

Prospects and Challenges of Mobile Learning Implementation: A Case Study

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Abstract

Mobile learning is a new learning landscape that offers opportunity for collaborative, personal, informal, and students' centered learning environment. In implementing any learning system such as mobile learning environment, it is important to understand challenges that affect its implementations in a particular culture. Additionally, learners' and instructors' expectations are deemed necessary for consideration. However, there is a lack of studies on this aspect, particularly in the context of Kuwait HE institutions. This research presents opportunities and prospects of m-learning, and discusses challenges and implications facing its implementation. The authors of this paper conducted a study in Kuwait HE to examine both students' and instructors' perceptions and attitudes toward this trend of learning, to evaluate its effectiveness, and to investigate cultural and social challenges that affect the implementation of m-learning in Kuwait HE. A questionnaire was administered to 499 students and 110 Instructors from different higher educational institutions in Kuwait. The results reveal that students and instructors have positive perceptions of m-learning, and believe that m-learning enhances the teaching and the learning process. The study reports some social and cultural issues that may act as barriers to m-learning implementation.

Keywords: Mobile learning; e-learning; Higher education; Implementation challenges; Perceptions

Introduction

The rapid development and implementation of mobile technologies made social changes in many fields such as financial institutions, tourism, and entertainments [1]. These developments also led to the introduction and use of mobile systems in education. M-learning is considered as the latest introduced type of learning [2], and its unique capabilities have the great potential to enrich the teaching and learning experience [3]. Mobile learning has been defined by different researchers. Quinn [4] simply sees m-learning as learning that takes place by the use of mobile devices. Traxler [5] defines m-learning, as an educational interaction between learners and the learning materials, which can be accessed from any location, using mobile technology. Kinash et al. [6] describe m-learning as using mobile devices for educational setting. Mobile technology provides us with a challenge that is to find out how to construct environments that can support different kind of learning settings and activities, and how to be accepted in different cultures and traditions [7]. M-learning is also providing us with opportunity that is to change the existing learning strategies in order to give students much higher flexible approach to managing their learning experiences. Thus, many researchers and academic are currently exploring the potential of mobile devices in supporting learning process.

Researchers are working to re-conceptualize the learning process and to investigate the impact of using m-learning to support the teaching and learning environment, and potentially places educational institutions at the forefront of pedagogical practice and addresses students' requirements for flexibility and ubiquity. Ozdamli and Cavus [1] listed some characteristic of mobile learning such as: ubiquitous, portable, blended, private, interactive, collaborative, and instant. M-learning is portable in which students can use it everywhere during their learning activities [8,9]; ubiquitous in which it is transforming the traditional classroom environment into anytime and anywhere education [8,10]; blended in which Instructors can use blended learning approach and can maximize the face-to-face and online interaction [11]; interactive in which it can provide an interactive learning environment for learners and instructors [9]; collaborative in which It provides a high level of collaboration, and best used for collaborative learning activities; immediate and allows instant access to information and educational instruction [12].

The rest of this paper is organized as follows: Section 2 introduces a literature review. Section 3 provides challenges of m-learning that affect the implementation of this technology and the educational process. A case study about m-learning in Kuwaiti higher education is introduced in section 4. Section 5 concludes the study.

Literature Review

Very recent study conducted by Dashti and Aldashti [13] investigated English major students' attitudes and perceptions towards the use of mobile learning at the College of Basic Education in Kuwait. Their results obtained from the questionnaires distributed on 300 female undergraduate students, indicated that the majority (80.3%) of students like the use of mobile devices in the learning environment and believe that it enhances their knowledge of language in terms of vocabulary and grammar. Furthermore, Almutairy et al. [14] presented the findings of a survey study exploring the possibility of integrating m-learning into Saudi Arabian higher education institutions. The study showed that m-learning provides unique opportunities from the perspective of Saudi students. The students pointed out that the use of mobile phones inside the classroom has positive outcomes in terms of increasing study skills and knowledge acquisition at Saudi Arabian academic institutions. In addition, Alfarani [15] conducted a study to understand the influence on the adoption of mobile learning in Saudi women teachers in higher education. She found that although participants (educators) perceived m-learning to have the potential to enhance communication with students, they identified technological, institutional, pedagogical and individual obstacles to the use of m-learning which had negative

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influence on mobile learning acceptance. The findings also revealed that resistance to change and perceived social culture are significant determinants of the current use of and the intention to use m-learning.

