On the Impact of Teaching Vocabulary through Asynchronous Social Media on EFL Learners' Vocabulary Learning and Retention

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This study aimed to investigate the effect of teaching vocabulary through asynchronous social media on EFL learners' vocabulary learning and retention. To fulfill the objective of this study, the researcher selected 57 EFL learners through convenience sampling method. The participants were assigned randomly into two groups of the experimental (n=30) and the control group (n=27). The researcher made some posts based on the intended vocabularies (n=50). The treatment lasted for ten sessions. The researcher used Instagram for the participants of the experimental group. She posted five vocabularies for students of the experimental by use of Instagram. The participants of this group had to see the posts during two days and each one of them had to make a sentence with each vocabulary on comments section. The same vocabularies were taught to the participants of the control group through conventional method. The statistical results indicated that the participants of the experimental who used Instagram as a medium for instruction had significantly better scores in comparison to the participants of the control group in both posttest and delayed posttest. The outcome of the current study can be useful for language teachers, EFL learners and syllabus designers.

Keywords: asynchronous social media, vocabulary learning, EFL, vocabulary retention, EFL learners

INTRODUCTION

Vocabulary is considered one of the most important components in any language learning process. When one needs to learn a foreign language, the first step is to learn its vocabulary. Mastering this component is essential for having successful communication in both written and spoken forms. Of course, knowing enough vocabulary is considered to be crucial for the development of any language skill. In this regard, the importance of vocabulary has recently been emphasized (Kesmez, 2021). In this regard, Barcoft (2004) pointed out that there is a strong relationship between having enough vocabulary and being able to communicate successfully. A rich vocabulary can facilitate the acquisition of other language skills (Kesmez, 2021).

According to the importance of vocabulary, many EFL learners still have difficulties with it. For example, many EFL learners have difficulties with writing and speaking because they do not have enough vocabulary. Traditional methods of teaching vocabulary, which are still used in schools and universities in some developing countries, make students memorize lists of words and directly give paired translations of each word. The main problem behind such methods is that they have no theoretical support, because learning vocabulary is something more than memorizing a list of words. It bores students in class (Krashen, 1989).

Given the important role of vocabulary in the development of other language skills, it is essential to find an effective way of teaching this component to language learners. In this regard, integrating technology into the language learning process can be seen as an effective way. Nowadays, the impact of technology is evident in different dimensions of human life and education is no exception (Nickerson, 2020). In this regard, many are trying to take advantage of technology and integrate it into the process of language learning (Wang & Chen, 2020). This tendency to use technology in the language learning process has led to two topics in the field: computer-assisted language learning (CALL) and mobile-assisted language learning (MALL) (Ko, 2019). Initially, CALL was common and after a while, MALL became more popular (Namaziandost, et. al., 2021).

Due to the growing popularity and use of social networks, especially mobile-based applications, many educators prefer to use them as a resource for educational purposes, as popular social networks such as Instagram can provide considerable potential content for education (Rosell-Aguilar, 2018; Taskiran, Koral Gumusoglu & Aydin, 2018). Recently, it has been reported that more than 4 billion people in the world are considered to be active users of the internet, and more than 3.196 billion people use different social networks. Considering this huge number of users, it is logical to use Internet and social networks for educational purposes or to share educational content in social networks (Manca & Ranieri, 2016).

In fact, social networks have recently caught the attention of trainers because of their rapid popularity. Moreover, such networks are very popular among young people. They can use such networks for educational purposes instead of wasting their time uselessly (Alsharidi, 2018). The awareness of educators in using the potential of social networks and smartphone-based applications is due to the fact that most students are active users of various social networks and many use such networks for professional purposes (Hsieh, 2017, as cited in Erarslan, 2019).

The significance of this study is that the integration of technology in vocabulary teaching can be considered as an important issue and yet there is a need for more studies in the Iranian context. Many EFL learners are equipped with the latest mobile phone in the class and they do not use it for pedagogical purposes. The basis of all teaching methods is synchronous teaching because students and teachers have interaction at the certain period of time. However, the virtual world has changed the world and there are many options that allow teachers to have asynchronous classes. Instagram is one of the popular social media and many people spend a lot of time on it. In this regard, the researcher decided to use Instagram as an asynchronous social media to teach vocabulary to EFL learners to see if it has a significant effect on EFL learners' vocabulary learning and retention.

