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Comparative Study on m-Learning Usage Among LIS Students from Hong Kong, Japan and Taiwan

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ABSTRACT

Mobile learning (m-learning) is gaining its importance in recent years. For libraries, it is inevitable to adapt to this trend and provide various information services and support for m-learning. This paper studies the m-learning usage of Library and Information Science (LIS) students, who will be the new blood for the library in future. In this paper, we invited 267 subjects from Hong Kong, Japan, and Taiwan to participate in our online survey. We found that LIS students from these regions do adopt communication tools and social media for m-learning. However, they less frequently use their smartphones for academic reading. Plus, they rely more on search engines for fulfilling their information needs instead of library resources. We also found that the lack of a mobile version of the library website constitutes a significant barrier in m-learning, but the lack of mobile apps is relatively acceptable by the respondents. The result of this study shows that there are no big differences in m-learning usage among the three regions, except that LIS students from Hong Kong are accessing the learning management platforms via their smartphones more frequently compared to students from Japan and Taiwan.

INTRODUCTION

A recent report released by the International Telecommunication Union (2014) estimated that the penetration rate of mobile broadband subscription reached 84% in developed countries by the end of 2014. Many scholars (Quinn, 2012; Rius, Masip, & Clarisó, 2014; Sharples, Taylor, & Vavoula, 2010; Traxler, 2009) consider that we are currently living in a mobile era in which most people can access mobile networks and leave their digital footprint in the connected world at ease. Eric Emerson Schmidt, the CEO of Google, even describes that people are treating their mobile devices as an extension of their own being (Claburn, 2007). This view was echoed by many scholars such as Sell, Walden, and Carlsson (2011) and Enders (2013), who opined that mobile devices are close to users not only physically, but also mentally by influencing how they interact with the world.

Mobile learning (m-learning) can be interpreted as learning via mobile devices. Indeed, there is already a long history of humans applying technologies to learning activities (Fok, 2012), from adopting paper in ancient times, to the introduction of computer-assisted tools for e-learning. The recent development of mobile and wireless technologies opened up new possibilities in knowledge acquisition and learning experience (Yang, Hwang, Hung, & Tseng, 2013). The pocket-sized mobile devices offer computer-like capabilities and Internet connectivity without the restriction of time and venue (Henderson & Chapman, 2012; Little, 2011). These unique features are drawing worldwide attention to the potential of m-learning in transforming the education landscape, as it is now feasible for learners to access, share and create knowledge anytime and anywhere (Binsaleh & Binsaleh, 2013; Fok, 2012; Hyman, Moser, & Segala, 2014; Koole, McQuilkin, & Ally, 2010). This scenario motivates learners to actively participate in their learning, impelling a change from the traditional knowledge transmission approach to a learner-centered knowledge construction paradigm (Li, Lou, Tseng, & Huang, 2013; Shih, Hwang, Chu, & Chuang, 2011). In addition, m-learning provides learners with greater flexibility by accessing just-enough, just-in-time and just-for-me contents (Peters, 2007; Rosenberg, 2001), which enhances learning effectiveness and efficiency.

Given the new forms of learning mentioned above, it is impossible for libraries to ignore the potential impacts arising from m-learning, especially when mobile devices have already become major information accessing tools by their patrons (Lippincott, 2010). Libraries have strived to expand its information services to their patrons' mobile devices on a 24/7 basis already (Dresselhaus & Shrode, 2012; Krishnan, 2011). For instance, many libraries have created their mobile version of the library websites for enhancing experiences in accessing their services via mobile devices (Chandhok & Babbar, 2011; Li, 2013; Seeholzer

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& Salem, 2011). Some libraries even developed their own mobile apps for patrons (Cummings, Merrill, & Borrelli, 2010; Hahn & Morales, 2011) to face this new change in the library environment.

As a majority of Library and Information Science (LIS) students will work at the library after graduation, they will be among the core members to assist libraries in adapting to m-learning. So, this research aims at studying the actual usage of m-learning by LIS students. Students from Hong Kong, Japan and Taiwan are selected for comparisons, as these regions are at a similar level of mobile technology adoption, yet with differences in culture. It is expected that this research could provide useful insight into m-learning usage by LIS students, in order to enable educators and researchers to assess the potential of m-learning and to incorporate emerging learner practices into the design of LIS education. Librarians could also gain insight into how libraries can meet or even exceed students' expectations in m-learning support from this research.

This paper is developed as follows. In the next section, we review the literature on the various aspects of mobile learning and its impact on LIS. Then, we discuss our research objectives and questions, then our methodology, data collection and data analysis. After the discussion of our findings and the limitation of this study, we conclude our paper with future research directions.

