	8	21.1
Female	30	78.9
Age (year)		
25 to 29	10	26.3
30 to 34	8	21.1
35 to 39	5	13.2
40 to 44	7	18.4
45 to 49	4	10.5
50 and above	4	10.5
Ethnic		
Malay	23	60.5
Chinese	12	31.6
Indian	2	5.3
Others	1	2.6
Marital		
Single	5	13.2
Married	33	86.8
Qualification		
Masters	3	7.9
Degree	17	44.7
Diploma	14	36.8
STPM*	4	10.5
Year of Service (Year)		
5 and less	14	36.8
6 to 10	4	10.5
11 to 15	5	13.2
16 to 20	5	13.2
More than 20	10	26.3

Description: Demographic profiles of respondents. For the qualification, STPM equals to higher school certificate (hsc) for pre-university program

2.2 Instrument

Data for this study was collected by using a self-administered quantitative questionnaire. All scales and other items used in the instrument were developed by the researchers after a review of related literature. The face and content validity of the questionnaire were evaluated by experts in the faculty and related field. The questionnaire was pilot tested with undergraduate student teachers in the university.

The questionnaire consisted of four sections. The first section was the demographic section. This section requested the respondents' age, gender, marital status, ethnicity, academic qualification level, and years of service as a teacher. The latter item provided for "less than five years" to "more than 20 years" of experience. Section B consisted of 26 questions which asked respondents to evaluate the effectiveness of the Self

Development program. Items in this section were rated on a five-point scale with "1" representing "Very Ineffective", and "5" representing "Very Effective". From Section C, the level of respondents' acceptance on the use of technology at schools was evaluated based on four variables, which are awareness and motivation, training and courses, design of training and courses, and supports and facilities. This section utilized five-point Likert scales from "Strongly Disagree" (1) to "Strongly Agree" (5). The forth section, Section D, consisting of two parts, requested respondents to evaluate their perceptions on the effectiveness of mobile learning via mobile phone at their schools and for their future. There were three items in the first parts which collected general information on respondents' usage of mobile phone. The second parts consisted of eleven items which asked respondents' perceptions on using mobile phone as pedagogical tools. The eleven items were rated based on five-point Likert-type scale, rating from "1" for "Strongly Disagree" to "5" for "Strongly Agree". The internal consistency of items pertaining to this section was measured by Cronbach's Alpha. It was found to be 0.928 which exceeded 0.9. Thus, the reliability of the items was deemed to be excellent (George and Mallery, 2003).

2.3 Data Analysis

Data were entered into statistical analysis software PASW 17 for quantitative analysis. Since the main purpose of this research was to study the teachers' perception on mobile phone as teaching-learning tools, descriptive statistics such as frequency, percentage, mean, and standard deviation were calculated to summarize the data. Crosstab and Chi-Square analysis was used to study the age factors on mobile phone usage among the respondents. Other than that, Pearson correlation was also used to study the relationship between respondents' perception on mobile learning with their mobile phone usage.

3. Results and Discussions

3.1 Mobile Phone Usage

From the survey, respondents were asked whether they find that using mobile phone is easy or not. They were also asked regarding their most frequent use of mobile phone, either for making calls or sending SMS. The frequency of SMS they sent daily was also gathered. Results obtained from all three questions were illustrated in the following figures and tables.

From Figure 1, it can be seen that most respondents agreed that using mobile phone is easy for them ('Yes' responses = 89.47%). This result is self-explanatory for those who use mobile phone frequently. As explained by Palen, Salzman, and Youngs (2000), how people feel about using mobile phone depends on whether or not they are the ones who use mobile phones. It can also be observed from Table 2 that most respondents who agreed on the ease of using mobile phone were from the youngest group, which is from 25 to 29 years old. Thus, younger teachers were more likely to feel that using mobile phone is easy for them, compared to the older groups. This finding is congruent with findings by Ferry (2008) who found that all the pre-service teachers found that using mobile phone is easy for them. Moreover, the mobile phone is usually regarded as an icon of the lifestyles of young people (Wilska, 2003).

