The Effectiveness of Texting on Enriching Saudi EFL College Students' Vocabulary Repertoire

Yasamiyan Saleh Alolaywi[*], Shatha Ahmed Alkhalaf

Department of English Language and Translation, College of Sciences and Arts, Methnab, Qassim University, Saudi Arabia

Email address:

yalieoy@qu.edu.sa (Yasamiyan Saleh Alolaywi), Sh.Alkhalaf@qu.edu.sa (Shatha Ahmed Alkhalaf)
[*]Corresponding author

Abstract: This research study aimed to investigate the effectiveness of texting on Saudi EFL college students' English vocabulary repertoire. The research was conducted on a vocabulary-building class of the intensive course program (ICP) at Qassim University. A total of 80 students participated in the study. The study employed an experimental approach with pre-test/post-test design to measure the effects of texting on the students' English vocabulary knowledge. The class was randomly divided into two groups, the experimental group, and the control group. Both groups were invited to Telegram groups in which they had to respond to a pre-test at the beginning, then a post-test eight weeks later. The experimental group had a daily conversation with the instructor and with each other in their Telegram group. The conversation took place by texting only with sharing photos sparingly. On the other hand, the control group reminded silent in their Telegram group during the whole period. After eight weeks, both groups were asked to participate in a post-test. The findings of the study revealed that the experimental group showed a significant improvement in their English vocabulary knowledge compared to the control group and the difference was statistically significant ($p < 0.05$). The results of the study showed that texting can be an effective tool to enhance students' English vocabulary knowledge. The results also suggested that texting can be an efficient technique for language teachers to use in their classrooms to improve students' language skills.

Keywords: Experimental Design, Foreign Language Learning, Mobile-Based Learning, Texting, Vocabulary Acquisition

1. Introduction

English has become a global language, and it is the most commonly used language for communication worldwide [3]. In Saudi Arabia, English is considered as a second language, and it is widely used in different fields, including education, business, and social communication. However, mastering English as a second language is not an easy task, and it requires continuous practice and exposure to the language. One of the essential aspects of learning a language is vocabulary knowledge, which is necessary for effective communication [13]. Therefore, language teachers need to find practical ways to enhance students' English vocabulary gains. Texting has become a prevalent form of interaction among young people worldwide, including Saudi Arabian students [1]. Texting is a form of written communication that involves the use of abbreviations, acronyms, and emoticons.

It can be a useful tool for language learning, as it provides students with opportunities to practice their language skills in a context that is relevant to their daily lives [8].

It is also believed that using distance learning via new social media platforms can motivate students to learn better. Additionally, given this advancement in technology, second language researchers and educators have claimed that some aspects of language learning, such as vocabulary, can be acquired through digital tools such as cell phone applications. Furthermore, researchers and instructors need to explore new, digital mediums of teaching vocabulary. Hence, this study aims to investigate the effects of using Telegram Messenger on vocabulary building of Saudi EFL undergraduate learners. It specifically aims to answer the following research question.

Research Questions and Hypotheses

RQ 1. Does texting positively affect the English vocabulary knowledge of Saudi EFL college students?

Based on the question raised above, the following null hypothesis was formulated in this study:

HO 1. There is no significant difference in the EFL college students' performance in the vocabulary post-test.

Statement of the Problem

English language proficiency is a key factor in the academic success of Saudi EFL college students. However, many students struggle to acquire and retain an adequate English vocabulary repertoire. Texting has become a popular and ubiquitous form of communication among college students, but its potential as a tool for vocabulary acquisition and retention has not been fully explored. This study aims to investigate the effectiveness of texting on Saudi EFL college students' English vocabulary repertoire. Specifically, the study will examine the effect of daily texting conversations with peers and an instructor on students' English vocabulary improvement. The results of this study can inform the development of effective and engaging instructional approaches for promoting English vocabulary learning among Saudi EFL undergraduate students.