Vocabulary

The first step in learning a foreign language is to master its vocabulary. Learning vocabulary is seen as a challenging task for many EFL learners because many methods of teaching vocabulary are ineffective. Moreover, providing new vocabulary without paying attention to language learners' background knowledge can be considered as one of the limitations in the process of vocabulary learning (Akhlaghi & Zareian, 2015).

Words can be seen as the basic structure of any foreign language learning, and to master any language it is essential to acquire its words. Therefore, it can be said that the crucial part of learning English as a foreign language is learning its vocabulary (Francis & Simpson, 2009). If you know enough vocabulary, you can perform better in other language skills. In other words, vocabulary is seen as a building block for the development of other language skills (Nation, 2001).

Foreign language learners' vocabulary knowledge can be formally reinforced through textbooks and informally reinforced through communication with others. Many theoretically based foundations have

emphasised the effectiveness of foreign language vocabulary acquisition (Hairrell et al., 2011). However, many EFL learners have difficulty in learning vocabulary and when they learn new vocabulary, they cannot recall it after a while. There are many reasons for this weakness. Some believed that the lack of appropriate and effective methods of teaching vocabulary led to frozen learning. Some others believed that limited access to authentic material in asynchronous mode led to such difficulties (Khoshsima & Khosravi, 2021).

Vocabulary is seen as an important component that plays a crucial role in the process of language learning. However, many EFL learners learn English from middle school, but many of them have problems in various language skills. The root of their problem lies in the fact that they do not know enough vocabulary (Kesmez, 2021). In addition, more research is needed to find the effective method of teaching this component to EFL learners.

Specifically, vocabulary is considered as mandatory to learning knowledge by receptive skills such as listening and reading and it is necessary for the expansion of the productive skills such as writing and speaking as well. The main goal of employing visual support for teaching vocabulary is to assist language learners find out and retain new vocabulary. Employing visual aids can be regarded as the effective way that makes learners enable to have access easily and to share their knowledge and it can make easy the process of understanding and acquiring new vocabulary (Çakmak, et. al., 2021).

Traditional pedagogical settings and language classrooms made language learners to employ paper-textbook and they had to be on the same page as their teachers and the teacher had an active role in such classes and the students had to follow the instruction of their teacher. Moreover, students had to memorize a list of new words with their translation and after a while they cannot remember the meaning of the words that they acquired. Thanks to technology, the integrating computer and mobile in language learning provided a new perspective in this domain. By use of technology many language learners could learn language in an innovative way. In fact, technology provided opportunities for language learners to access authentic content anytime, anywhere. (Çakmak, et. al., 2021).

For making better vocabulary acquisition among language learners, teachers can employ different instructional strategies. Nowadays, the role of technology is dominant in people's life. In fact, it can be said that technology made many things easy and it has positive effect on education in general and on foreign language learning in particular. People feel comfortable with various technological tools. Nowadays, many people around the world have smartphones and spend a lot of time using them. But it is good to use this tool for educational purposes (Khoshsima & Khosravi, 2021).

Technology and Language Learning

With the presence of new technologies and the emergence of different applications, a new era has appeared in the language teaching and learning process. Internet-based technologies, applications and websites facilitate the process of language learning all over the world. In this regard, McKeeman and Oviedo (2015) stated that technology is considered as a crucial tool to improve the process of language teaching as well. Moreover, teaching and learning a foreign language should not be limited to physical classrooms (Haygood et al., 2012). Recently, more studies (Janfeshan & Janfeshan, 2021; Yusuf et al., 2018) have been conducted on the effect of employing technology on EFL learners' language acquisition. Many of studies (Alsmari, 2019; Blattner & Lomicka, 2012) demonstrated the effectiveness of employing technology on developing foreign language learning and they claimed that use of technology can make easy the process of language learning to learners.

