

The Impact of WhatsApp Groups on Improving Jordanian University Students' Vocabulary Learning

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Abstract—The current study aimed at investigating the effectiveness of using WhatsApp groups to improve university students' vocabulary learning. The study adopted a quasi-experimental research design. It consisted of 60 male and female EFL students from Ajloun College University at Al-Balqa Applied University. The participants were assigned evenly into a control group, which was taught via conventional teaching methods, and an experimental group, which was taught via a researcher-administrated WhatsApp group. The teaching material included the first three units of the curriculum specified for the English Language 1 course at Ajloun University College. The study used vocabulary pre- and post-tests. The findings of the study revealed that the experimental group members performed better than the control group in the vocabulary post-test results. The findings demonstrated the effectiveness of using the WhatsApp group method to improve vocabulary learning among undergraduate EFL students at Ajloun University College. The study concluded that using group instant messaging mobile applications significantly improves the vocabulary teaching and learning process.

Index Terms—learning, vocabulary, WhatsApp

I. INTRODUCTION

We are living in the age of the media revolution, smart device applications, and smart phones (Smith, 2009). We use phones for more than simply communication. With the introduction of smart phones and other smart gadgets, the usage of mobile applications became an essential element of our everyday lives. People of all ages, including students, can now access smart device applications from any location and at any time (Cook & Das, 2007).

The young students are technologically, electronically, and digitally oriented. They are adapting to new technology so easily. Indeed, they are completely aware of globalization and actively participate in it. They spend much of their time on their smartphones. With the popularity of social media, and smart phones, some students eventually lose interest in learning from traditional books and curriculum. However, these mobile apps play a crucial part in people's daily lives, including schooling. These phone applications have simplified our lives and facilitated education process. In fact, "these profound changes are placing increasing pressure on the traditional models of teaching and learning" (Bansal & Joshi, 2014, p. 1). Thus, our youngsters need new educational techniques or tools. E-learning, m-learning, and technological aids may help to close the gap. Actually, communication technologies have permitted a move toward e-learning (Campbell, 2010).

The world has witnessed a consistent and rapid expansion in the number of phone applications. One of the most popular applications is WhatsApp. "WhatsApp Messenger is a mobile application that has apparently caught the attention of a large number of mobile users" (Giordano et al., 2015, p. 10). WhatsApp allows users to send several types of messages, including images, texts, audios, and videos (Al-Saleem, 2013).

Vocabulary is perhaps the most significant part of language that students should understand (Ur et al., 2014). Insufficient vocabulary in a foreign or second language hinders successful communication. Its importance is illustrated by students' interaction in school and in their daily duties and activities (Hashemifardnia et al., 2018).

Teachers used different methods or applications to improve vocabulary learning among EFL students. WhatsApp is one of the methods used by many language learners to enrich their vocabulary (Jafari & Chalaki, 2016). It allows EFL

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teachers to teach many words at a time. WhatsApp can help learners improve their vocabulary acquisition, which is crucial for effective vocabulary programs (Bensalem, 2018). As a result, including WhatsApp in improving students' language skills is regarded as a wise approach, with WhatsApp being used to improve students' competence in acquiring different language skills (Jafari & Chalak, 2016).

A. Purpose of the Study

This study was conducted for three primary reasons. To begin, pupils should be able to escape the monotony of the classroom and explore various live interactive environments, whether within or outside the classroom. Second, this study can help students recognize the challenges of using WhatsApp as a mobile learning method. Third, it can explore novel teaching-learning approaches that are more relevant and tailored to students' preferences and interests in order to raise their awareness of the subject being taught.

B. Limitations of the Study

The current study was limited to undergraduate students at Ajloun University College / Al-Balqa Applied University in the first semester of the academic year 2023-2024. The sample of the study included 60 male and female EFL students from Ajloun College University at Al-Balqa Applied University.

II. REVIEW OF THE RELATED LITERATURE

A pilot study was conducted to investigate the impact of WhatsApp on the interaction between students and high school teachers because it is still a relatively new phenomenon (Church & de Oliveira, 2013). A scan of the literature on the subject of this study revealed a few references and publications that addressed the WhatsApp problem from a pedagogical standpoint. The majority of the data was found in research papers, publications, and theses. The majority of the writers' arguments in these books suggest using WhatsApp as the ideal teaching tool. However, not all studies viewed WhatsApp from the same perspective. Here is a summary of the opinions of some researchers who suggest utilizing WhatsApp as a successful and efficient teaching-learning tool, along with those of the other members of the compared team.

