

# Students' Perception On The Need For The Development Of M-Learning Model For Teaching Arabic Reading Skills To Non-Arab Speakers.

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## Abstract

Information technology is a powerful tool in enhancing and improving education system especially in the 20th century. Today, educational institutions adopted the use of various ICT tools in disseminating information to learners. Mobile-learning is gaining recognition in teaching and learning process today. It facilitates teaching and learning process by easing tasks of both teachers and learners. Therefore, this study examined the perceptions of students on the need for the development of mobile-learning model for teaching Arabic reading skills to non-Arab speakers. A total of 120 international students were randomly selected for this study from the Institute of Arabic Language for Non-Arab Speakers, King Saud University, Riyadh, Kingdom of Saudi Arabia. It used descriptive statistics like simple percentage, mean and standard deviation to analyze the data collected from respondents. The result of the findings revealed that there is need to improve Arabic reading proficiency and the current reading activities of non-Arab speakers in King Saud University. These show that the mobile-learning device will be highly needed in doing these. It was also found that students expected performance, effort, will improve with the use of mobile-learning devices. Students are ready to turn-up good attitude towards teaching and learning if mobile devices are used for the instruction. This will also enhance their social development and increase their self-efficacy. Therefore, management of the University must strive to provide adequate facilities for mobile-learning, train teachers and students on the usage and motivate them towards using it in their instruction process.

**Keyword:** m-learning model, Arabic reading skills, non-Arab speakers, need analysis

## **Percepción De Los Estudiantes Sobre La Necesidad Del Desarrollo Del Modelo De Aprendizaje M Para Enseñar Habilidades De Lectura Árabe A Los Altavoces No Árabes.**

### **Resumen**

La tecnología de la información es una herramienta poderosa para mejorar y mejorar el sistema educativo, especialmente en el siglo XX. Hoy, las instituciones educativas adoptaron el uso de varias herramientas TIC para difundir información a los alumnos. El aprendizaje móvil está ganando reconocimiento en el proceso de enseñanza y aprendizaje en la actualidad. Facilita el proceso de enseñanza y aprendizaje al facilitar las tareas tanto de profesores como de alumnos. Por lo tanto, este estudio examinó las percepciones de los estudiantes sobre la necesidad de desarrollar un modelo de aprendizaje móvil para enseñar habilidades de lectura en árabe a hablantes no árabes. Un total de 120 estudiantes internacionales fueron seleccionados al azar para este estudio del Instituto de Lengua Árabe para Hablantes No Árabes, Universidad King Saud, Riad, Reino de Arabia Saudita. Utilizó estadísticas descriptivas como porcentaje simple, media y desviación estándar para analizar los datos recopilados de los encuestados. El resultado de los hallazgos reveló que existe la necesidad de mejorar el dominio de la lectura árabe y las actividades de lectura actuales de hablantes no árabes en la Universidad King Saud. Estos muestran que el dispositivo de aprendizaje móvil será muy necesario para hacer esto. También se descubrió que el rendimiento esperado de los estudiantes mejorará con el uso de dispositivos de aprendizaje móvil. Los estudiantes están listos para adoptar una buena actitud hacia la enseñanza y el aprendizaje si se utilizan dispositivos móviles para la instrucción. Esto también mejorará su desarrollo social y aumentará su autoeficacia. Por lo tanto, la administración de la Universidad debe esforzarse por proporcionar facilidades adecuadas para el aprendizaje móvil, capacitar a los maestros y estudiantes sobre el uso y motivarlos a usarlo en su

proceso de instrucción.

Palabra clave: modelo de m-learning, habilidades de lectura en árabe, hablantes no árabes, necesidad de análisis

### Introduction

The explosion of information technology from the end of the 20th century has forced education system into evolutionary process that changed the way people today learn which largely differs from the way their teachers, instructors and professors learned when they were students prior to the current advancement in information technology (Prensky, 2001; UNESCO, 2002). This advancement has rendered any technology that preceded it obsolete and changed the dynamic of information and education by making personal and unprecedented advancement in information technology and its impacts in human's life, the current educational system remains still unidirectional, from teacher to students, embedded in a one-size-fits-all approach using the same curricular and methods.

The continuous growth and attention to mobile-learning is based on various facts with regards to the mobile tools as well as internet access. As of 2015, it was estimated that there were 7.216 billion mobile cellular subscriptions across the world whereas 44 percent of the world population or 3.232 billion people had access to internet (The World Bank, 2016). This number is growing so rapidly that in 2012 it was estimated that only 5.98 billion or 89 percent of the world population were active mobile subscribers. In Saudi Arabia, it was estimated in 2015 that there were 3.747 million telephone lines and 52.8 million mobile cellular subscriptions which is more than the total population of the country and 21.96 million people (69.62 percent of the country's population) are connected to internet (The World Bank, 2016). Looking at these staggering figures, Quinn (2011) contends that mobile-learning is for real and there is no hype to it and it is not another big thing for the future. It is already a big thing for today. Also, as a result of this new development and growth of mobile learning, the United Nations Educational, Scientific and Cultural Organisation (UNESCO) formally recognized mobile-learning and spearhead the draft of policy guidelines for mobile

learning (UNESCO, 2011).

The salient nature of language and its underlining significant in relations to other subjects of education implies that it requires a distinctive curriculum and approach to teaching. For students to attain fluency in any language they learn they need more than just what the traditional method of teaching language offers in terms of grammar and other aspects of language which can usually be mastered in classroom environment. It has been proven that learning certain aspects of language such as vocabulary, grammar, and so on is easier than speaking fluently in that language (Steve and Hiroshi, 2013). It is highlighted by a number of researchers that to solve such problem there is need for suitable teaching methods that suit the size of a class, the subject level as well as the language level of the students (McKeachie, Asghar, and Berliner, 1990; Qing-xue and Jin-fang, 2007). Teachers usually follow traditional method of language teaching where students are given exercises related to various aspect of language such as structures, pronunciation, intonation and vocabulary learning. This often does not improve students' Arabic language fluency in time which is essential to succeed in their tertiary education. Various scholars have studied reading and orthography skills in Arabic language (Taha, 2016; Taha & Saiegh-Haddad, 2016; Khateb, Abdelgani, Taha & Ibrahim, 2014; Hussein, 2014; Taha, 2013; Ibrahim, 2013; Taha, Ibrahim & Khateb, 2012). Due to the orthographic complexity and linguistic uniqueness, Arabic reading skills has been one of the major obstacles students face in learning Arabic language (Taha, 2013). Although all the studies stated here focused on Arabic reading skills, none of them proposed an implementation model that would help students deal with challenges they face in Arabic reading skills. Similarly, none of the studies has tried to look into the possibility of adopting technology in order to help students deal with the obstacles they face in learning Arabic reading skills. Therefore, this points to a wide gap within the extant literature of Arabic reading skills.

