Mobile Applications' Impact on Student Performance and Satisfaction

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ABSTRACT
Mobile applications are rapidly growing in importance and can be used for various purposes. They had been used widely in education. One of the educational purposes for which mobile applications can be used is learning the right way to read and pronounce the verses of the Holy Quran. There are many applications that translate the Quran into several languages. In addition, there are applications that help usersto read the Quran, and search for a particular word or phrase in the text as well as listening to verses of the Holy Quran.

This research aims to study the relationships of behavioral factors and perceived usefulness of using the mobile application "Say Quran" for learning Quran on students' perceived performance, satisfaction and behavior. In this research a group of 118 students of the Computer Sciences and Information Systems College at Al Imam Muhammed Bin Saud Islamic University who are studying the Holy Quran course had been asked to use the application to help them on studying the Quran, then a survey had been distributed in order to collect the data. The results from this study provide evidence that there is a positive relationship between mobile application "Say Quran" and students' perceived performance, satisfaction and behavior while engaged in studying the Holy Quran.
Keywords: Arabic Speech Recognition; mobile applications; mobile learning; Say Quran, student performance, Performance, Satisfaction.

INTRODUCTION

Traditionally, education has been offered in classes where students can interact directly with their teachers, makingstudents' physical presence very important. However, the wide distribution of computers and communication technologies has made the learning process easier. Since the arrival of mobile phones in the 1980s (Huet and Tcheng, 2010), they have been widely used by people of all ages all around the world. It could be said that the whole world is becoming mobile; mobile phones are not only communication devices, butalso portable and private pieces of technological equipment.

Nowadays, mobile technologies are becoming increasingly ubiquitous and networked.Such technologies canbe used creatively in different areas. Using mobile technologies in education is a clear exampleof such innovation. Mobile devices equipped with internet connectionshave created the need for a new form of electronic learning, called mobile learning (Fu, Su, and Yu,2009). Internet-enabled mobile devices canhelp students to access learning resources and online courses, anywhere and at any time.

The mobile application industry is growing quickly. According to a recent market research report, the global mobile application market is expected to be worth $25 billion by 2015, 20.5 per cent of which will be generated by the Apple App Store (MarketsandMarkets, 2011).

Moreover, in a market research study conducted by Adkins (2013) in 2012, revenues generated in the Middle East for mobile learning products have reached $88.3 million. By 2017, these revenues willmore than double, to $205.4 million, with a growth rate of 18.4 per cent.

Many applications have been developed for mobile platforms. Over the last few years,these applications have been the focus not only of technical interest,but also marketing and business campaigns. Many applications have been developed for educational purposes (Demuynck and Laureys,2002). Browsing sites such as Android Apps at the Google PlayStore showsthe variety of learning applicationsfor subjects such as different languages;concepts related to mathematics;or programming languages, such as Quick Graph to calculate and design graph areas.In addition, one can find applications to learn about Islam and other religions (Quinn and Clark,2000).

People in Muslim and non-Muslim countries alike are keen to learn about Islam and the Qur'an. In Saudi Arabia,as in other Muslim countries, students learn about Islam atdifferent stages of their education. In addition, students of all educational levelsmust learn how to read the Qurancorrectly. Thus, having a mobile application that facilitates searching, reading, and listening to the Quran's verses would be a helpful tool for them.

With the above in mind, the objective of this study is to investigate the impact of the Say Quran mobile application (Alqahtani and Fayyoumi, 2013) as a learning tool for students enrolled at Al Imam Muhammed Bin Saud Islamic University,studying and learning Holy Quran. The impact ofthe Say Quran application is reflectedin the students' performance, satisfaction, behavior, and motivation to use the application.

The following sections presenta literature review and outline of the study's methodology. Then, data analysis and resultsare presented.The paper ends with adiscussion and conclusion.

LITERATURE REVIEW

Recently, many researchers have focused on mobile learning and its environment. Some researchers have defined the difference between e-learning and mobile learning, saying thate-learning is a learning process which is supported by digital electronic tools and media, and by analogy, m-learning is e-learning that uses mobile devices and wireless transmission (Pinkwart*et al*,2003,). M-learning functions by integrating a number of hardware and software technologies into multimedia applications to facilitate the understanding of educational content, for example, in the form of quizzes or games.A2010 study by Garajat the School of Engineering and Design, Brunel University, United Kingdom, was designed to enhance students' performance and experiences within the BSc Multimedia Technology and Design course. The research presented a number of m-learning application conceptsorganized under the subjects of administration, presentation, feedback, motivation, and innovation. The study found that implementing m-learning is sufficient for students.

