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Research Paper

Iranian EFL Learners' Understanding of Ubiquitous Learning: Examining Factors Affecting L2 Learner's Classroom Achievement Using Structural Equation Modeling

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Abstract
Ubiquitous learning can be described as a daily learning environment supported by mobile, computers, and wireless networks to provide learning anytime and anywhere. As the concept of Ubiquitous learning is little known in Iran, this study considers a sample of Iranian EFL learners to identify the effects of different aspects of Ubiquitous learning including omnipresence, context customization, interactivity, perceived self-efficacy, and m-learning motivation that influence L2 learner's classroom achievement. The participants included 150 high school students in Shiraz. A questionnaire adapted from Jung (2014) was the main data collection instrument used in the present study. Moreover, classroom achievement scores of the students taken from their final exam results were also analyzed. Structural equation modeling results showed that among aspects of Ubiquitous learning, omnipresence, context customization, perceived self-efficacy, and m-learning motivation affected classroom achievement but interactivity did not influence classroom achievement. The results also revealed the positive effect of integration of technology on student learning. EFL learners with a clear understanding of innovation in education are better positioned to move their efficiency and effectiveness from the traditional English learning environment to one that fully integrates learning into learners' daily routines. The study concludes that developments in technology need to be transmitted into the pedagogical areas and carefully considered in the forms of curriculum and contents for language teaching.

Keywords: *Ubiquitous learning, Classroom achievement, L2 learners*

آگاهی فراگیران زبان انگلیسی از یادگیری درهمه جا: بررسی شاخص های تاثیرگذار بر موفقیت کلاسی زبان آموزان با استفاده از مدل سازی معادلات ساختاری

یادگیری در همه جا را می توان به عنوان یک محیط یادگیری روزانه توصیف کرد که توسط تلفن همراه، رایانه و شبکه های بی سیم پشتیبانی می شود تا یادگیری را در هر زمان و هر مکان فراهم کند. از آنجا که مفهوم یادگیری درهمه جا در ایران کمتر شناخته شده است، این مطالعه نمونه ای از زبان آموزان ایرانی را برای شناسایی اثرجنبه های مختلف یادگیری در همه جا از جمله حضوردر همه جا در آن واحد، سفارشی کردن محتوا، تعامل، خودکارآمدی درک شده و انگیزه یادگیری از طریق موبایل که پیشرفت کلاسی زبان آموزان را تحت تاثیرقرار می دهند، در نظر می گیرد. شرکت کنندگان 150 دانش آموز دبیرستانی در شیراز بودند. پرسشنامه اقتباس شده از جانگ (2014) اصلی ترین ابزار جمع آوری اطلاعات بود که در مطالعه حاضر استفاده شد. علاوه بر این، نمرات پیشرفت کلاسی دانش آموزان حاصله از نتایج امتحان پایانی آنها نیز تحلیل گردید. نتایج مدل سازی معادلات ساختاری نشان داد که در میان جنبه های یادگیردر همه جا، حضوردر همه جا در آن واحد، سفارشی سازی محتوا، خودکارآمدی درک شده و انگیزه یادگیری از طریق موبایل بر پیشرفت کلاسی تأثیرگذار است اما تعامل بر موفقیت کلاسی تأثیر نمی گذارد. نتایج همچنین تأثیر مثبت تلفیق فناوری بر یادگیری دانش آموزان را نشان داد. فراگیران زبان انگلیسی با درک روشنی از نوآوری در آموزش، موقعیت بهتری دارند تا کارآیی و اثربخشی خود را از محیط سنتی یادگیری انگلیسی به محیطی که کاملاً یادگیری را در برنامه روزانه فراگیران ادغام می کند، منتقل کنند. نتیجه نهایی این تحقیق اینکه پیشرفت های فناوری باید به حوزه های آموزشی منتقل شود و در قالب برنامه درسی و مطالب آموزش زبان با دقت مورد توجه قرار گیرد.

واژگان کلیدی: یادگیری در همه جا ، پیشرفت کلاسی، فراگیران زبان، معادلات ساختاری

Introduction

Due to rapid growth in new technologies E-learning has changed into mobile learning. And then, it turned into ubiquitous learning (U-learning) with knowledge of the context and framework. E-learning and its aspects depend on the principles of constructivism (i.e. highlighting the learner's active status and needs analysis). Regarding the fact that they are considered as the necessities of today's education and training, we should utilize these methods and take advantage of their merits. To do so, more studies are required to be conducted on these methods which are appropriate to society's facilities and infrastructure (Zare, & Sarikhani, 2016).

Since people have easy access to the internet, teaching and learning should be taken into new consideration. The excessive use of handheld and portable devices along with pervasive wireless networking have changed structured learning opportunities into an "anytime, anywhere" endeavor. A shift that can be explained regarding ubiquity shows the traditional distinction between formal and informal learning contexts has changed. Technological, social, cultural, and institutional changes suggest that learning is a constant possibility (Burbules, 2014).

In an educational environment, teachers and students can benefit of new advances in ubiquitous computing and employ ubiquitous devices and technologies in their classrooms. Young people carry mobile devices anywhere and enjoy playing new gadgets (Cook & Das, 2012). Educators and curriculum developers should appreciate this reality and adopt, "mobile tools for 21st-century learners" (Norris & Soloway, 2008).

