Students' Perceptions of Edmodo and Mobile Learning and their Real Barriers towards them

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ABSTRACT
The present research aims to investigate the students' perceptions levels of Edmodo and Mobile learning and to identify the real barriers of them at Taibah University in KSA. After implemented Edmodo application as an M-learning platform, two scales were applied on the research sample, the first scale consisted of 36 statements was constructed to measure students' perceptions towards Edmodo and M-learning, and the second scale consisted of 17 items was constructed to determine the barriers of Edmodo and M-learning. The scales were distributed on 27 students during the second semester of the academic year 2013/2014. Findings indicated that students' perceptions of Edmodo and Mobile learning is in "High" level in general, and majority of students have positive perceptions towards Edmodo and Mobile learning since they think that learning using Edmodo facilitates and increases effectiveness communication of learning, and they appreciate Edmodo because it save time. Regarding the barriers of Edmodo and Mobile learning that facing several students seem like normal range, however, they were facing a problem of low mobile battery, and storing large files in their mobile phones, but they do not face any difficulty to enter the information on small screen size of mobile devices. Finally, it is suggested adding a section for M-learning in the universities to start application of M-learning and prepare a visible and audible guide for using of M-learning in teaching and learning.

Keywords: Edmodo, Edmodo perceptions, Edmodo Barriers, Mobile learning perceptions, Barriers of M-learning.

INTRODUCTION
The rapid and continual development in information and communications technologies (ICT), including improved wireless networking, and use mobile devices between university students' created a new learning environment, called "Mobile learning" or "M-learning". Mobile phone was just a tool to communicate with others by voice, but it is fast changed to multi-purpose tool in the light of the wireless technology like personal computer with high-quality camera functions, however, most mobile phones had become small and light weight, providing SMS and MMS, clock, stopwatch, calendar, games, multimedia player, and enabled to browse the Internet to send and receive e-mails or to share multimedia experience as the text, audio and images in addition to voice calls (Hartnell-Young and Heym, 2008). The hand-held mobility of the mobile phone make it growing at fast rate and make the number of it in many countries outnumber their population like in Saudi Arabia, for each 100 Saudi citizen they have180 mobile phones (Riyadh Newspaper, 2012). In addition, the increasing of adoption and acceptance of M-learning in all countries are not the same due to availability of infrastructure of mobile technology, the level of awareness of M-learning, and the expertise in the field of M-learning, and the willingness of the students to implement and use M-learning (Osang, et al., 2013).

Unlike more traditional environments of learning, M-learning is a recent e-learning environment, it has been introduced as a new learning technology lead to new learning form, through the availability of use mobile devices, such as smart phones, PDAs, and handheld computers by anyone to access information and learning materials from anywhere and at any time. However, M-learning allows students to learn from which location they want to learn since they can learn whenever and wherever they want on their existing mobile devices. Simply, the flexibility of use mobile devices at all times in the day and the night is it the most important characteristics of M-learning to achieve the idea of learning at anytime and anywhere (Pisey, et al., 2012).

Using of portable mobile devices in teaching, learning, and training provide the learners and trainees the ability to access the learning materials continuously, anytime anywhere, and at the same time, provide the teachers and trainers the ability to easily deliver homework activities continuously without interruption for learners and trainees, and that are parts of the educational process, which may not be provided by e-learning. M-learning and Edmodo application can take place everywhere, every time at home, in a car, day, night, etc. since mobile device are lighter and less bulky from bags full of books, papers, or even laptops. Despite the benefits and advantages of M-learning are countless, but unfortunately, there are some challenges and barriers appear in implementation of such learning form (Chanchary and Islam, 2009, Jarc, 2010, and Addison, 2011).

STATEMENT OF THE RESEARCH PROBLEM

In the twenty-first-century, especially in the last decade, many international conferences related to M-learning were held in different countries (Sweden, UK, Italy, Australia, South Africa, Canada, USA, Malta, etc.) to promote the use of wireless mobile technology in learning, for example, in Sweden 2002 held "mLearn" it was the first annual international conference and workshop on mobile and wireless techniques in education, also in Canada and in Greece in 2006 were held other two M-learning conferences. In February and October 2009 in the USA were held another two conferences, and at the same year 2009 in Spain (Barcelona) was held one more to present some projects and experimentations in the field of M-learning. In Malta (2010) was held the 9th World Conference on Mobile Learning (9th mLearn), then the tenth annual conference mLearn was held in China (2011), and before two years ago in 2012 were held two conferences, one in Finland (Helsinki) was held the 11th mLearn conference, and the second one was held in Jordan (Amman) the international conference to promote the use of mobile technology in interactive teaching and learning, and finally, the last World Conference on Mobile and Contextual Learning (12th mLearn) was held in Qatar in 2013.

These days, mobile devices integrated into students' lives since the majority of them use mobile devices such as smartphones, phaplets, tablets pc, iPads, e-book readers, however, reports by International Telecommunication Union (ITU) showed that the number of mobile phone users around the world will exceed the actual population of the globe by 2015, and the number of subscribers to mobile phone service that will reach 9 billion subscriber of 6 billion subscriber currently. Moreover, reports of ITU also pointed to the high number of mobile subscribers in Saudi Arabia to 54.5 million subscribers in 2012, and that number is increasing nowadays (Riyadh Newspaper, 2012).