Furthermore, an investigation was conducted by Al-Fahad [16], in order to understand and measure students' attitudes and perceptions towards the effectiveness of mobile learning. This study reports on the results of a survey of 186 undergraduate female students at King Saud University in Saudi Arabia about their attitude and perception to the use of mobile technology in education. Results of the survey indicate that offering mobile learning could improve the retention of bachelor students, by enhancing their teaching/learning. Similar study conducted by Nassuora [17] to understand students acceptance of mobile learning for higher education in Saudi Arabia and to examine the possibility of acceptance in m-learning. The researcher used a quantitative approach survey of 80 students, and adapted a Unified Theory of Acceptance and Use of Technology (UTAUT) model to determine the factors that influence the students' intention to use m-learning. The results from statistical analysis show that there is a high level of acceptance on m-learning level among students.

Regarding cultures, traditions, and religious norms, a recent paper by Al-kandari et al. [18] sought to find out the influence of culture on Instagram use between males and females in Kuwait. The Kuwaiti, as an Arab culture, can dictate the use of emerging social media. Study results confirm that males are more likely than females to post their personal pictures on Instagram, more likely to disclose their personal information and more likely to have public accounts unlike females who are more likely to have private accounts than males. In addition, Baker et al. [19] gave an example of Saudi Arabia a country with cultural traditions relating to gender. Because of cultural and religious norms there is gender segregation in the Saudi higher education system, which differs significantly from those who were seen in western cultures, and which have a significant impact on the attitudes and norms that influence their behavior towards the use of this technology.

M-learning Challenges

Research indicates that m-learning offers considerable benefits to build and support creative, collaborative, and communicative learning environments [20-22]. The implementation of efficient m-learning project, however, within educational environment is still a challenge due to the complex environment that incorporates management, pedagogical, technological elements, and socio-cultural issues. The following sections address and discuss some of the challenges imposed by the implementation of m-learning projects, these are: Management and Institutional Challenges; Integration to Technology Challenges; Technical Challenges; Design Challenges; Evaluation Challenges; Cultural and Social Challenges.

Management and institutional challenges

Managements of educational institutions need to define a clear policies, and technical and pedagogical support, in order to go for wide-scale implementation of m-learning. Lack of support and institutional policies were cited as institutional obstacles [23]. One of the most crucial challenges facing the educational institutions, when implementing m-learning project, is managing the change within the institution. Managing such change will affect processes, activities, and components, as well as people such as managers, decision makers, content designers and developers, employees, students, and instructors, of the educational institution [24]. The principles of change management have to be applied properly in order for the change process to succeed, starting with extensive and in advance planning [25]. The goal of the change

management is to change the attitudes and behaviors in the educational sector at different levels that includes different organizational and individual layers. Adopting a new m-learning strategy is a major change and naturally, people resist it, therefore, using the change management techniques will support moving towards the new era with confidence.

Integration to pedagogy challenges

It is challenging to properly integrate technology into their wider educational activities, and serious consideration must be given to teaching and learning strategies. The main drivers of innovation of m-learning should not be just deploying technology; there must be an integration of pedagogy and new methodologies that achieve educational goals. In order to develop successful mobile educational applications, design guidelines and new methods for the learning process must be followed, and, it is important to consider the methodological issues to develop appropriate pedagogical models. Significant efforts and steps have been made to provide methodologies and strategies in order to integrate mobile devices into teaching and learning practices [26]. Dahlstrom and Bichsel [27] urge researchers to look at pedagogical insights that will help instructors to better embrace mobile technologies. It is stressed by McGreal [28], that to accomplish this, mobile learning requires a successful integration between educational content and technology to achieve educational goals and to provide a successful teaching and learning environment. Alhazmi and Rahman [29] argued that the technological features of mobile applications such as mobility and interactivity are essential to successfully integrate this technology into wider educational settings.

