



Using Mobile Instant Messaging in Teaching Vocabulary to Pre-intermediate EFL Learners: The Case of WhatsApp

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ARTICLE INFO

o-ISSN: 2502-6909
p-ISSN: 2502-9207
Vol. 5, No. 1, June 2020
URL: <http://dx.doi.org/10.31327/jee.v5i1.1162>

Received	:	4 Januari 2020
Reviewed	:	7 March 2020
Accepted	:	1 May 2020

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Suggestion for the Citation and Bibliography

Citation in text:

Namaziandost, Shafiee, & Suryadi (2020) or (Namaziandost, Shafiee, & Suryadi, 2020)

Bibliography:

Namaziandost, E., Shafiee, S., & Suryadi, R.(2020). Using Mobile Instant Messaging in Teaching Vocabulary to Pre-intermediate EFL Learners: The Case of WhatsApp. *Journal of English Education*, 5 (1), 1-10.
DOI : <http://dx.doi.org/10.31327/jee.v5i1.1162>

Abstract

This study aimed to find out the impacts of using WhatsApp as a mobile instant messaging application on teaching vocabulary among pre-intermediate EFL learners. To this end, 60 Iranian pre-intermediate EFL learners were selected from a private English Language Institute. Then, they were randomly assigned to two equal groups there were an experimental group and a control group. They were pre-tested by a researcher-made vocabulary test. Then, the treatment was applied to both groups. As the treatment, the control group was taught with traditional activities whereas the experimental group was taught with the use of mobile application (WhatsApp). At the end of the instruction, a researcher-made vocabulary post-test was administered. The results of independent samples t-test and one-way ANCOVA indicated that the experimental group had better performance on the post-test compared to control group revealing the usefulness of the mobile application utilized in this study on learning vocabulary.

Keywords: mobile instant messaging, social media, WhatsApp, vocabulary knowledge

A. Introduction

While it is not a new topic for scholars to use mobile devices in language classroom, the rapid technological developments and innovations are constantly expanding the scope of unanswered questions. Opinions on Mobile-Assisted Language Learning (MALL) in the existing literature are largely optimistic. Several studies show how useful MALL is and how it impacts learners positively (Miangah & Nezarat, 2012; Ono & Ishihara, 2011; Tahmasbi, Hashemifardnia, & Namaziandost, 2019). In addition, several studies investigated the use of MALL in the atmosphere of the classroom to teach language skills and pointed to its advantages (e.g. Başoğlu & Akdemir, 2010; Lu, 2008; Shakibaei, Shahamat & Namaziandost, 2019). For example, in a Turkish EFL context, Başoğlu and Akdemir (2010) investigated mobile-assisted vocabulary learning and the use of flashcards with mobile phones. Lu (2008) contrasted the efficacy of mobile-assisted vocabulary learning with paper-based language learning methods. Alemi, Sarab, and Lari (2012) and Çavuş and Çabraham (2009) analyzed mobile-assisted learning methods of vocabulary in EFL classrooms.

Furthermore, the use of technology is an inevitable part of almost every aspect of life, and there is no exception to this. Computers, used for teachers as well as students as assisting tools, had beneficial uses in EFL classrooms. The use of computers to facilitate instruction, or Computer-Assisted Language Learning (CALL), has gained popularity in language studies, although this is not anything recent, as Warschauer and Healey (1998) note. However, it is a promising trend for language studies due to the development of technology and the information era. The popularity growth was not in vain. CALL may have many advantages; it has been suggested. CALL-based glossing, for example, is more effective than paper-based glossing; however, when extended to computers, writing is much easier in terms of accuracy (Taylor, 2013; Nasri, Namaziandost, & Akbari, 2019).

Nonetheless, recent technological advances have shown that funding for technology is no longer limited to computers. Nearly all computing technologies have been incorporated into mobile devices, such as phones and tablets, which in many schools have expanded access to technology. In the mobility world, millions of users communicate with each other in seconds and use a variety of applications for this purpose. WhatsApp allows people to interact through text messages, voice messages, videos and images (Han & Keskin, 2016; Abedi, Namaziandost, & Akbari, 2019).

