Appendix A

Review of Mobile learning in Saudi Arabia

Mobile learning in Saudi Arabia is still in the early stage. Researchers and practitioners have started to search and explore the literature of M-learning all over the world in order to adopt this learning domain effectively. There are few researches and projects have been conducted in various universities in Saudi Arabia that examined M-learning using different lens. In this paper, I will find out overall aspects that have been considered in various M-learning researches and projects in Saudi Arabia. I will review literature of M-learning emphasizing more on studies purposes, instructional methods, methods of collecting data, results, future recommendations, and location of institutions. The results of this paper will highlight aspects that play important roles in term of M-learning and will enable me to better understand M-learning studies and projects in Saudi Arabia.

1- Evaluating M-learning in Saudi Arabian higher education: a case study				
(This study used to inform m-learning benefits and challenges section in my first paper. However, this section was deleted based on our discussion.)				
Purpose	Instruments / Instructions	Results	Recommendations	Location
This paper presents a study that applies m- learning to a course at Qassim University. It aims to demonstrate that M-learning provides students with the ability to engage in	A questionnaire was used to collect study data. The researcher prepared course	M-learning helps make the process of education more convenient than in the past. Study proves that students continue their learning activities	Not provided	Qasim U

reflective thinking, to share information among peers and to facilitate the construction of social knowledge. It aims also to demonstrate that learning provides methods for education strategies to be easily and rapidly applied. Such strategies include team work, time management.	documents as PDF files and established a group to provide online discussions and explained potentially confusing points.	outside their classes anytime, provided a wi-fi network is available. Student's reflections on applying mobile devices in learning are highly noteworthy. The study also demonstrates that M-learning strategies have become crucial techniques that may be applied to a wide range of studies. Finally, the study clearly indicates that M-learning has many benefits over traditional classroom- centric learning A major disadvantage of applying M-learning is inadequate wireless network bandwidth.		
Alkhalaf, S. (2015). Evaluating M-learning in Saudi Arabian higher education: a case study. *arXiv preprint arXiv:1510.03189*.				
2- "Get Ready to Mobile Learning": Examining Factors Affecting College Students' Behavioral Intentions to Use M-learning				

in Saudi Arabia				
To examine the main factors affecting the adoption intention of Mobile Learning (M-learning) on the basis of the Unified Theory of Acceptance and Use of Technology (UTAUT) given the significance and power of such a theory in the field of Information Systems (IS)	The survey questionnaire was the main instrument for data collection.	The more M-learning is perceived as a way in which students can improve their academic performance, the more are the students who are willing to adopt this technology. If students perceive M-learning solutions as user- friendly, easy to be used, and free of effort, then their adoption intentions to use this technology would be greater If the surrounded environment is encouraging (e.g. peers and faculty members), students will feel more positive in trying out M-learning	To take into consideration the views of faculty members. To use another theory such as Decomposed Theory of Planned Behavior (TPB)	Al-Fasil univ/ Abha
Al-Hujran, O., Al-Lozi, E., & Al-Debei, M. M. (2014). "Get Ready to Mobile Learning": Examining Factors Affecting College Students' Behavioral Intentions to Use M-learning in Saudi Arabia. *Jordan Journal of Business Administration*, *10*(1).				
3- Students Acceptance of Mobile Learning for Higher Education in Saudi Arabia				
To examine the possibility of acceptance in mobile	A quantitative approach survey	The results from statistical analysis show that the	Not provided	Al-Fasil

learning (m- Learning) and study main factors that affect using m- learning that focus on higher education students in Saudi Arabia. The modified acceptance framework that based on the Unified Theory of Acceptance and Use of Technology (UTAUT) model is adopted to determine the factors that influence the students' intention to use M-learning in this study.	of 80 students was used.	acceptance level of students on M-learning is in the high level. The results showed that a positive attitude leads to the behavioral intention to use m-earning; so, the university administration should focus on the design M-learning system that appropriate with student's perception. Good perception and university policy supporting were two major factors that lead to success M-learning system.		univ.

Nassuora, A. B. (2012). Students acceptance of mobile learning for higher education in Saudi Arabia. *American Academic & Scholarly Research Journal*, *4*(2), 1.

4- Adaptation of Mobile Learning in Higher Educational Institutions of Saudi Arabia

This study aims to investigate the students' awareness of M-learning and its aspects, the adaptation of M-learning	Data was collected through the questionnaire, 300 under graduate	The results indicated that students have an adequate knowledge and awareness in mobile technologies and m-learning.	This study shows the female students' awareness of mobile devices, technologies, applications, and limitations. It	Jazan univ

| in education and the disclosure of m- learning services | students from various departments of Jazan University were participated successfully in this research | This result also showed an indication of students' expectations towards university services via mobile phones in higher educational institutions.

