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Usage of Mobile Features among Undergraduates and Mobile Learning

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Abstract: This study explores the gender differences in the usage of mobile features and the possibilities for implementing mobile learning among undergraduate students. A total of 351 undergraduate students participated in the study. Quantitative survey method was used to analyze the data. The study is organized into two sections. Firstly, provides the data results. Secondly, describes the features that can be used for mobile learning. The information obtained from this study will provide a baseline understanding of the usage of mobile technology among territory students in Malaysia. The results reveal no significant differences among female and male students. Furthermore, the study shows how mobile features can be used as reinforcement in the learning community.

Keywords: Gender differences, mobile features, mobile learning and 3G mobile technology, ubiquitous

INTRODUCTION

The latest 3G mobile technology has attracted the current generation. This technology offers features that equal those of the computer system. Ubiquitous wireless technology has great potential of being used in learning environments. Moreover, the present generation is drawn toward the features of this technology. Thus, every student currently owns a smart phone. In Malaysia, the penetration of smart phones has increased to 27% compared to that in 2011 (Report, 2012) and it reported that the growing number of apps as a key selection criterion for 79% of users who switched to smart phones in the next six months. As a result, mobile technology has become one of the emerging technologies in the world. Owning a mobile phone does not necessarily assure that students use it for learning purposes. Although many students know that smart phones are integrated with applications, including computing and communication, they seldom use these smart phones for learning purposes. This study conducted a survey on the usage of mobile features among university students to investigate any usage differences between genders. Likewise, it explored how these features can be used for learning purposes. Literature review shows that SMS is the most important feature among teenagers, regardless of gender (Nurvitadhi, 2005; Lie, 2004; Madell and Muncer, 2004; Ling, 2001; Eldrige and Grinter, 2001). Nurvitadhi (2005) reported that Japanese adolescents preferred SMS as the most important feature of mobile technology, followed by audio player. In the United States, gaming is the most important feature, followed by SMS. Ling (2001) stated that female adolescents use more text messages than male adolescents. Madell and Muncer (2004) revealed that 91.9% of students use mobile phones to make calls, 89.4% for texting messages and 80% for receiving calls. Previous research indicated that male students are attracted to the MP3 player, whereas female students use it as a socializing tool (Ling, 2001; Bianchi and Phillips, 2005).

- The following research questions are addressed in this study:
- What are the five most important features of mobile technology used by students?
- Is there any gender difference in the usage of mobile features?

RESEARCH METHODOLOGY

The data were collected using a survey among private college students belonging to the 18 to 24 age group in Malaysia. A total of 351 samples were selected by simple computer-generated random numbers. Among the selected the participants, 193 were males and 158 were females.

Figure 1 illustrates the graph and percentage of the features frequently used by male students. Table 1 shows the ranking of the highest and lowest usage of mobile features. Male students put SMS in the 1st place, games in the 2nd, music in the 3rd, email in the 4th, social network in the 5th, music download in the 6th, MMS in the 7th and calculator in the 8th, which were followed by other features.

Figure 2 illustrates the graph and percentage of the features frequently used by female students. Table 2 shows the ranking of the highest and lowest usage of mobile features. Female students put SMS in the 1st place, games in the 2nd, music in the 3rd, email in the 4th,

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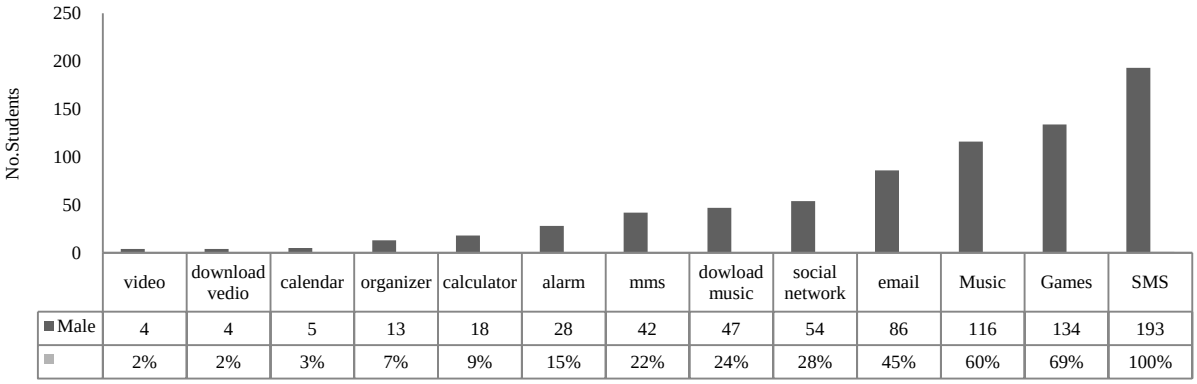