Hashimand colleagues(2011)introduced a Java m-learning application tool to review and revise course materials. This application can be used either on-line or off-line. The on-line feature helped users to access learning material through a certain URL, while the off-line feature helped users to access learning content via the application, which had been installed on their mobile devices. This application mainly focused on three subject areas: science, English, and mathematics. Learners could use the application to review course materials before exams or quizzes.

Mobile Learning in Saudi Arabia

Mobile learning in Saudi Arabia has attracted a great amount of attention from researchers.Alturki's (2013) researchdeals with the use of mobile learning at KSU. The study focused on students and faculties at the university. This research attempts to ensure that King Saud University is ready to employ mobile learning as part of the education process. The study involved a sample of 50 faculties out of 40, and 100 students out of 30,000. The major method of data collection was by questionnaire. The research showed the readiness of faculties and students to use mobile learning as a method of teaching and learning.Another survey by Al-Fahadwas conducted at King Saud University to measure the attitudes and perceptions of undergraduate students toward using mobile technology in education. The results of the research showed the possibility of improving education by enhancing methods of mobile teaching/learning (Al-Fahad, 2009). Another study, by Farah and Samiul (2011), reviewed the technological challenges of mobile learning in Saudi Arabia. They applied a questionnaire to a group of 131 undergraduate students, finding that more than 75 per cent of them responded positively to m-learning's flexibility and communication capabilities. However, some students required training in order to benefit from this new learning environment.

Acceptance model of mobile learning

A large number of studies have explored factors that influence human attitudes toward using and accepting new technologies. Researchers have employed well-established models and theories to undertake increasingly in-depth investigations. This includes the theory of reasoned action (TRA) byAjzenand Madden (1986); the technology acceptance model (TAM), which was put forward by (Davis , 1989);Ajzen's theory of planned behavior (TPB), (Ajzen, 1991) and the unified theory of acceptance and use of technology (UTAUT), put forth by Venkatesh et al.(2003).Huetand Tcheng (2010) explained the acceptance of m-learning and integrated TAM using perceived enjoyment from the motivational model, and perceived mobility value, as external variables of perceived usefulness. The study found that perceived usefulness and perceived ease of use positively influence students' attitudes toward m-learning.

Wei-Han Tan et al. (2012)developed a conceptual model to examine factors that affect intentions to adopt m-learning in Malaysia. The findings indicated that perceived usefulness, perceived ease of use, and subjective norms can affect one's intention to use mobile learning; gender factors did not appear to show any effects on m-learning usage. Further, Wang et al.(2009) extended the UTAUT model by including perceived playfulness, which is the individual's tendency to interact with the computers, and self-management of learning. The results showed that performance expectancy, effort expectancy, social influence, perceived playfulness, and self-management of learning all had effects on behavioral intention to use mobile learning. Moreover, they also found that age differences moderate the effects of effort expectancy and social influence on using mobile learning, and

that gender differences moderate the effects of social influence and self-management of using m-learning. In addition, Jairak et al.(2009)focused on assessing the acceptance of m-learning in higher education. The results show that only effort expectations and social influences affect students' intention to use m-learning. They also found that performance expectations, effort expectation, and social influences affect the attitudes of students regarding mobile learning.

Kamaruzaman&Zainol(2012)focused on behavioral responses among secondary school students. The authors of the study developed a mobile learning application to teach English. They found that this technology can improve the encouragement and performance of students when they learn English through the use of mobile devices. They also found that the functionality of the m-learning application used, the layout design, the content, and personal motivation all influence behavior positively.Shams(2013) explored the factors that influence the behavior of learners towards the use of m-learning applications. The result of this study showed the important relationship between the utility of m-learning, ease in m-learning, and self-management of the learner, and behavior towards the actual use of m-learning applications.

The usability of mobile learning applications includes some features that differ from other computer systems. These include the mobile context, connectivity, screen size, and different display resolutions. These features can influence usability factors such as effectiveness, efficiency, satisfaction, learnability, memorability, errors, and the cognitive load (Harrison et al., 2013). Another factor that is affected by m-learning applications is learner performance. A study by Vogel et al.(2007) aimed to explore the impact on learning performance. The results of this study showed positive support for learner performance enhancement, with support for constructive alignment as a moderate variable for students who use m-learning technology.