Previous studies of U-learning have been limited particularly in terms of explaining learners and environments (Cavus & Ibrahim, 2008; Callan, 1994; Hwang & Chen, 2013). In other words, most of them have focused on developing and experimentally testing new technological applications to improve discrete skills. They have generally focused on the U-learning technology itself instead of understanding the whole picture of U-learning environments. This background shows that most previous technology-assisted L2 studies examined the role of different forms of technology in L2 learning and ignored how individual factors affect technology-based instructions (Kim, 2010; Begum, 2011; Liu, Tan, and Chu, 2010).

According to Rahimi (2009), the use of technology in education will reduce training costs, save time, increase teaching-learning opportunities, and boost student performance. Over the last decade, in many developing countries, including Iran, there has been an increasing demand for mobile learning and ubiquitous learning in the learning environment. Such a modern learning paradigm has become an educational trend in information technology education by using computer and wireless technologies (Jeong & Hong, 2013). More precisely, this approach moves learning from the classroom environment to anywhere in the real life that is independent of the traditional learning environment (Dede, 2011). Considering the important role of various types of technology in daily life and language learning, it is important to investigate how different aspects of technology that provide opportunities for U-learning affect the achievement of L2 learners.

As a result, the present study investigates the effects of different aspects of U-learning including omnipresence, context customization, interactivity, perceived self-efficacy, and M-learning motivation on L2 learner's final classroom achievement.

Literature Review

Language Learning and Technology

Education, as a process, is dependent on coordination between learners and resources. Mobile devices can be employed by teachers to report on attendance, review student marks, gain general access to central school data, and manage their schedules more efficiently. Mobile devices can present course material, including due dates for assignments as well as providing

information about timetable and room changes to higher education students. A mobile learning organizer that has been designed and tried at the University of Birmingham (Holme & Sharples 2002; Sharples, Chan, Rudman & Bull, 2003; Corlett, Sharples, Chan & Bull, 2004), and the use of mobile phone technologies to endorse computing students (Riordan & Traxler, 2003; Traxler & Riordan, 2003) are among the examples of utilizing mobile technologies in this context.

Kiernan and Aizawa (2004) investigated the usefulness of employing cell phone text messages in task-based L2 learning. The project drew attention to some potential advantages of cell phones as well as highlighting some limitations, but overall suggested that cell phones represent a language learning resource worthy of further investigation. In another study, Thornton and Houser (2005) proposed a vocabulary learning system based on mobile e-mails for Japanese university students. Levy and Kennedy (2005) developed an Italian language learning system that was based on mobile SMS in an Australian university, with the focus on timing and number of repeated messages. Then, it made researchers develop more complex systems including context-aware, user-customized systems using PDA (personal digital assistants), and subsequently smartphones. Ogata and Yano (2008) introduced TANGO (Tag Added Learning Objects system) which utilized physical objects employing RFID (Radio Frequency Identification) tags for language learning. Stockwell (2007) designed a prototype of a mobile-based intelligent vocabulary learning system dubbed Vocab Tutor. Moreover, Chen and Chung (2008) developed a personalized mobile-based English vocabulary learning system following Item Response Theory and learning memory cycle. Li et al., (2010) developed an adaptive Kanji learning system via mobile phones. Additionally, Underwood, Luckin & Winters, (2010) devised a mobile-based self-initiated vocabulary learning application dubbed m-iLexicon.

Ubiquitous Learning

Ubiquitous computing is a term that refers to Weiser's vision (Weiser, 1991) of a world where invisible computers could assist people in daily activities and allow boundless access at anytime and anywhere to information resources. Also, it is the need of the user and the context in the omnipresent education setting on which the design of ubiquitous learning environment is based (Shin et al., 2011). Due to properties like portability and flexibility (Chang & Sheu, 2002), the concept of U-learning can be considered as a kind of distance learning whereby teaching and learning process can take place in an 'anywhere and anytime' situation (Huang et al., 2008). Also, in the ubiquitous learning environment, students are fully engaged in the learning process (Liu & Hwang, 2009).

One form of technology closely related to U-learning is mobile-assisted language learning technology (MALL). Smartphones, palmtops, PDAs, tablet PCs, laptop computers, and handheld devices are some examples of manual devices that can be used for M-learning (McConatha & Praul, 2008; Kukulska-Hulme & Traxler, 2005). Hand-held computers and mobile devices also play a crucial role in ubiquitous learning in the form of instructional tools (Crowe, 2007); allowing learners to build their knowledge with context-oriented materials (Aljohani & Davis, 2012). Multimedia applications of the hand-held devices provide learners with rich learning resources (Huang, Lin & Cheng, 2010). According to Rogers, Connelly, Hazlewood, and Tedesco (2009), learners are allowed to experience various settings and explore the field with features of mobile devices such as making sense and recording aspects of the local environment. Additionally, mobile-based technologies are capable of driving away from the traditional learning framework and develop a student-centered learning context (Zhang et al., 2011).

