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Mobile Learning in Higher Education

Mouna Nefzi
Department of libraries, College of Art, Imam Abdulrahman Bin Faisal University

***Corresponding author**
Mouna Nefzi

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Abstract: The explosion growth of Wireless, the 4G network and mobile devices have become a reality. These growths improved a ubiquitous use of mobile technology in all sectors of society. Among these sectors, the higher education befitted this technology as a new strategy of learning. M-learning becomes a very suitable and useful tool in the higher educational process. The goals of this article are to survey if the students of college of art in University Imam Abdurrahman Bin Feisal are well equipped for mobile learning, to learn how much these students adopted mobile devices in the educational process and to identify some of the problems faced by students when using these technology.
Keywords: mobile devices, mobile learning, higher education, survey

INTRODUCTION

It is evident that the technical progress has given rise to mutations in many sectors of society. Traxler **[**1**]** argued that "mobile, personal, and wireless devices are now radically transforming societal notions of discourse and knowledge, and are responsible for new forms of art, employment, language, commerce, deprivation, and crime, as well as learning ". In fact, many domains involved mobile technology, For example the health care domain and the monetary sector used this technology by sending services to all contributors. As the other areas, mobile technology has been deployed in the education sector, in such a way this technology continues to spread in the higher educational as a new tool of learning. So we can consider mobile learning a special kind of learning model adopting mobile technology [2]. It is unique compared to other types of educations. It can be used at anytime and anywhere [3].

At present approximately all students have mobile **[**4] which has favored the employing of mobile technology in the educational process. During the last few years, it is noticed that the universities are increasingly integrating this technology, because it can bring many opportunities to the learning process. The use of this technology by students is constantly evolving because it can offer them the opportunities to develop their learning skills. The aims of this article are to survey if the students of college of art in university of Imam Abdurrahman Bin Faisal are well equipped for mobile learning and to learn how these students adopted mobile learning in the educational process. In addition we determine how students treat this technology in their studies and identify some of the problems faced when they using these technologies.

RESEARCH METHODOLOGY

In the hope to achieve this survey, we given to 60 students of college of art in Dammam - University Imam Abdurrahman bin Faisal- a paper questionnaire which contains 10 multiple choices questions. To refine the results of the survey we adopted statistical method. To analyze the survey we adopted a comparison method of descriptive measures. In the next part we will present the questions posed to students and the results found, and this by presenting the percentages of every answer. By analyzing the student's demographic data, we obtain the following results: 55% are aged between 20 and 24 years, 35 % of them are under 20 years and 10% are between 25 and 29 years. For more details see figure 1.

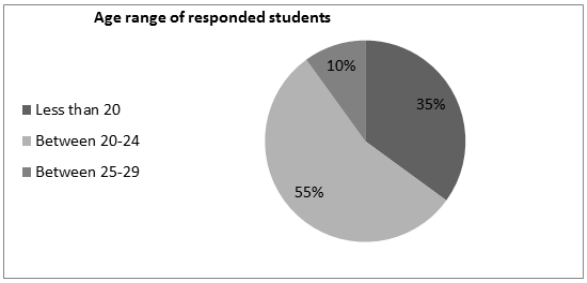

Fig-1: Age range of responded students

By analyzing the field range of responded students, the distribution of disciplines was as follows: 30% of them were from libraries. 25% were from English, 15 % are studying in communication, 20 %

from sociology and 10% from geography. See figure 2 for more details.