Over the past ten years, digital communication among student groups and between students and professors has grown in popularity through a variety of platforms, including Facebook groups, Twitter, WhatsApp, SMS, and email. Different features of each of these technologies affect how appropriate they are for educational objectives (Calvo et al., 2014).

Several studies have examined the different uses of WhatsApp in educational settings. Bouhnik and Deshen (2014) investigated how teachers use WhatsApp to communicate with the groups they teach. It concentrated on the way twelve high school teachers, males and females, initiated groups for their students, shared information and, monitored students-students (student-peer) as well as teacher-student interactions within WhatsApp groups (Bouhnik & Deshen, 2014).

According to Bere (2013), students in a university class in South Africa who participated in a WhatsApp experiment provided positive feedback and stated that it was more convenient to interact with their teachers and fellow students. They believed that WhatsApp was a productive way to have fruitful discussions on pertinent topics in a casual setting where students could learn in depth and authentically. Man (2014) used WhatsApp to guide 35 students in a study to raise their awareness of academic terms. The results showed that students began to value using WhatsApp because it helped them become more aware of academic terms.

Furthermore, a study conducted by Amry (2014) aimed at exploring the impact of WhatsApp utilization on students' attitudes and academic achievements. The researcher performed an experiment to compare an experimental group of 15 students with a control group of 15 students and found that there is a statistically significant difference at $\alpha = 0.005$ between the study groups in the achievements and attitudes in favor of experimental group students.

In the same field, Lawrence (2014) also investigated the impact of WhatsApp on learning vocabulary items by a group of five Afrikaans undergraduate learners prior to their reading texts. The findings demonstrated that WhatsApp is a useful tool for giving students, particularly those who struggle with vocabulary, opportunities to practice outside of the classroom. Similarly, Gooniband et al. (2013) discovered that using mobile devices to teach English vocabulary items improved the performance of semi-literate individuals.

Additionally, Wong et al. (2015) performed a study to explore students' experiences with using mobile devices for social media applications by studying 68 students in the academic year 2013-2014 using a semi-structured questionnaire. The results showed that students prefer to use their phones to access the internet and do their learning-related activities.

Jafari and Chalak (2016) carried out a quasi-experimental study that investigated the impact of using WhatsApp in teaching vocabulary for Iranian EFL learners. The study sample consisted of 60 EFL learners who were distributed evenly into an experimental group and a control group. The researchers used the vocabulary pre- and post-test tool to assess the level of vocabulary acquisition among the study participants before and after 4 weeks of the experimental procedure. The study findings indicated that using WhatsApp in teaching vocabulary significantly affected the acquisition of vocabulary by the experimental group of students. In addition, the findings showed that there were no significant statistical differences between males and females in the experimental group with regard to vocabulary acquisition.

In addition, Bensalem (2018) examined to what extent vocabulary knowledge is developed among undergraduate EFL learners in Arab Gulf University due to using WhatsApp in the instructional process. The quasi-experimental group was adopted in this study, it involved the recruitment of nineteen students as a control group, and twenty-one students were

assigned to represent the experimental group. The study findings revealed the superiority of the experimental group members in vocabulary acquisition over the control group, who were taught traditionally.

Another study by Bansal and Joshi (2014) explored the usefulness of WhatsApp m-learning in teaching yielded such favorable results. 82% of Indian participants believed that studying via WhatsApp m-learning was collaborative learning. They were eager to upload films, audios, and writings about the challenges, as well as learn from others' efforts.

In another study, Sivabalan and Ali (2022) explored the impact of WhatsApp on developing the vocabulary learning by tertiary level students. The sample of the study consisted of twenty psychology students in the state of Pahang. The study adopted the quasi-experimental method. The study used a vocabulary pre-test and a post-vocabulary test to figure out whether WhatsApp assisted students in learning vocabulary. The findings of the study showed that WhatsApp played a key role in improving vocabulary learning.