This continuous and unprecedented evolution of the mobile technology leads inevitably to a huge impact in educational sector. Academically, there is a plethora of literature produced in trying to

look at the impact of mobile technology in education (Wentzel et al. 2005; Ayoade, 2015; Vogel, Kennedy and Kuan, 2007; Wang et al. 2009; Ferreira et al. 2015; Keskin and Metcalf, 2011). These studies stated the impacts of mobile technologies on education, teaching and learning and how they improve students' academic success and achievement in various educational subjects (Muhammad Ridhuan, 2014). Therefore this paper aims at examining the need analysis for the implementation of m-learning model for teaching Arabic reading skill to non-Arab speakers.

### Literature Review

#### Concept of M-Learning

There is no consensus among scholars on single definition of mobile-learning. The emergence of mobile-learning could be traced back to the early 2000 studies (Sharples, 2000; Traxler, 2009; El-Hussein & Cronje, 2010). The reason for non-consensual agreement on a definition by scholars is due to the nature of mobile-learning as a new dynamic concept that emerged to revolutionized education as a whole and teaching and learning in a more specific way (Muhammad Ridhuan, 2014). It has been stated that early attempts at defining mobile-learning were "techno-centric" meaning to say that, they focused more on technology in their attempts to define the concept as "means of training using mobile devices especially through mobile phones besides PDAs, iPods, digital audio players and other such devices" ( Muhammad Ridhuan, 2014). Mobile-learning as a form of learning activity through which an individual engages to become more productive by consuming, interacting and creating information via the use of portable compact digital devices which is carried by the individual regularly and has a reliable connectivity (Hashemi, Azizinezhad, Najafi and Nesari, 2011; Wexler, Brown, Metcalf, Rogers & Wagner, 2008)

The implementation of mobile-learning in formal education has been growing exponentially in various countries and level of education. The most major level of education where mobile-learning application has been widespread and could be the best reference point is lower education or what is termed in countries such as the US as K-12. Various studies have studied the use of mobile-learning

at this particular level of education (Rikala, 2015; Chou, Block & Jesness, 2012; Grant & Barbour, 2013; Baran, 2014; Reeves, Gunter & Lacey, 2017; Lederman, 1995; Rothstein, 1996; Cattagni & Ferris, 2001; Nair, 2001; Nair, 2002; Lightbody, 2004).

### Methodology

**Research Design:** The type of research design used in this study is the descriptive research design. Creswell (2012) stressed that the descriptive research design enables researchers to identify the relationship between variables under study. Therefore, we used the descriptive design to understand the relationship between students' perception and in-class debate strategy in teaching religious-based subject like Tawhid in secondary schools in the Kingdom of Saudi Arabia.

**Population and sampling:** The population of this study consists of international students studying in the Institute of Arabic Language for Non-Arab speakers, King Saud University, Riyadh, Kingdom of Saudi Arabia. The population consists of about 3000 respondents. Out of this number, we drew our sample. Therefore, we used Krejcie and Morgan (1970) sample table in selecting the participants for this study. In addition, random sampling technique was used in selecting the sample in this study. This enables individual in the team to stand the chance of been selected as participant of a study (Trochim et. al., 2016, Yin, 2003). Based on the suggestion, we used 120 respondents who were randomly selected across two departments in the Institute of Arabic Language for Non-Arab speakers, King Saud University, Riyadh, Kingdom of Saudi Arabia.

**Instrumentation:** In this study, we developed survey questionnaire to examine perception of students on the need for mobile-learning in teaching Arabic Language reading skills to non-Arab speakers in Institute of Arabic language for Non-Arab speakers, King Saud University, Kingdom of Saudi Arabia. This questionnaire consists of 42 items. Therefore, this instrument was tested for its reliability and validity below:

### Analysis of Data

#### Demographic Information of Respondents

In this section, we examined distribution of the respondents in re-

lation to their gender, nationality and department. The result is presented below:

Table 1: Gender of Respondents

Gender	Frequency	Percentage(%)
Male	100	83.3
Female	20	16.7
Total	120	100

Table 1 above shows that 100 (83.3%) of the respondents are male while the remaining 20 (16.7%) are female international students studying in King Saud University, Kingdom of Saudi Arabia.

Table 2: Nationality of Respondents

Nationality	Frequency	Percentage(%)
Africa	59	49.2
Asia	65	45
Europe	7	5.8
Total	120	100

As expressed in Table 2 above, it was found that 59 (49.2%) of these respondents are from Africa, 54 (45%) are international students from Asia, 6 (5%) are international students from international students from Europe.

Table 3: Gender of Respondents

Department	Frequency	Percentage(%)
Human	73	60.8
Scientific	47	39.2
Total	120	100

From Table 3 above, it was found that 73 (60.8%) of the respondents are in department of human science while the remaining 47 (39.2%) are in department of scientific in King Saud University, Kingdom of Saudi Arabia.

Next, we went further to ascertain the need for m-learning model in teaching Arabic reading skills to non-Arab speakers in King Saud University, Riyadh, Kingdom of Saudi Arabia and arrived at the following results:

Needs Analysis on Students' Perception on M-Learning Model for Teaching Arabic Reading Skills to Non-Arab Speakers

Table 4: Students' Perception on their Proficiency in Arabic Reading Skills

S/N	Items	SD	D	N	A	SA	Total			
1	I feel that my skill in reading needs to development	2	10	9	37	62	4.32	1.02		
2	I feel that my reading efficiency is high		20	22	28	32	18	3.05	1.31	
3	I feel bored during reading	5	33	21	29	32	3.42	1.26		
4	I have difficulty in reading comprehension		5	26	15	29	45	3.69	1.29	
5	I need someone to correct my mistakes in reading	3	13	16	32	56	4.04	1.13		
6	I need modern reading-stimulating methods			4	8	12	42	54	4.12	1.05
7	I feel ashamed while reading in front of my colleagues			11	31	19	33	26	3.27	1.31
8	I need to know the appropriate stops during reading		6	17	13	31	53	3.90	1.25	
9	I have difficulty in fluency during reading		6	22	15	30	47	3.75	1.29	
10	I find it difficult to read verbally with intonations.		8	25	19	29	39	3.55	1.31	
11	I have difficulty in diversifying the sound according to the content of the sentence I read		4	24	22	29	41	3.66	1.23	
12	I have difficulty pronouncing some words			10	23	16	29	42	3.58	1.36
13	I need to know the meaning of some vocabulary	2	4	11	40	63	4.32	0.90		

As seen in table 4 above' there are 13 items in the level of student's perceptions about their proficiency in reading skills. Item 1, "I feel that my skill in reading needs to development." The majority of the student respondents reported strongly agree with the statement (62%) this followed by agree with (37%). However, the minority responded are strongly disagree (2%) and neutral with (9%) respectively. The total mean score for this item is M=4.23 which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement in regard that their skill in reading needs to development.

Item 2, "I feel that my reading efficiency is high." the majority of the students respondents reported agree with the statement (32%) and this followed by neutral with (28%). However, the minority responded are strongly agree (18%) and strongly disagree with (28%) respectively. The total mean score for this item is M=3.05 which is



moderate level. So, the overall result for this item indicates that half of the students participated in this study expressed moderate agreement in regard that their reading efficiency is high.