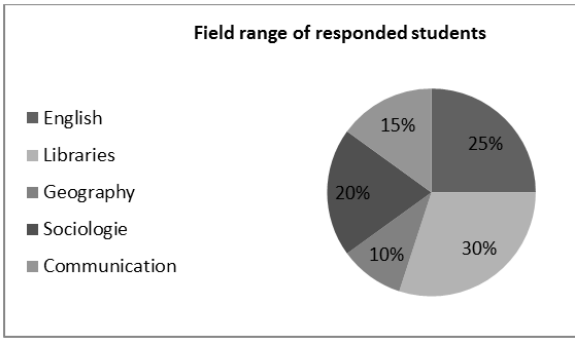

Fig-2: Field range of responded students

To determine the ownership of mobile devices, we asked some students the following question**:**

Question 1: Do you own mobile devices with internet?

a) Yes
b) no

By analyzing the obtained responses of students, 100% of the respondent students confirmed that they own mobile devices.

In order to know the number of mobiles own by each student, we asked the following question:

Question2: How many mobile devices do you own?

- 1
- 2
- More than 2

The obtained results shown that 45 % of the respondent students own 1 mobile device, 35 % of them own 2 mobiles devices and 20% of the respondent students own more than 2. See figure 3 for more details.

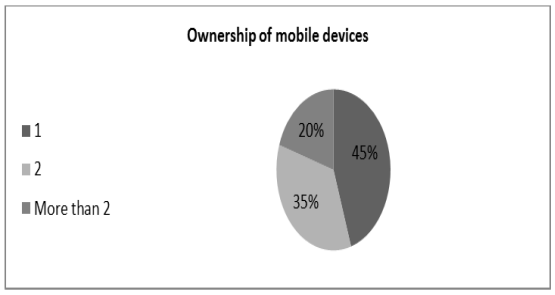

Fig-3: Ownership of mobile devices

To know the utility of the mobile devices in the study of each student, we asked the following question:

Question 3: Do you use mobile devices in your study?

a) Yes
b) No

The obtained results show that 100% of the responded students are using mobile devices in their studies.

In order to determine the frequency of using mobile devices in the studies we asked the students the question below:

Question 4: How many times a week do you use mobile devices in your study?

- Every day
- 3 days per week
- 1 day per week
- Less than that

The obtained results shown that the students use frequently mobile devices in their studies .80% of the responded students are using mobile devices every day, 15% of them are adopting m-devices for three time per week and 5% of the responded students are employing mobile devices for1time per week. See figure 4 for more details.

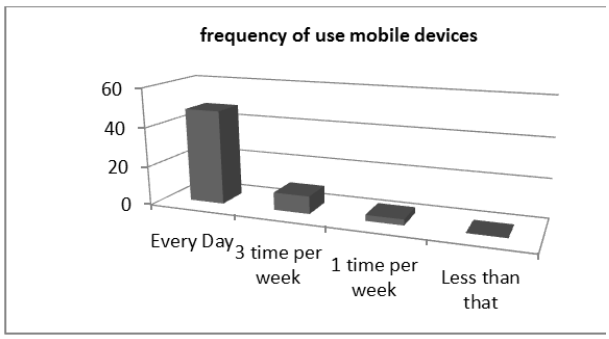

Fig-4: Frequency of use mobile devices

To determine the favorite time to use mobile devices for study we asked the student the question below:

Question 5: What is your favorite time to use mobile devices for study?

- In morning
- In afternoon
- In night
- Sometime else

The results show that the responded students use mobile devices at any time there is no time constraint. See figure 5 for more details

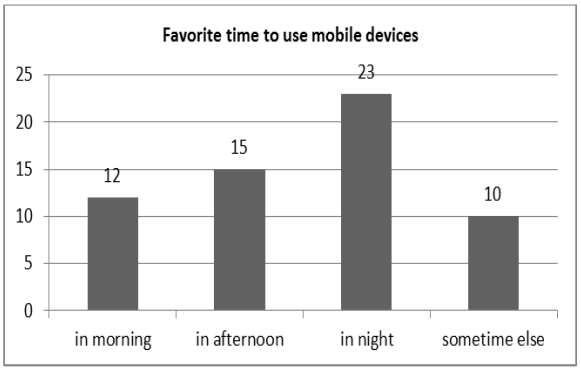

Fig-5: Favorite time to use mobile devices

To know the favorite place to use mobile devices for study we quizzed the following question:

Question 6: What is your favorite place to use mobile devices for study?