Characteristics of U- learning

Different ubiquitous characteristics are introduced by researchers (Chen, Kao, Sheu & Chiang, 2002; Curtis, Luchini, Bobrowsky, Quintana and Soloway, 2002; Hwang et al., 2008;

Chiu et al., 2008) and since then they have been utilized by various researchers to be part of the U-learning characteristics. The following ubiquitous constructs used in this study are among the constructs used by Jung (2014) and Liaw and Huang (2013).

Omnipresence

Omnipresence, a synonym for ubiquity, reflects communication and connectivity in learning environments anytime, anywhere. Looney, Jessup, and Valacich (2004) maintained that the omnipresent nature of smart technologies offers learners exceptional efficiency, flexibility, and convenience, thereby influencing their achievement. Besides, omnipresence is one of the well-recognized advantages of smart technologies and the main reason many learners have adopted smartphones (Dholakia, Dholakia, Lehrer, & Kshetri, 2004).

Context Customization

Customization is the extent to which U-learning presents EFL learners efficient content based on learners' needs and learning context (Figge, 2004; Kannan et al., 2001). Several studies have considered context customization as contextual offerings, reflective of one of the traditional ubiquitous characteristics for language learning. English language learners' attitudes and behaviors toward U-learning are influenced by the nature of the learning environment. According to Kim (2008), the different learning conditions which learners encounter, considerably drive their attitudes and thus, influence their behaviors.

Interactivity

According to this study, interactivity is considered as the technological interaction between learners and technological tools, meaning that ELLs interact with learning content through ubiquitous devices such as smartphones (Wang, 2006).

Perceived Self-efficacy

The concept of perceived self-efficacy is reflective of a sense of control over one's environment and an optimistic attitude towards being capable of changing challenging environmental demands through one's behavior. Therefore, it implies a self-confident view of one's capability to handle certain stressors in life (Schwarzer & Warner, 2013).

M-Learning Motivation

Motivation can be defined as the factors engaging goal-directed behavior for the needs of individuals and state what people do (Pezzulo, Van Der Meer, Lansink, & Pennartz, 2014; Redman, 2016).

This study considered a sample of Iranian EFL learners to identify the effects of different aspects of U-learning that influence English-language learners' final classroom achievement. It incorporated the effects of ubiquitous aspects (omnipresence, context customization, interactivity, perceived self-efficacy, and m-learning motivation) on EFL learners' classroom achievement. The following research question was therefore posed based on what was mentioned above:

RQ. Do different aspects of U-learning including omnipresence, context customization, interactivity, perceived self-efficacy, and m-learning motivation affect EFL learners' classroom achievement?

Methodology

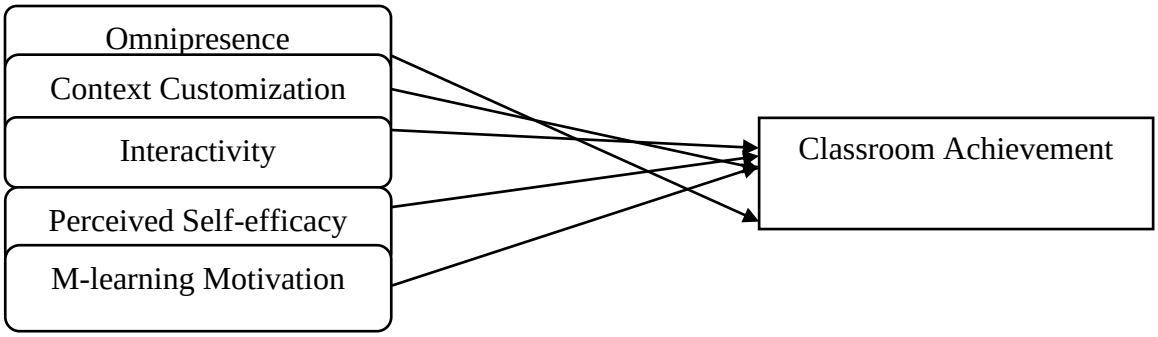
Research Model

Figure 1 represents the model used in this study to perform structural equation modeling for analyzing learners' scores. Instead of focusing on the technological attributes influencing EFL

learners' behaviors, the proposed research model includes learner attributes. This approach is valuable because, in the investigation of new technology in English learning, the focus is too often placed on technical aspects.

Figure 1

The Proposed Model of the Research



Participants

A sample of 150 high school students in Shiraz-Iran includes study participants. All the participants were female. At the time of the study, all the students were in grade ten and 16 years old. The textbook taught to the students was VISION 1. The students had been enrolled in the high school first year. They had learned English during primary education for three years. The students participated voluntarily and were motivated to learn English. To be able to share the additional book resources, a virtual group on Telegram was made to provide accessibility for them.

Instruments

Aspects of Ubiquitous learning questionnaire

The questionnaire used in this study was adapted from Jung (2014), and Liaw & Huang (2013). It included five aspects of Ubiquitous learning namely omnipresence, context customization, interactivity, perceived self-efficacy, and m-learning motivation. Four of these aspects were selected from Jung (2014), and one was selected from Liaw & Huang (2013). Each respondent was asked to specify the level of agreement to a statement in a five-point Likert-type scale ranging from "strongly disagree" (1) to "strongly agree" (5). The translated version of the questionnaire was used to collect the data to avoid any misunderstandings or confusion on the side of the participants. The reliability of the new questionnaire with 16 points was determined and Cronbach's Alpha 0.93 was obtained. Also, confirmatory factor analysis was run to investigate the validity of the U- learning questionnaire. The results indicated that the model explained 63.35 % of the total variance of the scores.