Item 3, "I feel bored during reading." the majority of the students respondents reported disagree with the statement (33%) and followed by the statement strongly agree with (32%). However, the minority responded are strongly agree (5%) and neutral with (21%) respectively. The total mean score for this item is  $M=3.42$  which is moderate level. So, the overall result for this item indicates that half of the students participated in this study expressed moderate agreement in regard that they feel bored during reading.

Item 4, "I need someone to correct my mistakes in reading." the majority of the students respondents reported strongly agree with the statement (56%) and followed by agree with (23%). However, the minority responded strongly are disagree (5%) and neutral with (15%) respectively. The total mean score for this item is  $M=3.69$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement in regard that they have difficulty in reading comprehension.

Item 5, "I have difficulty in reading comprehension." the majority of the students respondents reported strongly agree with the statement (45%) and followed by agree with (29%). However, the minority responded are strongly disagree (3%) and disagree with (13%) respectively. The total mean score for this item is  $M=4.04$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement in regard that they need someone to correct my mistakes in reading.

Item 6, "I have difficulty in reading comprehension." the majority of the students respondents reported strongly agree with the statement (54%) and followed by agree with (42%). However, the minority responded are strongly disagree (4%) and disagree with (8%) respectively. The total mean score for this item is  $M=4.04$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement in regard that they have difficulty in reading comprehension.

Item 7, "I need to know the appropriate stops during reading." the majority of the students respondents reported agree with the statement (33%) and followed by disagree (31%). However, the minority responded are strongly disagree (11%) and neutral with (19%) respectively. The total mean score for this item is  $M=3.27$  which is moderate level. So, the overall result for this item indicates the students participated in this study expressed moderate agreement in regard that they need to know the appropriate stops during reading.

Item 8, "I need to know the appropriate stops during reading." the majority of the students respondents reported strongly agree with the statement (53%) and followed by agree with (31%). However, the minority responded are strongly disagree (6%) and neutral with (13%) respectively. The total mean score for this item is  $M=3.90$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement in regard that they need to know the appropriate stops during reading.

Item 9, "I have difficulty in fluency during reading." the majority of the students respondents reported strongly agree with the statement (47%) and followed by agree with (30%). However, the minority responded are strongly disagree (6%) and neutral with (15%) respectively. The total mean score for this item is  $M=3.75$  which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement in regard that they have difficulty in fluency during reading.

Item 10, "I find it difficult to read verbally with intonations." the majority of the students respondents reported strongly agree with the statement (39 %) and followed by agree with (29%). However, the minority responded are strongly disagree (8%) and neutral with (19%) respectively. The total mean score for this item is  $M=3.55$  which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement in regard that they find it difficult to read verbally with intonations.

Item 11, "I have difficulty in diversifying the sound according to the

content of the sentence I read” the majority of the students respondents reported strongly agree with the statement (41 %) and followed by agree with (29%). However, the minority responded are strongly disagree (4%) and neutral with (22%) respectively. The total mean score for this item is  $M=3.66$  which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement in regard that they have difficulty in diversifying the sound according to the content of the sentence they read.

Item 12, “I have difficulty pronouncing some words” the majority of the students respondents reported strongly agree with the statement (42 %) and followed by agree with (29%). However, the minority responded are strongly disagree (10%) and neutral with (16%) respectively. The total mean score for this item is  $M=3.58$  which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement in regard that they have difficulty pronouncing some words.

Item 13, “I need to know the meaning of some vocabulary” the majority of the students respondents reported strongly agree with the statement (63 %) and followed by agree with (42%). However, the minority responded are strongly disagree (2%) and disagree with (4%) respectively. The total mean score for this item is  $M=4.32$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement in regard that they need to know the meaning of some vocabulary.

Over all, as it shown above in the table 4.4 the average mean of the 13 items in the level of student's perceptions about their proficiency in reading skills was (3.73) which is high level of means . Therefore, this indicates that the majority of the students participated in this study expressed high agreement towards their proficiency in reading skills.

Table 5: Students' Perception on the Current Reading Activities at The Institute of Arabic Language for Non-Arab Speakers

S/N	Items	SD	D	N	A	SA	1	
1	Developing my skills steadily	3	12	17	42	46	3.97	1.08
2	Achieving the principle of interaction in learning the skill of reading electronically	14	32	25	36	13	3.02	1.22
3	Offers opportunities to practice reading electronically	10	30	22	40	18	3.22	1.22
4	Provide feedback electronically	15	30	23	34	18	3.08	1.28
5	Connect students to reality electronically	9	34	20	36	21	3.22	1.24
6	Interested in performing skills	5	26	33	35	21	3.34	1.13
7	Get high grades in the rest of the courses	13	28	14	45	20	3.26	1.29
8	Attract students' attention	17	32	18	32	21	3.07	1.35
9	Use mobile learning devices (mobile phone, iPad, iPad, tablets)	10	44	19	31	16	2.99	1.23
10	The possibility of reading activities outside the classroom	2	43	18	37	20	3.25	1.16
11	Greater focus on reading skills electronically	10	43	14	32	21	3.09	1.29
12	Achieve the principle of active learning in learning reading skill	12	34	18	37	19	3.14	1.27
13	Diversify learning activities to develop reading skills	19	25	16	35	25	3.18	1.40
14	Provides an electronic reading of the texts to be read	20	29	19	34	18	3.01	1.34

Table 5 above shows that there are 14 items in the level of student's perceptions about the current reading activities at the institute of teaching Arabic language for non-speakers at King Saud University. Item 1, "Developing my skills steadily" the majority of the students respondents reported strongly agree with the statement (46 %) and followed by agree with (42%). However, the minority responded are strongly disagree (3%) and disagree with (12%) respectively. The total mean score for this item is M=3.97 which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement in regard that they develop their skills steadily.

Item 2, "Achieving the principle of interaction in learning the skill of reading electronically" the majority of the students respondents reported agree with the statement (36 %) and followed by disagree with (32%). However, the minority responded are strongly agree (13%) and strongly disagree with (14%) respectively. The total mean score for this item is  $M=3.02$  which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement in regard that they achieve the principle of interaction in learning the skill of reading electronically.

Item 3, "Offers opportunities to practice reading electronically" the majority of the students respondents reported agree with the statement (40 %) and followed by disagree with (30%). However, the minority responded are strongly agree (10%) and strongly disagree with (18%) respectively. The total mean score for this item is  $M=3.22$  which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement in regard offering opportunities to practice reading electronically.

Item 4, "Provide feedback electronically" the majority of the students respondents reported agree with the statement (34 %) and followed by disagree with (30%). However, the minority responded are strongly agree (15%) and strongly disagree with (18%) respectively. The total mean score for this item is  $M=3.08$  which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement in regard provide feedback electronically.

