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Ahmed Alhunaiyyan, Rana A. Alhajri, Salah Al-Sharhan

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PROSPECTS AND CHALLENGES OF MOBILE LEARNING IMPLEMENTATION:

A Case Study on Kuwait Higher Education

Ahmed Alhunaiyyan¹, Rana A. Alhajri^{2*}, Salah Al-Sharhan³

^{1,2} Department of Computer Science

The Public Authority for Applied Education and Training (PAAET), KUWAIT

e-mail¹: hunaiyyan@hotmail.com , e-mail²: rana_alhajri@yahoo.com,

³ Computer Science Department, Gulf University for Science and Technology (GUST) - KUWAIT
alsharhans@gust.edu.kw

*Corresponding Author

BIOGRAPHY



Dr. Ahmed A. Al-Hunaiyyan is a faculty member of the department of Computer and Information systems at the College of Business Studies, PAAET, Kuwait. He earned his PhD. Degree in the field of Computer Science, specializing in Multimedia interface design, from Hertfordshire University, United Kingdom. As of working experience, he participated in various academic institutions, in and out of Kuwait. Now Dr. Al-hunaiyyan is a research associate at the faculty of computer science at University of Malaya, Malaysia. His research interest is Human Computer Interaction (HCI), software Usability, Designing Educational Multimedia Interfaces and social media.



Dr. Rana Alhajri is a faculty member in the department of Computer Science at the Higher Institute of Telecommunication and Navigation, Public Authority for Applied Education and Training (PAAET), Kuwait. She earned her PhD. Degree in the field of Computer Science, specializing in e-learning, from Brunel University, United Kingdom. Her research interest is Hypermedia, Individual Differences, HCI, Usability, Multimedia Interface design in education in software use and social media.



Dr. Salah Al-Sharhan is the Vice President for Academic Affairs at Gulf University for Science and Technology (GUST), and an associate professor in Computer Science Department. He earned his Ph.D. in Systems Design Engineering with an emphasis on the Computational Intelligence from the University of Waterloo, Canada in 2002. His research interests span different areas such as intelligent systems, data clustering and classifications using soft computing algorithms, and the application of computational intelligence techniques to a verity of real life problems. In addition, Dr. Al-Sharhan developed several e-learning and e-health models and participated in developing the strategic plans for different sectors in State of Kuwait such as the eLearning Strategy of the Ministry of education. Also, he was the Program Manager of the eLearning Project (consisted of 10 different projects) which was a splendid national project that introduced eLearning to all the schools of the State of Kuwait.

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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 the challenges that affect its implementation. 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 higher education (HE) institutions. This research presents opportunities and prospects of m-learning, and discusses challenges and implications facing its implementation. This article presents a study which was conducted 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 higher education (HE). A questionnaire was administered to students and 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 learning process. However, 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.*

1. Introduction

The use of mobile devices has integrated into all aspects of life even in the developed countries. The rapid development and growth of mobile technology has motivated developers to introduce a wide range of mobile applications, changing users' behavior and expectations and reshaping industries and businesses. The rapid development and implementation of mobile technologies made social changes in many fields such as financial institutions, tourism, and entertainments (Cavus, 2011). These developments also led to the introduction and use of mobile devices in education, which is considered the latest introduced type of learning (Ebrahim, et al., 2015).

New interactive technologies are providing us with a challenge and an opportunity evenly. Mobile technology is providing 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 (Alhajri, et al., 2011; Alhajri, et al., 2013). M-learning is also providing us with opportunity that is to change the existing learning strategies to give students much flexible approach to managing their learning experiences. Thus, many researchers and educators are currently exploring the potential of mobile devices in supporting the learning process.

Mobile learning has been defined by different researchers. Quinn (2000) simply sees m-learning as learning that takes place using mobile devices (Quinn, 2000). Traxler (2007) defines m-learning, as an educational interaction between learners and the learning materials, which can be accessed from any location, using mobile technology (Traxler, 2007). Kinash et al. (2012) describe m-learning as using mobile devices for educational setting (Kinash, et al., 2012). Furthermore, Ozdamli and Cavus (2011) define Mobile learning as a kind of learning that allows learners to obtain learning materials anytime anywhere, using mobile devices (Ozdamli & Cavus, 2011). It is worth pointing out the difference between e-learning, and m-learning, e-learning is identified as an online learning which can be carried out in and out of the classroom (Rosenberg, 2001). Sharples (2005) sees m-learning as an extension of e-learning (Sharples, 2005); while the work of Winters (2006) concludes that m-learning is a subset of e-learning (Winters, 2006).

