

Students' Acceptance on Mobile Phone Usage and SMS Learning

Nadiatul Maisarah Rosley¹, Issham Ismail^{2*} and Hema Latha Visvernardan³

^{1,2,3}School of Distance Education, Universiti Sains Malaysia, 11800 Penang, Malaysia
*issham@usm.my

Abstract

This current study is aimed at understanding students' acceptance on mobile phone usage and learning through Short Message Service (SMS). The pattern of using the mobile phone is also surveyed. The focus group interviews are conducted amongst 45 Universiti Sains Malaysia (USM) students studying Financial Principle, Mechanics (Physics), Money & Banking, Quantitative Economy, Optics and International Business. A questionnaire was developed consisting of three parts with 30 issues and the students are required to answer all questions. The main focus of this survey is to inspect closely the utilisation of mobile phones and the willingness of students to accept SMS learning concept in the near future.

Keywords: mobile learning, distance education, SMS

Abstrak

Kajian ini bertujuan untuk memahami penerimaan pelajar terhadap penggunaan telefon mudah alih dan pembelajaran menerusi Khidmat Pesanan Ringkas (SMS). Pola penggunaan telefon mudah alih adalah juga ditinjau. Temu bual kumpulan sasaran dijalankan ke atas 45 orang pelajar Universiti Sains Malaysia (USM) yang mempelajari Prinsip Kewangan, Mekanik (Fizik), Wang & Perbankan, Ekonomi Kuantitatif, Optik dan Perniagaan Antarabangsa. Suatu soal selidik telah dihasilkan yang mengandungi tiga bahagian dengan 30 soalan dan pelajar dikehendaki menjawab kesemua soalan. Tumpuan utama tinjauan ini ialah untuk meneliti secara dekat penggunaan telefon mudah alih dan kesediaan pelajar untuk menerima konsep pembelajaran menerusi SMS dalam masa yang terdekat ini.

Kata kunci: pembelajaran secara mudah alih, pendidikan jarak jauh, SMS

Introduction

The usage of mobile communication technology such as wireless internet, mobile phone, MP3 etc. has dramatically increased in recent years. Amongst various contemporary mobile communication technologies, the mobile phone is defined as “the most radiative domestic appliance ever invented” (Coghill, 2001). The mobile phone is also an important communication technology in everyday life. It directly or indirectly affects many aspects of human relationships and human interactions (Katz and Aakhus, 2002; Ling, 2004). In former days, mobile phone was mainly used to communicate or create networking but it exceeds the major purposes of mobile phone in this new era.

It is common to hold a mobile phone in this digital era. Even some individuals keep multiple mobile phones in some cases for legitimate reasons such as having one phone for business and another for personal use, though a second mobile phone may also be used to covertly conduct an affair or illicit business transactions.

The Handphone Users Survey being conducted by the Malaysian Communication and Multimedia Commission (MCMC) in 2007, reported that adults (users aged between 20 and 49) continued to be the highest group of handphone users with 66.8% followed by pre-teens and teens (users aged up to 19 years old) with 20.9%. Seniors (aged 50 years and above) accounted for only 12.3% of the handphone users.

Table 1 Handphone users

Age category	2005	2006	2007
Pre-teens and teens (up to 19)	13.1%	20.5%	20.9%
Adults (20–49)	78.2%	66.8%	66.8%
Seniors (50+)	8.7%	12.6%	12.3%

The upward trend for the pre-teens and teens continues, although slowing down in 2007. But it is estimated to be higher than before in 2009.

The content and information delivered through mobile phones has an effect on people’s emotion. Based on the survey conducted by PEW Research Centre, American mobile phone users cannot live without it. So it clearly shows that mobile phones play a major role in human life where they are owned by all age of groups.

Theory

The major theoretical framework of this study is Ball-Rokeach and DeFleur's (1976) media dependency theory. This theory explains people's dependence on certain forms of media to get information, in both everyday, daily life and in crisis situations, and how this preference becomes more important to the user than the normal forms. Unlike other mass media theories (e.g., cultivation theory; modelling theory) that demonstrate the cause and effect relationship between media and their audience, media dependency theory argues that the individual does not depend on all media equally (Ball-Rokeach and DeFleur, 1976).

Mobile communication theorists (e.g., Gergen, 2002; Sugiyama and Katz, 2003; Bull, 2005) argued that people use their mobile communication technologies to explore (e.g., make new friends; create new communities) and to enhance (e.g., disconnect themselves from others) their social networking. This study will provide a framework for demonstrating how students depend on mobile phones to get information and also to investigate the acceptance of Short Message Service (SMS) learning by the students.