It can be observed from Figure 2 that the most respondents used mobile phones to make calls as much as to send SMS. This is contradict with a study by Seppälä and Alamäki (2002) who found that the utilization of mobile phone was more on sending pictures rather than sending SMS. Table 3 showed an interesting point regarding the use of mobile phone for making calls and sending SMS among the teachers. The youngest group (25 to 29 years) appeared to use mobile phone more for making calls rather than for sending SMS, while the eldest group (50 years and above) was otherwise. This finding is consistent with findings by So (2008), where it was found that majority of pre-service teachers with age maximum 25 years old used mobile phones more for voice communication. However, a study by Wilska (2003) reported a contrary finding, where it was found that an average young user made or received calls as much as they sent or received SMS.

Figure 3 demonstrated an intriguing result regarding the SMS usage among the respondents. It can be seen that more than half of the teachers (71.05%) were non-avid SMS users since they only sent less than 10 SMS per day. Only 5.26% of total respondents sent SMS more than 50 per day. Table 4 described in details regarding total SMS sent daily by the respondents according to their age. As can be seen, only the younger groups (below 35 years) sent SMS more than 50 per day. The elder ones (45 years and above) sent SMS not more than 10 per day. This finding might be explained from a study by Peters (2007) where it was found that age and ability of teachers were among factors which influenced their perception and usage of mobile phone.
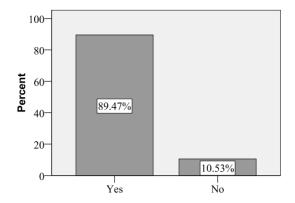
Figure 1. Ease of using mobile phone

Description: Majority respondents felt that it is easy for them to use mobile phone

Table 2. Ease of using mobile phone according to age

Age (Years)	Ease to Use Mobile Phone (%)
25 to 29	26.5
30 to 34	20.6
35 to 39	11.8
40 to 44	17.6
45 to 49	11.8
50 and above	11.8
Total	100

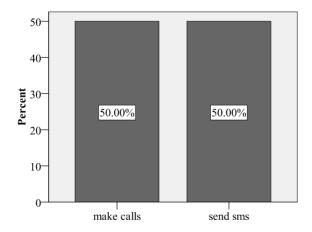Description: The younger groups find using mobile phone is easier

Figure 2. Most frequently used mobile phone application

Description: Respondents use mobile phone equally for making calls and sending SMS

Table 3. Most frequently used mobile phone application according to age

Age (Years)	Most Frequently Used Mobile Phone Application (%)		
	Make Calls	Send SMS	Total
25 to 29	70	30	100
30 to 34	50	50	100
35 to 39	40	60	100
40 to 44	42.9	57.1	100
45 to 49	50	50	100
50 and above	25	75	100

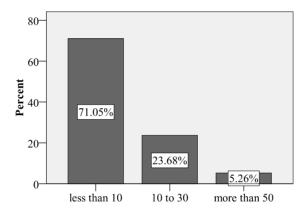Description: The young group uses mobile phone more for making calls

Figure 3. Total SMS sent daily

Description: Most respondents send SMS less than 10 only per day

Table 4. Total SMS sent daily according to age

Age (Years)	Total SMS Sent Daily (%)			
	Less than 10 SMS	10 to 30 SMS	More than 50 SMS	Total
25 to 29	50	40	10	100
30 to 34	50	37.5	12.5	100
35 to 39	80	20	0	100
40 to 44	85.7	14.3	0	100
45 to 49	100	0	0	100
50 and above	100	0	0	100

Description: Only some of younger groups send more than 50 SMS

3.2 Teachers' Perceptions on Mobile Learning

Table 5 contains statistics pertaining to the distribution of respondents' responses on the five items which asked them regarding their perceptions on the pedagogical usage of mobile phone at their school. Overall, the results suggested that most teachers did not quite agree on the adoption of mobile phone as teaching and learning tool at

their school. The most critical aspect which they did not perceive as good was on the use of mobile phone to assist teaching and learning process in school (mean = 2.16). This finding is supported by Mohamad and Woollard (2009) who reported that one of the challenges to implement mobile learning through mobile phones is that the devices are not welcomed in schools. Dewitt and Siraj (2010) conducted a similar study to a group of students from a school in Malaysia. It was found that they students did not perceived mobile phones to be useful for learning. Another study by Nordin, Hamzah, Yunus, and Embi (2010) also found that the student teachers were not interested to see m-learning as a part of schools' curriculum. Moreover, the respondents in the study also were also skeptical on allowing students to bring mobile phones to schools. It is an expected result for the case of Malaysia since students are restricted from bringing mobile phones to school (Malaysian Ministry of Education [MMOE], 2009). The MMOE has outlined the ownership and usage of mobile phones among school students as one of disciplinary offenses.