In addition, many recent publications and research projects related to mobile learning were present the prospects and benefits of M-learning environments like (Kukulska-Hulme and Traxler, 2005, Mehdipour and Zerehkafi, 2013), and other several of studies identified teachers' perceptions or students attitudes of M-learning like (Jacob and Issac, 2007, Al-Fahad, 2009, Khwaileh and AlJarrah, 2010, Hung, et al., 2010, Alzaidiyeen, et al., 2011, Uzunboylu and Ozdamli, 2011, Serin, 2012), and also, other several of studies reviewed the opportunities, and challenges in their countries, like (Hartnell-Young and Heym, 2008, Paliwal, and Sharma 2009, Vavoula and Sharples, 2009, Saleem, 2011, Pisey, et al., 2012, and Osang, et al., 2013). Some of these studies confirmed the existence of challenges and barriers, and they indicated limitations or obstacles in implementation of M-learning in their countries such as (Perry, 2003, Facer, et al., 2005, Krämer, 2005, Chanchary and Islam, 2009, and Addison, 2011). Although most of the studies are related to the mobile learning the studies on the perceptions of the students towards mobile learning and barriers at the same time are quite few or no research has been carried out to determine students' perceptions level of Edmodo and M-learning and to identify the barriers of them at the same time especially in the developing countries like KSA, because maybe most of them are still in the first level of readiness or maybe in the development level in implementing this type of learning environment and using Edmodo. Therefore, this research will attempt to investigate the perceptions' levels and barriers facing the students in Edmodo and M-learning through using their mobile devices to achieve learning objectives since it has not so far been studied in KSA.

Finally, the importance of this research is that by determining whether the students have positive perceptions of Edmodo and M-learning and whether there are deficiencies in the use of Edmodo and M-learning. Also, it is thought that the identifying of barriers of Edmodo and M-learning will contribute to the field of mobile technologies since it could be the first step in the right way to overcome them and to improve the M-learning process as a new form of learning by involving it in the coming years as learning form at university level.

AIMS OF RESEARCH

The present research aims to investigate the students' perceptions levels of Edmodo and Mobile learning and to identify the real barriers of Edmodo and M-learning that facing the students at Taibah University in KSA. For this aims of the research, it is supposed to answer the following two questions:
What is the perception level of the students towards Edmodo and M-learning at Taibah University?
What are the real barriers facing the students in Edmodo and M-learning at Taibah University?

TERMS OF THE RESEARCH AND ITS LIMITATIONS

Edmodo: is a simple M-learning tool using to present the lesson contents, it is common to all operation systems of smartphones; it provides useful tools for students and teachers to interact online outside class anywhere, anytime (Hourdequin, 2014).

M-learning: it is new learning form include using mobile phones, smartphones, personal digital assistants (PDAs) and tablet PCs, netbooks (ultra-mobile laptop PCs), personal digital multimedia players, portable gaming

consoles, but not desktops (Traxler, 2005) and (O'Connell, and Smith, 2007). The operational definition of M-learning: Learning with smart phones using Edmodo application based on a mobile learning service.

Perception: the tendency of the individual behavior about the variables that require acceptance or rejection response towards different subjects, or it is psychological state when an individual character that carries a positive or negative towards something (Oxford dictionary, 2014). The operational definition of the Perception: it is the degree of responses of the study sample on a perception scale of Edmodo and M-learning, and be positive, negative or neutral.

Barriers: something that obstructs or impedes to understanding, or anything that obstructs progress, access, etc. (The Free dictionary, 2014). The operational definition of the barriers it is the factors or variables that limits learn and understand of the study sample using their mobile devices to learn.

The present study is confined to the male students of Taibah University, and course of Teaching Means (two chapters), during the second semester of the academic year 2013-2014 AD.

THEORETICAL FRAMEWORK

Nowadays, mobile devices such as cellular phones, smartphones, tablet PCs, and netbooks (ultra-mobile laptop PCs) are recognized as essential tools for our daily lives, at the same time these devices are the main tools for M-learning. In fact, term of M-learning has risen in educational field to express learning using these portable mobile devices, however, M-learning is one of the e-learning system depends on wireless information communication technology and based on mobile devices in teaching, learning, training, and management homework of learners, it allows them to access educational materials at anytime, anywhere, outside the teaching hall, it is not only an extension for distance learning, but is also a part of the e-learning and the future of it (Ally, et al., 2005). Paul Williams (2008) depicts D-Learning as the foundation for E-Learning and E-Learning as the foundation for M-Learning and he demonstrates the relationship between M-learning, e-learning, distance learning and face to face learning in a hierarchy of learning methodologies based on time and learning environments, as seen in [Figure 1], and according to Cherian and Williams (2008) the differentiates between the four delivery methodologies is the way in which learning content are delivered since learning content can be delivered through each model, but the transmission channel usually differs (Cherian and Williams, 2008).

In general, they are some differences and similarities between M-learning and e-learning, e.g. each of them student-center learning and based on individual learning, and both of them allowing communication between teacher and students anywhere and at any time. M-learning use portable mobile devices, smartphones, tablet PCs, phablets, cellular phones, even the ultra-slim netbooks that rely on wireless network technology for the Internet connection and do not require presence in a specific place, while e-learning using desktop computers, and notebooks that rely wire fixed to connect the Internet and requires to be in a specific place (Charmonman and Chorpothong, 2005), (Laouris and Eteokleous, 2009). Specifically, M-learning gives ease communication between students, e.g. over SMS and MMS they can interconnect and exchange messages, and via Bluetooth they can sharing educational materials, and transferee files among themselves, in both cases not require presence in a specific place, but the communication in e-learning can be only by the Internet, with possibility of sharing files and e-books and exchange among students by e-mail, but they require sitting in front of the devices in a specific place (Sharma and Kitchens, 2004).
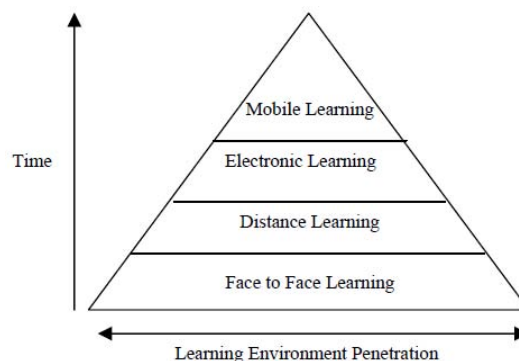