Emerging technologies have made significant changes to the methods of teaching and learning (Pavlik, 2015). One of these innovations, mobile phones, has contributed to a proliferation of research investigating their use in education. Reports and procedures of language teaching have also been influenced by this wave of transition (Stockwell, 2010; Namaziandost & Nasri, 2019b). By offering flexible, practical and personalized use opportunities in and outside the classroom, mobile learning challenges conventional teaching methods considerably (Kukulka-Hulme & Traxler, 2005; Namaziandost, Saberi Dehkordi, & Shafiee, 2019). Specifically, for smartphones that come with both powerful hardware and software, making them as capable as a computer, learning on - the-go is becoming increasingly convenient. As illustrated by Stockwell (2015), today's smartphones' wide and touch-sensitive screen offers great advantages compared to pre-smartphone mobile devices used in several researches (Lu, 2008; Namaziandost, Hashemifardnia, & Shafiee, 2019; Kukulka-Hulme, 2010; Thornton & Houser, 2005; Namaziandost, Hosseini, & Utomo, 2020).

WhatsApp is an application that is available on the new generation of mobile phones such as iPhone, Samsung, Blackberry and Blackberry, allowing users to send text messages to each other free of charge. Users will not be paid for a text sent via WhatsApp. This is because, through an internet data link, WhatsApp delivers messages. WhatsApp accepts many different types of messages, from simple text to images to audio and video files (Ziafar & Namaziandost, 2019a; Namaziandost, Neisi, Kheryadi, & Nasri, 2019).

While most educationalists accept that WhatsApp messages are commonly used by Saudi Arabia undergraduate students, its influence on university academics tends to have two distinct

opinions. There are those who see the use of so-called "Web Language" as an English language breakdown; other teachers see the emerging abbreviations as evidence of a growing technical attack on formal written English. By comparison, there are those who see this same "Web Language" not only as an indicator of how language is constantly evolving and changing, but also as a form of literacy that can be capitalized on to engage students in more conventional learning (Etemadfar, Namaziandost, & Banari, 2019).

Vocabulary instruction is essential to the growth of skills and the acquisition of desired language skills. Constant efforts have been made to find the best method for teaching vocabulary. In this sense, while vocabulary is a cornerstone of foreign language learning, idiomatic expressions are the most commonly used non-literal words, and building blocks of daily conversations in a language can create communication problems for language learners, such as awkward and unauthentic sounding (Cooper, 1999; Namaziandost, Sabzevari, & Hashemifardnia, 2018). In order to become competent in the target language, these phrases are particularly important. In fact, strong mastery of idiomatic expressions is generally considered to be similar to the fluidity of target language native speakers (Schmitt, 2000; Wray, 2000). Thus, as Irujo (1986) stressed, language teaching should be an integral part of language teaching programs from the beginning levels and be taught with ample chances of practice in naturalistic contexts. Nevertheless, when teaching languages, there are difficulties (Zhang, 2009).

Mobile devices could open new doors with their unique qualities such as 'accessibility, customizability, and portability' (Saran & Seferoglu, 2010, p.253), and 'physical characteristics (e.g., size and weight), input functionality (e.g., keyboard or touchpad), performance capabilities (e.g., screen size and audio functions), file storage and recovery, processing speed, and 'low error rates' (Alzu'bi & Sabha, 2013, p.179) in the processes of teaching and learning.

While we live in the age of automation, historically our classes are held. Smartphones are seen everywhere and they are often used by pupils, but not for learning purposes. Out of classrooms, smartphones can be used to help students learn more vocabulary regardless of teachers. Due to time constraints and a strong burden on the pupils, learning vocabulary in the classroom can be disadvantageous. Students who spend long hours learning English in classes often feel fatigue and disinterest. To learn language, they require stimulus that can be enhanced by adding meaning to it (Miramontes, Nadeau, & Commins, 1997; Namaziandost, Rezvani, & Polemikou, 2020). Seeing the need to fill the research gap in the role of mobile messaging apps in developing the vocabulary of L2 learners in Iran, this study aims to explore whether WhatsApp as a mobile instant messaging has any significant effects on developing Iranian EFL pre-intermediate EFL learners' vocabulary knowledge. To reach this goal, the following question was proposed:

RQ 1. Does using WhatsApp as a mobile instant messaging have any significant effect on pre-intermediate EFL learners' vocabulary knowledge?