The rest of this article is organized as follows: Section 2 introduces related studies. 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 HE is introduced in section 4. Section 5 concludes the study, and suggests future directions.

2. Related Studies

Mobile learning has a significant impact on teaching and learning (Klassen, et al., 2013). That urged researchers to investigate the impact of using m-learning to support the teaching and learning. Ozdamli and Cavus (2011) listed some characteristic of mobile learning such as: ubiquitous, portable, blended, private, interactive, collaborative, and instant (Ozdamli & Cavus, 2011). M-learning is characterized as *portable*, students can use it anytime, anywhere (Cavus & Ibrahim, 2009; Ahonen, et al., 2004); *ubiquitous* because it transforms the traditional classroom into anytime and anywhere education (Kukulska-Hulme, et al., 2009; Cavus & Ibrahim, 2009); *blended* in which instructors can blend m-learning with traditional learning (Al-Sharhan, 2016), and can maximize the face-to-face and online interaction (Ocak, 2010); *interactive* in which it can provide an interactive learning environment (Cavus & Uzunboylu, 2009); *collaborative* because it creates collaborative learning activities (Uzunboylu, et al., 2009); *immediate*, it allows instant access to learning materials and educational instruction (Eteokleous & Ktoridou, 2009). Furthermore, Chen et al. (2013) pointed out that mobile platforms allow learners to collaborate with their classmates, search information, find and search locations (Chen, et al., 2013).

The valuable features of mobile computing bring both opportunities and challenges to the development of Mobile Social Media Applications (MSMA). Social media applications offer opportunities to enrich students' collaboration, engagement, and interactivity. Valtonen et al. (2011) used mobile devices with his students to enable them to collaborate and share lecture notes via Twitter. His students discussed class activities, exchanges course related resources, and commented on classroom experiences using this social media program. They said that twitter allows them to interact, share, express, and build constructive relationships which affects the quality of learning (Valtonen, et al., 2011). In addition, Alhazmi and Rahman (2013) believe that social media applications create collaborative teams that advance students' participations and engagements (Alhazmi & Rahman, 2013).

Since the authors are focusing on Kuwait HE in which a case a study was conducted to understand students' and instructors' perceptions of m-learning, here are some studies conducted in Kuwait and in Saudi Arabia, a country which is very close to Kuwait in terms of culture, traditions, religion, and social life. A recent study was conducted by Dashti & Aldashti (2015) 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 undergraduate female students, indicated that (80.3%) are happy with using mobile devices in the learning environment and believe that it enhances their knowledge of English language (Dashti & Aldashti, 2015). Furthermore, Almutairy et al. (2015) presented the findings of a survey study exploring the possibility of integrating m-learning into Saudi Arabian higher education institutions. Their study showed that m-learning provides great opportunities, and pointed out that the use of mobile phones inside the classroom increases knowledge acquisition (Almutairy, et al., 2015). In addition, Alfarani (2015) conducted a study to understand the influence on the adoption of mobile learning in Saudi women teachers in higher education. She found that m-learning has the potential to enhance collaboration with students, however, she listed some obstacles which had negative effects on mobile learning acceptance. The findings also revealed that resistance to change, social, and cultural issues are significant factors of using m-learning (Alfarani, 2015).

Furthermore, an investigation was conducted by Al-Fahad (2009), to understand and measure students' attitudes and perceptions towards the effectiveness of mobile learning. A survey of 186 undergraduate female students at King Saud University in Saudi Arabia was used, the results of the survey indicated that mobile learning improves the retention of knowledge, and enhances students' learning process (Al-Fahad, 2009). Similar study conducted by Nassuora (2013), to examine students' acceptance of mobile learning in Saudi Arabia, using a quantitative approach survey of 80 HE students. The study results demonstrated that m-learning has a high level of acceptance among the Saudi students (Nassuora, 2013).