Dillon and Morris (1996) claimed that user acceptance is defined as the demonstrable willingness within a user group to employ information technology for the task it is designed to support. Thus, the concept is not being applied to situations in which users claim they will employ it without providing evidence of use, or to the use of a technology for purposes unintended by the designers or producers (e.g., using an Internet connection for personal entertainment in a work situation).

Method

In order to study the attitudes and the acceptance of students in mobile phone usage and also SMS learning, a questionnaire was developed consisting of 30 issues to be measured from the students' point of view.

Table 2 Attitudes and acceptance of students in mobile phone usage and SMS learning

Gender	
Male	31.10%
Female	68.90%
Age	
20–29	37.80%
30–39	42.20%
40–49	17.80%
> 50	2.20%
Ethnicity	
Malay	57.80%
Indian	6.70%
Chinese	31.10%
Others	4.40%
Mobile phone ownership	
Mobile phone	97.80%
PDA & Mobile	2.20%
Working sector	
Public sector	53.30%
Private sector	44.40%
Not working	2.20%

The survey was administered to students taking Financial Principle, Mechanics (Physics), Money & Banking, Quantitative Economy, Optics and International Business, which consists of 45 students who were required to answer the questionnaire. According to Table 2, most of the participants are female students, and the remaining 68.9% were male participants. The respondents are from various background, age, ethnic group, field of study and working sector which are believed to have different opinions on the question answered. Majority of these participants (97.8%) owned just a mobile phone and 2.2% owned both PDA and a mobile phone.

Research Tool and Data Collection

The study was surveyed in nature; therefore a questionnaire was used for the data collection. Researcher developed the questionnaire regarding students' acceptance on mobile phone usage and learning via SMS and distributed to a small sample of USM students to determine the internal

consistency of the questionnaire. The result was calculated based on percentage to show a clear statistical view of the acceptance of SMS learning amongst the USM students.

The questionnaire consists of 30 questions which was separated into three parts. Part A covers the demographic data of the respondent and Part B covers the issues of mobile phone usage amongst the students. Part C contains questions regarding the technology acceptance, whereby a five-point Likert scale was used. However this study only focuses on the feedback gathered from Part B.

Findings

The first aim of our study was to determine student’s basic attitudes towards the usage of mobile phone. First of all, the type of devices mostly owned by the students was identified.

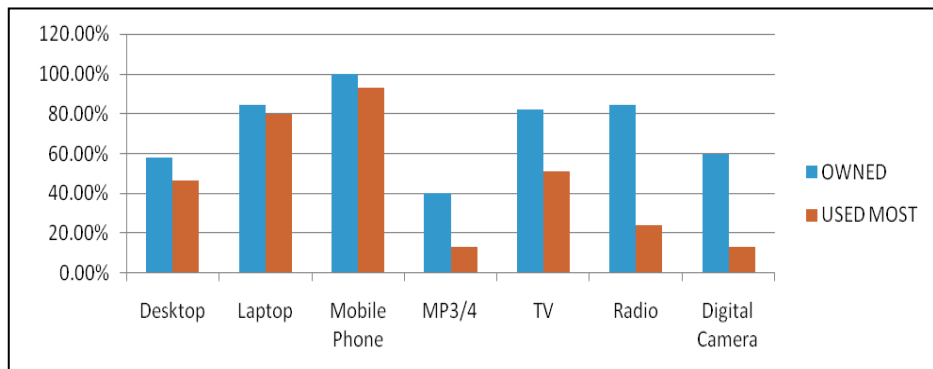


Figure 1 Devices owned by the students and the frequency of usage

Respondents are required to notify the devices that they own from the nine options given in the questionnaire. It obviously showed that 84.4% students owned mobile phones followed by laptop and radio. Thirty seven out of 45 students owned a television because the respondents are part time students who do not stay in the hostel. It was noticed that only 57.8% of the students owned a desktop computer compared to digital camera, and this may be because of the flexibility and convenience of these specific devices.

Even though the students owned all the listed tools, they did not use them frequently. Only 80% of them frequently used their laptops but still mobile phone was reported to be the most tool being used that is 93.3%. Television usage was 51.1% and desktop computer was 46.7%. Other devices were reported to be less than 50% usage by the students.

