Mobile Learning Trends among Students in Vietnam

Angela Murphy, Warren Midgley, and Helen Farley

University of Southern Queensland, Toowoomba, Australia
helen.farley@usq.edu.au

Abstract. Mobile learning has the potential to expand access to education in developing countries. Little is known about the preferences of students in some Asian countries such as Vietnam. Some of these countries have restricted internet access and may be subject to internet censorship. A study was conducted with forty-four Masters students in Vietnam to identify informal mobile learning trends. Results indicate that although rates of ownership of mobile technologies are still low in comparison to many other countries, students do use these devices to support their studies. A third of students had access to a tablet computer, smartphone or MP3 player and many students had access to more than one device. Most students used Wi-Fi and considered internet quality to be moderate or fair. Access to high quality internet and the impact of internet censorship needs to be taken into account when developing mobile learning content for students in Vietnam.

Keywords: M-Learning, Mobile Learning, Internet Access, Developing Countries, Higher Education, Vietnam, Internet Censorship, Social Media.

1 Introduction

As a result of the incremental improvements in design, mobile technologies are increasingly perceived as essential to the conduct of people's everyday lives [1]. The ubiquitous connectivity and portable nature of these technologies enables access to contextualised learning experiences which translate into greater ownership of learning processes [2]. Furthermore, these technologies are becoming more accessible and affordable, thereby presenting unique opportunities for facilitating the flexible delivery of contextualised learning for diverse student cohorts.

Proponents of social constructivism maintain that students learn best when undertaking authentic tasks within relevant and meaningful contexts [3] and emphasise the importance of communication and collaboration in the construction of knowledge [4]. A number of research studies have focused on the use of mobile technologies to support learning in both formal and informal settings. Mobile technologies have been found to encourage greater communication and collaboration in classroom settings facilitating social presence as students share information with fellow students [5]. The portability of mobile devices as well as their sophisticated geo-location capabilities (GPS) enable educators to provide students with opportunities to engage in contextualised and interactive learning [6].

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1.1 Internet Access and Censorship in Vietnam

In developing countries, mobile technologies have been adopted at greater rates, as compared to personal computers, probably because tablets and smartphones are more affordable and easier to use [7]. However, to fully leverage the affordances of these devices for learning, there must also be access to high-speed internet. The provision of internet access and other technical infrastructure varies widely across Asia. In Vietnam, the internet has been available since 1997 with the number of subscribers increasing 15-fold since 2000 [8]. According to Vietnam Government statistics, only about a third (34%) of the population are connected to the internet, as compared to 83% in South Korea and 80% in Japan [9].

A report by the Berkman Centre of the Internet and Society revealed that Vietnam has sophisticated and effective filtering systems that resemble those of China [10]. It is important for educators to understand the extent to which internet censorship may impact on mobile learning in Vietnam. Social networks, for example, are often used in mobile learning scenarios to encourage collaboration and sharing of information. In Vietnam, however, local authorities partially or wholly block access to sites such as Facebook [11]. Only a third (33%) of consumers in Vietnam over the age of 15 have a social media profile on a platform called Zing Me and 28% have an active Facebook profile [12].

1.2 Mobile Technologies and Mobile Learning in Vietnam

According to a survey conducted by Nielsen, mobile technologies are gaining in popularity in most countries in Southeast Asia [12]. Devices such as tablet computers, MP3 players, internet-capable games consoles, eBook readers and internet-capable televisions are being used with greater frequency by consumers across all of Southeast Asia, except Vietnam. According to this study only 32% of consumers over the age of 15 have access to an internet-capable mobile phone compared to 64% in the Philippines, Thailand (77%), Malaysia (77%), Indonesia (78%) and Singapore (85%). Smartphone ownership in Vietnam is also much lower than other regions with a penetration of only 11% and less than 1% for tablets. Consumers in Vietnam are still highly reliant on desktop computers (95%) for access to the internet with only 30% accessing the internet through laptops. However, ownership of mobile technologies is growing rapidly [13]. Between 2005 and 2010, mobile phone subscriptions in Vietnam increased by 72.4% with 175.3 mobile phone subscriptions for every 100 inhabitants. This rate of change was much higher than in more developed Southeast Asian countries such as in Singapore (7%) and Thailand (17%) [14].

Research indicates that students have complex relationships with these technologies, and that these relationships evolve as new technologies enter the marketplace [15]. Kennedy and Fox found that current research provides limited insight into the mobile technology ownership and usage trends of students in Asian countries [16]. They conducted research with first-year undergraduate students at the University of Hong Kong, finding that nearly all students had access to mobile phones (98%) and notebook computers (81%). They compared these findings to those from a study conducted by Kennedy, Judd, Churchward, Gray and Krause, and found that rates of

ownership of these technologies was on a par or exceeded those of Australian first-year undergraduate students [17]. Unfortunately, there was no distinction provided between feature phone and smartphone ownership and no indication as to rates of ownership of tablets or eBook readers. No previous studies were found that specifically examined mobile learning trends among students in Vietnam.