The review of related literature indicates that WhatsApp is more effective than traditional face-to-face communication methods. However, few studies investigated the effect of WhatsApp on learning vocabulary in the Jordanian educational context. Thus, the present study aimed at exploring the impact of using WhatsApp groups on improving university students' vocabulary learning in Jordan.

III. METHODOLOGY

This study investigated the impact of WhatsApp groups on improving University Students' vocabulary acquisition. In this section, the researchers explain the methods and materials adopted to carry out the study, and other important elements, such as the study setting, sample and population, data collection procedure, and data analysis steps. In addition, this section lists the ethical considerations.

A. Research Design

Research design refers to the data collection procedure in this study. The researchers had followed the quasi-experimental approach, which represented distributing the study participants into two groups; the experimental group (taught using WhatsApp groups method) and the control group (taught via conventional methods). In addition, the researchers developed a vocabulary assessment test that was administered before and after performing the experimental procedure.

B. Study Population

The target population was female and male college EFL learners who were enrolled in the English language department at Ajloun University College in the first semester of the academic year 2023-2024.

C. Sample Size and Sample Selection

The researchers recruited a sample that consisted of 60-second year EFL learners from Ajloun University College who were enrolled in the English language 1 course. The study participants were divided into a control group (n = 30 students) and an experimental group (n = 30 students). Permissions to add the experimental group members to a WhatsApp group were obtained before assigning them to the experimental group.

D. The Study Instrument

The researchers designed a vocabulary test by determining the purpose of the test and examining the content of the educational course English Language 1. The researchers depended on many stages of test preparation procedure, such as the following:

- Identifying the main purpose of the test.
- Reviewing the literature and published studies concerned with vocabulary acquisition among EFL learners.
- Analyzing the cognitive content of the educational material taught to the students.
- Identifying the specifications of the test and determining the test items.
- Setting the test instructions.
- Preparing the first version of the vocabulary acquisition test.

The primary version of the vocabulary acquisition test was submitted to a jury of specialists and experts in curriculum and teaching methods in different Jordanian universities, and they were asked to review the test and provide any suggestions regarding its appropriateness and comprehensiveness. After performing their suggested modifications, the researchers prepared the final version of the vocabulary acquisition test, which was used as both a pre- and post-test to measure the study participants' acquisition of English vocabulary.

The reliability of the vocabulary test was ensured through the test-retest procedure. The researchers administered the vocabulary test to 25 EFL learners at Ajloun University College who were excluded from the study sample and re-administered the test again after two weeks. The reliability coefficient was calculated for the two administrations (0.87).

The final version of the vocabulary test included 25 multiple-choice questions with four possible answers for each question. Each item was given a mark. Therefore, the marking of the test ranged between 0 and 25 for the study participants.

E. The Study Procedure

1. After reviewing literature and published research studies that addressed the integration and utilization of social media platforms in EFL learning, the researchers formulated the research problem and set out the purpose of the study.
2. The researchers identified the study population, the study sample, and the most appropriate sampling technique to recruit the study participants.
3. The researchers had obtained the formal approvals to conduct the study.
4. The study participants were assigned to the study groups.
5. Designing the study instrument through a valid and reliable procedure.
6. The experimental procedure of the study included teaching the control group via conventional teaching methods adopted in the English language department at Ajloun College University, and teaching the experimental group through a WhatsApp educational group.
7. Establishing the WhatsApp group included getting permission from the participating students to share their phone numbers, adding them to the social group, and setting instructions and regulations for this group.
8. The researchers administered the vocabulary pre-test for both groups.
9. The educational material used in the WhatsApp group involved using texts, group discussions, images, short clips, animated images, audio clips, and any possible media that supported vocabulary teaching for the group members.
10. After a 4-week period, the educational material was taught to both groups either conventionally or via WhatsApp group.
11. The researchers administered the vocabulary posttest for both groups.
12. Both pre- and posttest were marked by the researchers. The marks of the participating students were organized, tabulated, and analyzed.

F. Data Analysis

After compiling and coding the data from the vocabulary pre-test and post-test, the results were imported to Excel sheets, and then inserted into Statistical Package for Social Sciences (SPSS v.23.0) to perform the statistical analysis such as mean, standard deviation, frequencies, independent samples t-test, and ANOVA test.