Moreover, an experiment byHamdan& Ben-Chabane(2012)discussed how to improve students' personal skills and performance by using mobile learning applications. They performed the experiment with IT students at UAE University. They found that using mobile learning technology can improve student performance in the educational process.In addition, user satisfaction is influenced by many environmental and individual factors. A study by Hassanein et al. (2010) focused only on factors facilitating student satisfaction with mobile learning. The study presented a model of student satisfaction with mobile learning, showing that both external and internal facilitating factors associated with the mobile learner can influence students' satisfaction with this technology.

Say Quran Application

Say Quran mobile application is an android mobile application that is designed and developed for verbal Quranic verse recognition and identification by listening to part of the verse. This application will facilitate learning the holy Quran. Moreover, it will assist users in efficiently understanding the correct meaning of Quranic verses. In addition, the application will provide the users with an alternative way to study Quran, by simply saying the verse, which would give the user the position, translation and interpretation of the verse.

The application had been developed by using ASR API (Application Programming Interface) which is available in Android OS. The application was implemented using Android Jelly Bean 4.1.2. It needs an Internet connection in order to work properly since it needs to run Google's ASRengine. The application's layout is developed by using Google Layout UI. It also consists of Quran XML, Translation XML and Interpretation XML which is being parsed to SQL Lite Database.

Say Quran mobile application can be used to identify the Arabic speech through the device's microphone, and then the speech will go through the ASR engine to be analyzed to text then will give results back. Then, the application would start a search loop through the Holy Quran to look for the verses that contain that is similar to the spoken words. Those results would be brought back to the user. So, the verse, the name of Surah (chapter) and the verse's number will be shown to the user.

The user can select the appropriate language of interpretation select the context he wants and then would give him a representation of that verse's interpretation and translation to many languages. Since Arabic is a verbal language, developing an Arabic ASR application is considered a very big challenge since there is no enough material on this subject. The following figures can represent the steps of working on Say Quran App. Figure 1 shows the results in two languages with the basic information provided about the verse (In which chapter and the number of verse within the chapter). Figure 2 shows part of the list of different languages that can be selected to show the interpretations (Alqahtani and Fayyoumi, 2013)

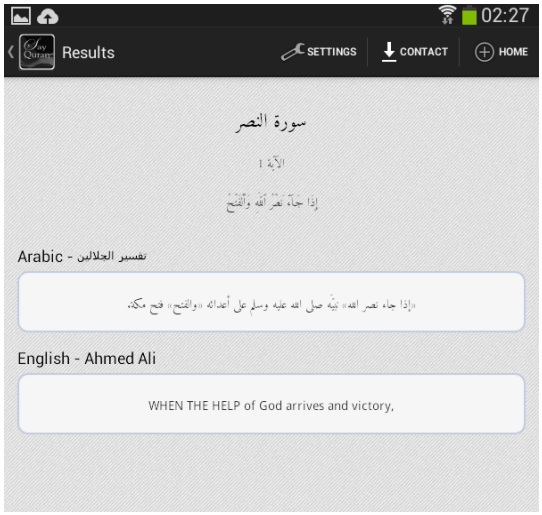

Figure 1: Quran Verse, Verse Number, Surah/Chapter Name and Interpretation

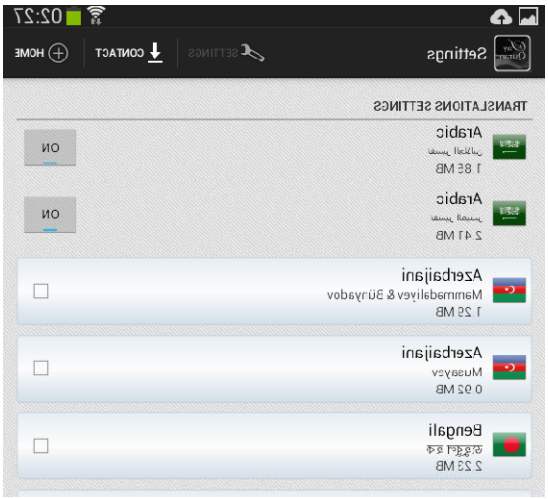

Figure 2 : Settings of Translation

RESEARCH MODEL AND HYPOTHESES DEVELOPMENT

Based on the literature review and previous studies that have focused on the factors affecting mobile learning applications and impact on their users, the research model for this study is composed of three dependent variables: mobile learner performance, mobile learner satisfaction, and mobile learner behavior. In addition to these dependent variables, there are four independent variables; perceived usefulness,application's ease of use, content quality, and layout design of the mobile application.

