

The Effect of Using Mobile Phones for Learning New Vocabulary Items by Iraqi non-English Major College Students

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The extensive use of wireless mobile technologies has created more opportunities to shift the traditional academic setting into mobile learning, and interactive multimedia is also a great way to communicate and learn. The use of mobile applications such as WhatsApp in transmitting messages is a fast way of assisting students to learn vocabulary. To address this issue, this empirical research was conducted to examine the effect of mobile phones on vocabulary acquisition by Iraqi non-English major college students. A total of twenty-eight female-students studying at the University of Al-Qadisiyah College of Education for Women, Department of Psychological Counselling and Educational Guidance in the second year, participated in this study. Based on a mixed-methods approach, the quantitative data was collected through questionnaires to elicit students' perceptions of using a mobile phone to learn new vocabulary, while informal interviews were directed to collect qualitative data. The results revealed that the participants had highly positive attitudes towards mobile learning because it supplied them with both form and meaning-focussed instruction and had technical knowledge to implement mobile learning. The results also demonstrated students reported some benefits of learning by mobile phone, including the probability of learning outside the classroom anywhere, at any time. Others referred to obstacles that faced them in the experience such as the choppy and expensive cost of the internet connection and the lack of interest of the university or college to add communication devices and the Internet to become part of the curriculum to use them inside the class as well. The study ended with some conclusions which seem to be justified.

Key words: *Mobile Phone, Mobile Learning, Mobile Vocabulary Learning, WhatsApp.*

Introduction

Mobile device use for educational purposes, namely mobile learning, is reported by Kukulska-Hulme (2006: 295-310) as, "mobile learning promises to deliver nearer integration of language learning with daily communication necessities and cultural experience." For Trifanova et al. (2004: 45), the mobile device is "... any device that is small, autonomous, and unobtrusive enough to accompany in every moment". According to Sharples (2006), initially, mobile learning concentrated on the role of mobile technologies and devices in an educational environment, recently mobile learning has been described as the mobility of the user and informal learning that takes place outside the classroom. Hence, any portable devices like tablets, mobile phones, and portable media player devices contribute to mobile learning. Using mobile devices is one of the most popular means of communication outside the classroom (Al-Shehri, 2012). Thus, these portable and easily accessible devices offer more opportunities to improve students' retention, fulfil their assignments, and support the different necessities of the younger digital generation.

This research aims at examining the perceptions and attitudes of non-English major students after the experience of learning vocabulary with the aid of mobile phones.

Theoretical Background

Mobile Learning

Mobile learning, mainly shortened as m-learning, transforms traditional classroom-based learning/ teaching and bridges formal/ informal learning outside the classroom. In their study, Sharples et al. (2010: 87-99) define mobile learning as "an approach that significantly differs from the current theories of the classroom, accounts for the mobility of learners, covers both formal and informal learning, learning theories as a constructive and social process, and analyses learning as a personal and technology-driven activity." O'Connell and Smith (2007:3) refer to m-learning as "... learning that is facilitated and enhanced by the use of digital mobile devices that can be carried and used anywhere and anytime". M-learning is also known as "the acquisition of any knowledge and skill through the use of mobile technology, anywhere, anytime, which results in an alteration in behaviour" (Geddes, 2004). The above definitions elucidate that m-learning is determined by 'anywhere and anytime' access to formal or informal learning activities.

Mobile learning has frequently been viewed as an updated version of e-learning, which involves learning experiences with electronic devices. Mehdipour and Zerehkafi (2013, cited in Parajuli, 2016) state that there is full contact between e-learning and m-learning in the broader context of digital learning.

Dudenev and Hockly (2007) say that e-learning is a set of technological devices, including smartphones, MP3 players, and laptops, that may influence language learning. M-learning gives some special competencies that assist learners, including self-study, freedom, information sharing, mobility, and promoting student and teacher interaction (Bidin and Ziden 2013; Viberg and Grönlund 2013). According to Kukulska-Hulme et al. (2004), mobile devices have brought a plethora of learning possibilities that are well-matched with the mobile lifestyle. "Mobile technology can support quick feedback or reinforcement; immersive experiences such as mobile games or investigations" placed learning in an authentic context of information exchange and record-keeping in informal and lifelong learning." (ibid.).