Figure 1: Hierarchical Learning Methodologies

In the light of the previous context, the M-learning form quite different from the traditional learning form, and has special characteristics like, small size and light weight of portable mobile devices, also flexibility to every time and everywhere (Attewell and Webster, 2004). More specifically, the portable mobile devices which can be

used them in M-learning identified by Quinn (2008) to: Netbooks or ultra-slim notebooks, Wearable mini Computers, Tablet PC, iPads, Phablets, Smartphones, iPhones, PDAs, Cellular Phones, E-books readers, personal digital multimedia players, and portable gaming consoles.

Based on services of portable mobile devices and their applications in learning process and according to Hartnell-Young and Heym (2008) M-learning provides essential services and possibilities, such as, basic communications between learners using Wi-Fi or Bluetooth and NFC for sending and receiving voice and messaging by SMS, MMS. Also, by GPS (service global positioning system) the learners can access GIS (Geographic Information Systems), and they can use digital compass to determine their movements, which are useful in scientific trips or even in determining their path when traveling between different regions. The training is another service of using mobile devices; a recent training provides training for most of the educational programs via applications like Videoconference or sending multimedia files such as video, Word, PDF, and slides of PowerPoint presentations to trainees via Internet (Sampson, 2006). Multimedia creation is one of the most services of mobile devices and a popular method for learning "on the move", however, when the learners outside the classroom they could use camera to take scientific pictures (JPEG or GIF), especially when they are doing scientific tours. Also by microphone they could record sound files and digital notes during their scientific experiments or their lectures using smartphones, digital media players, or iPods, also, the digital pen (stylus) could use to drawing charts or designing of electronic geographic maps (Weiss, 2004).

On the other hand, interactive social networks for social entertainment needs is one service from portable mobile devices since most mobile devices connect directly to the popular social network sites (Facebook, Twitter, Youtube, LinkedIn, etc.), for example, Facebook offers collaborative discussions, by sending questions, assignments to a group of learners. Furthermore, Twitter provides micro-blogging service to enhance students interactive. Additionally, mobile Web (Web Information), is another important service provided by mobile devices since the learner can access many educational materials, and sharing them by e-mail, or by blogs, or by wiki, or they can use E-Readers to browse electronic books, newspapers, magazines, and language dictionaries or scientific dictionaries (Gadd, 2010).

The benefits of mobile devices and M-learning in the field of education identified by Kukulska-Hulme and Traxler (2005), some of these benefits included, flexibility and freedom in learning, social interaction skills and cooperative learning, self-learning and self-assessment by short tests or quizzes, and taking into account the individual differences, in addition, engage learners to interest in education, collaboration between educators and learners by sharing assignments, automation of assessments of learners, and allows immediate feedback (Osang, et al., 2013). But to catch these major benefits and to apply the M-learning and portable mobile devices in the field of learning they should have special specifications such as, ease of use, and support self-learning skills, however, these devices should have technical specifications to operate efficiently when used in learning purposes, such as, a microphone and speaker, light and Gyro sensor to detect the mobile phone rotation, Internal 3G or 4G antenna to access the Internet (Kurbel and Hilker 2003), and (Sharples, et al., 2007). In addition, powerful camera, large memory capacity to store data, screen size with good resolution, and operating system to run educational application (Naismith, et al., 2004).

Regarding to Economides and Nikolaou (2006) the usable and accessible M-learning system based on mobile devices should have standards and criteria to design their learning content, from those criteria are: usability, technical, and functional criteria, however, usability criteria belong to user-interface with simple navigation menus and multiple languages, easy to read text and write, paint, play and records multimedia. Technical criteria belong CPU performance, Ram, screen, microphones, speakers, Wi-Fi, Bluetooth, GPS, support deference operating systems. Functional criteria belong communication tools, such as phone, SMS, MMS, e-mail, Web, Chat, videoconferencing, and fax, then information management tools such as clock, calendar, organizer, agenda, planner, and reminder.

In the implementation of an M-learning project, a technology selection roadmap were identified by Attewell (2005), as he suggests five general categories of technology that should be considered when implementing M-learning, these were: transport, delivery, platform, development languages, and media technologies, as demonstrated in [Figure 2], however, connectivity and transport by using different communication technology, now, with the widening capability of mobile devices, learners and teachers can access the internet using WiFi /WLAN, 3G or 4G, GPRS or GPS, Bluetooth, IrDa, NFC, QR (Quick Response Code), and RFID (Radio Frequency Identification). Delivery technology includes WAP, E-MAIL, SMS, MMS, HTTP (WEB). Platform and Operation systems technology contains Windows phone, iOS, Android, Blackberry, and before were Pocket Pc and Palm OS. Development languages technology of programs and Apps include Flash enabled web, Images and text based webpages, by using Flash, Java, C, C++, HTML, XHTML, etc., finally, media technologies to