The Classroom Achievement Scores of the Students

The scores of the students were taken from the results of their final exam. Learners' achievement was investigated through their success on that semester's final exam. The achievement test included the four language skills along with vocabulary and grammar and had 65 questions. This test was teacher-made and was constructed by the classroom teacher based on the contents that the students studied in the class during the semester. The questionnaire's reliability coefficient was 67% and its Cronbach's alpha coefficient was 78%.

Data collection procedures

The data collection procedure was carried out over 12 consecutive weeks in a public high school in Shiraz. Due to the ubiquitous nature of Telegram, it can be adapted to learning/teaching environments by the teachers and leave learners with different opportunities to practice English. So, the teacher provided a telegram group for the participants as a supplementary teaching tool for out-of-school time and the participants were added to that group by which they could send their assignments, including writing parts and audio files, and receive feedback on their assignments. They could also ask questions about their issues, and receive answers. All learners had to use Telegram for the above purposes regularly. The participants received aspects of ubiquitous learning questionnaire after participating in 12 mobile-assisted language learning sessions. The questionnaire was designed to measure learners' perceptions of various aspects of ubiquitous learning including (omnipresence, context customization, interactivity, perceived self-efficacy, and m-learning motivation). On the other hand, the participants' final exam results of that semester were gathered to be used for further data analysis. After obtaining learners' scores, statistical analysis was run using structural equation modeling.

Data analysis

This study adopted an exploratory design considering a sample of Iranian EFL learners to identify the effects of aspects of U-learning (omnipresence, context customization, interactivity, perceived self-efficacy, and m-learning motivation) on EFL learners' final classroom achievement. For investigating the effects of different aspects of U-learning on EFL learners' classroom achievement, Structural Equation Modeling (SEM) was conducted using AMOS software version 21 software.

Results

The proposed research question refers to the effect of different aspects of U-learning including omnipresence, context customization, interactivity, perceived self-efficacy, and m-learning motivation on classroom achievement. So, in this part, the effect of different aspects of U-learning on classroom achievement is tested separately.

Do different aspects of U-learning including omnipresence, context customization, interactivity, perceived self-efficacy, and m-learning motivation affect classroom achievement?

The Effect of Omnipresence on Classroom achievement

Table 1

Direct Effect Indicator of Omnipresence on Classroom Achievement

Independent variable	Dependent variable	Non-Standard effect	Standard Effect	Significant level	Hypothesis
Omnipresence	Classroom Achievement	0.54	0.66	0.01	Accept

Table 1 indicates the amount of the standard direct effect indicator of the omnipresence as an independent variable on classroom achievement. As shown, the value of the standard direct effect of omnipresence on classroom achievement was 0.66. It was indicated that an increase in the standard deviation of the omnipresence would increase the standard deviation of classroom achievement by 66%.

The Effect of Context Customization on Classroom Achievement

Table 2

Direct Effect Indicator of Context Customization on Classroom Achievement

Independent variable	Dependent variable	Non-Standard effect	Standard Effect	Significant level	Hypothesis
Context Customization	Classroom Achievement	0.34	0.41	0.01	Accept

Table 2 illuminates the amount of the standard direct effect indicator of the context customization as an independent variable on classroom achievement. As shown, the value of the standard direct effect of the context customization on classroom achievement was 0.41. It was indicated that an increase in the standard deviation of the context customization would increase the standard deviation of classroom achievement by 41%.

The effect of Interactivity on Classroom Achievement

Table 3

Direct Effect Indicator of Interactivity on Classroom Achievement

Independent variable	Dependent variable	Non-Standard effect	Standard Effect	Significant level	Hypothesis
Interactivity	Classroom Achievement	0.09	0.10	0.32	Reject

Table 3 indicates the magnitude of the standard direct effect indicator of the interactivity on classroom achievement. As shown in this table, the value of the standard direct effect of the interactivity on classroom achievement was 0.10 and non-significant.

The Effect of Perceived Self-Efficacy on Classroom Achievement

Table 4

Direct Effect Indicator of Perceived Self-efficacy on Classroom Achievement

Independent variable	Dependent variable	Non-Standard effect	Standard Effect	Significant level	Hypothesis
Perceived Self-efficacy	Classroom Achievement	0.29	0.37	0.01	Accept

Table 4 points out the amount of the standard direct effect indicator of the perceived self-efficacy as an independent variable on classroom achievement. According to this table, the value of the standard direct effect of perceived self-efficacy on perceived usefulness was 0.37. It was indicated that an increase in the standard deviation of Perceived self-efficacy would increase the standard deviation of classroom achievement by 37%.

The Effect of M-Learning Motivation on Classroom Achievement

Table 5

Direct Effect Indicator of M-learning Motivation on Classroom Achievement

Independent variable	Dependent variable	Non-Standard effect	Standard Effect	Significant level	Hypothesis
M-learning Motivation	Classroom Achievement	0.71	0.28	0.01	Accept

Table 5 indicates the amount of the standard direct effect indicator of the m-learning motivation as an independent variable on classroom achievement. As shown, the value of the standard direct effect of the m-learning motivation on classroom achievement was 0.28. It was indicated that an increase in the standard deviation of the M-learning motivation would increase the standard deviation of classroom achievement by 28%.