Mobile Vocabulary Learning

The past decade has seen the rapid and continual development in using mobile phones for learning vocabulary items, and the focus has been on the role of these devices in teaching vocabulary to second/ foreign language learners. Wilkins (1972) argues; "Without grammar very little can be conveyed, and without vocabulary, nothing can be conveyed." So, it turns out that knowledge of vocabulary is the prerequisite for conveying the meaning. When it's about conveying the meaning, an essential prerequisite should be taken into consideration, which is understanding the meaning. Vocabulary learning is of importance, particularly for non-English major students in Iraq, where they study English as a foreign language.

Learning vocabulary in the context of computer learning and mobile assisted language learning refers to the possibilities offered by technology to learn or consolidate English vocabulary. According to Pegrum (2014:131), the most prevalent mobile assisted language learning activity reported in the literature is vocabulary learning. Vocabulary learning research is connected with vocabulary apps to better explain how vocabulary learning occurs in a mobile learning episode (Underwood, 2014). Knowledge about words happens during different episodes, and vocabulary apps have embedded vocabulary learning tools, such as game-like activities, notebook tools, flashcards, dictionary tools, derived from what research stated that works best for vocabulary learning. Leal Alves and de Oliveira (2014: 51) believe that difficulties which confronted EFL learners in vocabulary acquisition resulted from several variables. These variables "are somehow dependent on factors such as socioeconomic, ideological and cultural conditions beyond their teaching/learning and the intellectual characteristics of learners."

Supporting meta-design for self-vocabulary learning by making use of social and mobile technologies, Underwood et al. (2014) developed an app, miLexicon, which enables learners to gather, look up and share information about new vocabulary, while providing access to a learner's favoured technology and social resource. Therefore, they draw attention to the fact that within a learning app, learners should be allowed to configure the way they want to manage their vocabulary learning. Consequently, this seems to be highlighting the role of social

learning strategies within a mobile environment. The outcomes of the authors' studies showed that the 6 participants occasionally reviewed the word they added in the app and that they rarely used miLexicon beyond the initial lookup. These outcomes echo Luckin et al. (2012: 87), who report, that "no technology has an impact on learning in its own right, its impact depends upon how it was used." Consequently, they identify the most effective learning activities and the way technology can support these activities (ibid.). This signifies that it is not the technology used that can affect learning, but the way learners use technology to support the most efficient individual learning activities.

Deng and Trainin (2015: 52) use the concept of 'affordance', which was originated by Gibson 1977 to elucidate the connecting of cognition to knowledge. They remark affordance may "explain how students interact and learn with mobile devices during the vocabulary learning process." Learning with devices is "at times different from the traditional vocabulary learning strategies and at other times complements or enhances such strategies." For students to perceive the affordability of mobile devices, they require knowledge of its potential to aid the education process.

The Impact of Multimedia / Media on Language Learning

A large number of devices have been used in Mobile assisted language learning-based classes. Zhao (2005) says, "Other technologies that hold the capacity for language learning include PDA, multimedia cellular phones, MP3 players, DVD players, and digital dictionaries." These devices create a possible tool for learning-teaching second/foreign languages.

Mayer (2002, cited in Rezaei et al., 2015: 5) demonstrates how comprehension takes place through verbal and visual inputs by presenting the cognitive theory of multimedia. This theory encompasses dual coding theory, which is based on three significant assumptions. The first, the dual channels assumption, demonstrates how the visual and verbal inputs are handled unconnectedly, even though a transfer in one sort of input is feasible. The second is the limited capacity assumption that refers to limited channels capacity. The third one is the active processing assumption that demonstrates how people partake in energetic knowledge construction. Though the presentation via multimedia can supply verbal and visual inputs, the user can then decide on the words and illustrations and manage them individually in verbal or visual channels where basic and logical links have made between these two channels. Mayer infers that using multimedia can be valuable when providing information in a way that does not increase a load of active work memory as clarifying words with pictures, displaying information through images, and placing images and words near each other to help the learner create the link between the two.