support video and audio files (MP3, WMA, MP4, M4A, AAC, AVI, 3GP formats etc.), phone calls, teleconferencing, and voice recognition (Attewell, 2005), (Cobcroft, et al., 2006), and (O'Connell and Smith, 2007).
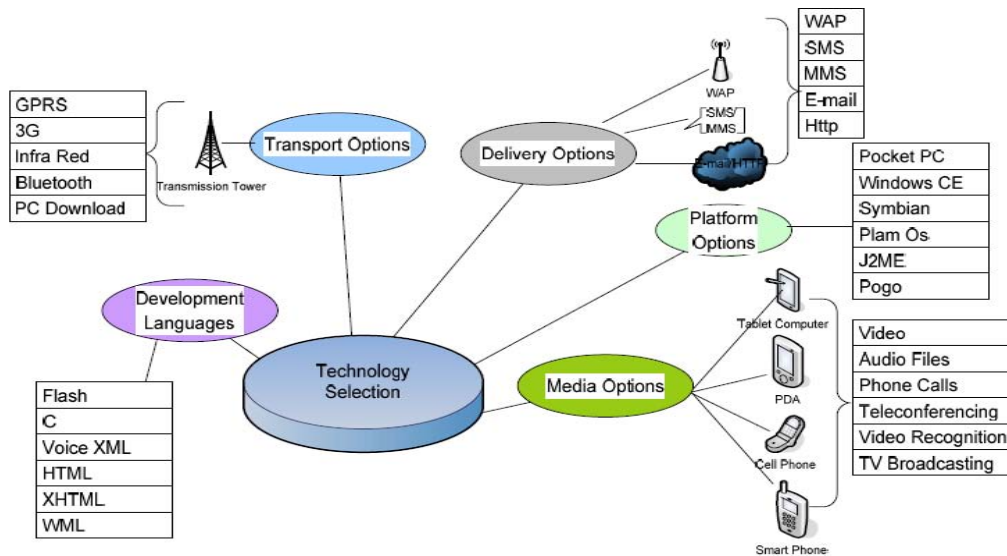

Figure 2: Technology Selection Roadmap of M-learning Environment (Chanchary and Islam, 2009)

In general, reviewing the previous research studies which applied the mobile devices and implemented M-learning in the field of education, some attitudes and perceptions were investigated, a major of benefits and opportunities were found, parallel, a number of challenges and barriers were appeared, however, in Malaysia (2007) Jacob and Issac search the attitudes of students' university towards M-learning, the study sample included 250 students from the engineering department and the business section. The results of their study revealed that (79%) of the study sample believe that there is no need to go to the library or labs of computers to access the Internet, a (74%) of them believe the easy to access the content of their courses, and (33 %) of the students emphasize ease of communication between teachers and students and their colleagues (Jacob and Issac, 2007). And also**,** in Saudi Arabia, a survey by Al-Fahad (2009) aimed to understand and measure students' attitudes and perceptions towards the effectiveness of mobile learning on one hundred eighty six undergraduate female students at King Saud University. Result of this survey clearly indicated that offering mobile learning could be our method for improving retention of B.A, and M.D. students, by enhancing their teaching and learning (Al-Fahad, 2009). Moreover, Khwaileh and AlJarrah (2010) investigated the graduate students' perceptions towards M-learning at university of Jordan, the results showed that there were no negative opinions towards M-learning held by the participants, and the students are willing to use M-learning and they believe that M-learning has a lot of advantages (Khwaileh and AlJarrah, 2010).

Uzunboylu and Ozdamli (2011) created an available instrument that assesses teachers' perceptions of m-learning in Cyprus. However, they developed version of mobile learning perception scale which includes dimensions seeking teachers' feedback on three facets of the m-learning. Sub-dimensions are defined as 'Aim-Mobile Technologies Fit', 'Appropriateness of Branch', and 'Forms of M-learning Application and Tools' Sufficient Adequacy of Communication', and after that, they tested the reliability and validity of the final version on a sample of 467 teachers from the 32 schools in 2010. The findings of the study showed that this instrument can be used for the future studies, and according to the results, teachers exhibited above medium levels of perception towards M-learning (Uzunboylu and Ozdamli, 2011). Also, in Cyprus, Serin, 2012 analyzed mobile learning perceptions and mobile learning levels of the prospective teachers at a university in Turkish Republic of Northern Cyprus according to their departments and gender. "Mobile Learning Perception Scale" was used for data collection, and applied on 355 prospective teachers. Descriptive statistics, t-test and variance analysis were used to analysis of the data. As a result of the research, it was found out that mobile learning perceptions and mobile learning levels of the prospective teachers showed no significant difference according to the department and gender variables. As a result it was found out that prospective teachers' mobile learning perception levels were low (Serin, 2012).

Furthermore, a report by Perry (2003) defined main barriers about Handheld Computers (PDAs) in school as: cost, lack of support and training, printing and battery problems (the necessity to charge battery every day), small screens, lack of print-out capability, the time it takes to input data and text, costs of software. Moreover,

the findings of study by Facer, et al., (2005) revealed to technical difficulties with the devices used in M-learning by handheld computers, such as, synchronizing the device with a PC, or laptop, navigation and file storage, short battery life, paucity of appropriate mobile software, lack of teacher confidence and lack of training impacted negatively on their teaching, together with uncertainty as to how the devices might best be used to enhance teaching and learning. Furthermore, Krämer (2005) presented some challenges of mobile learning that need to be addressed, such as, the small screens of mobile devices limits the type and amount of information that can be displayed and made it difficult to read the details. Lack of input devices such as mouse, keyboard or stylus pen slow down text input speed and reduce the device's usability with respect to the interaction between man and machine. The lack of suitable multimedia player and viewer software (flash, Java, video, audio, etc.) on mobile devices disallows the use of animations and moving graphics. Finally, limited storage capacity and intermittent or slow connection rates since requires downloading, uploading, caching of educational materials.