Perceived usefulness:

Perceived usefulness can be defined as the perceptions of a person using a new technology that it will enhance satisfaction and performance.Many studies have shown that perceived usefulness has a strong effect on learner performance in the learning process.Perceived usefulness can have a great impact to increase productivity, enhance performance, improve effectiveness and achieve satisfaction. Also, according to Hassanein et al. (2010),high perceived usefulness will result in higher satisfaction.Thus, we hypothesize:

H1: Perceived usefulness enhances m-learners' performance.
H2: Perceived usefulness enhances m-learners' satisfaction.

Content quality:

Learningcontent plays a strong role in attracting and motivating students to learn. Derakhshan's (2009) study shows that content is an essential feature instudents' technological based learning experience. Furthermore,Kutluk and Gülmez (2014) find that students strongly agree that well-organized and easy-to-navigate content is an attractive feature for m-learners. Thus, learning content must provide materials that help learners to quickly access the needed information. This information can be in the form of equations, formulas,

graphics, definitions, and video. Thus, having good content inspires students to learn (Bekele, 2010; Mara, 2012).In addition, the content of mobile applications should incorporate pedagogical objectives and requirements. It should be easy to navigate, and provide accurate and up-to-date information. When m-learners are exposed to good quality content, they will be happy, satisfied and more eager to learn (Kim et al., 2005; Bekele, 2010; Mara, 2012). Hence, we hypothesize the following:

H3: Content quality enhances the level of m-learners' satisfaction.
H4: Content quality enhances m-learners' behavior.

Application's ease of use:
Ease of use is a belief about new technology which influences personal attitudes towards using that technology. According to studies of interface designfor mobile applications, there is a relationship between good interface design and ease of use for m-learning apps. Thus, when an application is difficult to use, the learners cannot use it and they may leave it. According to the study (Davis, F.D., 1989) ease of use is a construct to measure system/application quality, which is related to user-friendly application design. According to Abu-al-Aish et al.(2013) and Davis (1989),ease of use can positively affect m-learning behavior. Thus, we hypothesize:

H5: An application's ease of use enhances m-learners' behavior

Layout design
Layout design can incorporate typographic elements, which can connect meanings. These elements should be related to each other across the mobile screen. For m-learning applications, screen size is the standard, which can be divided into menu, navigation area, and the content area, which displays the learning content (Darcey and Conder, 2012).The attractiveness of the interface layout and the colors used will have a great impact on the learner's behavior(Kamaruzaman&Zainol, 2012).

Layout design and graphic design should have the same look. Elements such as columns, margins, and icons should be placed on the screen consistently. That way, when the user understands how to use one screen, he or she will be able to understand other screens and how they work. Colors can be used to complementinformation to accomplish the purpose of the m-learning application, but should be used in moderation (Kim et al., 2005). Thus, layout design positively influences m-learner behavior (Jairak et al.,2009).

H6: An application's layout design enhances m-learners' behavior.

M-Learners' Performance
According to a studyby Hashim et al. (2011),learner performance can be defined as the extent to which the learner can believe that using mobile technology in learning would be of benefit.

Mobile learning can help students to take control over their learning and optimize it inside and outside the classroom through the learning environment. Therefore, learner performance suggests that learners will find that mobile learning is beneficial and useful since they learn quickly and in different locations. In the mobile learning environment, new units, activities and skills are designed to support learners in a new process of learning. In addition, the technology of m-learning can change people's thoughts, actions, feelings and skills (Vogel et al.,2007).

In the individual environment, mobile learning can empower learners with improved study and personal skills. Moreover, in a collaborative environment (such as a group of learners), mobile learning can enhance communication, problem solving, critical thinking skills, and students' responses to challenges. Learner performance will be enhanced as long as there is some interaction between learners and the mobile applications (Hamdan& Ben-Chabane, 2012).