Discussion

The proposed research question investigated the effect of different aspects of U-learning including omnipresence, context customization, interactivity, perceived self-efficacy, and m-learning motivation on classroom achievement. The obtained data showed that due to the amounts of standard direct effect, omnipresence (0.66), context customization (0.41), perceived self-efficacy (0.37), and m-learning motivation (0.28) affected classroom achievement but interactivity (0.10) didn't influence classroom achievement. It means that the four variables of ubiquitous characteristics were positively related to learners' classroom achievement. In other words, there is a positive relationship between omnipresence and learners' classroom achievement by showing the highest path coefficient from ubiquitous characteristics; and thus was supported. This suggests that omnipresence is a key attribute of u-learning. The results provide support for the relationship between context customization and learners' classroom achievement. This suggests that learners are more likely to receive benefits from this u-learning characteristic than from other learning environments. Also, perceived self-efficacy and m-learning motivation had significant positive effects on learners' classroom achievement which suggests that learner's perceived self-efficacy and motivation to learn new behavioral patterns through u-learning may increase his or her classroom achievement.

The results show that the use of mobile phones for learning activities is significant in different ways because it is an effective method for motivating even disinterested students. The previous studies support the self-efficacy role on improvement of people's activities (Bandura & Locke, 2003) and the strong relationship between self-efficacy and general performance of the individuals (Stajkovic & Luthans, 1988; Multon Brown & Leni, 1991). In this way, perceived self-efficacy has been used as an antecedent of academic performance in many studies. Within an academic context, the relationship between self-efficacy and the academic performance had been explored across various subjects in a range of learning environments (including early years, high school, and university populations). A meta-analysis of 12 years related studies found that perceived self-efficacy moderately correlated with academic performance (Honicke, 2016).

This study provides a new approach to understanding ubiquity and the use of technology in English language classrooms. The findings support the results of previous studies on the role of technology in language teaching. 311 research studies on the effectiveness of technology on students' achievement were investigated by Sivin-Kachala and Bialo in 2000. The results showed positive patterns when students participated in technology-rich settings, including significant progress and achievement in all subjects, increased achievement in preschool through high school for students with different needs, and improved attitudes towards learning and increased self-esteem.

In evaluating large-scale studies, as well as some new smaller studies on innovative educational technologies, Schacter (1999) found that students with access to any number of technologies have shown positive improvements in achievement on researcher constructed tests, standardized tests, and national tests.

Solanki and Shyamlee (2012) and Pourhosein Gilakjani (2017) argued that the methodology of language teaching has changed due to technology. The researchers continued that the application of technology allows learners to learn based on their interests. It also meets the

learners' visual and auditory senses. Lam and Lawrence (2002) and Pourhosein Gilakjani (2017) stated that technology helps learners in adapting their learning process and they can have access to information that their teachers are unable to provide.

Moreover, the findings of this study were in line with those of Yunus, Salehi, and Amini, (2015) who claimed that CALL integration in EFL contexts has intensified remarkably in modern years.

Furthermore, this study supports the discoveries of the other researchers who have verified the significance of Internet-based tools for English learning (Alsaleem, 2014; Susilo, 2014). The findings, on the other hand, are in line with those of Alavinia and Quitassi (2013), who endorsed mobile phones as a learning tool that can be one of many modern ways to meet the needs of learners. To sum up, learners via different applications such as Telegram as an instructional device could share their information, talk over group assignments as well as evaluate each other's work.

The results of this study support the findings of Stickler and Hampel (2010), who found that online language courses can combine different approaches for learning and teaching, such as using language communicatively and focusing on form and language practice.

The results of this study confirm the findings of Thornton and Houser (2005) who investigated the use of mobile devices in language learning. The results showed that the students were able to learn via mobile phone and evaluate the educational materials designed for mobile phones very satisfactorily. Researchers also have found that mobile phones are a very powerful learning medium as they can attract the attention of students and generate new opportunities for study. Telegram has a variety of features, such as ubiquity, ease of access, ease of sharing personal ideas and peer input, as well as teacher's feedback to individuals.

Conclusion

Technology is always a crucial part of teaching and learning environment. It is an important part of the teachers' profession through which they will use it to promote learning. When we mention technology in teaching and learning, the word 'integration' is employed. Technology is going to be part of our everyday life. In this way, it is time to rethink the concept of integrating technology into the curriculum and try to embed technology into teaching to help the learning process. In other words, technology is an integral part of the learning experience and a big challenge for teachers during the process of teaching and learning (Eady & Lockyer, 2013).

The purpose of this study was to investigate the understanding of ubiquitous learning among Iranian EFL learners. After analyzing the data, these findings were reported:

Among aspects of U-learning; omnipresence, context customization, perceived self-efficacy, and m-learning motivation affected classroom achievement but interactivity didn't influence classroom achievement.

In short, this study again reinforces the fact that the advent of technology, in general, and social networks, in particular, must be accepted as an unavoidable fact in educational environments, especially where language teaching is the objective. If technology is used correctly, it can offer teachers and learners a lot of advantages. It is a resource that learners should use to overcome their learning difficulties.