Cherian and Williams (2008) indicated a few barriers to the distribution of course content in an M-Learning environment; content hosting and network infrastructures exist. Also, Chanchary and Islam (2009) clarified that the factors of M-learning environment can be treated as technical challenges, like, memory size of mobile devices is crucial while downloading learning materials. Battery life: shorter battery life of handheld devices can create negative stimuli among learners. Smaller screen size and compact buttons (keys) can discomfort learners. Interfaces of mobile phones are reduced to the essentials. Furthermore, learning materials could be in various file formats and not all formats are supported by the processing platforms of mobile devices.

In 2011 Martin Addison listed other three barriers related the learning content that is deliver by using of mobile devices in learning and that were preventing organizations from adopting M-learning, the first barrier is the lacked engaging educational content since the existing platforms focused on text-based content and had a very narrow breadth of subject areas related training, the second is too long content, which was designed for e-learning not for a learner on-the-move, the third barrier is that the content was designed for a large screen devices not designed for a small screen devices, e.g. learning navigation designed for a laptop screen was not easy to use on a touchscreen device (Addison, 2011). And also, Saleem (2011) classified the challenges hinder the implementation of mobile learning to three categories, technological, educational and general challenges, first, technological challenges: small screen and small keyboards used in mobile learning applications, short battery virtual age, and low storage capacity, second, educational challenges: designing and preparing educational mobile curricula, digital and technological gap between students in using mobile learning applications, and cheating in M-learning process, finally, general challenges: high cost, needs an infrastructure, wireless networks and modern mobile learning devices, and some security breaches for wireless and wire networks.

Recently, a study by Osang, et al., (2013) discussed the benefits and prospects of implementing mobile learning in Nigeria, and they aimed to identify the challenges which will be responsible for the sustenance of mobile learning by open and distance learners (ODL) educators and students, they confirmed the technical challenges of mobile learning include: different screen seizes, device limitations, training, safety, security, maintenance, and the implementation cost, then, they applied a questionnaire on 80 educators to identified barriers to mobile learning, and the findings of the study indicated that 75% of the educators believe that the poor learning environment will greatly affect the teaching and learning activities using mobile phone, the findings indicated that 73% of the educators are of the opinion that technologies usually create expertise in the technology rather than the actual knowledge it is meant to deliver (Osang, et al., 2013).

In general, the majority of previous studies held in different countries and they focused on attitudes and perceptions of teachers or students' university towards M-learning, and other studies indicated main or a few barriers, or presented some challenges of M-Learning environment, and they have used scales or surveys to reach their aims. In particular, implementation of M-learning environment needs applications and design tools such as: Blackboard mobile for Mobile management. Bump, Inkling, KeneXa, HotLava Mobile, Drop Vox, Course Smart and Edmode for Authoring Tools. Pocket, Pen ultimate, Iannontate, Ever note (Brown and Haag, 2011).

The current research adopted the Edmodo (co-founded and designed by Nick Borg and Jeff O'Hara in 2008) as a newly M-learning tool to present the course content and to achieve research aims, for many reasons, first, the appearance of Edmodo and its functionality closely be similar to that of Facebook and almost all the students are already familiar with that social network, see [Capture 1], second, Edmodo is a safe social networking community that provides an educational micro blogging environment for teachers and learners, also it can be seen as a multi-platform Learning Management System (LMS) which can facilitate educators to set up and manage their online classes easily (Witherspoon, 2011), third, Edmodo it has become a popular virtual M-

learning platform because it is a secure, ease to use, accessible via web browser and a free smartphone app for Windows phone, iOS, Android, etc., it is provides a virtual space for teachers and educators to share and discuss ideas, and files (text, images, audio, and video) through mobile devices. Furthermore, teachers can send notes (SMS), and alerts to individual students, and also, send assignments and quizzes, receive completed assignments, and conduct polls. Students can also share content, submit homework, assignments, and quizzes, receive their teacher's feedback, notes, and alerts, as well as vote on polls (Jarc, 2010). Overall, Edmodo is a simple; it is friendly user interface, common to all operation systems of smartphones, provides useful tools for students and teachers to interact online outside class anywhere, anytime (Hourdequin, 2014). Basically, students may like Edmodo since it easy for them to connect and work with their classmates and teachers online, and they may not cause students to face any difficulties. In addition, teachers may like Edmodo because it provides simple functions for teachers to create and manage their online classroom community, finally, Edmodo offers privacy to both teachers and their students (Kongchan, 2013).

Capture 1: Screen Capture for Edmodo Interface

RESEARCH METHODOLOGY

The current research followed the empirical approach to investigate the students' perceptions levels of Edmodo and Mobile learning, and to identify the real barriers of Edmodo and M-learning that facing the students at Taibah University, by applying two scales on the research sample: students' perceptions scale of Edmodo and Mobile learning, and barriers scale of Edmodo and Mobile learning. The research population included undergraduate students who study Teaching Means course at Taibah University, and the main research sample was 32 students from one classroom of Teaching Means course.