Learners' performance can be evaluated by observing their actions. For example, their level of learning will be of higher quality, they will gain more understanding of the subject, achieve the desired learning outcomes, enjoy using the mobile application for learning, improve their collaboration with classmates, increase the productivity of their learning time, display a positive attitude toward the subject, and so on (MacCallum, 2009). Many studies focus on studying the factors that influence mobile learning; however, the present study measured the impact on learners who used the Say Quran mobile application, evaluating their performance, satisfaction, and behavioral intention to use it.

A study by Vogel and colleagues (2007) aimed to explore the impact of mobile applications on learning performance. The results of the research showed positive support for an increase in learners' performance, with

support for constructive alignment as a moderator variable for students who use m-learning technologies. Moreover, an experiment by Hamdan and Ben-Chabane (2013) discussed how to improve students' personal skills and performance by using mobile learning applications. They performed their experiment at UAE University, using IT course students, and found that using mobile learning technology can enhance student performance in the educational process. The researchers also found that the performance of a mobile learner will have a positive effect on learners' behavioral intentions to use m-learning applications(MacCallum, 2009).

H7: M-learners' performance enhances m-learners' behavior.

M-Learners' Satisfaction

In the field of information systems (IS), user satisfaction refers to the degree to which users feel comfortable with the systems to achieve their goals. In addition, in the field of human-computer interaction, user satisfaction refers to the affection expressions gained from interacting with a system. Therefore, satisfaction is a subjective set of interactive experiences influenced by affective elements.

Satisfaction, in most studies, can indicate characteristics of quality. When the user is satisfied with a system, it means that he or she has control, the freedom to use the system, and can therefore get what is required and needed from the system. According to Hassanein and colleagues (2010), mobile learner satisfaction can be influenced by perceived usefulness, and a high level of perceived usefulness results in higher satisfaction. Perceived usefulness can be defined as the perception of a person who uses a new technology designed to enhance his or her satisfaction and performance. With this in mind, m-learner satisfaction is greatly influenced by the application's perceived usefulness and content quality (Mara, 2012).

H8: M-learners' satisfaction enhances m-learners' motivation.

M-Learners' Behaviors

The behaviors of mobile learning applications' users can be defined as a set of actions in conjunction with the m-learning environment. The use of mobile learning applications provides learners with new opportunities and changes their behaviors. The behavior of m-learners is positively affected by content, ease of use, and layout and design of mobile learning applications. (Nayebi et al., 2012). Furthermore, m-learners' performance has a positive effect on their behavior. Student behavior is affected by many factors; for example, content quality can influence m-learners' satisfaction and behavior variables (Chaiprasurt*et al*., 2011). Ease of use can affect m-learners' behavior positively (Kim. *et al.,* 2005). In addition, in m-learning applications, the screen size is a standard that can be divided into menus, a navigation area, and a content area to display the learning materials (Miao, 2012). The attractiveness of the interface layout and the colors also have a great impact on learner behaviors (Kamaruzaman&Zainol, 2012).

M-Learners' Motivation

There are many factors that contribute to successful practice in m-learning, and motivation is one of those factors. Motivation lies at the heart of successful learning, since motivated students are keen to learn. Motivation can be defined as a person's internal needs, desires, and wants and can determine his or her attitude (Bekele, 2010).

According to Chantorn*et al.*'s (2011) study, we can expect an increase in the satisfaction and motivation of students in online learning environments that are supported by mobile technologies. In the learning environment, and especially mobile learning, MacCallum (2009) has proven that motivation has a great impact on how learners use technology for mobile learning. He also found that learners are more likely to use mobile technology if they feel it can improve and enhance their performance. Hence, m-learners' motivation is influenced by their satisfaction; at the same time, it can affect the relationship between usefulness and m-learners' performance (Chaiprasurt et al., 2011).

Thus, content and perceived usefulness positively influence learner satisfaction with the application. Ease of use, content, and layout design also positively affect m-learners' behavior, as shown by the previous researcher (Miao, 2012).

H9: M-learners' motivation enhances the relationship between perceived usefulness and m-learners' performance.

The following diagram shows the proposed research model.