2. Literature Review

2.1. Incidental Vocabulary Learning

One of the most common controversies in the field of second language acquisition (SLA) revolves around the best strategies and methods for acquiring new words. In SLA literature, there are two main methods of vocabulary acquisition: intentional and incidental vocabulary learning. Incidental or accidental vocabulary learning generally refers to the indirect learning of words through reading or listening, during which there is no explicit intention to learn words, though words are often learned as a byproduct [18]. Incidental learning can also occur because of watching TV and films (extensive viewing) or listening to podcasts or other recordings (extensive listening). Intentional learning, on the other hand, involves highly structured and planned learning.

Krashen (1989), in an extended review of reading and vocabulary, claimed that reading can contribute to vocabulary acquisition. Krashen based his argument on the input hypothesis where he claims that a foreign language is acquired when the learner focuses on the message not on the form of the message [9].

Several studies have proven the significance of incidental learning. For example, Zhang, Song and Burston (2011) examined the effectiveness of learning vocabulary via mobile phones with 78 Chinese university students. Their study findings proved that grasping new lexical items via mobile phones is effective. Furthermore, Etela (2018) investigated the effects of using mobile phone SMS on intentional and incidental vocabulary learning by Iranian EFL learners. The findings of the study showed that all three groups with both methods of using SMS and the traditional method of teacher-fronted class had improved their post-tests. However, as for the incidental and the intentional groups, the difference was not significant [4]. Lastly, Li, Cummins, and Deng (2017) explored the feasibility of texting to enhance English language learners' (ELLs) academic vocabulary learning [10]. The results of the study indicated students' overall positive results with the intervention. It also proved the usefulness of text messaging in enhancing ELLs' vocabulary learning.

2.2. Technology-Based Vocabulary Acquisition

Technology has invaded human lives in all forms. For instance, social media platforms have become an integral part of many people's daily activities. Undoubtedly, these platforms play a pivotal role in communication. For this reason, many studies have sought to verify the role of social media applications in the linguistic domain, specifically in the acquisition of a second language. For example, to explore the role of using Telegram Messenger on EFL learners' vocabulary learning, Ardestani (2017) conducted a study with 100 intermediate-level Iranian students. The results indicated that Telegram Messenger had significant effect on improving vocabulary knowledge of Iranian EFL learners as students in the experimental group performed better than the students in the control group [2].

Moreover, Odinokaya, Krylova, Rubtsova and Almazova (2021) investigated the effectiveness of Discord application in teaching and learning EFL vocabulary with university EFL learners [14]. Discord is a free messenger with support for Internet Protocol (IP) telephony and video conferencing, as well as the possibility to create public and private chats for exchanging text and voice messages. Findings showed that the participants in the experimental group outperformed their counterparts in the control group, suggesting that Discord application had positively impacted learners' vocabulary acquisition. To examine the effects of MALL (Mobile-Assisted Language Learning) on the of receptive and productive acquisition of L2 vocabulary, Sharifi and Shahreza (2021) carried out a study with 57 language-institute Iranian students. The results showed a statistically significant difference between the test scores of the experimental and control group in favor of the participants in the experimental group [15]. This finding inspired teachers and course planners to consider using mobile applications in vocabulary teaching. Similarly, Fageeh (2013) carried out a study with Saudi EFL learners to explore the impact of MALL on learners' lexical improvement and motivation [5]. The results of the study indicated that the participants in the experimental group performed better in the post-test than the participants in the control group. Results from a motivation scale also showed that the experimental participants had enhanced motivation and perceptions compared to the control participants.

In addition, Mahzoun and Zohoorian (2019), tested the use of smartphones for learning English vocabulary with 32 Iranian Business management students [11]. It was found that online practicing of new lexical forms had a significant effect on EFL learners' vocabulary gains. Also, it was found that the participants held positive beliefs about practicing target

words through Telegram. Likewise, Tabrizi and Onvani (2017) researched the effect of using Telegram App on Iranian EFL early learners' vocabulary teaching and learning. Findings of the study revealed that learning vocabulary through social networking is more effective than the traditional approach [16].