Jazan University had the required infrastructure to utilizing M-learning services. | also presents the required infrastructure and architecture to implement m- learning.

Future study might include different groups such as male students, and faculty members. | |

Narayanasamy, F. S., & Mohamed, J. B. K. (2013). Adaptation of Mobile Learning in Higher Educational Institutions of Saudi Arabia. *International Journal of Computer Applications*, *69*(6).

5- STUDENTS' ATTITUDES AND PERCEPTIONS TOWARDS THE EFFECTIVENESS OF MOBILE LEARNING IN KING SAUD UNIVERSITY, SAUDI ARABIA

| - To explore the student attitudes and the perceptions on the effectiveness of mobile learning.

- To draw the student's preferences for mobile learning in distance education.

- To examine the extent of use mobile learning by distance learners. | A questionnaire was developed with 8 items designed to measure students' attitudes and perception on the effectives of mobile learning. | Results indicate that offering mobile learning could be our method for improving retention of B.A ,and M.D. students, by enhancing their teaching/learning.

The biggest advantage of this technology is that it can be used anywhere, anytime and adopt their mobile learning systems with the aim of improving communication and enriching | Not provided | Saud univ |

		students' learning experiences in their open and distance learning.		
Al-Fahad, F. N. (2009). Students' attitudes and perceptions towards the effectiveness of mobile learning in King Saud University, Saudi Arabia. *TOJET: The Turkish Online Journal of Educational Technology*, *8*(2).				
6- Mobile Learning Adoption in Saudi Arabia				
This paper investigates the use of mobile phones and tablets for learning purposes among university students in Saudi Arabia. An extended Technology Acceptance Model (TAM) is proposed to analyze the adoption of mobile devices and smart phones by Saudi university students for accessing course materials, searching the web for information related to their discipline, sharing knowledge, conducting assignments	A questionnaire was used to collect data for the study.	Perceived innovativeness does not show high positive correlation with perceived usefulness of M-learning	We further need to include female students in our sample. Also, the sample consists of students from only one college. In our preliminary analysis, we only applied simple correlations analysis. The structural model method will be applied in the next research stage	King Fasil univ

Seliaman, M. E., & Al-Turki, M. S. (2012). Mobile learning adoption in Saudi Arabia. *World Academy of Science, Engineering and Technology*, *69*, 391-293.

7- Mobile Learning in Saudi Arabia – Prospects and Challenges

This paper reviews the prospects and technological challenges of mobile-learning in Saudi Arabia (SA)	A questionnaire survey was used to collect study data. In addition, authors monitored the performance of the students for two months and tried to identify the effects of M-learning applications on students' quiz performances	The student's attitude to this new learning environment is welcoming. They like the flexibility of this approach, capability to access learning materials immediately and its improved method of communication between teachers and co-learners. However, a large number of students still have no idea what m- learning means and how it can facilitate their education, but at the same time they are interested to experience the blended learning method where M-learning can be assimilated with class lectures	Recommendations for future research are not provided. However, authors' recommendation was giving proper training to the students so they can have a sense of security in the new learning environment and take full advantage of it	Najran Univ

Chanchary, F. H., & Islam, S. A. M. I. U. L. (2011). Mobile learning in Saudi Arabia–prospects and challenges.				
8- Contextual Mobile Learning System for Saudi Arabian Universities				
This paper presents the framework of a contextual mobile learning system taking into account the learning environment at Saudi Arabian universities.	The mobile learning framework has been validated by an interview based qualitative method	Produced a general mobile learning framework for Saudi universities. The main principles and the essential components such as functional modules and context databases are produced.	To improve the framework by integrating more components.	Saud univ
Altameem, T. (2011). Contextual mobile learning system for Saudi Arabian universities. *International Journal of Computer Applications*, *21*(4), 21-26.				
9- Exploring the Potential of Mobile Learning Use Among Faculty Members				
The purpose of this paper is to investigate faculty members' attitudes toward mobile learning in King Saud University	A questionnaire consisted of 37 items was developed to measure the attitudes.	The attitudes of faculty members towards mobile learning are positive. There are statistically significant differences attributed to gender in favor of (female faculty members), academic rank in favor of (instructor), and academic experience in favor of	There should be frameworks available that make higher education institutions able to meet the needs of m learning, through satisfying the needs of prospective learners through balanced techniques to develop technology and the human	Saud univ

	(21 years of experience and more).	element.	

Alwraikat, M., & Al Tokhaim, H. (2014). Exploring the Potential of Mobile Learning Use Among Faculty Members. *International Journal of Interactive Mobile Technologies*, 8(3).

10- Mobile Learning Adoption in Saudi Arabia

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