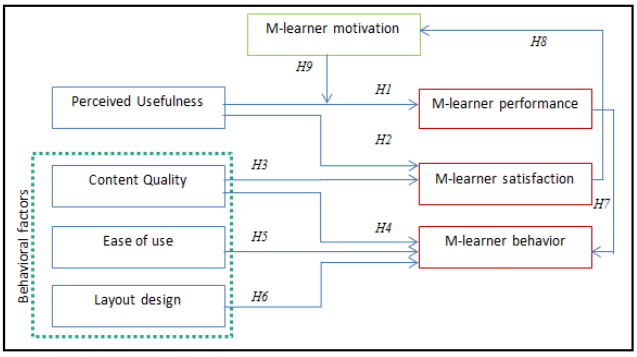

Figure 3: Research Model

RESEARCH METHODOLOGY

A) Data Collection and Measurement Scales

In order to test our model and understand the factors influencingstudents' performance, satisfaction and behavior in using the Say Quran application, an experiment was carried outusing theSay Quran application.170 students of the Computer Sciences and Information Systems College who also study the Holy Quran in cooperation with the Religion Origins College were asked to use the Say Quran application.Then, a structured questionnaire was created and distributed online for the students (both males and females) who study the Holy Quran. According to the equation used todetermine the sample size of the study (Sekaran and Bougie, 2009),the sample size of this study was about 118 participants out of a larger population of 170 students. The questionnaire contained 34 questions describing eight constructs: m-learner performance, m-learner satisfaction, m-learner motivation, m-learner behavior, perceived usefulness, content quality, ease of use, and layout/graphic design.

The questionnaire was checked and approved by a group of referees who were empowered to revise the questions as needed. Moreover, some study participants were involved in the process of vetting the questionnaire's wording during the pilot study. Not only were wordings revised, some language was revised to improve clarity, the relevance of the questionnaire items to the research concepts, and to what extent the items could clarify the study idea. Finally, the questionnaire was modified and adjusted based on referees' and the pilot study subjects' comments.

Table 1: Summary of measurement scales

Variable /Construct	Measurement Items
M-learner Performance	1. When I use the Say Quran application, my learning skills are enhanced. 2. I am sure that Say Quran increased my understanding of the Holy Quran. 3. Using the Say Quran application would enable me to perform learning tasks more quickly. 4. Using the Say Quran helped me to achieve my desired grade in the Holy Quran course.
M-learner Satisfaction	1. Generally, I am satisfied with the Say Quran mobile application. 2. I became fond of the services provided to me by using the application. 3. I will recommend this application to others.
M-learner Behavior	1. When I use the Say Quran application, I plan to use mobile learning applications as a part of my studies. 2. I will use the Say Quran application frequently in all lectures of the Holy Quran course. 3. I am enjoying using the Say Quran m-learning app. 4. I will not hesitate to start the Say Quran application anywhere; I will not only use it during lectures.
M-learner Motivation	1. I like to use the Say Quran application to learn as much as possible. 2. I want to use Say Quran and attend traditional classroom facilities. 3. I believe that I can improve my skills by using the Say Quran application. 4. I believe that using the Say Quran m-learning application has helped me to learn more things I'm interested in.
Perceived Usefulness	1. Using the Say Quran application would improve my learning performance. 2. The Say Quran application would enhance my academic effectiveness. 3. Using this application would increase my productivity (reduce the time

	required to accomplish tasks). 4. Using such an m-learning application could make both teaching and learning easier .
Content Quality	1. I agree that the content of the Say Quran application is visibly described to the user. 2. I am satisfied with the contents of the Say Quran application. 3. I agree that the division of contentswithin the application is straightforward. 4. The content in the application is readable. 5. I agree that thedivision of contentswithin Say Quran is easy to absorb. 6. Voice recognition when using the Say Quran application was accurate. 7. Voice recognition when using the Say Quran application responds quickly.
Ease of Use	1. I found navigating around the application screen to be easy. 2. Distinguishing the appropriate icon for the application for the needed information is easy. 3. The application is user friendly.
Layout and Graphic Design	1. The application is adapted to mobile devices'screen sizes. 2. The Say Quran application's layout design can support both landscape and portrait modes seamlessly. 3. The application is familiar to the user. 4. I have found that the text and colors are clear. 5. I feel happy with the design of the Say Quran application.