Regarding culture, traditions, and religious norms, Baker et al. (2007) gave an example of Saudi Arabia a country with cultural traditions relating to gender. They stated that because of cultural and religious norms there is a gender segregation in the Saudi education system, which have a significant impact on the attitudes and perceptions towards the use of mobile technology in learning (Baker, et al., 2007). A very recent study by Al-kandari et al. (2016) was conducted to understand the influence of culture on Instagram use between male and female students in Kuwaiti HE institutions. The results of the analysis confirm that males are more likely to disclose their personal information, and

more likely to have public accounts on Instagram, unlike females who prefer private accounts. They related this to the Kuwaiti conservative cultural norms and traditions (Al-kandari, et al., 2016).

3. M-learning challenges

Research indicates that m-learning offers considerable benefits to build and support creative, collaborative, and communicative learning environments (Alhazmi, et al., 2014; Pollara, 2011; Sharples, et al., 2009). 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, as illustrated in Figure (1).

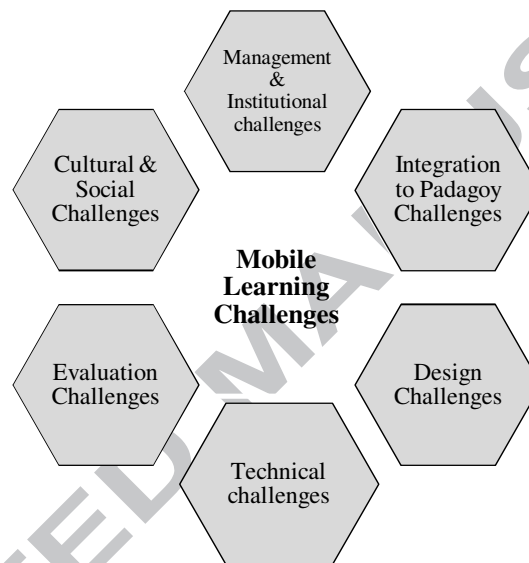


Figure (1): Mobile Learning challenges

3.1. Management and Institutional Challenges

Managements of educational institutions are increasingly acknowledging both the external factors (technology, Stakeholders, competition, etc.), and internal factors (technological and pedagogical approaches). Management needs to define a clear policy, and technical and pedagogical support, to go for a wide-scale implementation of m-learning. Lack of support and institutional policies were cited as institutional obstacles (Ismail, et al., 2013). Wilen-Daungenti (2009) pointed that university management is aware of the impact of rapidly changing technology, and said to be extremely conservative and reluctant to make large investments (Wilen-Daungenti, 2009).

One of the most crucial challenges facing educational institutions, when implementing m-learning project, is managing the change within the institution. Managing such change will affect processes and activities, as well as the people such as: students, instructors, managers, developers, and employees (Al-Sharhan, 2016). The principles of change management should be applied properly for the change process to succeed (Dublin, 2007). The goal of the change management is to change the attitudes and behaviors that includes different organizational and individual layers such as students, instructors, management, employees, and families. 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.

3.2. 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. To develop successful mobile educational systems, with appropriate pedagogical models, design guidelines that support the cognitive load of learners, and facilitate the learning process must be followed. Significant efforts and steps have been made to provide methodologies and strategies to integrate mobile devices into teaching and learning practices (Johnson, et al., 2011). Dahlstrom and Bichsel (2014) urge researchers to look at the pedagogical issues that will help instructors to better embrace mobile technologies (Dahlstrom & Bichsel, 2014). It is pointed out by (McGreal, 2012; Duderstadt, 2011), that to accomplish this, mobile learning requires a successful integration between content and technology to provide a successful teaching and learning environment.

When designing mobile learning programs, it is important to select the teaching and learning strategies that work best with the technological tools (Sharples, et al., 2005). In addition, Hwang and Chang (2011) pointed that we must focus on the use of new technologies by adopting pedagogical approaches by understanding mobile features and capabilities (Hwang & Chang, 2011). Messinger (2012) stated that the lack of effective models in m-learning limits the widespread adoption of mobile learning (Messinger, 2012). Cochrane (2012) stressed that the lack of pedagogical issues and lack of teacher professional support will affect the widespread adoption of mobile learning (Cochrane, 2012). Alhazmi and Rahman (2012) argued that the technological features of mobile applications such as mobility and interactivity are essential to successfully integrate this technology into the educational settings (Alhazmi & Rahman, 2012). The integration of mobile device into teaching and learning gives instructors an opportunity to share and create educational resources, and interact with students. Although some instructors are efficient in using these emerging technologies, others, especially in developed countries, will require pedagogical support and professional training programs to help them in utilizing such technology. It was reported by (Foulger, et al., 2013; Valtonen, et al., 2011) that the lack of expertise in integrating mobile technologies is a challenge to effective integration of mobile learning into teaching and learning.