The results of this study offer perspectives for learners and teachers to illustrate the value of using social media to enhance language learning for students. Teaching ESL / EFL in the Ubiquitous Learning Environment allows students to become lifelong learners by using various devices while improving their search skills. The Ubiquitous Learning Environment provides a safe environment for learners to communicate with each other and with instructors in an ESL/EFL context. Innovations have become part of our lives and students need to learn how to use these innovations to be prepared for their future careers.

Like any other research, this study had some limitations, too. The results of this study cannot be generalized thoroughly because the population of this study was limited to one city, only Shiraz. So, it cannot be the true example of Iranian EFL learners. Also, the difference in background knowledge of students would affect the results. Some students had different background knowledge because of attending English classes in institutes.

Future research should take into account the successful use of mobile devices for students especially outside the classroom to provide a more thorough understanding of the effects and use of mobile learning tools out of school work.

It remains to be investigated similar studies with the other proficiency levels. It is supposed that learners at both lower and upper levels can profit mobile devices in learning a foreign language differently.

References

Alavinia, P., & Qoitassi, K. (2013). On the Viability of Vocabulary Learning Enhancement through the Implementation of MALL: The Case of Iranian EFL Learners. *Journal of Language Teaching and Research, 4*(2), 412–426.

Aljohani, N. R., & Davis, H. C. (2012). *"Learning Analytics in Mobile and Ubiquitous Learning Environments."* Paper presented at the 11th World Conference on Mobile and Contextual Learning: mLearn, Helsinki, Finland, 16-18.

Alsaleem, B. I. A. (2014). The effect of "Whatsapp" electronic dialogue journaling on improving writing Vocabulary Word Choice and Voice of EFL Undergraduate Saudi Students. *Arab World English Journal, 4*(3), 213–225.

Bandura A., & Locke EA. (2003). Negative self- efficacy and goal effects revisited. *Journal of Applied Psychology, 88*, 87–99.

Begum, R. (2011). Prospect for cell phones as instructional tools in the EFL classroom: A case study of Jahangirnagar University, Bangladesh. English Language Teaching, 4(1), 105–115.

Burbules, N. C. (2014). Los significados de "aprendizaje ubicuo". *Education Policy Analysis Archives*, *22*, 1-10. https://doi.org/10.14507/epaa.v22.1880.

Callan, S. (1994). Can the use of hand-held personal computers assist transition students to produce written work of excellent quality? Wentworth County Board of Education, Ontario, Canada.

Cavus, N., & Ibrahim, D. (2008). MOLT: A mobile learning tool that makes learning new technical English language words enjoyable. International Journal of Interactive Mobile Technologies, 2(4), 38–42.

Chang, C. Y., & Sheu, J. P. (2002). "Design and implementation of Ad Hoc classroom and eSchoolbag systems for ubiquitous learning." In M. Milrad, U. Hoope, and Kinshuk (Eds.), *Proceedings of IEEE international workshop on wireless and mobile technologies in education* (pp. 8–14). Los Alamitos, CA: IEEE Publications.

Chen, C. M., & Chung, C.J. (2008). Personalized mobile English vocabulary learning system based on item response theory and learning memory cycle, *Computers & Education, 51*(2), 624–645.

Chen, Y.S., Kao, T.C., Sheu, J.P. & Chiang, C.Y. (2002). A Mobile Scaffolding-Aid-Based Bird Watching Learning System, *Proceedings of IEEE International Workshop on Wireless and Mobile Technologies in Education (WMTE'02)*, 15-22.

Chiu, P.S., Kuo, Y., Huang, Y. & Chen. T. (2008). *A Meaningful Learning based u-Learning Evaluation Model*, Eighth IEEE International Conference on Advanced Learning Technologies, pp. 77- 81.

Cook, D.J., & Das, S.K. (2012). Pervasive computing at scale: Transforming the state of the art. *Pervasive and Mobile Computing, 8*(1), 22 – 35.

Corlett, D., Sharples, M., Chan, T., & Bull, S. (2004). A mobile learning organizer for university students. *Proceedings of the 2nd International Workshop on Wireless and Mobile Technologies in Education.* JungLi, Taiwan: IEEE Computer Society, pp. 35-42.

Crowe, A. R. (2007). "Learning to teach with mobile technology: A teacher educator's journey." In M. van't Hooft and K. Swan (Eds.), *Ubiquitous computing in education Mahwah* (pp. 127-144). New Jersey: Lawrence Erlbaum Associates.

Curtis, M., Luchini, K., Bobrowsky, W., Quintana, C. & Soloway, E. (2002). Handheld Use in K-12: A Descriptive Account, *Proceedings of IEEE International Workshop on Wireless and Mobile Technologies in Education (WMTE'02)*, pp. 23-30.

Dede, C. (2011)." Emerging technologies, ubiquitous learning, and educational transformation." Paper presented at the 6th European Conference on Technology Enhanced Learning, EC-TEL2011 Palermo, Italy, September 20-23.

Dholakia, N., Dholakia, R., Lehrer, M., & Kshetri, N. (2004). Patterns, opportunities, and challenges in the emerging global m-commerce landscape. In N. Shi (Ed.), *Wireless communications and mobile commerce* (pp. 121) Singapore & Hershey PA: Idea Group.