According to dual coding theory, Kalyuga et al. (1999) surely assert that multimedia can boost the student's learning process through visual content, audio, animation, and simulation. If the instruction contains words and images, the process of learning and the individual's working memory will be more effective according to this theory (ibid.: 372). In his study, Hsu (2008) provides learners with verbal in addition to pictorial annotations for learning English vocabulary. Findings of a post-test show that the pictorial annotations assist participants with low verbal and high visual aptitude to retain vocabulary. Huang (2014) mentions, "the explosion of ubiquitous handheld technologies together with wireless and mobile phone networks to facilitate, support, enhance and extend the reach of teaching and learning." Of course, it has mentioned that there is a stronger request for media learning content, along with the user-centred instructional procedure.

Methodology

In the state study, the researcher endeavoured to examine the impact of utilising mobile phones in education to boost students' learning of English vocabulary by exploring students' attitudes and perceiving their progress after using the mobile phones to support learning the English language. This paper tried to address the following research questions:

Research Questions

1. What are Iraqi female students' attitudes to learning vocabulary with mobile phones while roaming outside the classroom?
2. What are female students' attitudes to the benefits and obstacles of the learning experiment via WhatsApp? What are the suggestions for making the app more effective?

Sample

The subjects of this paper were (28) female students studying at the University of Al-Qadisiyah, College of Education for Women, Department of Psychological Counselling and Educational Guidance (non-English majors) in the second year who were studying New Headway Plus (Pre-Intermediate Student's Book) in the 1st semester 2017-2018. All of the subjects were native speakers of Arabic. Most of them were at the age of 20-22, and they were informed of the fact that they have been selected to partake in this research, and the obtained data will be used only for the sake of research.

Research Design

In this study, WhatsApp text message was used as a tool for sending the target vocabulary items when students were out of the class. Every student of the experimental group had a cell phone with WhatsApp installed. Most of the items were borrowed from New Headway Plus (Pre-Intermediate Student's Book) by John and Liz Soars (2006) and sent a text message of five items a day at 10.30 am with an average of 25 words per week. Every item comprises the spelling and explanation in both English and Arabic with supportive images, audios, and videos during the implementation process. The experiment lasted for about six weeks, and participants were requested to respond to a questionnaire to get their attitudes. The questionnaire consists of twelve items in total (nine Likert scale items with four options and three open-ended questions). The term m-learning was explained to the participants because it has not been utilised in the academic setting in which they study.

Data Collection Instruments

Based on Dörnyei (2007: 170) a mixed-methods approach (quantitative and qualitative methods) used in this research "was a questionnaire survey with follow-up interview or retrospection" As quantitative analysis, data was gathered via questionnaires to elicit students' perceptions of using a mobile phone to learn new vocabulary, while interviews were conducted to collect qualitative data. For answering the questionnaire's items, the statements and the interview data were transcribed in Arabic, translated into English by a professional translator, and then analysed using a thematic analysis.

Findings and Discussion

The findings are presented below according to the order of the research questions and methodologies.

Findings for Quantitative Data

To find out how well students are aware of phone messages, the researcher needs to see how often text messages are read and how they have been treated after reading. As the results show, the overwhelming majority of the students (95.5%) read the messages. 80 % of students kept the text message for future reference, whereas 20% of them removed it. For students' favourite places to read phone messages to learn vocabulary, almost all of them had chosen to check and read the text messages during commuting or in their spare time, like waiting for transport lines on their way home or sitting in the canteen. According to their mobility and accessibility, smartphones create opportunities for participants to take advantage of such spare time.

The questionnaire that was distributed among a convenient sampling of female students studying at the University of Al-Qadisiyah, College of Education for Women, Department of Psychological Counselling and Educational Guidance was a combination of different types of questions, the responses to which can be considered suitable in finding out the students' attitudes towards using mobile phones for outside classroom learning vocabulary. The tables below show the percentages of respondents' responses and frequencies to each item of the questionnaire.