Based on the research question, the following null hypothesis was formulated:

H0 1. Using WhatsApp as a mobile instant messaging does not have any significant effect on pre-intermediate EFL learners' vocabulary knowledge.

B. Methodology

1. Research Design

Quasi-experimental method of research was used in this study. Accordingly, the study employs a pre-test and post-test design to extract needed data of one experimental group and one control group. This study focused on the variable of mobile instant messaging as an independent variable and vocabulary knowledge as a dependent variable which is hypothesized to be affected by the independent variable. The collected data were analyzed quantitatively through using Independent samples t-test and one way ANCOVA.

2. Participants

This study was carried out on about 60 pre-intermediate EFL students from a private English language institute. They were selected among 90 students from three classes based on their performance on Oxford Quick Placement Test. The participants were selected based on random sampling; that is, all students had an equal chance to be selected as the target population of the study. They were all male and their age ranged from 15 to 18. The researcher divided the participants into two equal groups of 30- experimental group and control group. The control group was taught with traditional activities whereas the experimental group was taught with the use of mobile application (WhatsApp).

3. Instruments

The first instrument which was utilized in the present study to homogenize the participants in terms of language proficiency was the Oxford Quick Placement Test (OQPT) (Appendix A). It helped the researcher to have a greater understanding of what level (i.e., elementary, pre-intermediate, intermediate) the participants were. As Purpura (2004) maintains, OQPT has 60 multiple-choice items. The participants whose scores are 1 to 17 will be considered beginners; the participants whose scores are 18 to 29 as elementary; those participants whose scores are 30 to 39 are pre-intermediate; the participants whose scores are 40 to 47 are intermediate; the participants whose scores are 48 to 54 are considered as the advanced learners and those whose scores are 55 to 60 are very advanced learners. Based on the results of this test, 60 pre-intermediate students were regarded as the target participants of the current research.

The second instrument for gathering data to answer the research questions of the study was a researcher-made vocabulary pre-test which was prepared based on the students' course book. This test was given to measure the students' vocabulary knowledge before receiving the treatment. It consists of 40 multiple choice items. The pre-test validity was confirmed by a panel of English experts and its reliability was computed through using KR-21 formula and it was 0.898. The pre-test was piloted on another similar group so as to check the feasibility of the test that was going to be administered to the target participants.

The third instrument of this study was a researcher-made vocabulary post-test. This test was designed based on the words which were taught to the students. It included 40 multiple-choice items. The validity of both post-tests was checked by five assessment and measurement experts in this field and their reliability was calculated by applying KR-21 formula and it was 0.799. The post-test was also piloted in another English language institute.

4. Data Collection Procedure

The following steps were carried out in this study:

1. Administering the Oxford Quick Placement Test (OQPT) to determine the participants' language proficiency.
2. Administering the pretest.
3. Administering the treatment: The experimental groups received the intended educational materials containing the English words by WhatsApp. It means that the experimental group used WhatsApp in order to practice the selected words outside of the L2 classroom. The control group received the word instruction through the conventional method. In the control group, the participants took part in in-door classes and the words were taught to them by the researcher in a face to face fashion.
4. Administering the post-test.

5. Data Analysis

The descriptive statistics were calculated through using SPSS software, version 25. Then, independent samples t-test and one-way ANCOVA were run to determine the effectiveness of mobile instant messaging in teaching vocabulary to pre-intermediate EFL learners.

C. Results

It was stated above that 60 pre-intermediate learners were drawn from a larger pool of EFL learners as a result of their scores on the placement test, and were assigned to the two groups of EG and CG. To further ascertain the homogeneity of the two groups in terms of their writing ability before the treatment, their pretest scores were compared via an independent-samples *t* test:

Table 1. *Descriptive Statistics for the Pretest*

	Groups	<i>N</i>	Mean	Std. Deviation	Std. Error Mean
Pretest	EG	30	11.3667	1.92055	.35064
	CG	30	11.4000	1.99309	.36389

Table 1 shows that the EG learners' mean score on the pretest equaled 11.3667 and the CG learners' mean score was 11.4000. To see whether the difference between these two mean scores, and thus the two groups on the pretest, was statistically significant or not, the researcher had to examine the *p* value under the *Sig.* (2-tailed) column in the *t* test table. In this table, a *p* value less than .05 would indicate a statistically significant difference between the two groups, while a *p* value larger than .05 indicates a difference which failed to reach statistical significance.