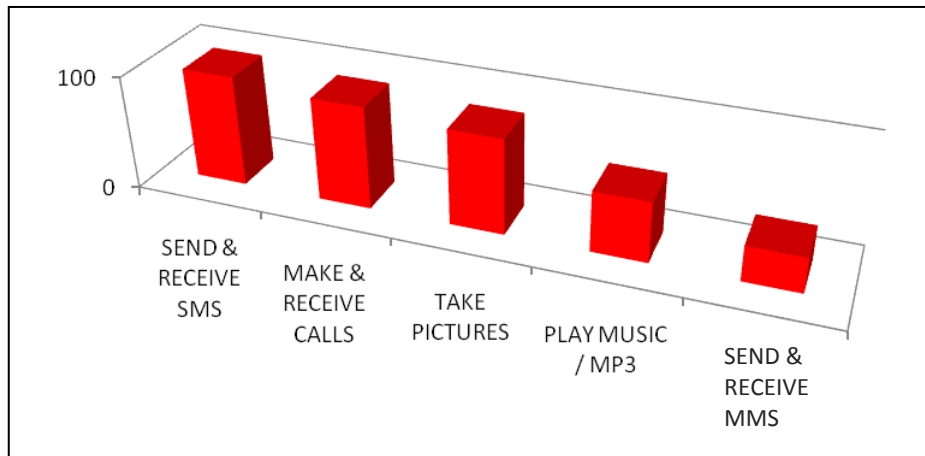


Figure 2 Five most activities done with the mobile phone

As the main focus of this study was on mobile phone usage and SMS learning concept, questions were linked with mobile phone as it already proved that majority of the students owned and frequently use mobile phones. “What are the possibilities to do with the mobile phone?” and “What is the main activity done by the students with the mobile phone?” Various reasons, such as convenience, mobility, safety and networking are found as to why the mobile phone is favoured by its users (Ling, 2004; Palen, Salzman and Youngs, 2000). In those days, function of mobile phone was limited to communication but now it is not only for that specific reason. Taking pictures, playing music, sending and receiving SMSs or MMSs, accessing internet, recording or playing videos etc. are considered to be done with modern mobile phones. Camera is one of the common features in nowadays mobile phones. Majority of the students said that sending and receiving SMSs are the main possibilities to be done with mobile phones whereby all 45 students chose that answer followed by taking pictures and playing MP3; whereas 75.6% of the students said that recording videos could also be done with mobile phones. Only 48.9%

said that mobile phones can be used for sending and receiving e-mails and also radio programmes. Research by Traxler and Riordan (2003) indicated that SMS is very effective, especially if the communication is short, personalised and focused.

However, 97.8% of them used theirs for sending and receiving SMSs even though 100% of them said it is the major activity to be done with. Based on Figure 2, 91.1% used their mobile phones for making and receiving calls, followed by taking pictures 84.4%. Out of 45 students, only 24 used mobile phones for playing music or MP3 files. The least percentage was 31.1% whereby these students send and receive MMSs through their mobile phones.

How Much Does The Mobile Phone Owned by The Students Help Them in Their Routine Life?

The greatest percentage was noted to keep in touch with family and the second was to keep in touch with friends. In Geser's (2005) viewpoint, the mobile phone enhances bilateral interaction between two individuals. When students move away from their parental homes, mobile phones can become a technology that restores and strengthens family ties. Moreover, the mobile phone is found as a source to manage privileged relationships (Fortunati, 2002; Licoppe and Heurtin, 2001; Vincent, 2005) and that people actively use the mobile phone to contact family and friends (de Gournay, 2002; Lasen, 2005; Ling, 2004; Katz and Aakhus, 2002).

Figure 3 shows that only 33.3% of the students used mobile phones for revising or finding information regarding the subjects studied for the semester. It is estimated that the students will do this at the last moment before the final exam of each semester. Less than 30% used mobile phones to learn new things, share ideas, find information or for hobbies.

The respondents also mentioned that at all times the mobile phone is used for playing games or videos and downloading files. Less than 35% hardly used mobile phones for mobile banking and website browsing. Commonly the students used their mobile phones for basic purposes such as alarm function (93.3%) and calculator (95.6%).