Design challenges

It is important to understand that mobile devices are equipped with various features such as: Camera, location, recording, sensors, search, media player, calculator, calendar, etc. Understanding these capabilities of mobile devices will help designers to explore the potential of mobile learning, which can truly support informal and social learning models. Designers of m-learning applications need to understand the three types of design, that is: instructional design, which is the educational design of the application; interface design, which is the transparent to the user; and screen design, which is the design of the graphics and the visual display. Al-Hunaiyyan [30] pointed that the more emphasis the developer puts in these designs, the more useful and functional the application will be. It is essential for instructional designers to design e-learning courses effectively for mobile devices, he pointed out that m-learning should be viewed differently from that of e-learning, due to mobile characteristics such as the screen size, screen orientation, mobile storage and memory, and network bandwidth.

On the other hand, user interface design is important factor for successful application. Thus, designing and developing an efficient educational interface within a learning environment is still a challenge for most developers, facilitators, and educators [31]. Udell [32] stated that user's interface for mobile must be consistent and stressed to keep the application simple when designing interfaces on mobile devices. M-learning applications must be simple and intuitive. In addition, the organization of elements and media on the mobile screen will undoubtedly influence the ease and quality of learning, and has an important impact on learners' cognitive load. Good screen design attempts to impose consistency on the layout of the screens, and the content of information displayed on the screen is very important in determining the success of a user's interaction with the system [30]. It is important to consider the number of pixels available on target users' device. This will help in providing the best quality of images, and higher resolutions on users' devices. Considering the aspect ratio is

also important, designing for landscape display (Horizontal) should be different than designing for portraits (Vertical).

Technical challenges

Technical difficulties are a significant aspect in the implementation and integration of m-learning technologies in education. Qureshi et al. [33] listed some of these difficulties which include “installation, availability of latest technology, fast Internet connection, and uninterrupted supply of electricity, maintenance, administration, security and absence of technical support”. There are technical challenges related to the infrastructure, mobile device, application development, technical support, security, and technical knowledge of instructors, learners, and other stakeholders, which must be considered when employing m-learning project. These challenges resulted from the rapid change in technologies, programs and devices. Furthermore, Park [34] listed some technical limitations related to the physical attributes of mobile devices such as: small screen size; insufficient memory; limited battery; network reliability; excessive screen brightness outside; limitation of software applications; safety and privacy. In addition, connectivity and bandwidth need to be considered when developing m-learning. Bakari et al. [35] pointed that most of the developing countries lack quality and expert in technical support and maintenance of Information and Communication Technologies (ICT).

Evaluation challenges

Evaluation is an essential activity in the lifecycle of any interactive learning systems design, and mobile learning adds additional challenges for evaluation of both the technology and the learning outcome. There is a lack of evidence regarding the effective use of mobile learning in education, which he believes will limit the widespread adoption of mobile learning. Kukulska-Hulme and Traxler [36], urged to integrate evaluation strategies into the development and implementations of m-learning technologies. Traxler [37] said that evaluation of mobile learning is challenging. He identified some attributes that a ‘good’ evaluation should be: “Efficient (cost and time); Rigorous; Ethical; Proportionate; Consistent with the teaching and learning strategies; Aligned to the technology of learning; and Authentic”. Furthermore, Park [34] stressed on using various assessment methods of learners using mobile devices.

Cultural and social challenges

There are cultural norms and social concerns while accepting the deployment of m-learning. Kadirire and Guy [38] pointed a drawback to mobile learning is the personal uses of the device with less control over the students makes mobile learning activities are subject to frequent interruptions. Ethical and practical implications such as: resistance to change amongst lecturers; concerns about new social practices affecting lecturers’ personal time; increasing amount of information to be stored on his device; privacy issues; data security; and cyber-bullying, were addressed by [39,40]. The accessibility of mobile devices is another challenge. If mobile learning is to be implemented successfully, students and instructors must own a mobile device. Naismith et al. [41] addressed issues related to the implementation of m-learning including technology ownership and the digital divide. Furthermore, Park [34] listed social limitations of m-learning such as: Accessibility and cost issues for end users; frequent changes of mobile device models; and risk of learners’ distraction.