The prominent role of technology in education and language learning became more prominent after the Corona virus pandemic. After the emergence of corona virus at the end of 2019, many classes around the world were managed in various online platforms. Therefore, many students had to use the Internet

to continue their education (Janfeshan, 2022). Given the widespread use of internet and online platforms for language learning, many curriculum designers tried to design different applications to meet the needs of language learners (Goldschmidt, 2020).

Vocabulary and Technology

As mentioned above, vocabulary is considered to be one of the most important parts of any foreign language learning process. The first thing in learning a foreign language is to learn vocabulary. Having good knowledge of vocabulary lead people to be good in other language skills either receptive skill or productive skill. Given the importance of vocabulary, there is still a need for more empirical studies to find the effective way to teach this component. Many studies have shown that the integration of technology in education and language teaching can be seen as a useful way to strengthen EFL learners' language skills. In this regard, virtual environment provides an atmosphere for students to see each other and participate in their classes virtually. Moreover, the use of asynchronous social media leads people to take advantage of instruction at any time they want (Kaviani, 2022).

Nowadays, advances in technology and the Internet have opened up new ways of teaching and learning. Through the use of the Internet, people can share information and students can access authentic materials at any time. In addition, educational resources such as books and articles as well as images can be digitized and distributed through the internet. Moreover, the effectiveness of various mobile-based applications made groups of people able to collaborate with the internet and it led to a new aspect of online learning as well (Beldarrain, 2006).

However, the effectiveness of social networks has been proven, but after the Corona virus pandemic, its importance became dominant. At the end of 2019, a virus was discovered in China and it quickly affected the world. Many educational classes in the world were continued online. At that time, the effectiveness of social networks was emphasized and many students around the world used them and still they continued to attend online classes. Besides, many believe that many students can express themselves in online platform and they do not feel shy in digital world (Kaviani, 2022).

Nowadays, the different dimensions of the scientific world are available over the internet and students can have access to many scientific paper and articles virtually (Idrees Ibrahim, 2021). In this regard, Abrar (2021) pointed out that employing social network can be regarded as one of the instruments that is at the service of instructors and students to access data at any time and any place and it makes easy the process of learning a foreign language.

Given this fact that educational world is moving toward the employment of internet and social network in pedagogical setting, instructor can feel comfortable with such network if they have enough media literacy. Learning and teaching by use of internet and in online platforms are being more energetic throughout the world. In many developing countries, such as Iran many pedagogical settings are becoming interested in using online platforms for education. Yet, there is need to unique policy for having successful online education (Kaviani, 2022). Nowadays, many instructors and learners believed that education can be taken place beyond the physical classrooms.

The appearance of digital age has modified the way people communicate to each other during last decades. In different forms of social networks (SNs) and email, technology has been combined with communication to challenge the way through which people communicate with each other (Scarborough, 2009). Web 2.0 applications have affected people life in different ways. E-learning or learning by use of Internet is the product of technology that had a great effect on education and therefore in language learning (Mazman & Usluel, 2010).

Employing social networks in pedagogical settings can be regarded as an effective idea since many learners spend more time on online social media (Mazman & Usluel, 2010). Mason and Rennie (2007)

pointed out that it is no longer to question if to take use of these electronic technologies in foreign language teaching or to reinforce learning of learners by employing them. Studies indicated that SN instruments support educational-based activities by making cooperation, collaboration, active participation and sharing resources (Ajjan & Hartshorne, 2008).

Online education can be conducted into two modes. The first mode is synchronous social network through which all students and instructor have to be online in a certain time and such as real class, they can have communication and interaction and the only difference is that their communication happens in online platform. The other mode is asynchronous social media. Asynchronous social network, there is no need students and instructor become online in certain time. Teacher can send the related content and materials and students can see it during flexible time. This method can be regarded very useful for those who cannot attend to regular classes. That is why the researcher of the current study decided to select Instagram as asynchronous social network for teaching vocabulary through it. At the rest, theoretical explanation is provided.