RESEARCH TOOLS

Edmodo App, perceptions scale and barriers scale were used to achieve the aims of the research. Both of students' perceptions scale and barriers scale for Edmodo and M-learning have prepared and constructed from literature review and related studies, however, the perceptions scale consisted of 36 multiple choice statements, each statement has five choices according to Likert scale divided into three fields: Measurement and Academic Achievement (13 items), Mobile Communication and Interaction Resources (6 items), and Information Access (17 items), 31 items were Positive and five items were Negative (No. 12, 17, 30, 33 and 35) see [Table 3]. Choices' options ranged from strongly agree to strongly disagree (strongly agree, agree, undecided, disagree, strongly disagree), five scores to the most positive statement and one score to the most negative were given. The scores given to the scale ranged from 36 to 180, therefore, scores means of perception scale was explained in three levels ranged as low (36- 84), average (85 - 133) and high (134-180). High scores indicate positive perceptions and low scores show negative perceptions. And also, the barriers scale consisted of 17 multiple choice items each item has five choices based on Likert scale, 13 items were Positive and four items were Negative (No. 3, 9, 10, and 15) see [Table 4], and choices' options ranged as perceptions scale. The validity of the two scales confirmed after consulting six assessors (professors of Teaching Means) from the Department of Educational Technology at Taibah University, who pointed to the appropriateness of the purpose for which they were prepared and they indicated some comments and useful suggestions to modify some statements and items from them. The reliability of these scales were significantly inter-correlated ($p \leq 0.05$) and each component statement /item was significantly correlated with its summated variable, with Cronbach Alpha $\alpha = 0.69$ for overall the perceptions scale, and with Cronbach Alpha $\alpha = 0.77$ for overall the barriers scale.

PROCEDURES OF THE RESEARCH AND DATA COLLECTION

Before starting the implementation of the experiment, the researcher clarified what is Edmodo, and what is the aim of the research for the 32 students (main sample), and the students were asked whether they were participating in experiment or not, after that applied the perceptions and barriers scales on five students from the

participants, and they answered the scales in 25- 30 minutes, and this indicated to the readiness of the scales for final applying.

Looking at the [Table 1] labeled Item-Total Statistics, it is seen the reliability statistics of the two scales, with Cronbach Alpha coefficient, the reliability found as a good Cronbach Alpha α = 0.69 for overall the perceptions scale, however, an acceptable Cronbach Alpha α = 0.72 for field of Measurement and Academic Achievement, a good Cronbach Alpha α = 0.70 for field of Mobile Communication and Interaction, and an acceptable Cronbach Alpha α = 0.61 for field of Information Access. And also, found as a good Cronbach Alpha α = 0.77 for overall the barriers scale, however, all values of reliability coefficient for barriers scale items were accepted according to the study sample since they are higher than 0.56. For that reason, this suggests that the reliability among student samples was well established for perceptions scale items and barriers scale items too. Then, started teaching the students by Edmodo using smartphones, almost, the experiment lasted for nearly eight weeks from first of March 2014 to 31 of May 2014, see [Capture 1 and 2].

Table 1: Item-Total Statistics of Perceptions Scale and Barriers Scale

Scale	No.	Scale Fields	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Perceptions	1	Measurement and Academic Achievement	225.4444	105.718	.291	.729
	2	Mobile Communication and Interaction	249.5926	114.635	.353	.703
	3	Information Access	205.8889	91.872	.507	.615
		Overall Scale Fields	**136.1852**	**35.003**	**1.000**	**.693**
Barriers		**Overall Scale**	47.89	89.256	.727	.77

TEACHING STEPS USING EDMODO

At the beginning of the semester, identified the course content and the number of students for experimentation, and before starting the experiment the researcher registered in www.edmodo.com using an email address, after singing up to Edmodo, created a group entitled "Teaching Means", then received a code to give it to students to join the group (Kongchan, 2012).

After that, started teaching the students using smartphones through Edmodo, at the beginning of the teaching process sent user guide of Edmodo for the students, then put title of the course that will be teaching, also at the beginning of each lecture defined the lecture objectives, and then upload course files related the lecture as PDF, and course syllabus as Win Word to Edmodo students, then sent Edmodo user guide link on YouTube, see [Capture 3], then start discussing course subjects, after that asking questions to make sure from understand the course content, then given some examples to emphasize the important course concepts, and sent some websites links, then asked activities from the students to following course, finally, made quizzes with short answer.
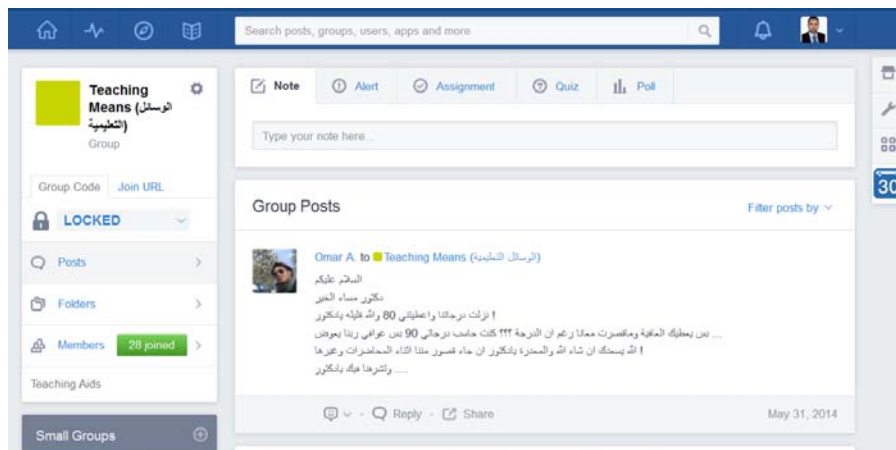
Capture 2: Screen Capture for Last Date of Edmodo Experiment

Capture 3: Screen Capture for Teaching Using Edmodo

DATA ANALYSIS

Descriptive statistical analysis were used, the data obtained from responses of the study sample was coded and analyzed using SPSS (Statistical Packages for Social Sciences version 16), specifically, Cronbach Alpha, means and standard deviation were used, however, to ensure reliability for the perceptions scale and barriers scales used Cronbach Alpha, to consider the students' perceptions levels of Mobile learning used means of scores and standard deviation for responses on perceptions scale, and to identify the real barriers of M-learning used means and standard deviation of scores for responses on barriers scale.