3.3. Design Challenges

Mobile devices are equipped with various features such as camera, sensors, search, calculator, location, media player, notes, calendar, etc. Understanding these capabilities of mobile devices will help designers to explore the potential of mobile learning. Designers and developers should consider both the technical features and the design principles when developing educational materials for mobile devices. Designers of m-learning programs need to consider 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 pointed that the more emphasis the developer puts on these designs, the more useful and functional the application will be (Al-Hunaiyyan, 2000).

Suni and Ross (1997) state that instructional design is a systematic process for creating digital learning materials (Suni & Ross, 1997). The various instructional design methodologies can help in deciding on different learning situation that achieves the educational objectives using various types of mobile devices. Instructional designers must explore new methods that assist mobile learning situations to create effective learning solutions. Goel (2014) stated that 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 traditional e-learning, due to mobile limitations such as the screen size, memory, screen brightness, and network bandwidth (Goel, 2014).

User interface design is important factor for a successful application. Thus, designing and developing an efficient educational interface within a learning environment is still a challenge for most developers, facilitators, and educators (Alhajri & AL-Hunaiyyan, 2016). Udell (2012) stated that the interface for mobiles must be consistent and straightforward than those of e-learning. He believes that if the mobile navigation must be learned to use, then that is a failure (Udell, 2012). Similarly, Elias (2011) stated that m-learning applications must be simple and intuitive (Elias, 2011). Furthermore, Kukulska-Hulme et al. (2009) urged developers of mobile learning applications to design attractive and easy to use interface, a pleasant visual design, and effective interaction styles (Kukulska-Hulme, et al., 2009). In addition to instructional and interface design, the organization of visual elements and media on the mobile screen will influence the ease and quality of learning, and has an important impact on learners'

cognitive load. The consistency on the layout of the screens, and the organization of elements and content of information displayed on the screen is very important in determining the success of a user's interaction with the program (Al-Hunaiyyan, 2000). It is important to consider the number of pixels available on users' device, to provide the best quality of images on users' screens. Furthermore, designers should consider screen size and screen orientation (Horizontal and Vertical), knowing that learners sometimes need to be able to use both orientations.

3.4. Technical Challenges

Technical difficulties are a significant aspect in the implementation and integration of m-learning technologies in education. Qureshi et al. (2012) 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" (Qureshi, et al., 2012). There are technical challenges related to the infrastructure, mobile device, application development, technical support, security, and technical knowledge of instructors, students, and other stakeholders, which must be considered when employing m-learning project. Furthermore, Park (2011) listed some technical limitations related to the physical attributes of mobile devices such as: small screen size; insufficient memory; network reliability; limited battery; and screen brightness (Park, 2011). Technical support is essential to all parties involved in the m-learning project, and there is a need for continuing technical and material support (Mahruf, et al., 2010). However, Bakari et al. (2005) pointed that most of the developed countries lack quality and expert in technical support and maintenance of Information and Communication Technologies (ICT) (Bakari, et al., 2005).

3.5. Evaluation Challenges

Evaluation is an essential activity in the lifecycle of any interactive learning systems, and mobile learning adds additional challenges for evaluation of both the technology and the learning outcome. Evaluation strategies for education have been focused on face-to-face mechanism with learners in classrooms and laboratories. Now, e-learning and m-learning, add complexity to the evaluation process forcing educational institutions to consider m-learning technical capabilities, pedagogical issues, cultural, and social factors. Messinger (2012) stated that 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. He addressed the questions: "How to evaluate the effectiveness? How to assess learning outcome?" (Messinger, 2012). Kukulska-Hulme and Traxler (2005), urged to integrate evaluation strategies into the development and implementations of m-learning technologies. They believed that planning, design, implementation, and evaluation of the use of mobile technologies in education must be integrated to be successful (Kukulska-Hulme & Traxler, 2005). Traxler (2002) pointed 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" (Traxler, 2002). Furthermore, Park (2011) stressed on using various evaluation methods of learners using mobile devices (Park, 2011).