Cultural differences in relation to perceptions and attitudes towards types of technology are key factors for both the acceptance of these types of technology and for their future use [42]. Introducing m-learning applications to a new culture brings many issues that

need to be investigated. Resistance to change is a great challenge, it is believed that mobile technology increases the work for the instructors because it adds additional preparations. Some educators resist the idea of integrating this technology into their practice, because of the constraints it present to them. Studies report that resistance to change plays an essential role in accepting technology in education [43,44]. Tai and Ting [45] believe that the success of the m-learning project depends on the participation of instructors and their belief in the possibilities of this technology, and its effectiveness to enhance teaching and learning. Creating a professional development and teacher training course can foster collaboration among instructors to become comfortable environment while using this technology in and out the classroom [46].

Case Study: M-learning in Kuwait HE

The Ministry of Education in Kuwait (MOE) has launched a national e-learning project in Kuwait based on Kuwait e-learning strategy that was developed in 2008. The MoE distributed 80,500 one to one mobile devices (Tablets) on students and instructors in the academic year 2015/2016 in order to activate mobile learning. Currently, the teacher readiness program is executed to prepare the teacher for the new era. This program is designed by the e-learning team at MoE and international vendors.

In the Arab world, Al-Shehri [47] stated that one major factor which can make mobile learning suitable and effective choice in the Arab world is the widespread penetration of mobile devices among Arab young students. The mobile market in Kuwait experienced strong growth in mobile penetration to over 200 percent in 2015 offering strong network connections [48]. The high mobile phone penetrations among people in Kuwait as well as availability of good mobile infrastructure are all important factors that can enhance the shift to mobile learning. Therefore, this study was conducted to seek both students’ and instructors’ perceptions and attitudes toward mobile learning, evaluate its effectiveness, and investigates cultural and social challenges that affect the implementation of m-learning in Kuwait HE.

The study tries to answer the following questions:

1. What are the students’ and instructors’ perceptions towards the use of mobile devices for m-learning?
2. Is there any perceived social or cultural issues that may affect the acceptance of m-learning?
3. Will instructors resist the idea of mobile learning?

Methodology

This study was exploratory in nature. It investigates higher education students’ and instructors’ perceptions and attitudes towards mobile learning. For the sake of satisfying the study’s objectives, two online questionnaires have been designed, one for students, and one for instructors (the reason for designing two questionnaires because of slight variations of the questions). During the second academic term (Spring 2015/2016), the questionnaires were randomly distributed to 620 undergraduate students (in which 499 students completed all of the questions in the questionnaire successfully). The questionnaires were also randomly distributed to 125 instructors (in which 110 instructors completed all of the questions in the questionnaire successfully). The analysis of the survey results is presented based on a valid response of the questioned answered by students and the instructors who completed all of the questions in the questionnaires, 499 students and 110 instructors. Students and instructors come from various institutions such as: The Public Authority for Applied Education and Training (PAAET), private universities, Kuwait University, and others.

The scales used in the two questionnaires were designed to be appropriate to the scope and context of the study. Each questionnaire is consisted of 2 sections. Section 1 collects demographic data which is showing in Tables 1 and 2, and gathers information about the frequent use of mobile device, type of mobile and their frequent use of mobile applications. On the other hand, Section 2 which its data presented in Tables 3, 4, and 5 measures students' and instructors' perceptions and attitudes towards the usefulness of mobile learning and social media learning tools. Section 2 of the questionnaire consisted 5-PointLikert type scale as: 1 for Strongly Disagree, 2 for Disagree, 3 for Neutral, 4 for Agree, and 5 for Strongly Agree. In order to rate the questionnaire items, data were quantitatively analyzed using SPSS. Percentages, means, and standard deviations (SD), were used for the sake of the analysis. A pilot study was conducted on students in a class section with their instructor in order to test the adequacy of the questionnaire, to assess the feasibility of the survey, and to validate the initial results. Few improvements were made for the preparation of the main study. The profiles of the respondents were analyzed by using the SPSS descriptive analysis function.

Results

In this section we present results of the study including students' and instructors' demographic data and background information, Tables 1 and 2; Students' and instructors' perceptions and attitudes about m-learning, Tables 3 and 4; A comparison between students' and instructors' opinions and perceptions in Table 5.