Item 5, "Connect students to reality electronically." the majority of the students respondents reported agree with the statement (36 %) and followed by disagree with (34%). However, the minority responded are strongly agree (9%) and neutral with (20%) respectively. The total mean score for this item is  $M=3.22$  which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement in regard connecting students to reality electronically.

Item 6, "Interested in performing skills (applied side)." the majority

of the students respondents reported agree with the statement (35 %) and followed by neutral with (33%). However, the minority responded are strongly agree (5%) and strongly disagree with (21%) respectively. The total mean score for this item is  $M=3.34$  which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement in regard interested in performing skills (applied side).

Item 7, "Get high grades in the rest of the courses." the majority of the students respondents reported agree with the statement (45 %) and followed by disagree with (28%). However, the minority responded are strongly disagree (13%) and neutral with (14%) respectively. The total mean score for this item is  $M=3.26$  which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement in regard getting high grades in the rest courses.

For item 8, "Attract students' attention" the majority of the students respondents reported the same percentage for agree and disagree with the statement (32 %) and followed by strongly agree with (21%). However, the minority responded are strongly agree (10%) and neutral with (18%) respectively. The total mean score for this item is  $M=3.07$  which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement that the current reading activities in the institute attract their attention.

Item 9, "Use mobile learning devices (mobile phone, iPad, iPad, tablets)." the majority of the students respondents reported disagree with the statement (44 %) and followed by agree with (31%). However, the minority responded are strongly disagree (10%) and strongly agree with (16%) respectively. The total mean score for this item is  $M=2.99$  which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement in regard using mobile learning devices (mobile phone, iPad, iPad, tablets).

For item 10, "The possibility of reading activities outside the classroom." the majority of the students respondents reported disagree

with the statement (43 %) and followed by agree with (37%). However, the minority responded are strongly disagree (2%) and neutral with (18%) respectively. The total mean score for this item is  $M=3.25$  which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement in regard the possibility of reading activities outside the classroom.

For item 11, "Greater focus on reading skills electronically." the majority of the students respondents reported disagree with the statement (43 %) and followed by agree with (32%). However, the minority responded are strongly disagree (10%) and neutral with (14%) respectively. The total mean score for this item is  $M=3.09$  which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement in regard greater focus on reading skills electronically.

For item 12, "Achieve the principle of active learning in learning reading skill." the majority of the students respondents reported agree with the statement (37 %) and followed by agree with (34%). However, the minority responded are strongly disagree (12%) and neutral with (18%) respectively. The total mean score for this item is  $M=3.14$  which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement in regard achieve the principle of active learning in learning reading skill.

Regarding item 13, "Diversify learning activities to develop reading skills." the majority of the students respondents reported agree with the statement (37 %) and followed by dis agree as well as strongly agree with the same percentage (25%). However, the minority responded are neutral (16%) and strongly disagree with (19%) respectively. The total mean score for this item is  $M=3.14$  which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement in regard diversify learning activities to develop reading skills.

Finally item 14, “Provides an electronic reading of the texts to be read.” the majority of the students respondents reported agree with the statement (34 %) and followed by disagree with (29%). However, the minority responded are strongly agree (18%) and neutral with (19%) respectively. The total mean score for this item is  $M=3.01$  which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement in regard providing an electronic reading of the texts to be read.

As reported in Table 5 above, the average mean of the 14 items in the level of student’s perceptions about the current reading activities at the institute of teaching Arabic language for non-speakers at King Saud University was 3.20 which is moderate level of means . This implies that the majority of the students participated in this study expressed moderate agreement about the current reading activities at the institute of teaching Arabic language for non-speakers at King Saud University. In addition, the respondents also added some notes or requirements they needed as follows:

1. Reading activities help in getting new words, and
2. Reading activities Interested in speaking fluently when speaking.

To what extent do students accept the use of m-learning in reading activities at the Institute of Arabic Language Teaching for Non-Arab Speakers.

Here, we examined the extent at which students accept use of mobile learning in reading activities at the institute of Arabic language teaching to non-native speakers at King Saud University. This is done under eight dimensions as presented below:

Dimension One: Expected Performance



Table 6: Expected Performance of Mobile-Learning in Reading Activities

S/N	Items	SD	D	N	A	SA		
1	I find mobile learning a useful tool to develop my reading skills	2	4	7	39	68	4.39	0.87
2	Mobile learning helps me accomplish my educational tasks faster I know what the subject is trying to teach	1	4	10	46	59	4.32	0.83
3	Mobile learning will increase my reading efficiency	1	3	11	49	56	4.30	0.81.
4	Mobile learning helps me get higher grades in reading skills	3	6	16	41	54	4.14	1.00

Table 6 above reveals that there are 4 items in the level of student's perceptions about expected performance of mobile learning in reading activities. Item 1, "I find mobile learning a useful tool to develop my reading skills." the majority of the students respondents reported strongly agree with the statement (68%) and followed by agree with (39%). However, the minority responded are strongly disagree (2%) and disagree with (4%) respectively. The total mean score for this item is M=4.39 which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that they find mobile learning a useful tool to develop their reading skills.

Item 2, "Mobile learning helps me accomplish my educational tasks faster." the majority of the students respondents reported strongly agree with the statement (59%) and followed by agree with (46%). However, the minority responded are strongly disagree (1%) and disagree with (4%) respectively. The total mean score for this item is M=4.32 which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that mobile learning helps them accomplish their educational tasks faster.

For item 3, "Mobile learning will increase my reading efficiency." the majority of the students respondents reported strongly agree with the statement (56%) and followed by agree with (49%). However,

the minority responded are strongly disagree (1%) and disagree with (3%) respectively. The total mean score for this item is  $M=4.32$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that mobile learning will increase their reading efficiency.

Finally, item 4, “Mobile learning helps me get higher grades in reading skills.” the majority of the students respondents reported strongly agree with the statement (54%) and followed by agree with (41%). However, the minority responded are strongly disagree (3%) and disagree with (6%) respectively. The total mean score for this item is  $M=4.14$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that mobile learning helps them to get higher grades in reading skills.

In summary, Table 6 above shows that the average mean of the 4 items in the level of what extent students accept use of mobile learning in reading activities at the institute of Arabic language teaching to non-native speakers at King Saud University was 4.33 which shows a high level of means . This indicates that the majority of the students participated in this study expressed high agreement about accept use of mobile learning in reading activities at the institute of Arabic language teaching to non-native speakers at King Saud University.

Dimension 2: Level of the expected effort of mobile learning in reading activities among the students.

Table 7: Level of Expected Effort of Mobile-Learning in Reading Activities Among Students

S/N	Items	SD	D	N	A	SA		
1	I find mobile learning easy to use	3	4	14	43	56	4.21	0.95
2	Mobile learning will facilitate proficiency for reading proficiency	3	5	15	47	50	4.13	0.96
3	I expect the interaction in mobile learning to help increase understanding of the readable text	4	4	12	48	52	4.17	0.97

As seen in Table 7 above, there are 3 items in the level of student's perceptions about Expected efforts of mobile learning in reading activities. Item 1, "I find mobile learning easy to use." the majority of the students respondents reported strongly agree with the statement (56%) and followed by agree with (43%). However, the minority responded are strongly disagree (3%) and disagree with (4%) respectively. The total mean score for this item is  $M=4.21$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that they find mobile learning is easy to use.