Further, to explore the usefulness of using WhatsApp on EFL Learners' vocabulary acquisition, Hashemifardnia, Namaziandost and Esfahani (2018) conducted an experiment with 50 language-institute Iranian learners [7]. Findings of the study revealed that the experimental group significantly outperformed the control group in the post-test. Finally, Fathi, Alipour and Saeedian (2018) examined the impact of using mobile app of Memrise on the second language (L2) vocabulary learning and self-regulatory capacity in vocabulary acquisition with 59 Iranian EFL learners [6]. Findings of the study indicated that learners who learned with Memrise performed better in the vocabulary test than learners who were taught in the traditional method. Results also showed that Memrise helped students improve their L2 vocabulary knowledge and self-regulating skills more than the control group.

3. Methodology

3.1. Participants and Sampling

The population of this study is learners of English as a foreign language (EFL). The participants in this study were 80 students from the Department of English language and Translation at Qassim University, Saudi Arabia. The students are all majoring in English, and their native tongue is Arabic. They range in age from 19 to 22 years old. They are freshmen students who are in their first year of study (Intensive Course "IC") in the English program. The participants were sampled in the study according to the cluster sampling method. Cluster sampling involves enrolling all the students in a group for the treatment. In the IC program, students are taught basic language subjects such as reading, writing, speaking, and listening in addition to grammar and vocabulary building courses.

3.2. Research Design

The research design employed in this study is the true experimental design. The experimental design is often employed to answer research questions that involve the measurement of cause-effect relationships between variables. The selected sample was equally divided into an experimental group and a control group. The experimental group was exposed to an eight-week treatment through which the students were enrolled in a Telegram group to practice text messaging with their instructor and with peers. The control group did not receive any treatment. In due course, results obtained from the pre, and post-tests are attributable to the treatment variable. The common feature of the experimental design is the fact that the manipulation process takes place in a controlled environment in which only the

target variables are varied while others are kept constant (Johnson & Christensen, 2004).

In this study, the independent variable tested was the effectiveness of texting to improve English vocabulary acquisition. On the other hand, the dependent variable which was measured between the two groups was the students' grasp of new English words along with the adequate manifestation of this knowledge on the students' test performance.

3.3. Procedure

The class was randomly divided into two groups, the experimental group, and the control group. Both groups were invited to Telegram groups in which they had to respond to a pre-test at the beginning, then a post-test eight weeks later. The experimental group had a daily conversation with the instructor and with each other in their Telegram group. The conversations took place by texting only with sharing photos sometimes. The topics of the conversations were related to the vocabulary items covered in the course, and the instructor provided feedback and corrections on the students' messages. On the other hand, the control group remained silent in their Telegram group during the whole period. After eight weeks, both groups were asked to participate in a post-test. The post-test was similar in format to the pre-test and was administered in the same conditions.

3.4. Data Collection and Analysis

The data for this research were collected from the pre-test and post-test results. The students' scores were analyzed using descriptive statistics and inferential statistics. The descriptive statistics were used to describe the students' performance on the pre-test and post-test. The inferential statistics were used to compare the performance of the experimental group and the control group on the given tests.

3.5. Instruments

Pre-test and post-test

The study employed a pre-test/post-test design with an experimental group and a control group to measure the effect of texting on the students' English vocabulary knowledge. The pre-test and post-test consisted of 24 multiple-choice questions based on the vocabulary items covered in the course (Appendix II). The questions were designed to measure the students' ability to recognize and use the vocabulary items in context. A single item in the tests counts for 1 point with a total score of 24 points per test. These items were grouped into four categories according to the four parts of speech: nouns, verbs, adjectives and adverbs.

3.6. Data Analysis

RQ.1: Does texting positively affect the English vocabulary knowledge of Saudi EFL college students?

HO 1. There is no significant difference in the EFL college students' performance in the vocabulary post-test.

The aim of the first research question was to examine the

effects of texting on increasing EFL learners' vocabulary repertoires. To this end, a pre-test and a post-test were administered. Data analysis of test results showed that the participants in the experimental group outperformed the participants in the control group in the post-test and the difference was statistically significant (table 4).

Table 1. Pre-test Results.

Group Statistics					
	Group	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Score	Experimental	40	15.58	5.043	.797
	Control	40	17.40	3.973	.628

However, table 1 above shows that the overall mean of the pre-test scores for the experimental group was 15.58, while for the control group, it was 17.40 showing a statistically non-significant difference according to the results of the independent samples t-test ($p > .05$), (table 2).