3.6. Cultural and Social Challenges

New technologies are now being introduced to different educational arenas. There are cultural norms and social concerns while accepting the deployment of m-learning. Kadirire and Guy (2009) pointed a downside 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 (Kadirire & Guy, 2009). In addition, ethical and practical implications such as: resistance to change amongst instructors; concerns about new social practices affecting instructors' personal time; increasing amount of information to be stored on his/her device; privacy issues; security; and cyber-bullying, were pointed by (Aubusson, et al., 2009; Cushing, 2011). The accessibility of mobile devices is another challenge. If mobile learning is to be implemented successfully, students and instructors must own a mobile device (Cushing, 2011). Naismith, et al. (2004) addressed issues related to the implementation of m-learning including technology ownership and the digital divide (Futurelab, et al., 2004). Furthermore, Park (2011) listed social limitations of m-learning such as: Accessibility and cost issues for end users; frequent changes of device models; and students' distraction (Park, 2011).

Cultural differences in relation to perceptions and attitudes towards technology are key factors for both the acceptance of these types of technology and for their future use (Al-Oteawi, 2002). Introducing m-learning to a new

culture brings many issues that need to be investigated. It is very important first to understand the nature of the target culture and to use the findings as a basis for m-learning project implementation (Al-Hunaiyyan, 2000). Baker et al. (2007) gave an example of Saudi Arabia a country with cultural traditions relating to gender (Baker, et al., 2007). Similarly, Al-kandari et al., (2016) sought to find out the influence of culture on Instagram use between males and females in Kuwait (Al-kandari, et al., 2016). Furthermore, resistance to change is a great challenge. Despite the increase in mobile usage, especially among students, it is believed that mobile technology increases the work for the instructors because it adds additional arrangements. Some educators resist the idea of integrating this technology into their practice, because of the constraints it presents to them. Studies report that resistance to change plays an essential role in accepting technology in education (Kim & Kankanhalli, 2009; Nov & Ye, 2008). In addition, Messinger (2012) argued that the resistance of instructors to technology limits the adoption of m-learning (Messinger, 2012). This was attributed as seen by (Herro, et al., 2013) to the lack of technical knowledge by instructors, as well as lack of funds for professional development programs. 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 (Al-Hunaiyyan, et al., 2012).

4. Case Study: M-learning in Kuwaiti 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) among students and instructors in the academic year 2015/2016 to activate mobile learning. Currently, the teacher readiness program is executed to prepare the teacher for the new technological era. This program is designed by the e-learning team at MOE and international vendors.

Al-Shehri, (2012) 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 (Al-Shehri, 2012). The mobile market in Kuwait experienced strong growth in mobile penetration to over 200 percent in 2015 (Kuwait Telecommunications Report Q4, 2015). The high mobile phone availability among people in Kuwait as well as the good mobile infrastructure are all important factors that can enhance the shift to mobile learning.

The purpose of this study is to seek both students' and instructors' perceptions and attitudes toward mobile learning, to evaluate its effectiveness, and to investigate cultural and social challenges that affect the implementation of m-learning in Kuwait.

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. *Are there any perceived social or cultural issues that may affect the acceptance of m-learning?*
3. *Will instructors resist the idea of mobile learning?*

4.1 Methodology

This study is exploratory in nature. It investigates higher education students' and instructors' perceptions and attitudes towards mobile learning. The sample of this study are students and instructors. They represent various HE institutions in Kuwait such as: The Public Authority for Applied Education and Training (PAAET), Gulf University for Science and Technology (Private University), and Kuwait University. Unlike some research which focus only on students' perceptions, this study, examines both students and instructors to underline several issues about mobile learning from two perspectives. In addition, having the sample of the study from both private and government educational sectors, will give better and diverse views.

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 which are related to the role of both instructors and students in mobile learning process. The structure of the questionnaires was adapted from several previous studies (Al-Fahad, 2009; Dashti & Aldashti, 2015; Georgieva, et al., 2011; Nassuora, 2013). However, questions and 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 parts. Part 1 collects demographic data and gathers information about the frequent use of mobile device, type of mobile device, and their frequent use of mobile

applications, presented in table 1 (students), and table 2 (instructors). Part 2 of the questionnaires measures students' and instructors' perceptions and attitudes towards the usefulness of mobile learning and social media learning tools, presented in table 3 (students), and table 4 (instructors). The questions in part 2 consisted 5-Point Likert type scale as: 1 for Strongly Disagree, 2 for Disagree, 3 for Neutral, 4 for Agree, and 5 for Strongly Agree. A pilot study was conducted on students in a class section with their instructor 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.