Table 2. *Results of Independent-Samples *t* Test Comparing the Pretest Scores of EG and CG*

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	T	df	Sig. (2-tailed)
Pretest	Equal variances assumed	.248	.621	-.066	58	.948
	Equal variances not assumed			-.066	57.920	.948

Based in the information presented in Table 2., there was not a statistically significant difference in the pretest scores for EG ($M = 11.4000$, $SD = 1.99309$) and CG ($M = 11.3667$, $SD = 1.92055$), $t(58) = -.066$, $p = .621$ (two-tailed). This conclusion was made since the *p* value was larger than the significance level ($p > .05$). Hence, it could be inferred that the learners in the two groups were at the same level of pretest.

As the research question of the study was intended to figure out whether using WhatsApp as a mobile instant messaging have any significant effect on pre-intermediate EFL Learners' vocabulary knowledge, the post-test scores of the EG and CG learners had to be compared. To attain this objective, the researcher could run an independent-samples *t* test, but to control for any possible pre-existing differences between these two subgroups, and compare their post-test scores accordingly, one-way ANCOVA was chosen to be conducted:

Table 3. *Descriptive Statistics for Comparing the Post-test Scores of the EG and CG Learners*

Groups	Mean	Std. Deviation	<i>N</i>
EG	15.3333	1.49328	30
CG	11.8333	1.89525	30
Total	13.5833	2.44458	60

In Table 3, it could be found that the post-test mean score of the EG learners ($M = 15.3333$) was larger than the post-test mean score of the CG learners ($M = 11.8333$). To find out whether this

difference was a statistically significant one or not, the researcher had to look down the *Sig.* column and in front of the Groups row in Table 4:

Table 4. Results of One-Way ANCOVA for Comparing the Post-test Scores of the EG and CG Learners

Dependent Variable: post-test Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	243.623 ^a	2	121.811	63.723	.000	.691
Intercept	98.161	1	98.161	51.350	.000	.474
pretest	59.873	1	59.873	31.321	.621	.000
groups	185.558	1	185.558	97.070	.000	.630
Error	108.960	57	1.912			
Total	11423.000	60				
Corrected Total	352.583	59				

a. R Squared = .526 (Adjusted R Squared = .505)

In Table 4, if you find the row labelled Groups in the leftmost column, and read across this row, under the *Sig.* column, you can find the *p* value, which should be compared with the alpha level of significance (i.e., .05). The *p* value here was lower than the alpha level of significance (.00 < .05), which indicates that the difference between the two groups of EG ($M = 15.3333$) and CG ($M = 11.8333$) on the vocabulary post-test was statistically significant. This means that using the WhatsApp could significantly improve the vocabulary knowledge of the EG learners.

Another noteworthy piece of information in Table 4 is the effect size value, shown under the Partial Eta Squared column in front of Groups. This value equalled 0.630, which means that the treatment (i.e., using WhatsApp as a mobile instant messaging) accounted for 63% of the difference between the EG and CG learners.

D. Discussion

This study attempted to address the question that was: Does using WhatsApp as a mobile instant messaging have any significant effect on pre-intermediate EFL learners' vocabulary knowledge? Subsequently, the following null hypothesis was formulated and explored: Using WhatsApp as a mobile instant messaging does not have any significant effect on pre-intermediate EFL learners' vocabulary knowledge. The hypothesis of this study is rejected since the results showed that there was a significant difference between vocabulary knowledge scores on the post-test through using mobile instant messaging instruction and traditional instruction.

In sum, after administrating various analyses, it was manifested that utilizing WhatsApp as a mobile instant messaging in learning vocabulary could be an advantageous technique which can significantly expand the knowledge of vocabulary. As a matter of fact, the participants who were taught the vocabulary through mobile instant messaging performed more successfully on the post-test than those who taught through traditional instruction. In fact, using utilizing WhatsApp as a mobile instant messaging improved vocabulary knowledge more effectively.