For Item 2, "Mobile learning will facilitate proficiency for reading proficiency." the majority of the students respondents reported strongly agree with the statement (50%) and followed by agree with (47%). However, the minority responded are strongly disagree (3%) and disagree with (5%) respectively. The total mean score for this item is  $M=4.13$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that mobile learning will facilitate proficiency for reading proficiency.

Finally, Item 3, "I expect the interaction in mobile learning to help increase understanding of the readable text." the majority of the students respondents reported strongly agree with the statement (52%) and followed by agree with (48%). However, the minority responded are strongly disagree as well as disagree with the same percentage (4%). The total mean score for this item is  $M=4.17$  which is high level. Therefore, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that they expect the interaction in mobile learning to help increase understanding of the readable text.

In conclusion, it was noticed from Table 7 above that the average mean of the 3 items in the Level of the expected effort of mobile-learning in reading activities at the institute of Arabic language teaching to non-Arab speakers at King Saud University was 4.16 which is high level of means. Therefore, this indicates that the majority of the students participated in this study expressed high agreement about expected effort of mobile learning in reading activities

at the institute of Arabic language teaching to non-native speakers at King Saud University.

Dimension Three: The attitude towards the use of technology in education

Table 8: Level of students' Attitude Towards Use of Technology in Education

S/N	Items	SD	D	N	A	SA		1
	The use of mobile learning is a good idea to develop reading skill.							
1		3	13	46	57	4.29	0.82	
2	I like learning mobile reading skills	2	6	18	40	54	4.15	0.97
3	Mobile learning makes learning more exciting	4	4	12	48	52	4.17	0.97
4	Reading skills will be fun using mobile learning	1	3	11	44	61	4.34	0.81

Item 1 in Table 8 above shows that the use of mobile learning is a good idea to develop reading skill.” the majority of the students respondents reported strongly agree with the statement (57%) and followed by agree with (46%). However, the minority responded are strongly disagree (1%) and disagree with (3%) respectively. The total mean score for this item is M=4.29 which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that using mobile learning is a good idea to develop their reading skill.

For item 2, “I like learning mobile reading skills.” the majority of the students respondents reported strongly agree with the statement (54%) and followed by agree with (40%). However, the minority responded are strongly disagree (2%) and disagree with (6%) respectively. The total mean score for this item is M=4.15 which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that they like learning mobile reading skills.

Regarding item 3, “Mobile learning makes learning more exciting.” the majority of the students respondents reported strongly agree with the statement (54%) and followed by agree with (50%). However, the minority responded are strongly disagree (1%) and disagree with (4%) respectively. The total mean score for this item is M=4.27 which is high level. So, the overall result for this item indicates that

the majority of the students participated in this study expressed high agreement that mobile learning makes learning more exciting for them.

Finally, item 4, "Reading skills will be fun using mobile learning." the majority of the students respondents reported strongly agree with the statement (61%) and followed by agree with (44%). However, the minority responded are strongly disagree (1%) and disagree with (3%) respectively. The total mean score for this item is  $M=4.34$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that reading skills will be fun through mobile learning.

Over all, it was found from Table 8 above that the average mean of the 4 items in the level of student's attitude towards the use of technology at the institute of Arabic language teaching to non-native speakers at King Saud University was (4.26) which is high level of means. It implies that majority of the students that participated in this study expressed high agreement about their attitudes towards the use of technology in education at the institute of Arabic language teaching to non-native speakers at King Saud University.

Dimension Four: Social Impact

Table 9: Level of social impact on using mobile learning in reading activities

S/N	Items	SD	D	N	A	SA		1
	My university supports the use of mobile learning to develop reading skills	4	8	14	45	49	4.06	1.05
	2 People close to me encourage me to use mobile learning to develop reading skills	2	11	20	43	44	3.97	1.03
	3 People close to me recommend using mobile learning to develop reading skills	2	12	18	38	50	4.02	1.06
	4 My teachers persuaded me to use mobile learning to develop reading skills	2	8	15	45	50	4.11	0.98

As seen in table 9 above' there are 4 items in the level of student's perceptions about social impact of mobile learning in reading activities. Item 1, "My university supports the use of mobile learning to develop reading skills." the majority of the students respondents reported strongly agree with the statement (49%) and followed by

agree with (45%). However, the minority responded are strongly disagree (4%) and disagree with (8%) respectively. The total mean score for this item is  $M=4.06$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that their university supports the use of mobile learning to develop reading skills.

For item 2, "People close to me encourage me to use mobile learning to develop reading skills." the majority of the students respondents reported strongly agree with the statement (44%) and followed by agree with (43%). However, the minority responded are strongly disagree (2%) and disagree with (11%) respectively. The total mean score for this item is  $M=3.97$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that their close friend encourage them to use mobile learning to develop reading skills.

Item 3, "People close to me recommend using mobile learning to develop reading skills." the majority of the students respondents reported strongly agree with the statement (50%) and followed by agree with (38%). However, the minority responded are strongly disagree (2%) and disagree with (12%) respectively. The total mean score for this item is  $M=4.02$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that their close friend recommend them to use mobile learning to develop reading skills.

Finally Item 4, "My teachers persuaded me to use mobile learning to develop reading skills." the majority of the students respondents reported strongly agree with the statement (50%) and followed by agree with (45%). However, the minority responded are strongly disagree (2%) and disagree with (8%) respectively. The total mean score for this item is  $M=4.11$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that their teachers persuaded them to use mobile learning to develop reading skills.

Over all, it can be noticed from Table 9 above that the average mean of the 4 items in the level of social impact on using of mobile learning in reading activities at the institute of Arabic language teaching

to non-native speakers at King Saud University was (4.03) which is high level of means. Therefore, this indicates that the majority of the students participated in this study expressed high agreement about social impact on them to use mobile learning in reading activities.

Dimension Five: Facilitating conditions

The fifth dimension aims to find out “Level of facilitating conditions for using of mobile learning in reading activities”. There are three items under this heading. The 3 items were given a range of five points Likert scale with 1= Strongly Disagree; 2= Agree; 3= Neutral; 4= Agree; 5= Strongly Agree. The level of their will be decided based on mean scores interpretation where (1-2.33) is low, (2.34-3.67) is moderate, and (3.68-5) is high (Bagheri & Pihie, 2014; Pihie et al., 2011). The percentage scores were computed for each item, to indicate the level of student’s perceptions about perceptions of students about the suitability of using mobile devices reading activities at their institute and the result is presented below:

Table 10: Level of facilitating condition for using mobile learning in reading activities

S/N	Items	SD	D	N	A	SA			1
1	I have the tools and resources to use mobile learning	0	11	20	45	44	4.02	0.95	
2	I have the knowledge to use mobile learning	0	7	18	50	45	4.11	0.87	
3	The Institute has specialized technicians to assist with mobile learning difficulties	3	16	23	38	40	3.80	1.12	

As seen in Table 10 above, there are 3 items in the level of student’s perceptions about facilitating conditions for using mobile learning in reading activities. Item 1, “I have the tools and resources to use mobile learning.” the majority of the students respondents reported agree with the statement (45%) and followed by strongly agree with (44%). On the other hand, responded are strongly disagree didn’t registered any percentage since it was (0%) and it followed by disagree with second lower percentage with (11%) respectively. The total mean score for this item is M=4.02 which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that they have

the tools and resources to use mobile learning.