The first item requires the participants to specify their readiness for receiving vocabulary text messages. Table 1 indicates that the majority of subjects who partook in the survey had positive attitudes towards the readiness of receiving vocabulary text messages via WhatsApp. In fact, (26) frequencies accounting for (92.85%) of the participants strongly agree and agree to receive text messages via WhatsApp, while (2) frequencies accounting for (6.15%) disagree with the statement.

Table 1: The Responses of Frequencies and Percentages of Readiness of Receiving Vocabulary Text Messages

Responses	Frequencies	Percentages
Strongly Agree	23	82.14%
Agree	3	10.71%
Disagree	1	3.57%
Strongly Disagree	1	3.57%

Table 2 and Table 3 below illustrate the responses of participants to the second item of the questionnaire: "Readiness to use functions of other mobile learning" and the third one "Readiness to continue to learn vocabulary via mobile phone". A closer examination of the findings reveals that the mobile learning experience has led to this positive feedback. (39.28%) of the respondents strongly agree and (42.85%) agree with the second item, and (7.14%) of them strongly disagree and (10.71%) disagree. The results show that they tend to choose to learn vocabulary through mobile phones and look forward to continuing to learn the language via them as well. Besides, (50%) of the participants agree and (35.71%) strongly agree, and only a handful of them (7.14%) strongly disagree and disagree with the third item. This also corroborates students' preference for mobile learning. The whole findings demonstrate that students' overall attitudes concerning this new style of vocabulary learning are quite positive. They believe learning new words employing WhatsApp was a pleasant style of learning. In line with the findings, Bensalem (2018) figures that "EFL learners who used WhatsApp enjoyed more vocabulary learning compared to those who did not use it."

Table 2: Responses of Frequencies and Percentages of Readiness to Use Functions of Other Mobile Learning

Responses	Frequencies	Percentages
Strongly Agree	11	39.28%
Agree	12	42.85%
Disagree	3	10.71%
Strongly Disagree	2	7.14%

Table 3: Responses of Frequencies and Percentages of Readiness to Continue to Learn Vocabulary via Mobile Phone

Responses	Frequencies	Percentages
Strongly Agree	10	35.71%
Agree	14	50%
Disagree	2	7.14%
Strongly Disagree	2	7.14%

The fourth item of the questionnaire was: "Mobile phone is a useful reference tool for learning vocabulary outside the classroom". As it is indicated in Table 4, most students – 25 out of 28 that makes (89.28%) of the total – responded very positively. The rest of the students (10.71%) did not think they wanted to re-experience learning new vocabulary by means of a mobile phone in the future. The large number of students who are willing to go on using WhatsApp as a tool to learn vocabulary outside the classroom is quite remarkable. This is obvious in their responses concerning the fifth statement of the questionnaire: "Encouraging students to use other social networks such as Instagram, Facebook, and Telegram ... etc. may improve students' vocabulary." It could be noticed in Table 5 that the use of social networks for learning purposes gained lots of agreements from the students. A great majority of students, (75%) of the total, agreed and strongly agreed with the statement, since many students have used to sharing experiences via social networks, the students may find them to be most useful in memorising new words. Nonetheless, it does not support the results of Dehghan et al. (2017), whose subjects did not gain an advantage from WhatsApp to strengthen their vocabulary learning. Researchers discussed that the findings were influenced by the subjects' lack of interest to do the tasks, rather than by the invaluableness of the mobile phone as an educational means. The results of this paper indicated that mobile phones stimulated students to fulfil their vocabulary tasks as they could take advantage of the elasticity of place and time to accomplish the tasks at their own pace.

Table 4: Responses of Frequencies and Percentages of Mobile Phone as a Useful Reference Tool for Learning Vocabulary outside the Classroom

Responses	Frequencies	Percentages
Strongly Agree	1	3.57%
Agree	24	85.71%
Disagree	2	7.14%
Strongly Disagree	1	3.57%

Table 5: Responses of Frequencies and Percentages of Encouraging Students to Use Other Social Networks such as Instagram, Facebook, Telegram ... etc. May Improve Students' Vocabulary

Responses	Frequencies	Percentages
Strongly Agree	8	28.57%
Agree	13	46.42%
Disagree	4	14.28%
Strongly Disagree	3	10.71%

Table 6 shows the overwhelming majority of the participants (96.42%) agreed with the sixth statement of the questionnaire: "Learning vocabulary is better when it has been presented in multiple ways such as definitions, pictures ... etc." Results showed that the subject who used WhatsApp for learning vocabulary performed better when they studied the words with explanatory or printed comments. These corroborate the findings of Taki and Khazaei (2011), who conducted their study to use smartphones to display vocabulary in written and pictorial forms.