During the second academic term (Spring 2015/2016), the online questionnaires were randomly distributed to 620 undergraduate students (in which 499 students completed the questions in the questionnaire successfully). The questionnaires were also randomly distributed to 125 instructors (in which 110 instructors completed the questions in the questionnaire successfully). The analysis of the survey results is presented based on a valid response of the questions answered by students and instructors who completed the questions in the questionnaires (499 students and 110 instructors). Data were quantitatively analyzed using SPSS. Percentages, means, and standard deviations (SD), were used for the sake of the analysis.

4.2 Results

The following sub-sections present results of the study including: Students' and instructors' demographic data and background information; Students' and instructors' perceptions and attitudes about m-learning; And a comparison between students' and instructors' opinions and perceptions.

4.2.1 Respondents Profiles & Background Information

Table (1) represents the characteristics of the students (499 responses), while Table (2) represents characteristics of the instructors (110 responses). The outputs of the first 6 questions are tabulated below showing frequencies and percentages among the subjects (gender, marital status, age, educational institution, type of mobile device, and frequent use of mobile applications).

Characteristics	Frequency	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	Frequency	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)

4.2.2 Students' and Instructors' Perceptions on M-learning

Part 2 of the 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, while Table (4) reflects instructors' responses. We used frequency and percentage to know the number and proportion of selected choice (5 strongly agree to 1 strongly disagree). In addition, Mean is used to give the general average of the choice, while Standard Deviation (SD) is used to provide an indication of how far the individual responses to a question vary or "deviate" from the mean. We noticed in tables 3 and 4 that the value of SD is around 1, which indicates that the answer of each question is close to the average.

4.2.2.1 Students' Perceptions on M-learning

Questions 7 to 17 of Table (3) show students' perceptions and opinions. Regarding students' responses of Q7, "Learning by mobile helps me learn anytime anywhere", the percentage of students' agreement is 77.15% (Mean = 4.05, SD = 1.040). In Q8, "Learning by mobile increases students' motivation to learning", the percentage of students' agreement is 55.51% (Mean = 3.61, SD = 1.106). In the results of Q9, "Mobile helps to follow up on grades and student's records", we found the percentage of students' agreement is 87.78%, while (Mean = 4.37, SD = .844), while Q10, "Learning by mobile is a good idea", the percentage of students' agreement is 61.16% (Mean = 3.69, SD = 1.148). In Q11, "M-learning breaks down psychological barriers between students and instructors", the percentage of students' agreement is 63.53% (Mean = 3.72, SD = 1.127).

In Q12, "M-learning helps me to share information with other students", the percentage of students' agreement is 84.57% (Mean = 4.25, SD = .918), while Q13, "The Use of social media applications help in educational attainment", the percentage of students' agreement is 67.94% (Mean = 3.75, SD = 1.030). The results of Q14, "I feel

satisfied if it were to impose the use of m-learning as a new learning tool”, show the percentage of students’ agreement is 45.49% while the disagreement is 27.85% (Mean = 3.27, SD = 1.270).

Questions 15, 16, and 17 of Table (3) reflect social and cultural issues about the use of m-learning in Kuwait. Q15, “I reject the idea of m-learning if it was employed to allow male and female students to contact each other”, shows that the percentage of students’ agreement is 33.87%, while the disagreement is 33.87%, and neutral is 32.26% (Mean = 3.00, SD = 1.248). Regarding Q16, “Our society will reject m-learning due to the customs and traditions”, the percentage of students’ agreement is 29.26%, while the disagreement is 37.28%, and neutral 33.47% (Mean = 2.87, SD = 1.175). Finally, in Q17, “The use of social media will cause social and family problems”, we found that the percentage of students’ agreement is 42.28%, while the disagreement is 25.25%, and neutral is 32.46% (Mean = 3.24, SD = 1.145).

