

STUDENTS FEEDBACK AND PERCEPTION REGARDING MOBILE PHONE APPLICATIONS AT THE FACULTY OF EDUCATION IN-UPM

HASSAN MAMOUD ABUHASSNA¹ & IBRAHIM MOHAMMED HAMAD AMIN²

¹Department of Education Studies, Instructional Technology, University Putra Malaysia, Malaysia

²Department of Education Studies, Sociology of Education, University Putra Malaysia, Malaysia

ABSTRACT

Mobile learning is gaining remarkable attention in academic platforms due to its uniqueness in facilitating learning for all levels of education. Many universities are now incorporating mobile technologies and devices into learning. The main aim of this research study is to better understand the prevalence and perceptions of mobile learning among UPM's faculty of education students. This paper reports on the results of a survey of eighty six (86) postgraduate students at University Putra Malaysia (UPM) about their utilization and perceptions of the use of mobile technologies and devices in education. An analysis of the quantitative survey findings is presented focusing on frequency of utilization of mobile devices for learning, confidence towards using mobile devices and technologies for learning, impact of mobile learning on students' performance. The researcher has attempted to determine how this technology is optimally used to improve student academic performance at the Faculty of Education at University Putra Malaysia (UPM). Results revealed that, a majority of the students use their mobile devices such as laptops, smart phones and tablets for writing down assignments, searching the web for study, accessing the university's LMS, reading books and academic papers, email, and communicating with colleagues on social networks (e.g Face book which is less often used to communicate with lecturers) (Alvarez, Alarcon, & Nussbaum, 2011).

The majority of students indicated that mobile learning technologies and devices have improved their academic performance in different ways. There was higher frequency agreement that social networking improved students' learning and Putra LMS improved students' satisfaction with the courses. The overall interpretation was that mobile learning has many advantages as it can be used anywhere, anytime while improving communication and enriching students' learning experiences in their learning.

KEYWORDS: Mobile Learning, Mobile Application, Mobile Education

INTRODUCTION

Education has always been influenced by socio-economic development status of the community and the changes that are taking place within it. The education systems that were developed and implemented a few centuries ago are not the same as the ones existing today. Our societies are experiencing many challenges as a result of the changes that are taking place (Besio, 2005). These challenges are attributed to the advancement of modern information and communication technologies (ICT) which play major roles in shaping the way we run our educational systems and institutions. The educational environment in which we are working nowadays is changing dramatically whereby technologies are more implemented than ever before (Jochems, Merrienboer & Koper, 2013).

The advancement of information and communication technologies (ICT) and proliferation of electronic knowledge has reshaped the way knowledge in schools and universities is delivered and managed. Becker (1994). In other words, new forms of education systems are evolving resulting in emerging novel learning and teaching methods which differ significantly from the traditional approaches. For instance, the way teachers and students interact is not just based in face-to-face traditional classroom settings. Instead, modern information and communication technologies enable students and teachers to interact not only remotely but also *anywhere* and *anytime*. The later form of flexible learning is possible through the use of *mobile* technologies. The provision of learning services through mobile devices is commonly called *mobile learning* (m-learning) (Salmon, 2009).

Recently, mobile learning has gained tremendous attention in academia, industry, and governments due to the unique enabling and affordable learning and teaching environment that can facilitate education for all for all levels of education systems (Bradshaw, 2012). As such, mobile learning has been studied extensively in academia, and a number of schools and higher learning institutions are increasingly adopting it to offer varying instructional services despite the common challenges affecting the adoption of technology in education. At UPM, we have witnessed a number of initiatives to incorporate mobile devices and applications to learning. In this work, we investigate the use and the perception of mobile learning at School of Education of UPM.

METHODS

Research Approach

In this study a mixed research approach by using both; quantitative method of research has been applied. While the major approach was quantitative, qualitative analytical techniques were employed on two open ended questions that we asked. In order to tackle the research questions, a survey method was used to investigate this study. According to Ary (2010), in survey, the researcher asks questions about peoples' beliefs on a particular issue, their opinions, characteristics, and behaviours. Also, a survey allows the researcher to gather information from a large sample of people relatively fast and economically.

PROCEDURE

This study used survey method to seek for students' perceptions on frequency use of mobile technologies for learning, how mobile technologies and devices are being used for learning, students' confidence towards the use of mobile technologies for learning as well as to explore the influence of mobile technologies on the students' academic performance. The location of the study was in Malaysia at the University Putra Malaysia (UPM). University Putra Malaysia is a public research university located at Serdang, close to the capital city of Kuala Lumpur. Specifically, the study was conducted at the university's Faculty of Education because it is one among the faculties that has a program of Educational Technology. In particular, the research was based at the Department of Science and Technical Education.