Instagram

Instagram is regarded as one of the most popular web applications in the world that was launched in October 2010 by Kevin Systrom and Mike Krieger. At its IOS version was released and those who had iPhone used it. Two years later, its android version was released and it became possible for many people of the world become member of this web application (Kaviani, 2022). Instagram is regarded as a popular social network that enables users to post photos and videos. Besides, it lets people to share stories in public or private pages (Wissam et al., 2020). In this regard, Niayesh (2015) noted that recently number of Iranian people who became members of this social network has been increased and it is growing.

There are a lot of academic and instructional pages on Instagram that are at the service of users and they provide useful information. Using Instagram for teaching vocabulary to EFL learners is regarded as an interesting idea. Many instructors prefer to create a page on this network and share their knowledge there. Therefore, by use of this social network both language teachers and learners can make use of the benefits of this application (Kaviani, 2022). In the same vein, Handayani (2016) pointed out that Instagram can be employed as a source for using many activities in language pedagogical settings such as vocabulary activities by employing photos and short video. Therefore, by employing Instagram, it is possible for language instructors to reinforce their students' language skills in a virtual environment.

Related Studies

In this section, the researcher reviewed some previous studies that were similar to the current study.

In their study, Namaziandost, Saberi Dehkordi, Alekasir and Tilwani (2021) investigated the effects of Rosetta Stone application on EFL learners' vocabulary learning. In their study, the wanted to compare use of computer, use of mobile and conventional classes. They came to this conclusion that those participants who employed technology performed significantly better in comparison to conventional classes. Moreover, those participants who used computer performed better in comparison to group who used mobile.

In the same vein, Norouzi Sedeh and Tabatabaei (2021) examined the effect of teaching vocabulary via textbook versus social media on EFL learners' creativity level. They came to this conclusion that employing social media can enhance EFL learners' creativity.

In her study, Kaviani (2022) investigated the impact of Instagram on learning English vocabulary among Iranian pre-intermediate EFL learners. The findings of her study indicated that the participants

of the experimental group who used Instagram as the treatment performed significantly better in comparison to the participants of the control group.

Similarly, in their study, Hajebi, Taheri, Fahandezh and Salari (2018) examined the role of web-based language teaching on vocabulary retention of adult pre-intermediate EFL learners. The outcomes of their study indicated that employing web-based language teaching had significant positive effect on EFL learners' vocabulary retention.

In the same vein, in her study, Khodabandeh (2020) explored the effect of social network on EFL learners' second language achievement. The outcomes of her study indicated that the participants of the experimental group who employed social media as the treatment performed significantly better in comparison to the participants of the control group.

In their study, Habibah, Asmawati, Fitriningsih and Nurdin (2021) examined the possible effects of employing Instagram on EFL learners' vocabulary learning. The results of their study indicated that those students who utilize Instagram as a social network for education had significantly a higher score in comparison to the participants of the control group who received the instruction through conventional way in the class.

Similarly, in his study, Erarslan (2019) explored Instagram as a social network for EFL learners. For collecting information, he employed both quantitative and qualitative methods. At the end, he concluded that Instagram can be regarded as the most popular social networks and it has the most users in the world. Using Instagram for teaching can be effective on reinforcing foreign language learning among EFL learners.

In the same vein, Mooneeb Ali (2021) explored the possible effects of Instagram as a mobile-based application on EFL learners. The findings of his study indicated that using Instagram can be regarded as the effective tool for boosting foreign language learning among EFL learners.

Similarly, in his study, Janfeshan (2022) examined the effects of employing Edmodo social learning network on EFL learners' vocabulary learning in Iraq. He came to this conclusion the using Edmodo has positive effect on reinforcing EFL learners' vocabulary. Besides, He noted that many EFL learners had positive attitude in respect to use of Edmodo in their pedagogical setting. With respect to the previous issues, the current researcher focusses on the following research questions specifically:

1. Does teaching vocabulary through asynchronous social media have any significant effect on EFL learners' vocabulary learning?

2. Does teaching vocabulary through asynchronous social media have any significant effect on EFL learners' vocabulary retention?

METHOD

Design

For conducting this study, a quasi-experimental design was used in this study. In this study, random selection was not used. The researcher assigned the participants randomly into two groups. Teaching vocabulary through asynchronous social media is regarded as the independent variable and vocabulary learning and retention are dependent variables.