No.	Question		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	SD
Q 7.	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		
Q 8.	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		
Q 9.	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		
Q 10.	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		
Q 11.	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		
Q 12.	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		
Q 13.	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		
Q 14.	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		
Q 15.	I reject m-learning if it allows 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		
Q 16.	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		
Q 17.	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

4.2.2.2 Instructors’ Perceptions on M-learning

Questions 7 to 17 of Table (4) show instructors’ perceptions and opinions. Regarding instructors’ responses of Q7, “Learning by mobile helps students learn anytime anywhere”, the percentage of instructors’ agreement is 76.40% (Mean = 3.91, SD = .991). In Q8, “Mobile helps to follow up on recording my grades and follow student’s records”, the percentage of instructors’ agreement is (90.90%), while (Mean = 4.42, SD = .734). The results in Q9, “M-learning breaks down psychological barriers between students and instructors”, shows that the percentage of instructors’ agreement is 70.90% (Mean = 3.90, SD = .898).

Regarding the results of Q10, “M-learning will add additional duties on my regular work as an instructor”, we found that the percentage of instructors’ agreement is 31.80% while the disagreement 39.10%, and neutral 29.1% (Mean = 2.92, SD = 1.182). Q11, “M-learning helps to solve the problems caused by the absence of students”,

shows that the percentage of instructors' agreement is 71.80% (Mean = 3.85, SD = 1.024). In Q12, "Using mobile in teaching increases academic achievement for students", the percentage of instructors' agreement is 63.60% (Mean = 3.69, SD = 1.038). Additionally, in Q13, "The Use of social media applications help in educational attainment", the percentage of instructors' agreement is 71.80% (Mean = 3.79, SD = .968). In, Q14, "I will feel satisfied if it were to impose the use of m-learning as a new learning tool", the percentage of instructors' agreement is 48.80%, while the disagreement is 24.50% (Mean = 3.35, SD = 1.268). Regarding Q15, "I would like to use mobile in teaching", the percentage of instructors' agreement is 60.90% (Mean = 3.74, SD = 1.163).

Questions 16 and 17 of Table (4) reflect social and cultural issues about the use of m-learning in Kuwait. In Q16, "Our society will reject m-learning due to the customs and traditions", the percentage of instructors' agreement is 33.60%, while the disagreement is 31.80%, and neutral is 34.50% (Mean = 3.03, SD = 1.161). Finally, in Q17, "The use of social media will cause social and family problems", the percentage of instructors' agreement is 39.10%, while the disagreement is 21.00%, and neutral 40.00% (Mean = 3.25, SD = 1.033).

No.	Question		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	SD
Q 7.	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		
Q 8.	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		
Q 9.	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		
Q 10.	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		
Q 11.	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		
Q 12.	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		
Q 13.	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		
Q 14.	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		
Q 15.	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		
Q 16.	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		
Q 17.	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

4.2.3 Comparing Students' with Instructors' Perceptions

Data presented in Table (5) compares students' and instructors' responses as provided in tables 3 and 4. The term Agreement represents "Strongly agree" plus "Agree" responses, while Disagreement represents "Strongly disagree" plus "Disagree" responses. It is interesting to find similarities in the percentage of most of the questions, as illustrated in Figure (2), which indicates that students and instructors almost have similar perceptions and attitudes toward m-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