The reason for selecting this area is the fact that University Putra Malaysia is its institutional active support to integration of instructional technologies to learning. For instance, UPM has assigned the Centre for Academic Development (CADE) to plan, design and develop a full feature, SCORM compatible and visually attractive new e-learning platforms (Yunus et al., 2010). In the meantime, the university is using Putra LMS as an e- learning management system which was developed to enhance the effectiveness of teaching and learning activities through the use of a common e-learning platform as well as to fulfil the University's vision of producing quality graduates who are competitive,

ethical and have the ability to progress and excel through lifelong learning. All these mentioned platforms are accessible by mobile devices. Another reason is that Faculty of Education is a place where issues related to integration of technology in education are actively taught and researched. (Amer & Hafez, 2011). The target sample of this study was 112 postgraduate students from University Putra Malaysia at the Faculty of Education where survey was conducted. The population included students undertaking Masters and Ph.D studies at their second semester in Research Methods. A research method is a compulsory course for all students of the Faculty of Education at the postgraduate level. All students from all departments study together in four classes that run the same course. Two of the Research Methods classes are taught in Bahasa Malayu and the other two are taught in English.

Selecting a sample from these four classes provides a higher chance of getting a good representative purposive sample since every student from every department of the faculty took part in the survey. The target population was categorized into two categories from the level of their education: (1) Masters students (2) Ph.D students.

RESULTS

Table 1: Number of Participants from Departments studies ($n=86$)

Department	Frequency	Percent %
Department of Foundations of Education	33	38.4
Department of Sport Studies	4	4.7
Department of Science and Technical Education	21	24.4
Department of Language and Humanities Education	12	14.0
Department of Professional Development and Continuing Education	3	3.5
Department of Counsellor Education and Counselling Psychology	13	15.1
Total	86	100.0

As seen from Table 1 above, the result shows Department of Foundations of Education got 38.4% respondents, Department of Sport Studies 4.7%, Department of Science and Technical Education got 24.4%, Department of Language and Humanities Education 14.0%, Department of Professional Development and Continuing Education 3.5% and Department of Counsellor Education and Counselling Psychology 15.1%. The largest number of respondents came from the Department of Foundations of Education while least respondents came from the Department of Sport Studies.

Table 2: Technology Access and Usage Comfortability

Types of Mobile Technologies	N	Percent (%)
Laptop Computer	86	100%
iPhone	22	25.6
iPad/Tablet	29	33.7
iTouch/Mp3 player	1	1.2
E-reader	3	3.5
Smartphone	69	80.2
Others	3	3.5

Table 2 and 4.4 show that 100% of all respondents on this survey own laptop computers (86), followed by smartphones 80.2% (69) and those who do not own smartphones owned iPhones by 25.6%. iPad/Tablet 33.7% while E-readers 3.5% and iTouch/mp3 player 1.2%. Others were 3.5% which the 3 respondents mentioned as Samsung Note, Notebook and digital camera. The data shows that only one student out of 86 owns an iTouch/Mp3 Player and only 3 own an E-reader.

Table 3: Technology Access between Males and Females (n=86, 17=Male, 69=Female)

	Gender			
	Male		Female	
	Frequency	%	Frequency	%
Laptop	17	100	69	100
iPhone	5	29	17	25
iPad/Tablet	2	12	27	39
iTouch/Mp3 Player	0	0	1	1
E-reader	0	0	3	4
Smartphone	11	65	58	84
Others	0	0	3	4

Regarding the technologies owned by students, it can be noted that in general female students have a higher percentage compared to male students by 84%, and the main reason for this is due to the fact that 80% of respondents were female and only 20% were male.

Table 4: Comfortability of Using Mobile Devices (n=86)

Feedback	Frequency	Percent
Not at all comfortable	1	1.2
A little comfortable	9	10.5
Fairly comfortable	41	47.7
Very comfortable	35	40.7
Total	86	100.0

The data obtained indicate there is a high level of comfortability towards using mobile devices among the respondents at UPM's faculty of education which is about 88% (fairly and very comfortable).

Frequency of Mobile Technologies Uses for Learning

Data collected for Section III of the questionnaire pointed out how frequently the students use mobile technologies for learning. The students were asked to indicate the frequency to which they use various mobile technologies for learning based on five-point Likert-scale with: 1=Never Use, 2=occasionally, 3=often, 4=frequently, and 5=every day.

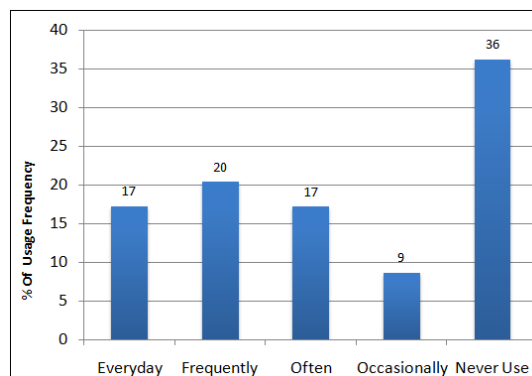
**Figure 1: Average % of Users and their Mobile Services Usage Frequency**

Figure 1 shows that about 36% of users have never used some services, whereas about 17% are using some services every day, and 20% of the respondents are using some services frequently. Individual frequencies for each item

and the devices used are presented in Appendix 7 table B. We further define “Frequent Uses” as any use that is classified as either Every day, Frequently, or Often. Any of this usage pattern may well reflect the use of mobile devices for learning and thus prevalence. The average number of users and their usage patterns where the percentage for Frequent Uses **are the sum of percentages of Everyday, Frequently, and Often**. The percentage of users who some services either everyday, frequently, or often is close to 55%. This shows that mobile learning is fairly prevalent at the Faculty of Education.