Participants

The participants of this study included 57 EFL learners who were studying at Joyandegan English language institute at the time of performing this study. The participants consisted of both male and female EFL learners and they were at the age ranged from 15 to 19. All of the participants were from

the same cultural background. The course book of the learners was "Four Corners". The researcher was not permitted to administer any test for homogenizing the participants since the institute itself had an entrance exam. Given the documents of the institute and the course book of students, the participants were regarded to be pre-intermediate. For selecting the participants, convenience sampling method was employed.

Materials and Instruments

For getting the proper result for this study, the researcher used (a) researcher-made vocabulary test as the pretest and delayed posttest. In the following the researcher provides detail explanations for this tool.

Researcher-made vocabulary test as the pretest, the posttest and the delayed posttest

The researcher designed a multiple choice test based on the intended vocabularies that were selected from the course book of the students. This test consisted of 50 items and each item had 2 score. Since this test was basically a researcher-made test, its reliability was calculated through Kr-21 and it reached to .91. This test at first was administered as the pretest to evaluate the previous knowledge of the participants given the intended vocabularies before starting the intervention. After covering the intended vocabularies, this test was administered as the posttest. Moreover, the same test was administered to measure long term vocabulary of the learners one month after the intervention. To remove the effect of practice, the researcher changed the place of items in the delayed posttest.

Procedure

To fulfill the objective of this study, the researcher selected 57 EFL learners through convenience sampling method. Since the institute had entrance exam, the researcher was not permitted to administer any test for homogenization. Given the documents of the institute and the course book of the students, they were regarded to be pre-intermediate. The participants were members of eight classes. The researcher assigned the participants randomly into two groups of the experimental group (n=30) and the control group (n=27).

Before the intervention began, the researcher administered a researcher-developed vocabulary test to ensure that participants in both groups knew the intended vocabulary. The test consisted of 50 items. The vocabulary was selected from the participants' course book. Then the researcher started the treatment. She explained Instagram to the participants of the experimental group. Many of them were familiar with it, so the researcher introduced it and the procedure to the students of the experimental group.

The researcher made 50 posts for the target vocabulary. In each session, she made 5 posts on her Instagram and the students in the experimental group who followed her had to see the post and to make sure they saw it, they had to write a sentence in the comment section. They had two days to see the post before coming to class. In each post, the researcher provided each new vocabulary with its synonym and definition. The students in the control group were taught the same vocabulary in a conventional way. In each session, the teacher introduced five new vocabulary words with their synonyms on the blackboard and the students in this group had to memorize them. Finally, after ten sessions, the researcher administered the researcher-designed vocabulary test as a post-test to see whether the use of asynchronous social media has a significant effect on EFL learners' vocabulary learning. This test was administered one month after the end of the intervention to measure the long-term vocabulary learning of the participants in both groups.

Data analysis

The raw data obtained from the researcher-made vocabulary test as the pretest, the posttest and the delayed posttest was sent to SPSS (version .26). For compering the results of the scores of the participants, in the pretest, posttest and delayed posttest, the researcher employed three independent samples, t-tests. Moreover, for measuring reliability of the researcher-made vocabulary test, the researcher used Kr-21.

FINDINGS

The researcher selected 57 EFL learners through convenience sampling method. Given the documents and the course book of the participants, they were regarded to be pre-intermediate EFL learners. The researcher assigned the participants randomly into two groups of the experimental (n=30) and the control (n=27). In this section, descriptive statistic of three groups is provided.

For answering the first research question, the researcher administered the researcher-made vocabulary test as the pretest. Then, after finishing the treatment, this test was administered as the posttest. The descriptive statistic results are provided below.

Answering Research Question 1

Before starting the invention (teaching vocabulary through Instagram), the researcher-made vocabulary test was administered as the pretest to both groups. The statistical outcomes of this test are provided in Table 1. As you can see, this table indicates the mean, standard deviation, and number of

the students in the experimental group ($\bar{x}$ =32.89, SD = 3.64, n = 30) and the control group ($\bar{x}$ =33.78, SD = 4.19, n =27) on both groups' vocabulary learning in the pretest.