- At home
- At university
- At travel
- Somewhere else

The answers shown that the responded students use mobile devices anywhere there is no spatial constraint. See figure 6 for more details.

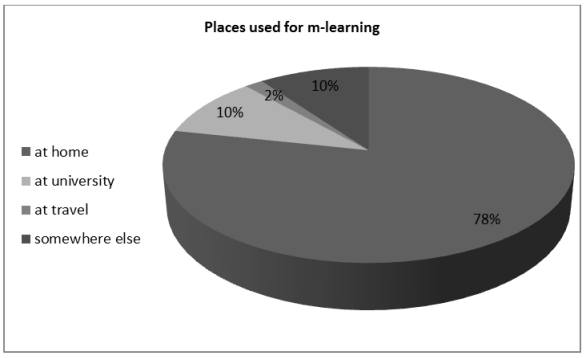

Fig-6: Places used for m-learning

To learn the main purpose of using mobile devices by students in their studies. we asked them the following question:

Question 7: What is the main goal of using mobile devices in the study?

- Communicate with teacher
- View lectures
- Communicate with classmates
- Self-study

The student's answers to this question were distributed as follows:

60% view lectures, 25 %communication with teacher, 10% communication with classmates and 10% self-studies. See figure 7 for more details.

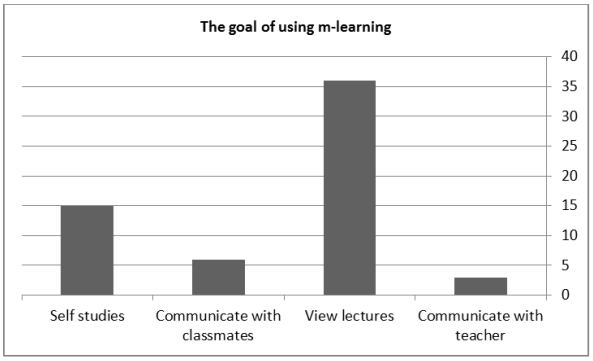

Fig-7: The goal of using m-learning

To know the material used for m-learning we quizzed the students the question below:

Question 8: What is the material used to study using mobile devices?

- Black board
- Web page
- Applications
- Other

The obtained results shown that the materials used by students for their studies are nominated in the following order: 60% black board, 27% web page, 10% application and 3% other material. See figure 8 for more details.

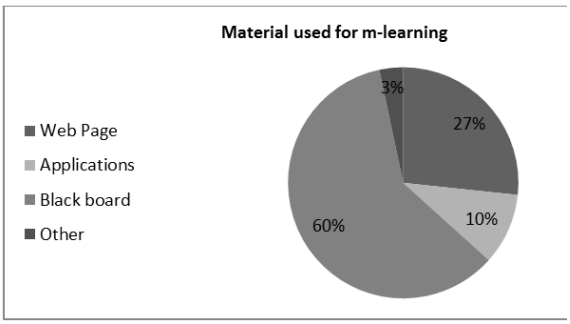

Fig-8: Material used for m-learning

To determine the features of mobile devices that encourages the students to use mobile devices in their studies**.** We asked them the following question**:**

Question9: What is the most important feature in the mobile devices?

- Easy transportation
- Adaptability with multimedia files
- CPU
- Others

The results shown that 59% of the responded students considered that the ease of transfer is one of the most important features that prompted the use of devices in learning.34% of them admitted that the adaptability with multimedia files is one of the factors that encourages students to use mobile devices in the study. 2% of the responded students chosen CPU and 5% considered that there are others features that encourages them to use mobile devices in their educations. See figure 9 for more details.