Table 5: Average % of Frequent Uses

Uses	Average %
Frequent Uses	54.4
Occasional Uses	9.4
Never Use	36.2

Frequency of Popular Mobile Learning Services

Table 6: Popular Mobile Learning Services at UPM’s Faculty of Education (n=86)

Mobile Technologies for M-learning	Percentage (%)
Communicating with colleagues through social networks (Facebook)	66
Sharing educational related materials with colleagues (Email)	68
Reading educational related materials like books, articles	70
Accessing encyclopaedia (Wikipedia)	70
Search academic papers through search engines (Google)	72
Access UPM online library	51

Additionally, from the table that peer communications is another most common service used for mobile learning. It offers rather informal interaction and collaborative learning amongst the peers. Social networking in particular is shown to be the most powerful tool that expands learning to unique new horizons. On the other hand, the least common learning services that received less than 35% of Frequent Uses is downloading podcasts, taking notes, communication with lecturers, either by email or through social media platforms. Here we only discuss the most popular and the least popular services, for details on how respondents use other mobile learning services. Table 6 below summarizes the rest of the frequency of learning technologies and devices.

The rest of learning services in questionnaire received a fair percentage of Frequent Uses for all three types of devices. For instance, when asked about communicating with colleagues through Email, majority 91% said that they use their laptops/notebooks frequently, almost every day or often while 73% said that they use their smartphones/iPhones frequently and 67% use iPad/tablet. When asked whether the respondents access UPM online library using laptop/notebook devices, 87% replied they do that everyday or occasionally, the persistent minority of 13% replied as never use. When asked whether the respondents communicate with their colleagues through social networks like Facebook using laptop/notebook, majority fairly do 81% while 19% replied as never do.

CONCLUSIONS

Similarly, when questioned whether the respondents search academic papers through search engines like Google using smartphone/iPhone, majority fairly do 86% while 14% replied as never do, and when asked whether the respondents read educational related materials such as books articles and documents using laptop/notebook, majority fairly do 89% while 11% replied as never do, Other popular mobile learning services include accessing encyclopaedia (Wikipedia) where 94% of respondents use their laptops/notebooks for access while 6% replied as never do.

Another service is downloading notes from UPM's learning management system. When asked whether the respondents download notes from Putra LMS (UPM's learning management system) using laptop/notebook devices, majority fairly do 93% while 7% replied as never use, These findings also show that, comparing the three categories of mobile devices for mobile learning technologies, (laptops/notebook, smartphone/iPhone, tablets/iPad), majority of the students use laptops to communicate with their colleagues through email by 46%, followed by smartphones/iPhones by 37% and tablets/iPads by 17%.

Overall, comparing the three categories of mobile devices for mobile learning technologies, (laptops/notebook, smartphone/iPhone, tablets/iPad), majority of the students (n=86) use laptops/notebooks to communicate with their lecturers through email by 50% followed by smartphones/iPhones by 32% and tablets/iPads by 18%. However, the data show that the students do not have the habit of communicating with their lecturers that much on mobile technologies. Details of prevalence of other learning services and the common mobile device used to access the can be found in.

Analysis of the questionnaires shows an interesting picture of how mobile technologies and devices are used by students at the faculty of education for learning. In general, students are sufficiently "technologized" and are using mobile technologies and devices for learning to a major extent.

The respondents of this study at UPM's faculty of education seem to be familiar with mobile learning and mobile technologies as well as UPM's learning services such as Putra LMS, online library and registered plagiarism checker. Some of the technologies are hardly used by students for their learning such as communicating with lectures through social networks and downloading podcasts that are available online.

Mobile learning seem to have now become an integral part of the study practices of both male and female respondents of this study at UPM's faculty of education: almost all respondents communicate with colleagues through social networks (99%) of all respondents (78 %) participate on online educational discussion forums. (77%) of respondents write down their assignments through word processing software. Putra LMS and online forums are also used among the respondents of this study at UPM's faculty of education on their mobile devices particularly laptops and smartphones: social networks and social sharing tools are highly appreciated and used by many students among themselves, both as a means of online communication and learning.

However, the differences due to age and gender do not appear to be particularly significant; most significant differences appear to be due to the mobile devices used or technologies available. For example, the use or not of certain technologies like social networking among students is high compared to downloading podcast or searching for answers during examinations; or the use of laptops/notebooks and iPads/tablets.

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