RESULTS OF THE STUDY

A) Reliability and validity

As for reliability and the internal consistency of measurement scales,the values of correlation coefficients of the statements of every construct are positive and statistically significant at P<0.01. Moreover, the Pearson correlation coefficients for all of the questionnaire's statements ranged from (0.971) to (0.801). Therefore, the questionnaire has a high internal consistency. The equation of Cronbach'salpha (α) is used in this research in order to examine the reliability of the questionnaire. The following table shows the questionnaire coefficients' stability.As the table below demonstrates,the general stability of the research tool is equal to .9783. This means that the questionnaire has a high rate of stability and can be applied to perform the experiment.

Variables	Cronbach's alpha	No. of items
M-learner Performance	.9389	4
M-learner Satisfaction	.9582	3
M-leaner Motivation	.8941	4
M-learner Behavior	.9119	4
Perceived Usefulness	.9300	4
Content Quality	.9550	7
Ease of Use	.9103	3
Layout and graphical design	.9532	5
General Stability	.9783	34

Table 2: An illustration of Cronbach's alpha of the study variables

The arithmetical means are shown below for the scores of responses for all the study variables statements. When this mean iscompared with the 5-point scale, from1 to 5 (High > 3, Neutral = 3 and Low < 3), it was found that results of the study are greater than the agreement point (+3), which means that all of the study variables are high because their arithmetic means are greater than 3 (Elliott and Wayne, 2006).

Construct	Mean	Standard Deviation
M-learner Performance	3.99	.760
M-learner Satisfaction	3.95	.788
M-leaner Motivation	3.93	.757
M-learner Behavior	3.92	.714
Perceived Usefulness	3.96	.749
Content Quality	3.84	.761
Ease of Use	3.97	.773
Layout and graphical design	3.97	.760

Table 3: Arithmetic mean and standard deviation for the scores

RESEARCH MODEL VALIDATION AND HYPOTHESES TESTING

In this study, a principal component analysis extraction with varimax rotation was performed on all items in an exploratory factor analysis. To test preconditions of the sample, Bartlett's test of sphericity and Kaiser-Meyer-Olkin measures were used for the factor analysis. The value of Kaiser-Meyer-Olkin was .873, exceeding the recommended value of .6 (Kaiser, 1974).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.873
Bartlett's Test of Sphericity	Approx. Chi-Square	3884.089
	df	561
	Sig.	.000

Table 4: Test of preconditions for analysis

Regression tests were conducted for hypotheses testing,in order to understand the relationship between variables and to determine the strength of the relationships. The following table is a summary of the regression analysis of the research hypotheses.

					Change Statistics				
Hypothesis	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.791[a]	.626	.623	.70388	.626	177.709	1	106	.000
2	.587[a]	.345	.338	.75777	.345	55.716	1	106	.000
3	.606[a]	.367	.361	.55582	.367	61.391	1	106	.000
4	.659[a]	.434	.429	.49102	.434	81.411	1	106	.000
5	.579[a]	.298	.292	.38380	.298	45.035	1	106	.000
6	.565[a]	.319	.313	.37803	.319	49.682	1	106	.000
7	.577[a]	.271	.264	.41626	.271	39.389	1	106	.000
8	.687[a]	.472	.467	.50772	.472	94.607	1	106	.000
9	.728[a]	.530	.521	.45211	.530	59.207	2	105	.000

Table 5: Summary of regression analysis of hypotheses

DISCUSSION AND CONCLUSION

Technology in the educational process is not new, and mobile learning applications have become more pervasive. Therefore, it is necessary to understand the impact of technology used in learning options. Modern speech recognition technology has had a great effort on mobile learning applications. It helps a user to interact with the device as if he or she were talking to another person. Many studies have been conducted on the challenging characteristics of Arabic speech recognition. One of them is how to recognize verbal verses from the Quran.

A comprehensive study of every aspect about mobile learning is necessary, because mobile learning in Saudi Arabia is still in its early stages. It is important to meet the goals of various m-learning factors. This study has aimed to develop the Say Quran application and to perform experiments to verify its influence on users. The survey results confirmed nine hypotheses, and the proposed model has been confirmed. All hypotheses were accepted by the study, as did previous experimental studies (Kamaruzaman&Zainol, 2012; Mara, 2012;Miao, 2012; Chaiprasurt et al., 2011; MacCallum, 2009; Kim. *et al.,* 2005).Despite the challenges of applying the

application, most respondents in the study had high satisfaction and positive attitudes towards the m-learning application. However, the study could be repeated with a larger sample size in order to generalize the results.

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