Respondents Profiles and background information

The outputs of the first 6 questions are tabulated below showing students' gender, marital status, age, educational institution, type of mobile device, and frequent use of mobile applications. Table 1 represents the characteristics of the students (499 responses) and Table 2 represents characteristics of the instructors (110 responses). The interesting point is that the mobile devices ownership is high for both students and instructors, i.e. more than 99% own a mobile device.

Students' perception on M-learning

Section (2) of students' and instructors' questionnaires used to measure students' and instructors' perceptions and attitudes about m-learning. The term Agreement represents "Strongly agree" plus "Agree" responses, while Disagreement represents "Strongly disagree" plus "Disagree responses". Table 3 reflects students' responses.

Instructors' perceptions on M-learning

Instructors' responses regarding their perceptions and opinions about m-learning are shown as in Table 4.

Comparing students' with instructors' perception

Data presented in Table 5 compares students' and instructors' responses. The table shows the percentage of students' and instructors' perceptions and opinions. The term Agreement represents "Strongly agree" plus "Agree" responses, while Disagreement represents "Strongly disagree" plus "Disagree" responses. It is interesting to find similarity in the percentages of most of the questions, as illustrated in Figure 1, which indicates that they have the same perception and attitudes toward m-learning.

Discussions

Regarding the first research question, "What are the students' and instructors' perceptions and attitudes towards the use of mobile devices for m-learning?", The results presented in Table 3 and Table 4 show that

| Characteristics | Number | Percentage % |
|--------------------------------------|--------|--------------|
| Q1. Gender | | |
| Male | 160 | 32.1% |
| Female | 339 | 67.9% |
| Q2. Marital status | | |
| Single | 356 | 71.3% |
| Married | 143 | 28.7% |
| Q3. Age | | |
| 16-24 Years | 336 | 67.3% |
| 25-35 Years | 116 | 23.2% |
| More than 35 | 47 | 9.4% |
| Q4. Educational institution | | |
| PAAET | 246 | 49.3% |
| Kuwait University | 38 | 7.6% |
| Private University | 154 | 30.9% |
| Ministry of Education | 46 | 9.2% |
| Other | 15 | 3.0% |
| Q5. My mobile device | | |
| I Phone | 379 | 76.0% |
| Galaxy | 110 | 22.0% |
| Others | 8 | 1.6% |
| I do not own | 2 | .4% |
| Q6. I use mobile applications | | |
| Seldom | 13 | 2.6% |
| Sometimes | 123 | 24.6% |
| Always | 363 | 72.7% |

Table 1: Characteristics of the Students (499 respondent).

| Characteristics | Number | Percentage % |
|--------------------------------------|--------|--------------|
| Q1. Gender | | |
| Male | 65 | 59.1 |
| Female | 45 | 40.9 |
| Q2. Marital status | | |
| Single | 36 | 32.7 |
| Married | 74 | 67.3 |
| Q3. Age | | |
| 16-24 Years | 24 | 21.8 |
| 25-35 Years | 25 | 22.7 |
| 36-55 Years | 52 | 47.3 |
| More than 55 Years | 9 | 8.2 |
| Q4. Educational institution | | |
| PAAET | 65 | 59.1 |
| Kuwait University | 6 | 5.5 |
| Private University | 23 | 20.9 |
| Ministry of Education | 15 | 13.6 |
| Other | 1 | .9 |
| Q5. My mobile device | | |
| I Phone | 79 | 71.8 |
| Galaxy | 27 | 24.5 |
| Others | 3 | 2.7 |
| I do not own | 1 | .9 |
| Q6. I use mobile applications | | |
| Seldom | 1 | .9 |
| sometimes | 21 | 19.1 |
| Always | 88 | 80.0 |

Table 2: Characteristics of the Instructors (110 respondent).