Eady, M. J., & Lockyer, L. (2013). *Tools for learning: technology and teaching strategies: Learning to teach in the primary school.* Queensland University of Technology, Australia. pp. 71-89. https://scholars.uow.edu.au/display/publication76376

Figge, S. (2004). Situation-dependent service: A challenger for mobile network operators. *Journal of Business Research, 57*(11), 1416-1422.

Holme, O., & Sharples, M. (2002). Implementing a student learning organizer on the pocket PC platform. *Proceedings of MLEARN 2002: European Workshop on Mobile and Contextual Learning*, Birmingham, UK, pp. 41-44.

Honicke, T., & Broadbent, J. (2016). The influence of academic self-efficacy on academic performance: A systematic review. *Educational Research Review, 17*, 63– 84. https://doi.org/10.1016/j.edurev.2015.11.002.

Huang, Y. M., Huang, T.C., & Hsieh, M. Y. (2008). Using Annotation Services in a Ubiquitous Jigsaw Cooperative Learning. *Educational Technology & Society, 11*(2), 3-15.

Huang, Y. M., Lin, Y. T., Cheng, S. C. (2010). Effectiveness of a Mobile Plant Learning System in a Science Curriculum in Taiwanese Elementary Education, *Computers & Education, 54*, 47- 58.

Hwang, G.-J., Tsai, C.-C., & Yang, S. J. H. (2008). Criteria, strategies and research issues of context-aware ubiquitous learning. *Educational Technology & Society, 11*(2), 81–91.

Hwang, W-Y., & Chen, H. (2013). Users' familiar situational contexts facilitate the practice of EFL in elementary schools with mobile devices. Computer Assisted Language Learning, 26(2), 101–125.

Jeong, H.Y., & Hong, B.H. (2013). "A practical use of learning system using user preference in ubiquitous computing environment," Multimedia Tools and Application, 64, 491-504.

Jung, H.J. (2014). Ubiquitous Learning: Determinants Impacting Learners' Satisfaction and Performance with Smartphones. *Language Learning & Technology, 18*(3), 97–119. Retrieved from http://llt.msu.edu/issues/october2014/jung.pdf.

Kannan, P. K., Chang, A. M., & Whinston, A. B. (2001). Wireless commerce: Marketing issues and possibilities. *Proceedings of the 34th Hawaii International Conference Systems Science,* IEEE Computer Society Press, Los Alamitos.

Kiernan, P. J., & Aizawa, K. (2004). Cell phones in task-based learning: Are cell phones useful language learning tools? *ReCALL, 16*(1), 71-84.

Kim, S. H. (2008). Moderating effects of job relevance and experience on mobile wireless technology acceptance: Adoption of a smartphone by individuals. *Information & Management, 45*(6), 387-393.

Kim, H-S. (2010). Three teachers' initial efforts to use Twitter for teaching English in public schools. *Multimedia-Assisted Language Learning, 13*(2), 129–154.

Kukulska-Hulme, A., & Traxler. J. (2005). *Mobile learning: A handbook for educators and trainers.* London: Routledge.

Lam, Y., & Lawrence, G. (2002). Teacher-student role redefinition during a computer-based second language project: Are computers catalysts for empowering change? *Computer Assisted Language Learning, 15*(3), 295-315. https://doi.org/10.1076/call.15.3.295.8185

Levy, M., & Kennedy, C. (2005). Learning Italian via mobile SMS. In A. Kukulska-Hulme & J. Traxler (Eds.), *Mobile learning: A handbook for educators and trainers.* London: Taylor and Francis, pp. 76-83.

Li, M., Ogata, H., Hou, B., Hashimoto, S., Uosaki, N., Liu, Y. & Yano, Y. (2010) 'Development of adaptive vocabulary learning via mobile phone, e-mail', *6th IEEE International Conference on Wireless, Mobile and Ubiquitous Technologies in Education (WMUTE),* pp. 34–41.

Liaw, SH. SH., & Huang, H. M. (2013). Perceived satisfaction, perceived usefulness and interactive learning environments as predictors to self-regulation in e-learning environments. *Computers & Education*, *60*(1), 14-24.

Liu, G. Z., & Hwang, G. J. (2009). "A key step to understanding paradigm shifts in e- learning," *British Journal of Educational Technology, 41*(2), 1–9.

Liu, T., Tan, T., & Chu, Y. (2010). QR code and augmented reality-supported mobile English learning system. In X. Jiang, M-Y. Ma, & C-W. Chen (Eds.), Workshop of Mobile Multimedia Processing 2008, *Lecture Notes in Computer Science, 59*(60), 37–52.

Money, C., Jessup, L., & Valacich, J. (2004). Emerging business models for mobile brokerage services. *Communications of the ACM, 47*(6), 71–77.

McConatha, D., & Praul, M. (2008). Mobile learning in higher education: An empirical assessment of a new educational tool. *The Turkish Online Journal of Educational Technology, 7*(3), 15–21.

Multon, K. D., Brown, S. D., & Lent, R. W. (1991). Relation of self-efficacy beliefs to academic outcomes: A meta-analytic investigation. *Journal of Counseling Psychology, 38,* 30-38. doi:10.1037/0022-0167.38.1.30.