Table 2. T-Test of Pre-Test Scores.

	T	**Df**	**S.g (2-tailed)**
Pre-Test	-1.798-	78	.076

On the other hand, results of the post-test showed significant improvement in the experimental group's students' performance in the vocabulary test, with an overall mean of 18.18, compared with 16. 35 for the control group, resulting in a statistically significant difference since ($p < .05$) (table 3).

Table 3. Post-test Results.

Group Statistics					
	Group	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Score	Experimental	40	18.18	5.486	.867
	Control	40	16.35	4.828	.763

Table 4. T-Test of Post-Test Scores.

	T	**Df**	**S.g (2-tailed)**
Pre-Test	1.579	78	.18
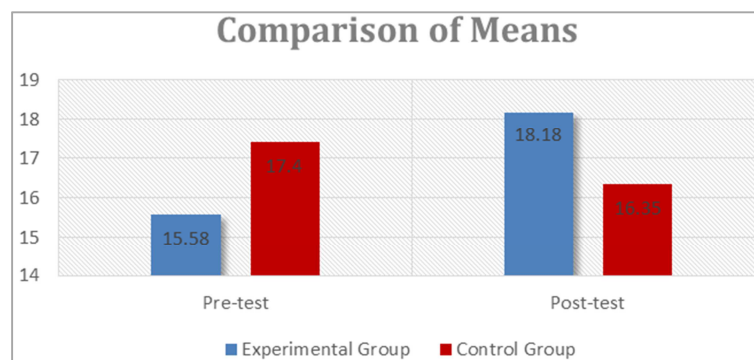
Figure 1. Comparison of means of pre-test and post-test scores.

Based on the results stated above, the null hypothesis HO 1. is rejected. Therefore, there is a significant difference in the EFL college students' performance in the vocabulary post-test. In fact, the results of the study indicated that the texting intervention was effective in improving the students' English vocabulary knowledge.

4. Discussion

The findings of this study support the hypothesis that texting can be an effective tool for enhancing students' English vocabulary knowledge. The results of the study showed that the experimental group, who had daily conversations with the instructor and with each other in their Telegram group, had a significantly higher mean score on the post-test compared to the control group, who did not participate in any texting activity. These results are consistent with previous studies that have shown the benefits of using texting as a tool for language learning (Thurlow & Poff, 2013; Alharbi & Ibrahim, 2018) [1].

The outcomes of this research have also shown that the participants in the experimental group performed better than the participants in the control group in the vocabulary test. This result is compatible with the results of the studies conducted by Ardestani (2017), Odinokaya, Krylova, Rubtsova and Almazova (2021), Shahreza (2021), Fageeh

(2013), Mahzoun and Zohoorian (2019) [2, 14, 15, 5, 11]. The some of these studies indicated that smart phone applications particularly Telegram Messenger had significantly impacted EFL learners' vocabulary acquisition.

This enhanced efficacy can be attributed to learners' smooth access to cell phone devices, and the easy-to use phone applications that can promote increased vocabulary attainment through frequent exposure to and continued practice with the vocabulary items on a daily basis; this conclusion is also in line with prior research findings that investigated the feasibility of other mobile apps such as WhatsApp, text messaging and Memrise on vocabulary learning (e.g., Tabrizi and Onvani (2017), Hashemifardnia, Namaziandost and Esfahani (2018), Fathi, Alipour and Saeedian (2018) [16, 7, 6].

Overall, the results of this research revealed that social media has the ability to increase learning estimates compared with traditional methods. Moreover, the cell phone applications utilized in the MALL environment meet the classifications considered crucial for quality vocabulary instruction by Nagy (2018) [12]. Nagy (2018) found that vocabulary instruction should include integration, repetition, and meaningful use. According to Nagy (2018), integration involves tying new learning to familiar concepts; semantic mapping is fundamental [12]. Repetition, which means providing students with continual encounters with the new word so that new knowledge can proceed into their reading vocabulary.