G. Ethical Considerations and Human Subject Issues

1. Official approvals to conduct the study were requested from the administration of Al-Balqa'a University and the English language department at Ajloun University College.
2. Acceptance was obtained from the students to add them to the WhatsApp group, involve them in the class session, and participate in the vocabulary pre- and post-tests.
3. The participants' responses kept anonymized even after the study is completed.

IV. RESULTS AND DISCUSSION

Table 1 indicated that there are significant differences in the mean scores of the study participants in the pre- and post-measurements based on the group (control and experimental). To detect if those differences were statistically significant, the researchers performed one way ANCOVA analysis for the vocabulary post-test scores after eliminating the pre-test scores for both groups. The results presented in Table 2 showed the One Way ANCOVA test results.

TABLE 1
MEANS AND STANDARD DEVIATIONS FOR THE STUDY PARTICIPANTS' SCORES IN VOCABULARY PRE AND POST-TESTS

Group	N	Pre-test		Post-test	
		Mean	Standard deviation	Mean	Standard deviation
Experimental	30	11.34	1.03	17.94	1.61
Control	30	12.06	0.79	13.38	1.12
Total	60				

It is clear from the results shown in Table 2 that there are significant differences at significance level ($\alpha \leq 0.05$) in the results of the vocabulary test based on the group (experimental, control), as the F value was 293.341 with a significance of 0.000, which is a statistically significant value, and this indicates a difference referred to the group.

Moreover, results showed that the effect of the teaching method was high, which is indicated by the high value of Eta square (80.1%).

TABLE 2
ONE WAY ANCOVA ANALYSIS OF THE VOCABULARY POSTTEST

Source of variation	Sum of squares	Df	Mean of sum of squares	F	Sig	Eta square
Pre-test	141.251	1	141.251	133.652	0.000	0.641
Group	326.235	1	326.235	293.341	0.000	0.801
Error	81.305	57				
Total		59				

To detect in favor of who those differences were, the researchers calculated the modified means and its standard errors (see Table 3).

TABLE 3
MODIFIED MEANS AND THEIR STANDARD ERRORS OF THE VOCABULARY POST-TEST ACCORDING TO THE GROUP (EXPERIMENTAL, CONTROL)

Group	Modified post-mean score	Standard error
Experimental	17.98	0.04
Control	13.27	0.11

Results presented in Table 3 showed that the significant statistical differences were in favor of the experimental group, who were taught through WhatsApp groups.

The findings of the present study indicated the superiority of the participants in the experimental group (who were taught using WhatsApp groups) over their peers in the control group (who were taught conventionally). The researchers attributed this superiority to the various benefits offered by the constructed WhatsApp group, such as providing students with audiovisual illustrations of the taught topics, the ability to share short video clips that explain the pronunciation and structure of the studied vocabulary, and many other services offered by the application. In addition, students' interaction through the social media platform was reported as significantly reducing students' learning anxiety and increasing their motivation for and engagement in the language learning process. The findings of the present study are in line with the findings reported by Bensalem (2018), who reported the positive impact of using WhatsApp in improving vocabulary acquisition among undergraduate EFL learners at the Arabian Gulf University. Besides, the results are in line with the findings of other studies, such as Gooniband et al. (2013), Lawrence (2014), Jafari and Chalak (2016), and Sivabalan and Ali (2022), who revealed that using WhatsApp had a significant role in the vocabulary learning of undergraduate students.

V. CONCLUSION AND RECOMMENDATIONS

Vocabulary knowledge is considered one of the requirements for successful communication. One of the symptoms of poor vocabulary learning and teaching is the inability to retrieve vocabulary that has been taught. In the current study, the researchers investigated the effectiveness of using WhatsApp groups in improving university students' vocabulary acquisition. The findings of the study revealed the superiority of the study participants who were instructed through the WhatsApp mobile application and the effectiveness of this application due to the various educational benefits offered by it.

The study recommends the integration of social platforms in general, and instant messaging applications such as WhatsApp in the vocabulary teaching and learning process. In addition, it is recommended to extend the research scope to cover other linguistic skills such as reading, listening, and writing and examine the effectiveness of social media applications in the instructional process. The study also recommends that teachers should receive instruction on how to use WhatsApp's EFL settings effectively. More research is needed to determine the impact of WhatsApp on vocabulary learning at various levels of proficiency.

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