For item 2, “I have the knowledge to use mobile learning.” the majority of the students respondents reported agree with the statement (50%) and followed by strongly agree with (45%). On the other hand, responded are strongly disagree didn't registered any percentage since it was (0%) and it followed by disagree with second lower percentage with (7%) respectively. The total mean score for this item is  $M=4.11$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that they have the sufficient knowledge to use mobile learning.

Finally Item 3, “The Institute has specialized technicians to assist with mobile learning difficulties.” the majority of the students respondents reported strongly agree with the statement (40%) and followed by agree with (38%). However, the minority responded are strongly disagree (3%) and disagree with (16%) respectively. The total mean score for this item is  $M=3.80$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that their institute has specialized technicians to assist with mobile learning difficulties.

Over all, it can be noticed from the Table 10 above that the average mean of the 3 items in the level of facilitating conditions for using of mobile learning in reading activities at the institute of Arabic language teaching to non-native speakers at King Saud University was 3.97. This shows a high level of means. Therefore, this indicates that the majority of the students participated in this study expressed high agreement about the level of facilitating conditions for using of mobile learning in reading activities.

#### Dimension Six: Self-efficacy

The sixth dimension examines level of self- efficacy for using of mobile learning in reading activities. Also, there are three questions under this heading. The result is presented below:



Table 11: Level of self-efficacy for using mobile learning in reading activities

S/N	Items	SD	D	N	A	SA			1
1	If someone help me when needed	2	5	13	42	58	4.24	0.93	
2	If I have a lot of time and mobile learning sources	1	3	18	46	52	4.21	0.85	
3	If there is internal help in the mobile learning system	2	1	22	43	52	4.18	0.88	

As seen in Table 11 above, there are 3 items in the level of student's perceptions about self-efficacy of mobile learning in reading activities. For item 1, "If someone help me when needed." the majority of the students respondents reported strongly agree with the statement (58%) and followed by agree with (42%). However, the minority responded are strongly disagree (2%) and disagree with (5%) respectively. The total mean score for this item is M=4.24 which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that they get help when needed.

Item 2, "If I have a lot of time and mobile learning sources." the majority of the students respondents reported strongly agree with the statement (52%) and followed by agree with (46%). However, the minority responded are strongly disagree (1%) and disagree with (3%) respectively. The total mean score for this item is M=4.21 which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that they have a lot of time and mobile learning sources. Finally, item 3, "If there is internal help in the mobile learning system." the majority of the students respondents reported strongly agree with the statement (52%) and followed by agree with (43%). However, the minority responded are disagree (1%) and strongly disagree with (2%) respectively. The total mean score for this item is M=4.18 which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that they have internal help in the mobile learning system.

In general, Table 11 above shows that the average mean of the 3 items in the level of self- efficacy for using of mobile learning in reading activities for non-native speakers at King Saud University was 4.21 which is high level of means. Therefore, this indicates that the majority of the students participated in this study expressed high agreement about the level of self- efficacy for using of mobile learning in reading activities.

Dimension Seven: Behavioural intention and determination to use mobile learning

The seventh dimension investigated the level of behavioural intention and determination to use mobile learning. The result is presented below:

Table 12: Behavioural intention and determination to use mobile learning in reading activities

S/N	Items	SD	D	N	A	SA	M	SD
1	I tend to use mobile learning as soon as possible to develop reading skills	1	5	12	51	51	4.22	0.85
2	I plan to use mobile learning in the next two months to develop reading skills	3	9	20	41	47	4.00	1.05
3	I expect to use mobile learning in the next two months to develop reading skills	4	6	23	39	48	4.01	1.05

As presented in Table 12 above’ there are 3 items in the level of student’s perceptions about behavioural intention and determination to use mobile learning of mobile learning in reading activities. Item 1, “I tend to use mobile learning as soon as possible to develop reading skills.” the majority of the students respondents reported strongly agree as well as agree with the same statement (51%). On the other hand, the minority responded are strongly disagree (3%) and disagree with (9%) respectively. The total mean score for this item is M=4.24 which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that they tend to use mobile learning as soon as possible to develop reading skills.

For item 2, “I plan to use mobile learning in the next two months to develop reading skills.” the majority of the students respondents

reported strongly agree with the statement (47%) and followed by agree with (41%). However, the minority responded are strongly disagree (3%) and disagree with (9%) respectively. The total mean score for this item is  $M=4.00$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that they plan to use mobile learning in the next two months to develop reading skills.

Finally, item 3, "I expect to use mobile learning in the next two months. To develop reading skills." the majority of the students respondents reported strongly agree with the statement (48%) and followed by agree with (39%). However, the minority responded are strongly disagree (4%) and disagree with (6%) respectively. The total mean score for this item is  $M=4.01$  which is high level. So, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement that they expect to use mobile learning in the next two months to develop reading skills.

In general, it can be noticed from the Table 12 above that the average mean of the 3 items in the level of behavioral intention and determination to use mobile learning for non-native speakers at King Saud University was 4.07 which is high level of means. Therefore, this indicates that the majority of the students participated in this study expressed high agreement about the level of Behavioral intention and determination to use mobile learning.

#### **Dimension Eight: Anxiety**

The eighth dimension examined the level of anxiety to use mobile learning. The percentage scores were computed for each item under this construct to ascertain the level of student's anxiety towards using mobile devices in reading activities at their institute.

Table 13: Anxiety towards the use of mobile learning in reading activities

S/N	Items	SD	D	N	A	SA	M	SD
1	I feel scared when using mobile learning	15	17	12	37	39	3.57	1.39
2	I am afraid to lose a lot of mobile learning information by pressing the button by mistake.	11	18	14	36	41	3.65	1.33
3	I have a fear of using mobile learning in learning to read	10	14	16	34	46	3.77	1.30

As shown in Table 13 above' there are 3 items in the level of student's perceptions about anxiety of use of mobile learning of mobile learning in reading activities. Firstly, item 1, "I feel scared when using mobile learning. To develop reading skills." the majority of the students respondents reported strongly agree with the statement (39%) and followed by agree with (37%). However, the minority responded are neutral (12%) and strongly disagree with (15%) respectively. The total mean score for this item is M=3.57 which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement in regard feeling scared when they use mobile learning.