In addition, the findings of this study can offer some pedagogical implications to EFL teachers, learners, practitioners, material developers, policy makers, educationalists, teacher trainers and researchers. The incorporation of mobile apps can virtually increase learners' motivation and engagement. Furthermore, these learning mediums can provide learners with the opportunity to achieve a thorough and deeper understanding of new vocabulary items by providing contextual learning, correct pronunciation and spelling of words. This method provides learners with the opportunity to gain knowledge in an efficient and convenient way by sharing authentic, visualized, and contextualized materials. Authentic materials and context are found to have positive impacts on learners' motivation (Zohoorian, 2015) [11].

Last but not least, the results of this study have particularly important implications for language teachers who may consider incorporating texting activities into their language classes. Texting can provide students with opportunities to practice their language skills in a context that is relevant to their daily lives. Texting can also be a fun and engaging way to learn a language, as it involves the use of abbreviations, acronyms, and emoticons.

5. Conclusion

The findings of this study suggest that texting can be an effective tool for enhancing students' English vocabulary knowledge. The results of the study showed that the experimental group, who had daily conversations with the instructor and with each other in their Telegram group, had a significantly higher mean score on the post-test compared to the control group. These results provide evidence for the potential benefits of using texting as a tool for language learning. Language teachers may consider incorporating texting activities into their language classes to provide students with opportunities to practice their language skills in a context that is relevant to their daily lives. Further research is needed to explore the long-term effects of using texting as a tool for language learning.

6. Limitations of the Study

The study has some limitations that should be considered when interpreting the results. First, the study was conducted on a small sample of Saudi EFL college students from a specific course at Qassim University. Therefore, the generalizability of the findings may be limited. Second, the study only focused on the short-term effects of the texting intervention. Further research is needed to investigate the long-term effects of using texting as a tool for language learning. Finally, the study only used one form of texting (Telegram) and did not explore the effects of other forms of texting, such as SMS or WhatsApp.

7. Future Directions

Future research should investigate the effects of texting on other aspects of language learning, such as grammar, speaking, and listening. Future studies should also explore the potential benefits of using different forms of texting, such as SMS and WhatsApp, and compare their effectiveness to that of Telegram. Finally, future research should investigate the long-term effects of using texting as a tool for language learning.
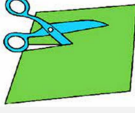
Appendix

Appendix I

Consent Form
Dear participant,
This is a part of research on "The effectiveness of texting on English language learners' vocabulary Repertoire", which contains pre and post-tests. Your participation is voluntary, and you may opt-out at any time. If you agree to take part in this study, please tick the box "agree" and move to the pre-test.

Thank you for your cooperation!
Researchers,

Appendix II

Pre-test
Convention
Dear participant,
This is a part of research on "the effectiveness of texting on English language learners' vocabulary" which contains pre and post-test. Your participation is voluntarily and you may withdraw at any time. If you agree to take part in this study, please tick the box "agree" and move to the pre-test.
Thank you for your cooperation
Choose the correct meaning of the following verbs:

Table 5. *Verbs.*

Bake: 1. cook by immersing in boiling water. 2. cook food by dry heat without direct exposure to a flame. 3. cooking food over an open fire. 4. cook food, especially meat, by prolonged exposure to heat.	Tear: 1 2 3 4
Shout: 1. call out 2. talk to public 3. Whisper 4. heavy crying	Depart: 1. land 2. arrive 3. stay 4. leave
Arrest: 1. rest for a while 2. taking into custody 3. release 4. take a break	Murder: 1. hit 2. steal 3. kill 4. attack
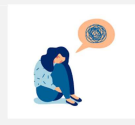
Choose the correct meaning of the following nouns:

Table 6. *Noun.*

Invoice: 1. receipt 2. report 3. application 4. paperwork	Retirement: 1. failing in certain task. 2. getting better position or better job. 3. leaving one's job and ceasing to work. 4. maintaining one's job for long time.
Tablet: 1 2 3 4	Plumber: 1 2 3 4
Concert: 1. a public display of works of art or items of interest 2. a speech in which a new idea is explained to an audience. 3. a musical performance given in public. 4. a grant of money, especially from a government.	Soldier: 1. a person who works in a factory. 2. a person who works in an army 3. a person who works in a library. 4. a person who works in a boat.