students and instructors have positive opinions about m-learning. The results strongly suggest that majority of the students and instructors perceived mobile learning as appealing learning tool as it allows the freedom to learn whenever and wherever they want. The value of

| No. | Question | | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | Mean | SD |
|-----|--|-----------|----------------|-------|---------|----------|-------------------|------|-------|
| | Learning by mobile helps me learn anytime anywhere | Frequency | 202 | 183 | 66 | 32 | 16 | 4.05 | 1.040 |
| | | Percent % | 40.48 | 36.67 | 13.23 | 6.41 | 3.21 | | |
| | Learning by mobile increases students' motivation to learning | Frequency | 127 | 150 | 140 | 64 | 18 | 3.61 | 1.106 |
| | | Percent % | 25.45 | 30.06 | 28.06 | 12.83 | 3.61 | | |
| | Mobile helps to follow up on grades and student record | Frequency | 272 | 166 | 44 | 9 | 8 | 4.37 | .844 |
| | | Percent % | 54.51 | 33.27 | 8.82 | 1.80 | 1.60 | | |
| | Learning by mobile is a good idea | Frequency | 144 | 161 | 117 | 50 | 27 | 3.69 | 1.148 |
| | | Percent % | 28.86 | 32.26 | 23.45 | 10.02 | 5.41 | | |
| | M-learning breaks down psychological barriers between students and instructors | Frequency | 142 | 175 | 108 | 49 | 25 | 3.72 | 1.127 |
| | | Percent % | 28.46 | 35.07 | 21.64 | 9.82 | 5.01 | | |
| | M-learning helps me to share information with other students | Frequency | 238 | 184 | 55 | 8 | 14 | 4.25 | .918 |
| | | Percent % | 47.70 | 36.87 | 11.02 | 1.60 | 2.81 | | |
| | The use of social media applications help in educational attainment | Frequency | 119 | 220 | 95 | 48 | 17 | 3.75 | 1.030 |
| | | Percent % | 23.85 | 44.09 | 19.04 | 9.62 | 3.41 | | |
| | I feel satisfied if it were to impose the use of m-learning as a new learning tool | Frequency | 103 | 124 | 133 | 84 | 55 | 3.27 | 1.270 |
| | | Percent % | 20.64 | 24.85 | 26.65 | 16.83 | 11.02 | | |
| | I reject m-learning if it allow male and female students to contact each other | Frequency | 74 | 95 | 161 | 97 | 72 | 3.00 | 1.248 |
| | | Percent % | 14.83 | 19.04 | 32.26 | 19.44 | 14.43 | | |
| | Our society will reject m-learning due to the customs and traditions | Frequency | 49 | 97 | 167 | 114 | 72 | 2.87 | 1.175 |
| | | Percent % | 9.82 | 19.44 | 33.47 | 22.85 | 14.43 | | |
| | The use of social media will cause social and family problems | Frequency | 75 | 136 | 162 | 86 | 40 | 3.24 | 1.145 |
| | | Percent% | 15.03 | 27.25 | 32.46 | 17.23 | 8.02 | | |

Table 3: Students' Perceptions on Mobile Learning.