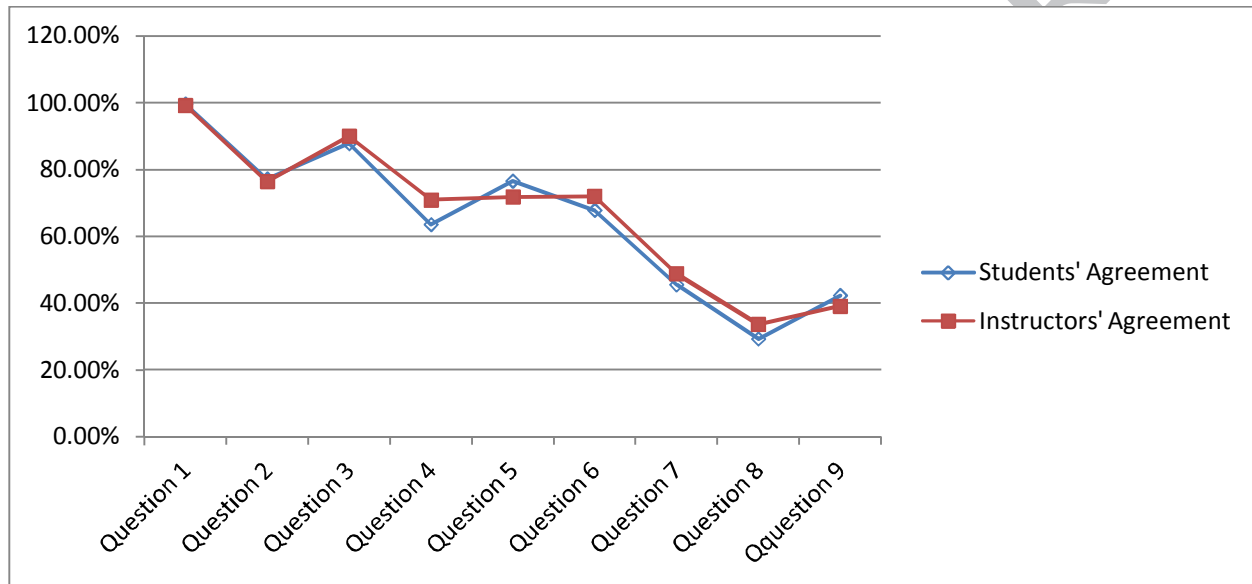


Figure (2): Comparing Students' with Instructors Perceptions

4.3 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 students and instructors have positive opinions about m-learning. The results strongly suggest that most of the students and instructors perceived mobile learning as attractive learning tool because it allows the freedom to learn whenever and wherever they want. The value of mobility in mobile learning is appreciated by students and instructors. They believed in its potential of providing various ways of learning and following up on students' records and grades. In addition, there is also evidence of positive perception on using mobile as a social learning tool, because it allows collaboration with instructors and other students. Students and instructors felt positively towards mobile learning by using social media applications. About 67% of the students and 72% of instructors believe that social media applications enhance learning. Our findings are supported by several studies. The study of Dashti and Aldashti (2015) showed positive perceptions of using mobile learning among Kuwaiti HE students (Dashti & Aldashti, 2015); provided unique opportunities from the perspective of Saudi students (Almutairy, et al., 2015); and demonstrated a high level of acceptance on m-learning level among HE Saudi students (Nassoura, 2013). In addition, The results of a study by Shih-hsien Yang (2012), indicated that students demonstrated positive attitudes toward m-learning, they believed that m-learning allows to acquire more information and supports collaborative learning (Shih-hsien Yang, 2012), His results supported an earlier study of Basoglu & Akdemir (2010), in that m-learning can increase students' learning (Basoglu & Akdemir, 2010).

Regarding 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 the Kuwaiti traditions and conservative culture, there is a 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. Regarding 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 33.60% of the total number, which is slightly higher than those instructors who disagree 31.80%. In addition, as social media can be used for 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.

The conservative attitudes of students and instructors and the society at large regarding the use of mobile devices which allows male students to contact female students might negatively affects the use of mobile learning. The respondents were divided on this issue, with half ‘agreeing’ and the other half ‘disagreeing’. In addition, 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 Al-kandari et al., (2016) supported these findings. The study shows that families in Kuwait are more likely to reject that their daughters to allow other stranger males to follow them on Instagram, a social media application (Al-kandari, et al., 2016). Having males’ followers may indicate a playful female. Such image is because “The misbehavior by women is believed to do more damage to family honor” (Nydell, 2006). Another study by Baker et al. (2007) indicated that when, there is gender segregation in the education system, the cultural and religious norms will have a significant impact on the attitudes, which influence the behavior towards the use of this technology (Baker, et al., 2007).

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 (Alfarani, 2015), instructors in this study felt happy with using m-learning. They did not show 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 stated 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 (Dahlstrom & Bichsel, 2014).

5. Conclusion & Future Direction

This research presents opportunities and prospects of m-learning, and discusses challenges and implications facing its implementation. The motivation in conducting 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 demonstrates that students’ and instructors’ perception to mobile learning is positive, and that most the students and instructors believe that m-learning is appealing regardless of their gender, age, or their educational institution (government or private). The value of mobility and the social features of m-learning is appreciated by students and instructors. They like the flexibility, ubiquity, capability to access learning materials and its improved method of communication and collaboration between instructors and students. In addition, they perceived potential in obtaining resources and multimedia learning materials on their mobiles. Despite the m-learning welcoming by students and instructors, 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 Kuwait, and it is hoped that with adequate 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 true mobile learning environments, 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 article 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 on mobile devices to reach Arab learners, by adopting pedagogical approaches and methodologies, taking into consideration their cultures, values, and local contexts, is valuable.

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