Table 6: Responses of Frequencies and Percentages of Learning Vocabulary is better when it is presented in Multiple Ways such as Definitions, Pictures.

Responses	Frequencies	Percentages
Strongly Agree	7	25%
Agree	20	71.42%
Disagree	1	3.57%
Strongly Disagree	0	0%

As regards the seventh item of the questionnaire: "Creating a class community in on-line networks can help to improve learning vocabulary", almost (71%) of the students were consistent that creating a class community in on-line network for learning purposes could be helpful in developing their vocabulary, while less than third of them opposed this idea. According to Cifuentes and Lents (2011), WhatsApp could foster interaction between students and instructors. In such an environment, it was possible to create a special link between various members as the case in Awada's (2016) study. She says subjects' sense of belonging to an

educational community arouses them to carry out their tasks with more assiduousness. Besides, the current study confirms the results of Junco et al. (2012), who states that "faculty who are more engaged on the platform with their students will see greater gains in academic outcomes." Table 7 below shows their responses.

Table 7: Responses of Frequencies and Percentages of Creating a Class Community in on-Line Networks Can Help to Improve Learning Vocabulary

Responses	Frequencies	Percentages
Strongly Agree	6	21.42%
Agree	14	50%
Disagree	4	14.28%
Strongly Disagree	4	14.28%

As for improving other skills of language, it could be seen from table 8 that (39%) disagreed whereas (61%) of the total responses agreed that mobile phones could help to develop their listening, reading, communication, writing, speaking, and pronunciation skills. Moreover, they maintained that the mobile phone helped them improve their studies and enabled them to become more confident in using the language. These findings were compatible with the conclusions, which were confirmed by several studies (Basoz, 2016; Awada, 2016; Hamad, 2017), who discussed the use of WhatsApp to develop the students' listening, reading, speaking, and writing skills.

Table 8: Responses of Frequencies and Percentages of Mobile Phones Can Help to Improve Other Skills of Language Learning

Responses	Frequencies	Percentages
Strongly Agree	7	25%
Agree	10	35.71%
Disagree	9	32.14%
Strongly Disagree	2	7.14%

The descriptive statistics, presented in Table 9, indicated that almost (82%) of the subjects agreed and a little less than (18%) disagreed with the idea that using a mobile phone provides a learning environment that is more relaxed and stress-free. They also thought that the experiment somehow made them feel less speaking anxiety and more confidence to participate in the classroom. The same results were reported by Awada (2016) as she states that "using WhatsApp may have helped students feel less inhibited and therefore has increased their confidence to be actively involved in the learning process" and felt it also had a positive impact on their language performance.

Table 9: Responses of Frequencies and Percentages of Mobile Phones Form a Relaxed and Stress-free Language Learning Environment

Responses	Frequencies	Percentages
Strongly Agree	3	10.71%
Agree	20	71.42%
Disagree	5	17.85%
Strongly Disagree	0	0%

Findings for Qualitative Data

Informal interviews with the subjects were directed in Arabic to answer the three open-ended questions. The interviewees volunteered to partake in this part of the study; the subjects were interviewed, (face-to-face) and recorded by the researcher herself. On average, each interview lasted approximately 15 minutes.