Table 1
Descriptive statistics of the experimental and the control groups' vocabulary learning scores on the pretest

Group	N	Mean	SD	Std. Error Mean
Experimental	30	32.89	3.647	.655
Control	27	33.78	4.191	.765

The statistical results of independent samples *t*-test for the purpose of comparing the vocabulary scores of the participants of both group on the pretest is provided in Table 2. Table 2 indicates the mean difference between the scores of these two groups is -.89 and this difference is not significant (t = -.56, p = .57, p > .05). Thus, it can be said that both groups had the equal vocabulary knowledge before starting the treatment.

Table 2
Independent samples T-Test for comparing two groups' scores of vocabulary learning (pretest)

Levene's Test for Variances			T-test for Means			
Factor	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.
Equal variances assumed	.329	.568	-.563	59	.575	-.89
Equal variances not assumed			-.562	57.318	.576	-.89

After covering the treatment, the researcher administered the researcher-made vocabulary test as the posttest to see if teaching vocabulary through Instagram had any significant effect on EFL learners'

vocabulary learning. The scores of the students of both groups are provided in Table 3. This table shows the mean, standard deviation, and number of students for the experimental group ($\bar{x}$ =87.88, *SD* = 7.54, *n* = 30) and the control group ($\bar{x}$ =75.67, *SD* = 6.74, *n* = 27) on both groups' vocabulary learning on the posttest.

Table 3
Descriptive statistics of experimental and control groups' vocabulary learning scores on the posttest

Group	*N*	Mean	*SD*	Std. Error Mean
Experimental	30	87.88	7.548	1.338
Control	27	75.67	6.742	1.213

Table 4 shows that statistical results by using independent samples t-test. It has been done to compare the vocabulary scores of both groups on the posttest. Table 4 indicates that the mean difference between the scores of both groups is 12.21 and this difference is significant (t = 2.59, p = .01, p < .05). Therefore, it can be said that there is a significant difference between scores of the experimental group and the control group on the posttest. Thus, utilizing Instagram as asynchronous social network for teaching vocabulary can be effective way for reinforcing EFL learners' vocabulary learning.

Table 4
Independent samples test for comparing two groups' scores of vocabulary learning (posttest)

Levene's Test for Variances			T-test for Means			
Factor	*F*	Sig.	*t*	*df*	Sig. (2-tailed)	Mean Diff.
Equal variances assumed	.125	.000	2.595	59	.012	12.21
Equal variances not assumed			2.600	58.617	.012	12.21

Answering Research Question 2

The second research question seeks to see if employing asynchronous social media have any significant effect on EFL learners' retention. The researcher administered the researcher-made vocabulary test as the delayed posttest one month after the intervention. The result of this test is provided in Table 5.

Table 5
Descriptive statistics of the experimental and the control groups' vocabulary retention scores on the delayed posttest

Group	*N*	Mean	*SD*	Std. Error Mean
Experimental	30	80.78	2.789	.578
Control	27	71.90	3.890	.684

For comparing the vocabulary retention scores of both groups, the researcher used independent samples *t*-test. The results are provided in Table 6. As you can see in Table 6, the mean difference between the experimental and the control group is -8.88 and this difference is significant (t = -2.23, p = .02, p < .05). It indicates that the participants of the experimental group had significantly better scores in comparison to the participants of the control group. In fact, the effectiveness of using Instagram as an asynchronous social network on EFL learners' vocabulary retention was proved.

Table 6
Independent samples T-Test for comparing two groups' scores of vocabulary retention (delayed posttest)

Levene's Test for Variances			T-test for Means			
			t	*df*	Sig. (2-tailed)	
Factor	*F*	*Sig.*				Mean Diff.
Equal variances assumed	.359	.000	-2.231	58	.021	-.8.88
Equal variances not assumed			-2.231	58	.021	-.8.88

DISCUSSION

The outcomes of the current study were in line with Namaziandost, Saberi Dehkordi, Alekasir and Tilwani (2021) who explored the effects of Rosetta Stone application on EFL learners' vocabulary learning. They concluded that using computer and mobile is effective on vocabulary learning. However, in contrast to the results of this study, they claimed that using computer is more effective than mobile. While in this study, it was proved that teaching vocabulary through Instagram is more effective.