1.3 Background and Objectives of the Study

In an increasingly connected world, partnerships between universities in different regions are becoming more common. One such partnership exists between the University of Southern Queensland (USQ) in Australia with the Ho Chi Minh City Open University (HCMCOU) in Vietnam. This arrangement involves specialist lecturers from USQ travelling to HCMCOU to teach intensive courses several times a year. These courses constitute the Master of Applied Linguistics program at USQ.

Each course operates with a series of cohorts of between thirty and forty students. All students already hold an undergraduate degree and have demonstrated through previous study a level of English proficiency deemed appropriate for this program (IELTS 6.5 or equivalent). The program is designed for those with careers in the field of 'Teaching English as a Second or Foreign Language.' Usually, there are two or more cohorts taking intensive courses in any given semester. At the time of data collection for this project, there were two cohorts of students with a total enrolment of 72 students.

One of the authors of this paper is involved in this initiative. In each of several visits, the lack of internet access and consequently, use of digital learning and teaching tools, were significant challenges. This was particularly true for the Computer Assisted Language Learning course. In order to investigate the extent and nature of the possible challenges to digital learning and teaching in this specific context, a survey was developed and deployed to students enrolled in the two courses running at the time. The survey was designed to assess not only the challenges, but also the aspirations and possibilities for the use of digital technologies for learning in this particular context.

2 Methodology

2.1 Participants

Fifty students responded to the online survey. After removing incomplete responses, a total of 44 responses were retained, representing a response rate of 61%. The sample consisted of mostly female participants (32, 73%) as compared to males (12, 27%), ranging in age from 24 to 46 with a mean age of 31. The majority of students were employed in addition to studying (35, 80%), working between 6 and 72 hours a week (M=34, SD=17.30). Most students lived with family (24, 55%), or with a partner and/or children (13, 30%). Very few lived with housemates or friends (3, 7%) or in single accommodation off campus (4, 9%). Participants spent between 4 and 96 hours per week studying (M=25.21, SD=18.62).

2.2 Data Collection and Analysis Procedures

A survey was developed with 28 closed and 3 open questions about students' access to and use of mobile technologies and internet for learning. The survey was in four sections: 1) student demographics, including questions about gender, age, current employment, and hours available for study each week; 2) the availability of internet access; 3) ownership of mobile devices; and 4) use of mobile devices for learning activities.

The survey was hosted online using the Qualtrics survey platform and a link to the survey was distributed by the course examiner during the period of face-to-face lectures in March 2013. Completion of the survey took around 15 minutes and was voluntary. The data file was compiled in SPSS for Microsoft Windows version 19.0 and analysed using descriptive methods.

3 Results

3.1 Student Access to the Internet

Students were asked to indicate from where they currently accessed the internet and which internet services they used most often. The research showed that for study purposes, most students accessed the internet at home (91%), at university (57%) or at work (52%). A large proportion of students also accessed the internet in public places such as libraries or cafés (41%). Wireless internet (Wi-Fi) was the most common method of accessing the internet, used most often by 75% of the sample. Nearly half of the sample (43%) also frequently used 3G and 43% frequently used ADSL or ADSL2+.

Students were asked about their perceptions of the quality of their access to the internet for study purposes. While more than half of the sample considered their access to be good (55%), more than a third considered their internet access to be fair (36%). Sample sizes were too small to statistically compare perceptions of the quality for the different types of internet access options.

3.2 Ownership and Access to Mobile Technologies

Students were asked about their ownership of, or access to a range of technologies such as desktop computers, laptops, netbooks, feature phones, smartphone, tablets, MP3 players or eBook readers. Netbook computers and laptops were not considered to be mobile devices for the purposes of this study.

Most students owned a laptop computer (95%) and 5% had access to one. This is possibly because it is required for students to bring a laptop to the intensive courses to participate in structured activities. A large proportion also owned (66%), or had access to (23%) desktop computers. Despite the portability of netbooks as compared to laptops, few owned (9%) or had access to (9%) these devices. Students owned up to 4 mobile devices (M=1.79, SD=1.06), with most owning feature phones (70%) and only 32% owning smartphones. A third of students (15, 34%) owned one device,

which was either a feature phone (n=11) or a smartphone (n=3). Further analysis showed that 23% of students owned both a smartphone and a feature phone and 22% owned a feature phone and had access to a smartphone. Students also supplemented their ownership of mobile phones with tablets. Nearly half of the students (43%) who owned a feature phone also owned or had access to a tablet, whereas 25% who owned a smartphone also owned or had access to a tablet. Four students did not own any devices, but still had use of them, and only one student did not own or have access to any devices.