FINDINGS AND DISCUSSION

The present research aimed to investigate the students' perceptions levels of Edmodo and Mobile learning and to identify the real barriers of Edmodo and M-learning that facing the students at Taibah University, in other words, the research attempts to answer the two questions: What are the perception level of the students towards Edmodo and M-learning at Taibah University? What are the real barriers facing the students in Edmodo and M-learning at Taibah University? The results of the statistical analysis displayed the means of scores and standard deviation for responses on overall fields of perceptions scale was presented in [Table 2].

Table 2: Mean and Standard Deviation of the Responses on Fields of Perceptions Scale

No.	Scale Fields	N	Minimum	Maximum	Sum	Mean	Std. Deviation
1	Measurement and Academic Achievement	27	40	53	1267	46.92	3.583
2	Mobile Communication and Interaction	27	17	27	615	22.77	2.516
3	Information Access	27	56	75	1795	66.48	3.609
	Overall Fields	27	123	149	3677	**136.19**	5.916

As presented in the above [Table 2], it is clear enough that students' perceptions of Edmodo and Mobile learning is in "High" level in general since the mean of overall fields of perceptions scale is 136.19 belongs the high-level range (134-180), this result summarizes the positive perceptions of students towards Edmodo and Mobile learning, however, as show in [Table 3], the higher mean score was for the statements "I think that learning using Edmodo facilitates interaction and communication between teacher and learner" with mean (4.63), SD (.792) and highest percentage of strongly agree (77.8%), the second mean score for the statements was "I appreciate Edmodo because it allows me to learn at the right time" with mean (4.59), SD (.747) and percentage of strongly agree (70.4%), and the third mean score for the statements were two items "I feel that the use of Edmodo and M-learning increase the effectiveness of learning", and "I believe that Edmodo and M-learning are aspects of scientific progress in the present era." with similar means (4.56), but different SD (.698 / .641), and different percentage of strongly agree (66.7% / 63%).

In fact, these results discovered that there are preferential perceptions among students of Taibah university (research sample) towards using Edmodo and M-learning, and these positive perceptions could be traced to many reasons, such as, the majority of students are proficient in dealing with mobile phones especially in their daily life matters, so they do not have any fear feeling of use it in learning. And also, there is effect of Edmodo

on their perceptions on increased contribute of interaction and communication between them and the teacher, and this result is confirmed by negative items as seen in [Table 3], however, the lowest mean score was the statement "I think that learning using Edmodo does not facilitate communication between students and each other" with mean (1.67), SD (.734) and high percentage of strongly disagree (48.1%) which confirm that Edmodo facilitate communication between students. Moreover, the second lower mean scores were two statements, "The best study of my courses away from the Edmodo and M-learning", and "Edmodo does not generate effective learning environment" with equal means (1.93), but different SD (1.299 / 1.174), and with the highest percentage of strongly disagree (55.6% / 44.4%), regarding the study sample, it is certifying that the Edmodo and M-learning not only facilitate and increase the effectiveness communication of learning, but also save students' time. All these results are confirmed by some studies as Jacob and Issac (2007), Al-Fahad (2009), Khwaileh and AlJarrah (2010), but these results conflicts with study held by Serin (2012) because she found out that prospective teachers' mobile learning perception levels were low.

Table 3: Mean and Standard Deviation of the Responses on Perceptions Scale

No.	Scale Items	Sum	Mean	Std. Deviation
	First field: Measurement and Academic Achievement			
1	I expect that Edmodo and M-learning can be used to increase the motivation to learn.	109	4.04	1.192
2	I see that the use of Edmodo in learning helps in getting immediate feedback.	98	3.63	1.363
3	I feel that learning using Edmodo and M-learning contributing into development my academic achievement.	98	3.63	1.305
4	I feel that the use of Edmodo and M-learning increase the effectiveness of learning.	123	4.56	.698
5	I believe that my achievement of the course is possible to increase after the use of Edmodo and M-learning.	102	3.78	1.121
6	I agree with the possibility of making quizzes through the Mobile phone.	109	4.04	1.427
7	I think that using Edmodo and M-learning lead to enrich the learning course.	108	4.00	1.144
8	I think that using Edmodo and M-learning develop self-learning skills among students.	106	3.93	1.072
9	I think that the use of Edmodo and M-learning help in evaluating the course continuously.	114	4.22	.934
10	I think that the use of Edmodo and M-learning help in develop of critical thinking.	56	2.07	.917
11	Edmodo can be used to enhancement the traditional learning.	94	3.48	1.252
12	Edmodo does not generate effective learning environment.*	52	1.93	1.174
13	Edmodo facilitates learning the university course.	98	3.63	1.182
	Second field: Mobile Communication and Interaction			
14	Edmodo and M-learning remove the limitation of place and time.	108	4.00	1.209
15	I believe that Edmodo and M-learning encouraging the interaction and participation of isolated students.	118	4.37	.839
16	I feel that Edmodo fosters the collective cooperation among students.	113	4.19	1.111
17	I think that Edmodo cannot be used to facilitate communication between students and each other.*	45	1.67	.734
18	I think that learning using Edmodo facilitates interaction and communication between teacher and learner.	125	4.63	.792
19	I think that the learning using Edmodo stronger social relations between students.	106	3.93	1.141
	Third field: Information Access			
20	By Edmodo and M-learning I can have a prompt access to educational materials that I need.	117	4.33	1.144
21	Edmodo and Mobile learning are easier than learning with the traditional learning.	104	3.85	1.262
22	I'm enjoying when using a Mobile device in study of the university courses.	113	4.19	.921
23	Using Edmodo to save time and effort to get the information.	119	4.41	.797
24	Access the course information become easier when using Edmodo.	119	4.41	.888
25	I would like to recognize the skills of using Edmodo and M-learning.	116	4.30	1.235
26	I feel that Edmodo contributes to the development search skills.	113	4.19	1.178
27	I join with those who are interested in talking about Edmodo and Mobile	107	3.96	.940