LITERATURE REVIEW

M-LEARNING OVERVIEW

M-Learning is generally considered as an evolution of e-learning (Kitchenham, 2011; Lu, Chang, Kinshuk, Huang, & Chen, 2014; Morales, 2013; Stevens & Kitchenham, 2011). Currently, no single definition of m-learning is reached as mobile technology is still in a rapidly changing field (Hockly, 2013; Kukulska-Hulme, 2009; Popescu, 2011). Some scholars opine that m-learning simply means learning via mobile devices (Chang, Littman-Quinn, & Kovarik, 2013; Hyman et al., 2014; Stevens & Kitchenham, 2011). Others focus on the mobility of the learner and learning activities (Bajpai, 2011; Binsaleh & Binsaleh, 2013). Thus, many scholars prefer to use the definition provided by the MOBIearn project (O'Malley et al., 2003), which defines m-learning by incorporating the two major ideas mentioned above, i.e., m-learning is "any sort of learning that happens when the learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies". Plus, many scholars emphasized that m-learning should be able to let learners conduct seamless and ubiquitous learning unconstrained by time and place (Calbraith & Dennick, 2011; Premkumar, 2011; Sharples, 2006).

In order to be engaged in m-learning, users need to have a mobile device to log into the m-learning system. However, the definition of mobile device evolves over time (Kukulska-Hulme et al., 2011). It can range from laptops, PDAs, game consoles, MP3 players, e-book readers, and netbooks, and then smartphones and tablets in recent years (Beseda, Machat, & Palecek, 2012; Lippincott, 2010). Although laptops are still the most common mobile devices for study, more and more users are switching to use smartphones and tablets for academic purposes (Cummings et al., 2010). The device ownership comparisons conducted by Dahlstrom, Dziuban, and Walker (2013) as shown in Fig. 1 confirmed the mentioned trends.

Owing to comparatively larger screens and longer battery life, some scholars (Chen & Denoyelles, 2013; Quinn, 2012) believed that tablets are the mobile devices more appropriate for m-learning. However, other scholars suggested that mobile devices should be easily carried in the pocket (Premkumar, 2011; Wagner, 2008), so that users could bring with them wherever they go (Lippincott, 2010). Castle (2014) even criticized that treating tablets as mobile devices is a mistake, as he opined that a tablet is only a netbook with higher portability. However, smartphones are more suitable for m-learning as users interacted on a much more personal level with it when compared to a tablet.

Despite the fact that mobile devices are very popular nowadays, the adoption of m-learning in education is still far from an ideal stage (Little, 2011; Liu, Han, & Li, 2010; Rajasingham, 2011). There are views that mobile devices were originally intended for communication and entertainment purposes rather than for educational use (Kinuthia & Marshall, 2013; Peters, 2007; Taraszow, Borghs, & Laouris, 2013). However, other scholars emphasize that the success of m-learning depends largely on human factors rather than just on technology (Ally & Prieto-Blázquez, 2014; Caudill, 2013). Therefore, the availability of mobile technology does not necessarily guarantee that it will be used for learning (Bomhold, 2013; Elmorshidy, 2012; Mtebe & Raisamo, 2014). For example, although some studies like Bomhold (2013) found that students did use their mobile devices for academic activities, other researchers (Alfawareh & Jusoh, 2014; Gupta & Manjrekar, 2012) had an opposite finding, i.e., they found out that students seldom used their mobile devices for learning and studying. Kim, Ilon, and Altmann (2013) even reported that those heavy users of mobile device are usually not the most engaged m-learning users. Based on the autonomy feature of m-learning that allows learners to take charge of their own learning progress (Liu et al., 2010; Sarrab, Al-Shihi, & Hussain Rehman, 2013),

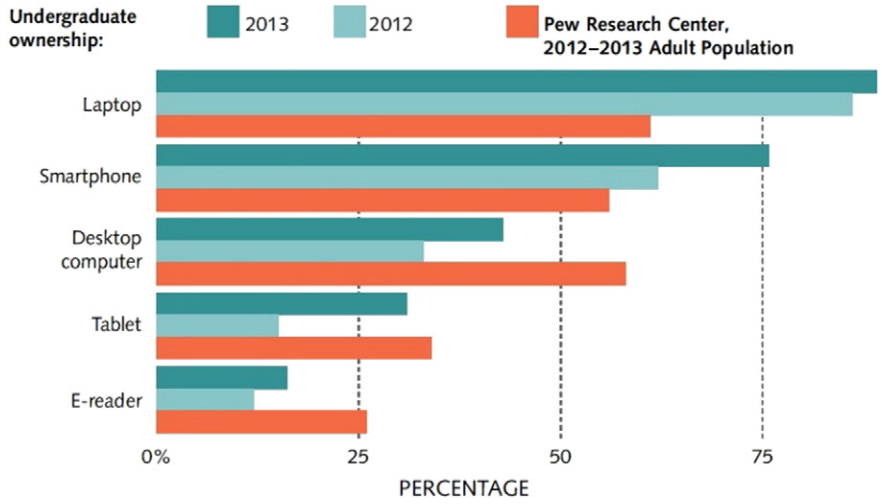

Fig. 1. 2012–2013 device ownership comparisons.
Adopted from Dahlstrom et al. (2013).