Students who owned or accessed these technologies were asked if they ever used them to support their studies. Unsurprisingly, laptops (93%) and desktops (64%) were the technologies used by most students. The use of tablets among students for study purposes was unexpectedly high with 57% of students who owned or had access to these devices using them for this purpose. Despite the large proportion of students owning feature phones, only 12% used them to support their studies. Smartphones were used by a higher proportion of students for study purposes (23%). This indicates that feature phones and smartphones are less suitable for the majority of learning activities, particularly when alternative technologies are available. This is possibly because of the small screen sizes of these devices as compared to tablets or computers.

3.3 Learning Using Mobile Technologies

Students were asked about the types of learning activities they conducted with their devices. These questions were filtered to appear only to students who indicated that they used each of these technologies to support their studies in the previous question. Laptops were most commonly used to complete most learning activities. However, tablets were used for a variety of activities by the students who used them for creating content including photos or videos (77%), sharing information with other students (77%) and searching online databases (77%). Tablets were also used for communication with course leaders and fellow students via email (77%), audio or video conferencing tools such as Skype (69%), or social media sites such as Facebook (69%). Additional activities using tablets included reading textbooks (62%), accessing course materials (62%), taking notes (62%), or accessing the learning management system (62%).

Of the six students who used smartphones to support their studies, most used them for taking photos or videos (83%), communicating on social media sites (83%) and sharing information with other students (83%). Smartphones were also used to send and receive emails from the course leader or other students (67%), search online databases (67%), search the internet for course-related information (67%), take notes (67%), and use audio or video conference tools (67%). Few students used smartphones for accessing and viewing course materials. This suggests that the small screen size of smartphones is not optimal for these types of activities. Students were also less inclined to complete assignments on their tablet computers (8%) or smartphones (0%). All students who used MP3 players used them to listen to course audio materials such as lectures or podcasts, and eBook readers (n=3) were used to read course materials. Students were also asked if there were any apps (mobile applications) that they used on their mobile devices to support their studies. A third of students (33%) indicated that they used apps and most claimed

they used dictionary apps. Additional apps included iBooks, QuickOffice, GoodReader, PDF annotation apps and Skype, suggesting that the apps used most by students were those that enabled them communicate with peers or to read or edit documents.

Those students who used smartphones for study used them on a daily basis. This is probably because these devices are always with the student. Despite the frequent use of tablets for learning purposes, these devices were not always with the student and only 62% used them on a daily basis. Feature phones were used infrequently for study purposes, with only 20% of students using them daily.

To determine the mobility of students while using mobile devices, they were asked about the locations in which they used mobile devices for learning. The majority used their mobile devices while stationary at home or work and there is little evidence of students using their mobile devices while physically moving.

To determine future mobile learning preferences, students were asked whether they would use mobile technologies for learning if they had access to these devices. They were also asked about the types of learning activities they would like to be able to undertake on these devices. The majority would be very likely (68%) or likely (19%) to use tablets to support learning, though fewer were willing to use them for taking photos or videos (59%) or listening to audio course materials such as podcasts (52%). A large proportion also noted that they would be very likely (46%) or likely (24%) to use smartphones for learning activities. Again students considered most learning activities as being suitable for these devices except for completing assignments (44%) and reading prescribed course textbooks (48%).

4 Discussion and Conclusion

The results of the study demonstrate that despite the low penetration of mobile technologies in Vietnam among general consumers [12], mobile technologies do have a clear role in supporting learning. Although few students had access to mobile technologies such as tablets, smartphones and MP3 players, a significant proportion of those who owned or had access to these technologies used them for learning activities. The anticipated increase in adoption of mobile technologies presents an opportunity for the provision of learning activities that leverage the unique affordances of the technologies. However, due to the small sample size, it is difficult to obtain clear insight into the learning patterns of students owning mobile technologies. These findings are therefore an indication of potential trends rather than a representative overview of the characteristics of Vietnamese students' use of mobile technologies for learning.

Without access to high quality internet, the opportunities to provide students with access to mobile learning experiences are more limited. Students in the current sample had acceptable to moderate levels of internet access for their studies, which suggest that the ability to access certain activities from mobile devices would be negatively impacted. Most students accessed the internet via Wi-Fi and it is notable that many students accessed the internet from public locations such as libraries or coffee shops. Students in Vietnam may therefore be hindered by barriers such as available bandwidth and varying levels of access in different locations. A limitation of this study is

that no information was obtained on the extent to which internet censorship impacted on students' access to learning content using mobile technologies. There was also no information obtained on students' current usage of social media.