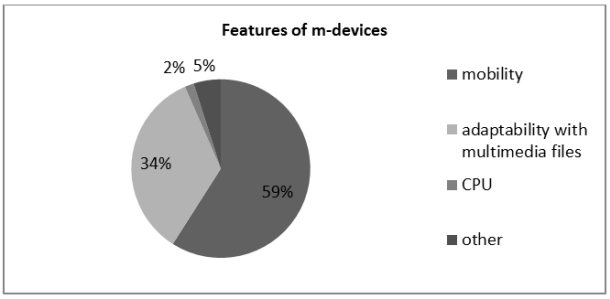

Fig-9: Features of m-devices

To determine the problems faced by students when they use mobile devices we asked them the following question:

Question 10: What is the main problem you face when you use mobile devices?

- No internet connection
- Small screen size
- Low battery
- Capacity of memory

The obtained results show that 40% of the responded students agree that no internet connection is one of the most point of limitation, 30 % of them admit that the battery life presents a problem, 20 % of the responded students consider that the screen size can be a barrier, 10% of the respondent agree that the capacity of memory can be an obstacle for m- learning. See figure 10 for more details.

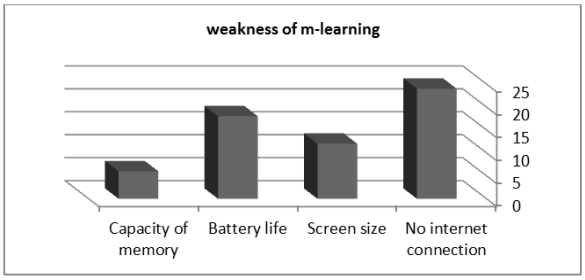

Fig-10: Weakness of m-learning

DISCUSSION

Based on this survey, it is evident that the students of college of art are well equipped by mobile devices. In fact, 100% of the responded owned mobile devices and 35% of them owned 2 devices. In addition, all the responded students used mobile devices for their studies. Ninety percent of them use m-learning for school studies in order to communicate with their classmates, to get notification from teacher and to see lectures. As Homan and Wood **[5]** indicate that m-learning changed the way that the students interact and communicate with each other's. Ten percent of the responded students exploit m-learning for the self-study. Mobile technology allows students to be more active with the course-material by finding resources related to their studies. This technology can offer to student of college of art the opportunities to ameliorate their learning competence. All the responded students admitted that there is no time and spatial constraint; they can use mobile devices to access to course materials at anytime and anywhere. Mottiwalla **[**6**]** declared that mobile learning "combines individualized learning with anytime and anywhere learning" (p. 2). Compared to available means, blackboard is often used for m-learning. 60% of the responded used this means to study. This growth use of mobile devices like tablet, smart phone in education is due to many features which have these devices: 59% of the responded agree that the mobility of the devices having higher features make them easily used by the students. 34 % of the responded admitted that the adaptability of mobile devices is very useful to download files with different types. We can deduce that the portability and the instant connectivity of mobile devices provide to students many privileges: mobile devices can be taken to different locations, and it can be used to access a diversity of data, independently of the constraint of time and space. The adaptation of mobile learning in the higher education environment presents challenges**.** The answers of students show that m- learning has some point of weakness which makes the students not likely to use it, 40% of the responded agree that no internet connection present a problem**,** the downloading of the files may be unsuccessful due to the slow network speeds**.** 30% consider that the battery life present a barrier**.** 10% admit that the memory space may be insufficient to back up all data; similar results were attained by **[7]**; Park **[**8**]**; Wang, Wu, & Wang, **[**9**]**. In their studies they speak about the technical limitation.

CONCLUSION

As all universities in the world, college of art in Dammam implemented m- learning in the educational process and the students of college of art adopted this technology. Mobile learning is still an emerging domain; researchers should find instructional models that consider both advantages and limitations of mobile devices**.** The implementation and the

employments of m-learning systems must take into account the students who have trouble of reading such as the dyslexia, also the m- learning systems must take into account the students who have reading difficulties caused by hearing or vision problems.

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