Fig. 1: Usage of mobile features among male student

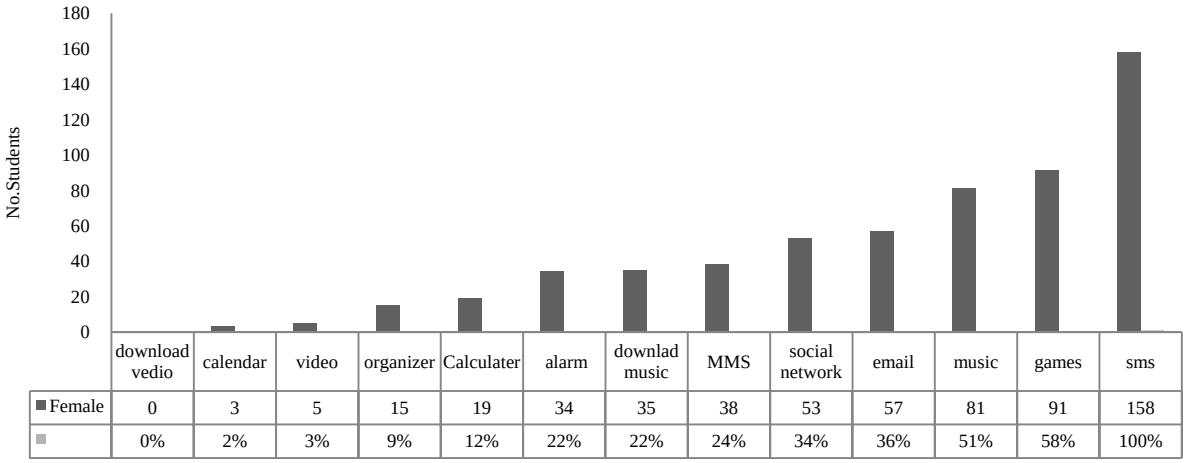

Fig. 2: Frequent usage of mobile features among female students

Table 1: Ranking of mobile feature usage among male students

Mobile features	Rank
SMS	1
Games	2
Music	3
Email	4
Social network	5
Music download	6
MMS	7
Calculator	8
Alarm	9
Organizer	10

Table 2: Ranking of mobile feature usage among female students

Mobile Features	Rank
SMS	1
Games	2
Music	3
Email	4
Social Network	5
MMS	6
Music Download	7
Alarm	8
Calculator	9
Organizer	10

social network in the 5th, MMS in the 6th, music download in the 7th and alarm in the 8th, which were followed by other features.

The result shows that the five most important features used by female and male students are similar. Hence, no differences in the usage of mobile features are observed between male and female students. Prensky (2005) stated that the present generation is a digital generation and its members are born with digital technology, thereby making them easily attracted to technologies regardless of gender. This result corroborates the premise put forward by Prensky (2005). However, students consider the mobile phone as a communication and entertainment tool and not as a device for learning.

MOBILE TECHNOLOGY AND THE LEARNING ENVIRONMENT

Behaviorism, cognitivism and constructivism are the three learning theories most often utilized in learning environments. These theories were developed 20 years ago before the advent of digital technology. Today, technology has changed our lifestyle and learning environment. According to Prensky (2005), present generations are more kinesthetic and visual. They like to learn by themselves rather than being told

Fig. 3: Features supporting the learning purpose

by someone. Traditional formal learning no longer comprises the majority of our learning. Learning at present is a continuous process and technology rewires our brains (Siemens, 2004). According to Siemens (2004), learning as a process that occurs with nebulous environments and entirely under the control of the individual through the integration of the principles of explored chaos, network and complexity and self-organization theories is called connectivism. Connectivism acknowledges the technical shift in the learning environment when new tools are utilized. The present digital generations have migrated to mobile generation and are constantly connected to mobile technology. Mobile features are ideally suited to students for learning purposes. Mobile learning enables communication in the learning community beyond the university and endows users with expertise over a range of features in an online learning environment. Mobile learning projects from the Philippines, Mongolia, Thailand, India and Bangladesh indicate that mobile learning enhances educational outcome. Alzaza and Yaakub (2011) point out that awareness of infrastructure is required to implement mobile learning services. Mobile technology offers ubiquitous wireless technology in a new platform for learners and educators and provides instructional materials and interaction among educators and learners wherever they are.

Figure 3 illustrates the benefits of using mobile features in a learning environment. Students can access mobile Internet e-books, conduct podcasting, download lectures notes, engage in social networking activities and email anywhere and anytime for learning purposes. Moreover, mobile Internet and mobile camera provide facilities for capturing the progress of assignments and video conferencing with their classmates and educators.

The unique features of mobile technology supplement traditional learning and reinforcement for the students. Wishart (2009) reported that mobile technologies are used as search engines, whereas other features are hardly used for learning purposes. Kukulska-Hulme (2007) argued that the success of using mobile technology will depend on the understanding of how these features can be used for educational purposes. Therefore, owning a mobile phone is not an assurance that students will use mobile phones for learning purposes. Educators should emphasize how the features are integrated in the learning environment.

CONCLUSION

Mobile phones have become an integral part of the life of students regardless of their gender. Mobile technology has provided new delivery platforms for learning communities because it offers flexibility and instant connectivity, which maximizes access through mobile Internet with minimum technical support. Therefore, university and faculty members ensure that students effectively use the technology for learning purposes; otherwise, the technology becomes redundant. More importantly, technology reduces paper usage and saves the environment to a certain extent.

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