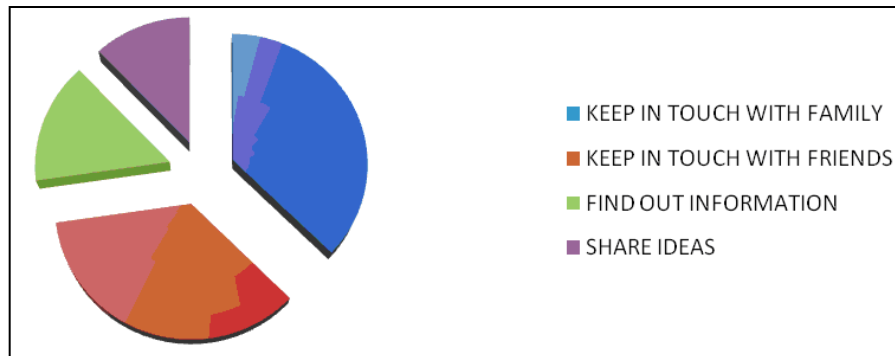


Figure 3 Frequency usage of mobile phones

How Happy Are They With Their Mobile Phone?

It was found that 46.5% utilised Celcom service provider followed by Maxis; and only 14% used Digi service provider. Participants in this study reported that they are happy with their current mobile phone usage and 62.2% of them are prepaid users. Only 48.9% mentioned that they used their mobile phones to make calls compared with sending SMSs. Twenty nine out of forty five students used to send SMSs less than 10 times per day. Frequency of sending SMSs 10–30 per day was 24.4%, whereas 8.9% used to send SMSs 31–50 per day. Indeed, it shows that SMS is highly cost effective and a very reliable method of communication. It is less expensive to send an SMS compared to postal mail or follow up via a telephone call. From the survey, 97.8% of the students felt it was convenient to use mobile phones and preferred most to be with all the time, relative to laptops and desktops.

Mobile learning can be an effective tool for learning or enhancing the teaching-learning process, because it increases accessibility. Moreover, it can be fitted to any appliances that support the technology facilities anywhere and at anytime. Similar to e-learning, mobile technologies can also be interfaced with many other media like audio, video, the internet, and so forth. In terms of usability of new technologies, there are two viewpoints that must be considered: one “in support” and another “against it.”

This study discovered that 86.7% of the respondents found it is convenient to use mobile phones for education. In the case of mobile learning, some users may feel it is not very convenient or conducive for learning because of its small screen, reading difficulties when being outside in the bright sunlight, whilst for others, the benefits of being able to learn on-the-move at a convenient location outweigh its optical disadvantages. Six students out of forty five disagreed or felt it was not convenient using mobile phones for education purposes.

Table 3 Educational functions preferred by the students to be received via their mobile phones

	Desirable	Most	More	Quite	Desirable	Less	Least
Receiving notification of class cancellations, room changes, exam venues and other administrative details		26.7%	6.7%	17.8%	8.9%	11.1%	28.9%
Notification of receiving and submitting assignments		15.6%	17.8%	20%	17.8%	17.8%	11.1%
Receiving notification of quiz and test grades		17.8%	13.3%	17.8%	20%	13.3%	17.8%
Taking lecture notes		24.4%	22.2%	13.3%	13.3%	11.1%	13.3%
Receiving exam tips		55.6%	15.6%	11.1%	11%	–	6.7%
Consulting with other students		11.1%	8.9%	13.3%	11.1%	22.2%	33.3%

Responses to each of the indicator on education functions that the students want to have with their mobile phones were measured on a scale of 1 to 6, ranging from “most desirable” to “least desirable.” Receiving exam tips followed by notifications about class cancellations, room changes, exam venues and others was the most desirable information preferred by the students. It is because the information is quite close and important for exam and can avoid wasting time due to travelling. Based on Table 3, consulting with other students were the least considered by the students with only 11.1% of them. Even though the elements were ranked from 1 to 6, all the functions are considered important to be received by the students via their mobile phones.

Conclusion

Mobile phone becomes the major communication technology for participants in this study as they preferred to use it for personal and also keen in using it for education as majority of the respondents agreed and felt convenient using the mobile phone as a tool to learn. In a developing country like Malaysia, the use of WAP and PDA-based mobile technologies are not yet popular due to the costs involved in owning and using such high-end mobile technologies and less expensive SMS-based learning mobile technologies such as mobile phones. However, these technologies do hold tremendous potentials, which can be strategically used to support and improve student retention.

We can say with some certainties that mobile technologies do appear to have a great future in a developing country like Malaysia. Indeed, mobile phones are one of the less expensive, most accessible and popular media amongst students of all ages. However, we still have a long way to move in enhancing SMS learning within schools and also in a higher education system.

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