However, more respondents agreed on the basic purpose of using mobile phone, which is it will help them to interact with anyone easier (Strongly agree = 21.1%), or even with colleagues and students (Strongly agree = 18.4%). Hence, the use of mobile phone as an effective interaction and communication medium was deemed to be acceptable among the respondents. This finding is consistent with findings by Suki and Suki (2009) who reported that, some lecturers who disliked the idea of using mobile technology in their classes agreed that the use of mobile phone is only suitable for communication purposes only.

Table 5. Perceptions on pedagogical usage of mobile phone at school

Statement (N=37, Cronbach's Alpha = 0.876)	Mean	Std. Devia tion	*Total Responses (%)				
			SD	D	NS	A	SA
Mobile phone helps to assist teaching in school	2.16	1.191	39.5	18.4	31.6	5.3	5.3
Teachers support mobile learning outside class time	2.57	1.237	31.6	5.3	39.5	21.1	2.6
The use of mobile phone for teaching and learning is encouraging	2.32	1.180	31.6	23.7	26.3	15.8	2.6
Mobile phone helps to interact with anyone easier	3.57	1.214	10.5	5.3	21.1	42.1	21.1
Mobile phone helps to interact effectively with colleagues and students	3.27	1.283	13.2	10.5	28.9	28.9	18.4

Description: The total responses in percent were determined by using a five-point likert scale rating from strongly disagree (1) to strongly agree (5)

Besides studying teachers' perceptions on the implementation of mobile learning via mobile phone at schools, this study also sought the findings on the future of mobile learning from teachers' perspective. Results pertaining to the research question were summarized in Table 6. Overall, it can be seen that majority of respondents were quite skeptical on the future of mobile learning for teachers (all mean values were closed to the midpoint). Although some were interested to further their studies at masters level (strongly agree: 23.7%), not many of them were willing to choose mobile learning as their future field of study. Worst of all, they raised concerns on the benefits of mobile learning in education, especially for the future generation (strongly disagree: 21.1%, 13.2%). In other words, not only the respondents did not see the benefits of mobile learning for their professional development, they also did not believe that mobile learning will be helpful in assisting teaching and learning process at schools. Villegas-Reimers (2003) suggested that there is very little evidence that support the claim that teacher education at a distance leads to improved classroom practice. It was suggested in the study that, a new approach to teachers' education and development requires a transformation of processes and policies that support not only them, but also their education, work and professional growth. Hence, this might one of the reasons which explain why the respondents did not see how a non-traditional learning mode can be beneficial for their classes.

Table 6. Perceptions on future of mobile learning for teachers

Statement (N=37, Cronbach's Alpha = 0.928)	Mean	Std. Devia tion	*Total Responses (%)				
			SD	D	NS	A	SA
Interest to further studies at masters level	3.35	1.379	13.2	15.8	15.8	31.6	23.7
Interest to attend classes via online learning	3.32	1.248	13.5	8.1	27.0	35.1	16.2
Interest to further studies through mobile learning	3.27	1.262	13.2	10.5	26.3	34.2	15.8
Believe the future of mobile learning in education	2.92	1.362	21.1	15.8	26.3	23.7	13.2
Mobile learning will help to learn ubiquitously	3.03	1.190	10.5	23.7	26.3	28.9	10.5
Believe the benefits of mobile learning to future generation	2.84	1.118	13.2	23.7	31.6	26.3	5.3

Description: The total responses in percent were determined by using a five-point likert scale rating from strongly disagree (1) to strongly agree (5)