	learning.			
28	By Edmodo and Mobile learning I can access course information in any time and at any place.	106	3.93	1.269
29	I believe that Edmodo and M-learning are aspects of scientific progress in the present era.	123	4.56	.641
30	I have no desire to participate in discussion related to Edmodo and M-learning.*	53	1.96	.980
31	I am trying to find out more information about the use of Edmodo and M-learning.	116	4.30	.912
32	I would like to attend workshop about the skills of using Edmodo and M-learning.	110	4.07	1.072
33	The best study of my courses away from the Edmodo and M-learning.*	52	1.93	1.299
34	I appreciate Edmodo because it allows me to learn at the right time.	124	4.59	.747
35	I prefer reading my courses in paper form not reading them by Edmodo and Mobile device.*	83	3.07	1.207
36	I feel that using Edmodo and M-learning save my time and my effort to get course materials.	120	4.44	.801

Regarding the second research question: What are the real barriers facing the students in Edmodo and M-learning at Taibah University? The results of the means of scores and standard deviation for responses on barriers scale were reported in [Table 4].

Table 4: Mean and Standard Deviation of the Responses on Barriers Scale

No.	Scale Items	Sum	Mean	Std. Deviation
1	I find it is difficult to use Edmodo as mobile learning application.	75	2.78	1.050
2	I am concerned during learning using Edmodo.	69	2.56	1.121
3	I do not feel bored when I read my course by Edmodo.*	88	3.26	1.259
4	I feel upset when answering questions by Edmodo and using mobile phone.	59	2.19	.962
5	I do not trust the authenticity of the information that I get them through Mobile phone and Edmodo.	64	2.37	1.006
6	I feel upset in solving exercises and activities using application of Edmodo for mobile learning.	73	2.70	1.103
7	I see that use of Edmodo as a mobile learning application would negatively affect the acquisition of the skills of reading and writing to me.	66	2.44	1.086
8	Difficult to store large files in my mobile phone.	85	3.15	1.262
9	I think that Edmodo as a mobile learning application does not lead to social isolation for students.*	75	2.78	1.219
10	I feel that use of Edmodo as a mobile learning application does not limit the difficulty of the course.*	85	3.15	1.027
11	I see the difficulty of organizing a discussions or educational dialogue through Edmodo.	80	2.96	1.255
12	I think that Edmodo focus on the cognitive side more than technical skills and emotional aspects.	76	2.81	1.111
13	I feel that the cons of Edmodo more than the positives.	72	2.67	1.109
14	Small screen size of mobile phone hinders the process of display the information in Edmodo on Mobile phone.	74	2.74	1.318
15	I do not find it is difficult to enter the information on the small screen size of mobile phone.*	91	3.37	1.305
16	I'm suffering from poor communication network	69	2.56	1.396
17	I'm having a problem of low mobile battery continuously.	92	3.41	1.421

In general, the results clear means that the real barriers of Edmodo and Mobile learning are in normal range since the mean of overall barriers scale is 46 belongs the average level (40- 69), however, as [Table 4] shows the means of barriers scale, and the higher mean score was for the positive statement "I'm having a problem of low mobile battery continuously" with mean (3.41), SD (1.421) and highest percentage (68.15%), next the mean score for the statement "Difficult to store large files in my mobile phone" with mean (3.15), SD (1.262) and low percentage (63%), these results reveal the common barrier when using mobile for a long time per a day. The two

negative statements, "I do not find it is difficult to enter the information on the small screen size of mobile phone" with mean (3.37), SD (1.305) and percentage (67.4%), and "I do not feel bored when I read my course by Edmodo" with mean (3.26), SD (1.259) and percentage (65%), as it seen, despite these barriers, most students (research sample) are not boring using the small screen size, so it is not affected learning. For the above results, it could be said, a common barriers facing the students in Edmodo and M-learning, these barriers belong M-learning in general and they are not belong Edmod in specific, and that might be reported as barriers or challenges since earlier findings of other studies were parallel act a few of them as barriers, like Perry (2003), Facer, et al., (2005), Krämer (2005), Chanchary and Islam (2009), (Addison, 2011), Saleem (2011), and Osang, et al., (2013).

CONCLUSION AND RECOMMENDATIONS

In light of the research finding, it can be concluded that undergraduate students at Taibah University have positive perceptions towards Edmodo as an application for Mobile learning environment because it has many benefits in support learning process such as facilitate and increase effectiveness communication of learning, and they appreciate Edmodo since its allows them to learn at the right time, but every new learning environment has some barriers, and Edomdo and M-learning environment is not different, however, some barriers holding M-learning back from full implementation, and the near future will overcome these barriers, for example, the battery of mobile devices will last longer and better yet, it will be replaced all together by solar power technology, processors in mobile devices will get faster. Finally, the researcher recommends encouraging universities to add a section for mobile learning to start application of M-learning at the university level, to hold workshops for both students and professors to clarify the educational services of M-learning tools such as Edmodo, and to prepare a use manual or an visible and audible guide for using of mobile devices in teaching and learning.

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