Choose the correct meaning of the following adjectives:

Table 7. *Adjectives.*

Attractive: 1. cute and charming 2. kind and nice 3. huge and rich 4. healthy and sporty	Depressed: 1 2 3 4
Confident: 1. long-suffering	Proud: 1. anxious or troubled about actual or potential problems.

2. self-assured	2. not showing or feeling nervousness, anger, or other strong emotions.
3. quick-tempered	3. used for emphasis, especially to express anger or annoyance.
4. peace-loving	4. feeling deep pleasure or satisfaction as a result of one's own achievements.
Calm:	Honest:
1. joyful	1. sincere
2. peaceful	2. clever
3. anxious	3. worthy
4. pretty	4. polite

Choose the correct meaning of the following adverbs:

Table 8. Adverbs.

Accurately:	Fairly:	Frequently:
1. with an ability to speak easily and smoothly.	1. quite	1. often
2. in a way that is correct in all details.	2. very	2. sometimes
3. to quite a high degree.	3. a little	3. occasionally
4. in a respectful and considerate manner.	4. slightly	4. always
Quietly:	Occasionally:	Suddenly:
1. in a way that others would know about.	1. often	1. urgently
2. in a way which requires peace and silence.	2. from time to time	2. eventually
3. in a way which requires immediate action.	3. always	3. gradually
4. in a way that is intended to be surprise.	4. rarely	4. unexpectedly

Appendix III
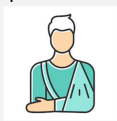
Post-test
Choose the correct meaning of the following verbs:

Table 9. Verbs.

Burn:	Spill:	Take off:
1. cause physical pain or injury to.	1. fall down or in.	1. become airborne.
2. weaken or damage something.	2. cause or allow liquid to flow over the edge of its container.	2. Land.
3. destroy, damage, or injure by heat or fire.	3. move downward, typically rapidly and freely without control.	3. touch down.
4. diminish or destroy the value or quality of.	4. move up and down or from side to side with rapid.	4. divide by cutting.
	Throw:	Rob:
Attack:	1. place something in a bin.	1. Steal
1. attend wrestling.	2. propel something with force through the air by a movement of the arm and hand.	2. Jump
2. raise voice.	3. pick something up and give it to someone.	3. Leave
3. talk about serious issue.	4. bring and hand over something to the proper recipient or address.	4. give back
4. take aggressive action.		

Choose the correct meaning of the following nouns:

Table 10. Nouns.

Choose the correct meaning of the following adjectives:

***Table 11.** Adjectives.*

Athletic:	Curious:	Patient:
1. kind and nice	1. having a quick-witted intelligence.	1. self-confident
2. healthy and sporty	2. causing laughter.	2. even-tempered
3. tall and handsome	3. eager to know or learn something.	3. quick-tempered
4. huge and rich	4. intelligent and well informed.	4. peace-loving
Confused:	Anxious:	Clever:
1. unable to think clearly.	1. pretty	1. hard
2. able to think clearly.	2. nerd	2. smart
3. methodical and organized	3. joyful	3. worthy
4. causing fear	4. worried	4. significant

Choose the correct meaning of the following adverbs:

***Table 12.** Adverbs.*

Fluently:	Incredibly:	Briefly:
1. with an ability to speak easily and smoothly.	1. slightly	1. for a long time
2. in a way that is correct in all details.	2. pretty	2. for a short time
3. to quite a high degree.	3. rarely	3. for a lot of effort
4. in a respectful and considerate manner.	4. extremely	4. for a little damage
Urgently:	Politely:	Probably:
1. in a way that is intended to be private.	1. in a quiet manner.	1. almost certainly
2. in a way that others couldn't know about.	2. in a respectful and considerate manner.	2. certainly
3. in a way that requires peace and quite.	3. in an unsuccessful way.	3. unlikely
4. in a way that requires immediate action.	4. in a manner resulting from anger.	4. impossible

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