Similarly, in line with the outcomes of the current study, Norouzi Sedeh and Tabatabaei (2021) proved the effectiveness of social media on creativity of EFL learners. In the same vein, Kaviani (2022) proved the effectiveness of Instagram on EFL learners' English vocabulary learning.

In the same vein, Hajebi, et. al., (2018) proved that employing web-based language teaching had significant positive effect on EFL learners' vocabulary retention. Same as the results of this study, the effectiveness of using Instagram as asynchronous social media on EFL learners' vocabulary retention was proved.

Similarly, Khodabandeh (2020) proved the effectiveness of social network on EFL learners' language achievement. In line with this study, our findings indicated the effectiveness of teaching vocabulary through Instagram as a social network on improving EFL learners' vocabulary learning and retention.

In line with the results of this study, in their study, Habibah, et. al., (2021) demonstrated the effectiveness of Instagram on EFL learners' vocabulary learning. In the current study, the researcher proved that employing Instagram for teaching vocabulary can boost EFL learners' vocabulary learning and retention.

Similar to the results of the current study that the effectiveness of using Instagram on improving vocabulary learning and retention of EFL learners was proved, in his study, Erarslan (2019) explored Instagram as a social network for EFL learners. He came to this conclusion that Instagram can be considered as the most popular social networks and it has the most users in the world. Utilizing Instagram for teaching can be effective in boosting foreign language learning among EFL learners.

In line with the outcomes of the current study, Mooneeb Ali (2021) proved that employing Instagram can be seen as the effective instrument for reinforcing foreign language learning of EFL learners.

The findings of our study indicated the effectiveness of teaching vocabulary through asynchronous social network on EFL learners' vocabulary learning and retention. In line with these results, Janfeshan (2022) proved that utilizing Edmodo has positive effect on reinforcing EFL learners' vocabulary.

CONCLUSION

The results of the study indicated that the participants of the experimental group had significant better score in the posttest. However, the scores of both group were reduced in the delayed posttest, the participants of the experimental group performed significantly better score. Using social network in asynchronous mode can be regarded as the effective method for teaching vocabulary to EFL learners. In fact, it was proved that teaching vocabulary through Instagram can boost EFL learners' vocabulary learning and retention. Moreover, the obstacle of time and place can be removed by this way since students can have access to content at any time and at any place. Many students equipped with newest smart phone and they spend much time on different social media. Teachers can use such media and application for pedagogical purpose.

Teachers can encourage their students to utilize their smart phones for educational objectives. Using asynchronous social media like Instagram assist teachers to provide their instruction without paying attention to time and place obstacles. Moreover, students can have access to the content at any time and any place. Since Instagram is attractive for students, it has positive effect on their attitude and they learn the content better.

In conclusion, it can be said that ELT teachers can use Instagram to enhance their students' English learning in general and their vocabulary learning in particular. The main implication of this study is that language teachers can use Instagram as a supplementary device in a supplementary mode. They can post their pedagogical content and students can access the posts at any time without any restrictions. Furthermore, EFL learners can use social applications to enhance their self-assessment and autonomy. When students use such a social network for pedagogical purposes, they gradually learn to be independent and this is something good for them.

Instagram provides an opportunity for EFL learners to reflect on their own learning in a virtual environment. In this regard, materials developers can pay attention to the effectiveness of using Instagram in developing vocabulary learning among EFL learners and make use of such a social network. In this way, students can use such networks in a beneficial way instead of wasting their time. The use of such networks is considered to be effective nowadays.

According to the limitations and delimitations of this study, the following suggestions are provided for future studies.

This study was carried out in an English institute. The same study can be done in other educational settings such as universities and schools. Moreover, in the current study, the researcher focused on vocabulary. Another study can be conducted to focus on other components or language skills. In addition, the researcher chose "Instagram" to teach vocabulary through it. Another study can be conducted on other applications. This study took ten sessions. Other study can be conducted in more sessions to get more reliable results. In this study, the researcher focused on pre-intermediate EFL learners. Other study can be conducted on EFL learners with different proficiency levels.

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