| No. | Question | | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree | Mean | SD |
|-----|--|-----------|----------------|-------|---------|----------|-------------------|------|-------|
| | Learning by mobile helps students learn anytime anywhere | Frequency | 31 | 53 | 14 | 9 | 3 | 3.91 | .991 |
| | | Percent % | 28.2 | 48.2 | 12.7 | 8.2 | 2.7 | | |
| | Mobile helps to follow up on recording my grades and follow student's records | Frequency | 62 | 38 | 4 | 6 | 0.0 | 4.42 | .806 |
| | | Percent % | 56.4 | 34.5 | 3.6 | 5.5 | 0.0 | | |
| | M-learning breaks down psychological barriers between students and instructors | Frequency | 29 | 49 | 26 | 4 | 2 | 3.90 | .898 |
| | | Percent % | 26.4 | 44.5 | 23.6 | 3.6 | 1.8 | | |
| | M-learning will add additional duties on my regular work as an instructor | Frequency | 12 | 23 | 32 | 30 | 13 | 2.92 | 1.182 |
| | | Percent % | 10.9 | 20.9 | 29.1 | 27.3 | 11.8 | | |
| | m-learning helps to solve the problems caused by the absence of students | Frequency | 30 | 49 | 19 | 8 | 4 | 3.85 | 1.024 |
| | | Percent % | 27.3 | 44.5 | 17.3 | 7.3 | 3.6 | | |
| | Using mobile in teaching increases academic achievement for students | Frequency | 25 | 45 | 24 | 13 | 3 | 3.69 | 1.038 |
| | | Percent % | 22.7 | 40.9 | 21.8 | 11.8 | 2.7 | | |
| | Q13_ Use social media applications help in educational attainment | Frequency | 23 | 56 | 20 | 7 | 4 | 3.79 | .968 |
| | | Percent % | 20.9 | 50.9 | 18.2 | 6.4 | 3.6 | | |
| | I feel satisfied if it were to impose the use of m-learning as a new teaching tool | Frequency | 24 | 30 | 29 | 15 | 12 | 3.35 | 1.268 |
| | | Percent % | 21.8 | 27.3 | 26.4 | 13.6 | 10.9 | | |
| | I would like to use mobile in teaching | Frequency | 35 | 32 | 29 | 7 | 7 | 3.74 | 1.163 |
| | | Percent % | 31.8 | 29.1 | 26.4 | 6.4 | 6.4 | | |
| | Our society will reject m-learning due to the customs and traditions | Frequency | 13 | 24 | 38 | 23 | 12 | 3.03 | 1.161 |
| | | Percent % | 11.8 | 21.8 | 34.5 | 20.9 | 10.9 | | |
| | The use of social media will cause social and family problems | Frequency | 13 | 30 | 44 | 17 | 6 | 3.25 | 1.033 |
| | | Percent % | 11.8 | 27.3 | 40.0 | 15.5 | 5.5 | | |

Table 4: Instructors' Perceptions on Mobile Learning.

mobility in mobile learning is vital and appreciated by the students and instructors. They perceived potential of providing various ways of learning; follow up on students' records and grades; and in obtaining resources and multimedia learning materials on their mobiles. Students and instructors feel strongly that mobile devices allow them to be connected and collaborate with each other. The enjoyment that they perceived in using their mobile devices is also a key issue in their

perception of mobile learning. In addition, there is also evidence of positive perception on using mobile learning as a social device. By being able to collaborate and connect themselves to the facilitators, students and other people, students and instructors felt positively towards mobile learning with the social features offered through their mobile devices and social media applications. About 67% of the students and 72% of instructors believe that social media applications enhance learning.

| No. | Question | Students' Agreement | Instructors' Agreement |
|-----|---|---------------------|------------------------|
| Q1 | I own a mobile device (Device Ownership) | 99.60% | 99.10% |
| Q2 | Learning by mobile helps students learn anytime anywhere. | 77.15% | 76.40% |
| Q3 | Mobile helps to follow up on instructors and students' grades and records | 87.78% | 90.00% |
| Q4 | M-learning breaks down psychological barriers between students and instructors | 63.53% | 70.90% |
| Q5 | m-learning helps to solve the problems caused by the absence of students | 76.55% | 71.80% |
| Q6 | Use social media applications help in educational attainment | 67.77% | 72.00% |
| Q7 | I will be satisfied if it were to impose the use of m-learning as a new teaching tool | 45.49% | 48.80% |
| Q8 | Our society will reject m-learning due to the customs and traditions | 29.26% | 33.60% |
| Q9 | The use of social media will cause social and family problems | 42.28% | 39.10% |

Table 5: Comparing Students' with Instructors Perceptions.

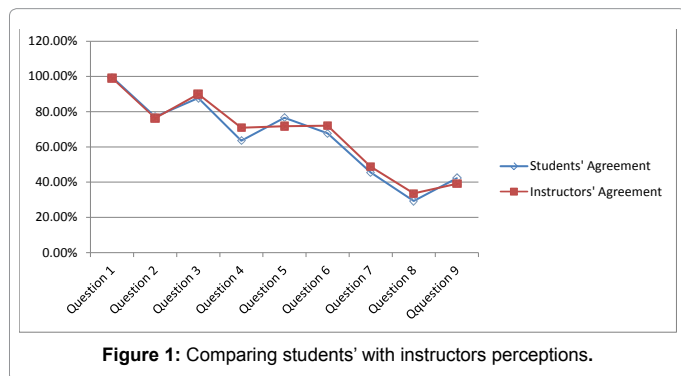


Figure 1: Comparing students' with instructors perceptions.