Then, this study also analyzed the possibility of whether the respondents' negative perceptions on integrating mobile phone as teaching and learning tools at schools were influenced by how they used mobile phone in their daily life. Pearson correlation analysis was performed to determine the relationships and results were described in Table 7. The results indicated that there was a significant relationship between teachers' perceptions on the pedagogical usage of mobile phone at school and how frequent they sent SMS every day. The respondents would probably have more positive perception in mobile learning when they themselves utilize mobile phone more for sending SMS. This finding is supported by Peters (2007) who found that not all teachers in the study used mobile technologies. Furthermore, the study reported that there appeared to be limited adoption of mobile learning for educational use. Other than that, it was also found in this study that teachers' perceptions on the implementation of mobile learning at schools were negatively correlated to their ease of using mobile phones. This finding implied that, even though the teachers felt confident in using mobile phones, it did not mean they would perceive mobile learning as beneficial for schools. This finding is in line with conditions in Perceptual Control Theory, as explained by Zhao and Cziko(2001): For teachers to use technology, they must have positive perceptions toward its use at schools, despite believing that they have sufficient ability and resources to use it in teaching. Our study has somehow reported the otherwise.

However, there was no significant relationship between respondents' perceptions on the future of mobile learning for teachers and how they used mobile phones. Cox, Preston and Cox. (1999) conducted similar study, particularly on what factors support or prevent teachers from using ICT. It was found in the study that only minority of respondents who believed in the use of ICT for their career prospects.

Table 7. Correlations between teachers'p on mobile learning with their mobile phone usage

Teachers' Perceptions on	Mean	Std. Deviation	Mobile Phone Usage		
			Ease-of-Use	Most Frequent Application	Frequency of SMS Sent
Pedagogical Usage of Mobile Phone at School	2.79	0.989	-0.385*	0.113	0.343*
Future of Mobile Learning for Teachers	3.14	1.082	-0.085	0.048	0.300

Description: Correlation is significant at the 0.05 level (2-tailed).

4. Conclusions and Recommendations

This study reported that, despite acknowledging their benefits for mediating interactions and communications

between people, the respondents mostly did not view mobile phones as effective teaching-learning tools for school education system, even outside classroom setting. Even though a positive correlation was found to be significant between the respondents' perception on mobile learning and their frequency of sending SMS in a day, not all respondents were keened toward the future perspective of mobile learning for teachers' profession. These findings implicate that considerable research is still needed to design and get the right mix, if in case mobile phone are to be deployed as tools to support teaching and learning in Malaysia. Since research on integrating mobile phone as pedagogical tools for school education are scarce, opinions gathered from teachers' perspective in this study would be beneficial for future research undertakings. Some of the issues raised here can also serve as useful hypotheses to be tested in future studies. What are the possible reasons of teachers' skepticism toward mobile learning via mobile phone? Does the system of education itself effect teachers' perceptions on mobile learning? How educational institution can contributes to build teachers' confidence in adapting to mobile phone technology in classrooms?

In conclusion, the adoption of mobile phone as pedagogical tools is still far from beginning to take its first steps in teaching and learning process in Malaysian schools. Not only teachers who are still skeptical and unprepared for mobile learning, the use of mobile phone at Malaysian schools are also long being banned. It is just recently that the Malaysian government has announced that, students shall no longer be prohibited from bringing their mobile phone to school starting from the year 2013. It appears that this news might bring new hopes to school educational providers and researchers who wish to adopt mobile phone as pedagogical tools in school. Though it seems promising, a lot things need to be considered in the first place, including the teachers' perception and acceptance of such educational changes. Their perceptions are crucial since teachers' willingness and preparedness to adopt with m-learning is one of a critical success factor.

Are Malaysian teachers ready for mobile learning? Since the study was carried out for teachers from several public schools in one state only, conclusion on the Malaysian teachers' readiness towards mobile learning cannot with any confidence be generalized. The study also may needs to explore on a more qualitative basis on the way teachers actually feel about integrating mobile phone technology in education at mainstream schools in Malaysia. Thus, considering just the perspective from this study, the answer to the aforementioned question is most probably, not yet. It appears that educational usage of mobile phone for Malaysian mainstream schooling is still long ahead to be achieved.

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