Secondly, item 2, "I am afraid to lose a lot of mobile learning information by pressing the button by mistake." the majority of the students respondents reported strongly agree with the statement (41%) and followed by agree with (36%). However, the minority responded are strongly disagree (11%) and neutral with (14%) respectively. The total mean score for this item is M=3.65 which is moderate level. So, the overall result for this item indicates that the majority of the students participated in this study expressed moderate agreement that they are afraid to lose a lot of mobile learning information by pressing the button by mistake. This may indicated the lack of the student's experience in using mobile learning as well as mobile devices.

Finally, item 3, "I feel scared when using mobile learning. To develop reading skills." the majority of the students respondents reported strongly agree with the statement (46%) and followed by agree

with (34%). However, the minority responded are strongly disagree (10%) and disagree with (14%) respectively. The total mean score for this item is  $M=3.77$  which is high level of means. Therefore, the overall result for this item indicates that the majority of the students participated in this study expressed high agreement in regard feeling scared when they use mobile learning.

In summary, it can be noticed from Table 13 above that the average mean of the 3 items in the level of anxiety to use mobile learning at the institute of Arabic language teaching to non-native speakers at King Saud University was 4.66 which is high level of means. Therefore, this indicates that the majority of the students participated in this study expressed high agreement about the Level of anxiety to use mobile learning.

### Discussion

The first part of this study focused on the need for using mobile-learning for teaching and learning Arabic reading skills. On this, students stressed that their proficiency in reading Arabic language is low. This was observed in Table 4 above. Similarly, this study found that the current reading activities adopted in the Institute for teaching Arabic language to non-Arab speakers in the King Saud university, need to be upgraded in order to meet the learning needs of the international students These shows that there is need for an alternative method of teaching Arabic reading skills in the Institute for Teaching Arabic Language to non-Arab speakers. This point corroborates with the view of Taha (2013) who found that Arabic language has been a problem to non-Arab speakers studying in Arab countries. Therefore, something must be done to address this situation. On this, the vacuum can be filled with the use of mobile-learning devices in teaching the subject to non-Arab speakers. Using mobile-learning devices will stimulate interest of learners to learning and enhance effective performance of students and teachers (Muhamed Ridhuan, 2014; Quin,2011) . Using mobile-learning devices to learn a foreign language will enable international students to learn different languages on their own and at their own pace (Muhammed Ridhuan, 2014)..

Furthermore, this study examined the extent at which Non-Arab

speaking students accept the use of mobile-learning devices in learning and enhancing their Arabic reading skills. Here, it was found that expectation performance of these students will be high if mobile-learning devices are used in the instruction process. Also, it was gathered from this study that expected effort of students will be increase if mobile-learning devices are used in teaching Arabic language to non-Arab speakers. Furthermore, students' attitude towards the use of technology in teaching and learning Arabic language will increase once university adopts mobile-learning devices in teaching. It was also found that using mobile-learning devices will impact positively on social interaction and social integration of non-Arab speaking students. In addition, presence of facilitating conditions will serve as stimulant to non-Arab speakers and will motivate them towards improving their reading skills in Arabic language. Finally, students self-efficacy will be high, behavioural intention and determination to use mobile-learning will increase, once mobile-learning devices are used in teaching and learning process in the Institute for teaching Arabic language to non-Arab speakers. These corroborate with the views of Muhammed Ridhuan (2014) who found that mobile-learning devices enhance effective teaching and learning. It also assists students to learn at their own pace, identify the areas of difficulties and provide suitable solution to the challenges facing effective teaching and learning (Hashemi et al., 2011; Wexler et al., 2008)

### Recommendation and Conclusion

Based on the result of the findings in this research study, we found that non-Arabic speakers found it difficult learning in Arab setting due to language barrier. Therefore, an alternative method of instruction should be introduced in order to stimulate the interest of non-Arab speakers towards learning Arabic language. For this reason, we strongly suggest that mobile-learning devices should be incorporated into teaching and learning process. Especially for teaching non-Arab speakers studying in Arab speaking countries. These devices must be made available to students and lecturers at all times. Staff and students must be trained on how to use these devices. In addition, the management of various universities must formulate

laws that will guide the use of mobile-learning. This law will prevent people from abusing the usage of the mobile-learning devices. Similarly, students and staff must be motivated towards using the mobile-learning devices provided in the university. They should also ensure effective supervision and monitoring of the teaching and learning exercise in order to improve the quality of service delivery and assist students towards learning Arabic language.

#### References

- Ayoade, O.B. (2015). Impact of mobile technology in transforming education and health sectors in Nigeria: Strength and challenges. Retrieved on July 3, 2017 from <http://eprints.covenantuniversity.edu.ng/5289/1/Paper%20121.pdf>
- Bagheri, A. & Lope Pihie, Z. (2014). Factors shaping entrepreneurial intentions. Newcastle upon Tyne: Cambridge Scholars Publishing.
- Baran, E. (2014). A review of research on mobile learning in teacher education. *Educational Technology & Society*, 17 (4), 17-32.
- Cattagni, A., & Ferris, E. (2001). Internet access in U.S. public schools and classrooms: 1994-2000. Washington, DC: IES, National Center for Education Statistic. Retrieved October 4, 2017 from <http://nces.ed.gov>
- Chou, C. C. & Block, L. & Jesness, R. (2012). A case study of mobile learning pilot project in K-12 schools. *Journal of Educational Technology Development and Exchange*, 5(2), 11-26.
- Creswell, J.W. (2012). Educational research: Planning, conduction and evaluating quantitative and qualitative research (4th ed.) Boston: Pearson.
- El-Hussein, M. O. M. & Cronje, J. C. (2010). Defining mobile learning in the higher education landscape. *Educational Technology & Society*, 13 (3), 12-21.

- Ferreira, M.J., Moreira, M., Pereira, C.S. & Durão, N. (2015). The role of mobile technologies in the teaching/learning process improvement in Portugal. Retrieved July 2, 2017 from [http://repositorio.uportu.pt/bitstream/11328/1352/1/ICERI\\_2015\\_2150\\_vFinal.pdf](http://repositorio.uportu.pt/bitstream/11328/1352/1/ICERI_2015_2150_vFinal.pdf)
- Grant, M. M. & Barbour, M. K. (2013). Mobile teaching and learning in the classroom and online: Case studies in K-12. Handbook of Mobile Learning. Berge, Z. and L. Muilenburg, eds. New York: Routledge. Retrieved November 2, 2017 from [https://www.http://digitalcommons.sacredheart.edu/cgi/viewcontent.cgi?article=1094&context=cad\\_fac](https://www.http://digitalcommons.sacredheart.edu/cgi/viewcontent.cgi?article=1094&context=cad_fac)
- Hashemi, M., Azizinezhad, M., Najafi, V. & Nesari, A. J. (2011). What is mobile learning? Challenges and capabilities. *Procedia – Social and Behavioural Sciences*, 30, 2477-2481.
- Hussein, A.M. (2014). Reading Arabic shallow and deep genres: Indispensable variables to science of reading. *Journal of Education and Learning*, 3(1), 60-69.
- Ibrahim, R. (2013). Reading in Arabic: New evidence for the role of vowel signs. *Creative Education*, 4(4), 248-253.
- Keskin, N. O., & Metcalf, D. (2011). The current perspectives, theories and practices of mobile learning. *The Turkish Online Journal of Educational Technology (TOJET)*, 10(2), 202-208.
- Khateb, A., Abdelgani, M.K., Taha, H.Y. & Ibrahim, R. (2014). The impact of orthographic connectivity on visual word recognition in Arabic: A cross-sectional study.