WhatsApp Interaction occurred in three main ways: exchanges between lecturer-reader, learner-learner (student-peer), and student-content. Engagements at the lecturer level revolved around consulting the IT lecturer with the guest lecturer (independent researcher) on WhatsApp mediated course design, tracking and interpreting the learning trajectory of students through WhatsApp enhanced interactions. Although the guest lecturer was interested slightly in promoting student groups, his positive interaction with the lecturer promoted social constructivist student participation interpretations. These knowledge-sharing activities on online course design and student learning progression were developed by both educators as team-based coaching that supported their pedagogy jointly. The professional experiences have also changed the online

teaching approach of the IT professor. Such approaches helped to turn teaching from a hierarchical, instructive style into a collective, connectivism approach.

At the student-peer level, through their intra-cluster collaborations on WhatsApp, the IT lecturer discerned peer-based mentoring and student constructivist knowledge building. Students were more directly involved as intelligence hunters, knowledge suppliers, information synthesizers and knowledge traders in awareness creation and negotiation perspectives. The facilitative position of the lecturer through the integration of the main themes that arise from student debates indicates confident leadership and a change from implementation approaches to constructivist approaches. For instance, students who usually focused on private individual research and resisted collective interaction saw their "lone wolf" (Bacon, Stewart & Stewart-Belle, 1998) mindset subverted by WhatsApp's demands for collaborative problem-solving.

The assistance of WhatsApp-mediated learning with simultaneous exposure to learning resources impaired the capacity of students to interact synchronously with peers and the teacher. The personalization and accessibility of the app to different contexts guaranteed a continuous supply of data, information and learning resources, allowing for networked learning and frequent peer-based feedback. The casual, comfortable framework for the immediate exchange of critical scholarly knowledge enabled by the "packing" of learning resources across multiple spaces prolonged learning times and expanded conventional spaces for consultation.

The decentralized networking affordances of WhatsApp often directly affected student engagement. The retrievability of shared messages while students were offline, outside network coverage or when their computers were turned off meant they could interact at any time regardless of context various forms of engagement and various time spans increased possibilities for student participation without losing channels of communication. Students claimed that WhatsApp discussion forums allowed them to think "deeply" before giving their opinions on questions and queries. This can be due to the decentralized nature of forums that mitigated the burden of rapid, random responses in lecture interactions (Rambe & Bere, 2013; Namaziandost, & Çakmak, 2020).

Due to time constraints and a strong burden on the learner, acquiring language in the classroom can be disadvantageous (Grace, 1998). The value of teaching English using mobile phones and mobile applications is getting an opportunity to learn beyond the limits of classrooms. In other words, "instructional practices are not restricted to a specific location... but can be carried out anywhere and anywhere [and] learners can communicate with instructors, learning materials and other learners, even asynchronously." (Bornman, 2012, p.288).

However, this may also be disadvantageous, as Kukulska-Hulme (2009) said, because studying outside the classroom is beyond the reach of the instructor, so careful planning should be done to establish a strong correlation between "what is better taught in the classroom[and] what should be learned outside[the classroom]" (p. 164). Teachers should, therefore, be responsible for designing activities in order to create an optimal balance between the curriculum in and outside the classroom. When keeping such a balance, they will "find avenues for their students to create material that is more engaging" (Basal, 2012, p.167). In this phase, learning experiences can become more interactive with the use of mobile phones (Cui & Bull, 2005).

E. Conclusion

This study aimed to check the impact of Using WhatsApp as a mobile instant messaging in teaching vocabulary to pre-intermediate EFL learners. The current study has added to the literature in that compared to traditional paper-based practices, using mobile applications in vocabulary instruction can be a more effective tool. Designing language learning programs, however, is a challenging task and requires careful preparation in this case. In addition, language teachers should be mindful of pedagogical factors in the implementation of vocabulary exercises while using mobile applications that are not adapted to vocabulary instruction. Language teachers should also pay

particular attention to the use of ready-made mobile applications for vocabulary teaching since the number of them is innumerable and although they were originally tailored to vocabulary teaching and the developers of them claim that they have been carefully designed in line with the scientific findings of vocabulary teaching, evidence of these statements will contribute to their vast number of tasks. Teachers should therefore be able to evaluate the usefulness of these vocabulary teaching applications.

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