To answer the first question: "Do you prefer the m-learning system or a traditional paper-based vocabulary learning system?" As revealed in the interviews, the participants had negative opinions about vocabulary learning, which altered after using the m-learning system. They declared that the traditional system of memorising a long list of words along with their first language (Arabic) equivalence was considered as an ineffective method to retain these words spontaneously or lead to a deep knowledge of vocabularies. This could be attributed to students' ineffective experiences of using routine methods to learn new vocabularies like repetition and memorisation, whereas the use of various platforms not just assists vocabulary learning but also makes for a feeling of enthusiasm and diversity. Furthermore, it seemed that participants who preferred the m-learning method were those who reside far from college compared to their classmates who live in Governorate Centre or University Student Dormitory (since the university's instructions do not allow using smartphones inside). These results echo the results of Traxler (2005), who demonstrated that "students who live far from the University Centre tend to use E-learning methods, including m-learning techniques." Besides that, most interviewees preferred the m-learning system since every one of them has a smartphone and knows how to use it, and they use it in daily life.

The second question in this current study was: "What are the obstacles that face you when utilising a mobile phone to support your vocabulary learning?" Some participants mentioned that WhatsApp needs a stable internet connection to share or exchange pictures, videos, voice, or lengthy messages. Taking the choppy internet connection in Iraq into account, it may not be practical to use it to improve vocabulary everywhere. Four participants stated that the university did not provide strategies for how to integrate apps into the syllabuses, activities, or the learning environment. For them, WhatsApp was nothing more than a communication tool to chat with their friends, play games, keep up with new events, and share and create

information. Other participants regarded m-learning as an interference in their private lives, which might affect their consent for informal learning. Another reason expressed by some participants was that they do not have enough money to participate in mobile learning services since the cost of these services is somewhat expensive in Iraq.

About the third question, which addresses the benefits of mobile phones in learning, most of the participants reported that WhatsApp has a positive impact on motivation, and interaction among students and its use in other curriculums would be beneficial. Other participants also expressed that utilising a mobile phone as an educational tool was a good idea since this generation is very accustomed to using technological devices. The overwhelming majority of the participants have reported that they can learn anywhere and anytime since smartphones are easy to carry and they can easily access and get the required information without having to be near a textbook or a computer. This merit is the most significant one that students have agreed on about the benefits of learning via mobile phones. Thus, it seems that WhatsApp aids the subjects to improve their vocabulary skills, though they encounter some obstacles in trying to do so.

Conclusion

This paper endeavoured to investigate female students' needs to develop vocabulary learning assisted by mobile phones. To address this issue, two research questions were raised to be replied to in a mixed-methods approach. The first research question responded by utilising data collected via questionnaires and analysed quantitatively. The second question responded with informal interviews that were analysed qualitatively. The statements and the interview data were transcribed and conducted in Arabic since the participants of the experiment were non-English speaking major college students.

Quantitative findings of the research indicated that a majority of subjects held positive attitudes about vocabulary learning via mobile phones, which are easy to carry, and have the same functions as large portable devices and students can easily access and get the required words without having to be at a textbook or a computer. Besides, mobile apps can aid students to find the implementation of vocabulary, memorise words for longer, and practice anywhere and anytime after the learning process.

The literature presents that the mobile phone is one of the academic outcomes of technological devices that can be utilised as a teaching-learning tool in classrooms as well as outside. This great opportunity should be investigated in Iraq and converted into an advantage to make the instructional designer design a content, program, or learning resource that fits particular curriculum areas and a specific educational concept.



It has also revealed that the timing of regular and instant vocabulary text messages may act as an efficient reminder for students to practice autonomous vocabulary learning and provides students with chronic exposure to targeted vocabularies, which are considered helpful to memorising new words.

Qualitative findings of this research showed that some participants reported various obstacles to using mobile learning in education, such as that their teachers did not properly guide or encourage the use of E-learning services that are supplied by the university, nor benefit from personal sites of faculty members to get distinct educational resources for curriculums. Furthermore, students highlighted the issue of the cost of internet connection; they mentioned there should be a solution to reduce the cost of high-speed 3G internet access, especially for students and generally in Iraq. At the moment, there is no real motivation to use mobile technologies for learning because of this problem.

As for the limitation of the state research, the number of the sample was limited to 28 students, and with larger samples, it would be possible to examine the impact of mobile applications better on students' knowledge of vocabulary. Another limitation was the lack of males participating in the study; only a small sample of females was used. Thus, more ideas with a various number of students that included males and instructors with various experiences, require to be taken into account in a long-term scheme.



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