Reading and Writing, 27(8), 1413–1436.

Krejcie, R.V., & Morgan, D.W. (1970). Determining sample size for research activities.

Educational and Psychological Measurement, 30,607 -610.

Lederman, T. (1995). Local area networks for K-12 schools. ERIC Digest. Cable bill to

high? Syracuse, New York: ERIC Clearinghouse on Information and Technology (ERIC

Identifier: ED389277). Retrieved November 2, 2017 from from <http://www.eric>

[digests.org](http://www.eric)

Lightbody, K. (2004, Jun). Wireless networking in schools. ICT in Education. Retrieved

October 9, 2017 from <http://www.zardec.net.au>.

McKeachie, W. J., Asghar Iran-Nejad, & Berliner, D. C. (1990). The multi-sourcenature

of learning: An introduction. Review of Educational Research, 60(4), 509-516.

Muhammad Ridhuan, T.L.A. (2014). Development of activity-based mLearning

implementation model for undergraduate English language learning. (Doctoral

Dissertation Submitted to the Faculty of Education, Universiti Malaysia).

Nair, R. A. P. (2002, Oct). The role of wireless computing technology in the design of

schools. Washington, DC: National Clearinghouse for Educational Facilities. Retrieved

October 23, 2017 from [www.designshare.com/Research/Nair/wireless.pdf](http://www.designshare.com/Research/Nair/wireless.pdf)

Nair, R. A. P. (2001, Dec). Wireless wide area networks for school districts. Washington,

DC: National Clearinghouse for Educational Facilities.1. Retrieved November 2, 2017

from <https://www.citeseerx.ist.psu.edu/viewdoc/download?>

doi=10.1.1.204.6518&rep=rep1...

Pallant, J. (2011). *A step by step guide to data analysis using SPSS: Survival manual*. (4th ed.). Australia: Allen and Unwin.

Pihie, ZaidatolAkmaliah Lope, Amir Sadeghi, and Habibah Elias, 2011. Analysis of Head of Departments Leadership Styles: Implication for Improving Research University Management Practices. *Procedia - Social and Behavioral Sciences*, 29: 1081–90.

Prensky, M. (2001). Digital natives, digital immigrants part 1. *On the Horizon*, 9(5), 1-6.

Quinn, C. N. (2011). *Designing mLearning: Tapping into the mobile revolution for organizational performance*. San Francisco: Pfeiffer.

Reeves, J. L., Gunter, G. A. & Lacey, C. (2017). Mobile learning in pre-kindergarten:

Using student feedback to inform practice. *Educational Technology & Society*, 20 (1), 37-44.

Rikala, J. (2015). *Designing a mobile learning framework for a formal educational context*. Jyväskylä Studies in Computing. Retrieved November 2, 2017 from

[https://jyx.jyu.fi/dspace/bitstream/handle/123456789/47324/978-951-39-6311-8\\_vaitos06112015.pdf;sequence=1](https://jyx.jyu.fi/dspace/bitstream/handle/123456789/47324/978-951-39-6311-8_vaitos06112015.pdf;sequence=1)

Rothstein, R. I. (1996). *Networking K-12 schools: architecture models and*

*evaluation of costs and benefits* (Master of Science Thesis, Massachusetts Institute of

Technology, Cambridge, MA. (ERIC No: ED442256)). Retrieved November 5, 2017

from <http://www.eric.ed.gov/>

Sharples, M. (2000). *The design of personal mobile technologies for lifelong learning*.

Steve T.F. & Hiroshi, F. (2013). Time is of the essence: factors en-  
 Computer & Education, 34, 177-195.

couraging

out-of class study time. *ELT Journal*, 67(1), 31-40. Retrieved January 21, 2013 from

<http://eltj.oxfordjournals.org/content/67/1/31.short>.

Taha, H.Y. (2016). Deep and shallow in Arabic orthography: New evidence from reading

performance of elementary school native Arab readers. *Journal of Writing Systems*

Research Volume, 8 (2),133-144.

Taha, H.Y. & Saiegh-Haddad, E. (2016). The role of phonological versus morphological

skills in the development of Arabic spelling: An intervention study. *Journal of*

*Psycholinguistic Research*, 45 (3), 507–535.

Taha, H.Y. (2013). Reading and spelling in Arabic: Linguistic and orthographic

complexity. *Theory and Practice in Language Studies*, 3 (5), 721-727.

Traxler, J. (2009). Learning in a mobile age. *International Journal of Mobile and Blended*

*Learning*, 1 (1), 1-12.

Trochim, W.M., Donnelly, J.P., & Arora, K.(2016). *Research methods: The essential knowledge base*. Australia: Cengage Learning.

UNESCO.(2011). *Mobile learning week report*. Retrieved on July 5, 2017 from

[http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/ICT/pdf/UNESCO%20](http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/ICT/pdf/UNESCO%20LW%20report%20final%2019jan.pdf)

[LW%20report%20final%2019jan.pdf](http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/ICT/pdf/UNESCO%20LW%20report%20final%2019jan.pdf)

UNESCO. (2012). *Turning on mobile learning in North America: Illustrative initiative*

and policy implications. Retrieved on June 10, 2017 from

<http://unesdoc.unesco.org/images/0021/002160/216083E.pdf>

Wang, M., Shen, R., Novak, D. & Pan X. (2009). *The impact of mobile learning on*

students' learning behaviours and performance: Report from a large

blended classroom.

British Journal of Educational Technology, 40(4), 673–695.

Wentzel, P., Van Lammeren, R., Molendijk, M., de Bruin, S. & Wag-tendonk, A.

(2005). Using mobile technology to enhance students' educational experiences. ECAR.

Retrieved on July 1, 2017 from <https://net.educause.edu/ir/library/pdf/ers0502/cs/ecs0502.pdf>

Wexler, S., Brown, J. , Metcalf, D., Rogers, D. & Wagner, E. (2008).

The e-Learning

guild report mobile learning. Retrieved from: <http://www.elearning-guild.com/>

research/archives/index.cfm?id=132& action=viewonly

World Bank.(2016). World development indicators. Retrieved on July 1, 2017 from

<http://data.worldbank.org/data-catalog/world-development-indicators>

Yin, R.K.(2003). Case study research: Design and methods (2nd ed.). Thousand Oaks: Sage Publications.