Due to the limited sample size, it is difficult to draw conclusive insights into the types of learning activities that students prefer to conduct on various mobile technologies and the reasons for these preferences. There appears to be a trend to use smaller devices such as smartphones that are always in the possession of the student to conduct activities such as information searches, sharing information with other students and taking photos or videos. The use of dictionary apps on smartphones is a clear example of instant access to a small but vitally important piece of information to assist learning, which is one of the clear benefits of using mobile technologies for learning. Therefore, these devices appear to support learning activities that are immediate and enable students to engage with learning content in a more interactive manner. Tablet devices are popular with students and appear to have the greatest applicability across multiple types of learning activities. Future surveys will need to incorporate questions that identify reasons for preferences of certain mobile technologies for certain activities and more detailed information on the how best to incorporate mobile technologies into enhancing the learning experiences of students in Vietnam.

References

[1] Evans-Cowley, J.: Planning in the Real-Time City: The Future of Mobile Technology. Journal of Planning Literature 25(2), 136–149 (2010)

[2] Wong, L.H.: A learner-centric view of mobile seamless learning. British Journal of Educational Technology 43, 19–23 (2012), doi:10.1111/j.1467-8535.2011.01245.x

[3] Loyens, S.M., Gijbels, D.: Understanding the effects of constructivist learning environments: Introducing a multi-directional approach. Instructional Science 36(5), 351–357 (2008)

[4] Wu, A.: Supporting electronic discourse: Principles of design from a social constructivist perspective. Journal of Interactive Learning Research 14(2), 167–184 (2003)

[5] Engel, G., Green, T.: Are we Dialing up Disaster? TechTrends 55(2) (2011)

[6] Kearney, M., Schuck, S., Burden, K., Aubusson, P.: Viewing mobile learning from a pedagogical perspective. Research in Learning Technology 20 (2012), doi:10.3402/rlt.v20i0/14406

[7] Zambrano, R., Seward, K., Ludwig, S.: Mobile Technologies and Em-powerment: Enhancing human development through participation and innovation. United Nations Development Programme (UNDP) (2012), http://www.undp.org/content/undp/en/home/librarypage/democratic-governance/access_to_informationande-governance/mobiletechnologiesprimer.html (retrieved)

[8] Vietnam Internet Network Information Centre. Report on Vietnam Internet Resources 2012. Ministry of Information and Communications, Vietnam (2012), http://vnnic.vn/sites/default/files/tailieu/ReportOnVietNamInternetResources2012.pdf (retrieved)

[9] Internetworldstats. com. 2012 Top 20 countries with the highest number of internet users (June 30, 2012), http://www.internetworldstats.com/top20.htm (retrieved)

[10] Berkman Cente. OpenNet Initiative Vietnam Report: University Research Team Finds an Increase in Internet Censorship in Vietnam. Berkman Center (August 5, 2006), http://cyber.law.harvard.edu/newsroom/opennet_vietnam (retrieved)

[11] Subramanian, R.: The Growth of Global Internet Censorship and Circumvention: A Survey. Communications of the International Information Management Association (CIIMA). Advance online publication (2012), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2032098 (retrieved)

[12] Nielsen: The Digital Media Habits and Attitudes of Southeast Asian Consumers (October 2011), http://www.nielsen.com/us/en/newswire/2011/surging-internet-usage-in-southeast-asia-reshaping-the-media-landscape.html (retrieved)

[13] ROA Holdings. Asian Mobile Market Forecast 2012-2015 (2012), http://global.roaholdings.com/press/press_name.html?type=0&num=66 (retrieved)

[14] So, H.J.: Turning on Mobile Learning in Asia: Illustrative Initiatives and Policy Implications. United Nations Educationa, Scientific and Cultural Organization (UNESCO) (2012), http://unesdoc.unesco.org/images/0021/002162/216283E.pdf (retrieved)

[15] Dahlstrom, E.: ECAR Study of Undergraduate Students and Information Technology, 2012 (Research report). EDUCAUSE Centre for Applied Research, Louisville (2012), http://net.educause.edu/ir/library/pdf/ERS1208/ERS1208.pdf (retrieved)

[16] Kennedy, G., Fox, B.: 'Digital natives': An Asian perspective for using learning technologies. International Journal of Education and Development using Information and Communication Technology 9(1), 64–79 (2013)

[17] Kennedy, G., Judd, T.S., Churchward, A., Gray, K., Krause, K.: First year students' experiences with technology: Are they really digital natives? 'Questioning the net generation: A collaborative project in Australian higher education'. Australasian Journal of Educational Technology 24(1), 108–122 (2008)