Norris, C., & Soloway, E. (2008). Handhelds: Getting mobile. *District Administration, 44*(8), 20 – 24.

Ogata, H., & Yano, Y. (2008). Supporting a decision making for task assignments in language learning outside classroom with handhelds, *Proceedings of the 16th International Conference on Computers in Education,* Taipei, pp.713–720.

Pezzulo, G., van der Meer, M. A., Lansink, C. S., & Pennartz, C. M. (2014). Internally generated sequences in learning and executing goal-directed behavior. *Trends in cognitive sciences, 18*(12), 647-657.

Pourhossein Gilakjani, A. (2017). A review of the literature on the integration of technology into the learning and teaching of English language skills. *International Journal of English Linguistic*s, *7*(5), 95-106. doi: https://doi.org/10.5539/ijel.v7n5p95

Rahimi Y. (2009). A study on computer anxiety of high school and the relationship between use of computer and ownership of personal computers. Proceedings of the electronics of conference. University of Science and Technology, Tehran, 18-19.

Redman, D. (2016). *Motivation of Adult, Auditioned Community Choirs: Implications toward Lifelong Learning*. Ph.D., University of South Florida.

Riordan, B., & Traxler, J. (2003). Supporting computing students at risk using blended technologies. *Proceedings of 4th Annual Conference*. Galway, Ireland: LTSN Centre for Information and Computer Science, 174-175.

Rogers, Y., Connelly, K., Hazlewood, W., & Tedesco, L. (2009). "Enhancing learning: A study of how mobile devices can facilitate sense making." *Personal and Ubiquitous Computing, 14*, 111–124.

Schacter, J. (1999). The impact of education technology on student achievement. What the most current research has to say. Retrieved from ERIC database (ED430537) .

Schwarzer, R., & Warner, L. M. (2013). Perceived self-efficacy and its relationship to resilience. In S. Prince- Embury & D. H. Saklofske (Eds.), *The Springer series on human exceptionality: Resilience in children, adolescents, and adults: Translating research into practice*, pp. 139-150. doi: 10.1007/978-1-4614-4939-3_10.

Sharples, M., Chan, T., Rudman, P., & Bull, S. (2003). Evaluation of a mobile learning organizer and concept mapping tools. *Proceedings of MLEARN 2003: Learning with Mobile Devices*, pp. 139-144. London, UK: Learning and Skills Development Agency.

Shin, D. H., Shin, Y. J., Choo, H., & Beom, K. (2011). Smartphones as smart pedagogical tools: Implications for smartphones as u-learning devices. *Computers in Human Behavior*, *27*, 2207- 2214.

Sivin-Kachala & Bialo, E. (2000). *Research Report on the Effectiveness of Technology in Schools.* (7th ed.) Washington.DC: Software and lnformation lndustry Association

Solanki, D., & Shyamlee1, M. P. (2012). *Use of technology in English language teaching and learning: An analysis.* 2012International Conference on Language, Medias and Culture IPEDR vol. 33(2012) ©(2012)IACSIT Press, Singapore. 150-156.

Stajkovic A., & Luthans F. (1998). Self-efficacy and work-related performance: A meta-analysis. *Psychological Bulletin, 124*, 240–261.

Stickler, U., & Hampel, R (2010). CyberDeutsch: Language production and user preferences in a Moodle Virtual Learning Environment. *CALICO Journal*, *28*(1), 49-73. http://dx.doi.org/10.11139/cj.28.1.49-73.

Stockwell, G. (2007). Vocabulary on the move: investigating an intelligent mobile phone-based vocabulary tutor. *Computer Assisted Language Learning*, *20*(4), 365–383.

Susilo, A. (2014). Exploring Facebook and Whatsapp As Supporting Social Network Applications For English Learning In Higher Education.

Thornton, P., & Houser, C. (2005). Using mobile phones in English education in Japan. *Journal of Computer Assisted Learning, 21*, 217-228.

Traxler, J., & Riordan, B. (2003). Evaluating the effectiveness of retention strategies using SMS, WAP and WWW student support. *Proceedings of 4th Annual Conference,* pp. 54-55. Galway, Ireland: LTSN Centre for Information and Computer Science.

Underwood, J., Luckin, R., & Winters, N. (2010) 'm-iLexicon harnessing resources for personal and collaborative language inquiry', *Communications in Computer and Information Science*, *126*, 87–98.

Wang, H. (2006). A pragmatic framework for promoting interactivity in e-Learning. In T. Reeves & S. Yamashita (Eds.), *Proceedings of World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education 2006*, pp. 158–163. Chesapeake, VA: Association for the Advancement of Computing in Education.

Weiser, M. (1991). The computer of the 21st century. *Scientific American, 265*(3), 66- 75.

Zare M., & Sarikhani R. (2016). "From E-learning to Ubiquitous Learning; Theoretical Principles". *Features of Medical Education Journal, 6*(3), 12-15.

Zhang, B., Looi, C. K., Seow, P., Chia, G., Wong, L. H., Chen, W., et al. (2011). Deconstructing and reconstructing: transforming primary science learning via a mobilized curriculum. Computers & Education, 55, 1504e1523. http://dx.doi.org/10.1016/j.compedu.2010.06.016