In regards to the second research question “Is there any perceived social or cultural issues that may affect the acceptance of m-learning?” It is important to point that because of Kuwaiti traditions and conservative culture, there is gender segregation in the Kuwaiti educational system, therefore, students’ opinions about male students contacting female students through m-learning collaboration was exactly divided in half with 33.87% rejected, while 33.87% did not reject. In regard to the society whether they reject m-learning because of Kuwaiti culture and traditions, students who agree are 29.26%, which is less than students who disagree with 37.28%. On the other hand, instructors’ agreement on that are 33.560% of the total number, which is slightly higher than those instructors who disagree (31.80%). In addition, as social media can be used in collaborative learning, students who believed that social media programs will cause family problems are 42.28%, which is higher than 25.25% of those students who disagree, while instructors who believed that social media programs will cause family problems are 39.10% which is higher than 21.00% of the instructors who disagree.

Although the conservative attitudes of students and instructors and the society at large regarding the use of mobile devices equipped with a camera which is allowing male students to contact female students

which might negatively affects the use of mobile learning in class, the respondents were divided on this issue, with half ‘agreeing’ and the other half ‘disagreeing’. About 67% of the students and 72% of instructors believe that social media applications enhance learning. However, they indicated that the use of social media will cause family problems because of the culture and traditions in Kuwait. A study conducted by Alkandari et al. [18] supported these findings. The study show that families in Kuwait are more likely to reject that their daughters to allow other stranger males to follow them in social media applications. Having males followers may shows a female who is a playful. Such image is because “The misbehavior by women is believed to do more damage to family honor” [49]. Another study by Baker et al. [17] indicated that when, there is gender segregation in the education system, because of cultural and religious norms which differs significantly from those seen in western cultures, will have a significant impact on the attitudes and norms that influence their behavior towards the use of this technology [50-55].

To answer the third research question, “Will Instructors resist the idea of mobile learning because it adds more responsibilities?”, although resistance to change is a negative influence on the acceptance of m-learning [15], instructors in this study felt happy with using m-learning in teaching and not showing resistant to the technology in which (60.17%) of them agree that m-learning is a good idea to be used for teaching. However (32.79%) of them believed that m-learning will add additional duties on their work.

Although mobile devices ownership is very high among students’ (99.6%) and instructors (99.10%), m-learning remains in its infancy in Kuwait higher education. However, Research indicates that the use of mobile technology in learning is not as widespread as the devices themselves [27].

Conclusion

This research presents opportunities and prospects of m-learning, and discusses challenges and implications facing its implementation. The motivation in pursuing this study is the interest to understand students’ and instructors’ perceptions and attitudes about mobile learning, and to look at the readiness of both students and instructors to adopt and use m-learning in Kuwait HE. Our study shows that students’ and instructors’ attitude to mobile learning is welcoming, and that the majority of the students and instructors believe that m-learning is appealing because it allows the freedom to learn whenever and wherever they want regardless of their gender, age, or their educational institution (government or private). In spite of the m-learning welcoming by students and instructors, they thought that the society might reject m-learning because it has a conflict with the Kuwaiti traditions and culture, especially that there is gender segregation in the Kuwaiti educational system. M-learning remains in its infancy in Kuwaiti educational systems, and it is hoped that with adequate information and awareness of the requirements of m-learning and its challenges, academic institutions and higher education policy makers in Kuwait should consider the possibility of creating mobile learning environments at academic institutions with consideration of the social, cultural, religious norms, and traditions.

As for a future work, it is important for m-learning implementations to understand and overcome the challenges of m-learning which are discussed in this paper such as management challenges, pedagogical challenges, design and development challenges, technical challenges, evaluation challenges, cultural and social challenges. The increasing availability of open educational resources for mobile technology is making access to learning more affordable for students. A research on

how to design and deliver learning content to reach the Arab learners, by adopting pedagogical approaches and methodologies, taking into consideration their cultures, values, and local contexts, is valuable.

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