EMPLOYING TELEGRAM APPLICATION: LEARNERS' ATTITUDE, VOCABULARY LEARNING, AND VOCABULARY DELAYED RETENTION

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Abstract:

Using smartphones for learning a language has long been recommended by scholars. However, its effectiveness is still the subject of argument. Moreover, due to the limited time in the conventional language classes, students do not have the chance to practice all vocabulary items which may hinder the learning process. Accordingly, a mixed method only-post-test quasi-experimental study was conducted. Also, for the qualitative phase, data were gathered through a focus group interview with the participants chosen through purposive sampling. It was confirmed that there was a significant effect of online practicing on vocabulary learning of the language learners. Furthermore, it was found out that the participants held a positive attitude for practicing target words through Telegram. In addition, the study results showed that using Telegram application does not have a significant effect on the retention of the vocabulary of the learners. From the results of this study, the researcher proposed some pedagogical implications to EFL teachers, practitioners, material developers, policy makers, and other English education stakeholders.

Keywords: Telegram, social networking, vocabulary learning, vocabulary retention, attitudes

1. Introduction

Today, using technology in language teaching and learning is dominant and there is a great deal of research about its effects in Foreign Language Acquisition (FLA). One challenge of using the new generation of technologies will be in the area of education. However, the increase in number and variety of information and communication technologies (ICT) as well as social media has made a major change in teaching and

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training processes (Duggan, 2009). Most of these technologies and social media are publicly available and can be used by everyone. Thus, some researchers believe that integrating them into language classes in combination with traditional teaching methods can increase learners' motivation and enhance the overall learning progress (Kromer & Kunter, 2010). This means that new technologies and social media may propose new opportunities to boost the quality and effectiveness of foreign language teaching (Isisag, 2012).

Language learners and teachers have been given special attention to use smartphones for learning a language which is called Mobile-Assisted Language Learning (MALL). Callan (1994) introduced MALL for the first time. MALL presents a kind of technology-enhanced learning in face-to-face, distance, and online modes. There have been many studies that focused on this issue, i.e. using mobile phones in EFL/ESL contexts for communicative activities (e.g., Ku-kulska Hulme & Shield, 2006), to support learners' English studies (McCarty, 2005), for improving listening and speaking (Belanger, 2005), for finding learners' perceptions of using mobile phones (Hsu, 2013), for promoting listening strategies (O'Bryan & Hegellieimer, 2007), for improving classroom-based learning (Stanley, 2006), and for vocabulary learning (Zhang, et al., 2011). However, the idea is still the subject of argument. Some studies have supported MALL and have many positive outcomes for it (e.g., Stockwell, 2010; Zhang, Song & Burston, 2011), but some other studies have suggested that it is not an effective technique, or at least it is not more effective than traditional classroom learning methods (e.g., Lu, 2008).

Learning vocabulary often seems to be important for a typical language learner (Zimmerman, 2001). However, because of the limited time in the conventional language classes, students do not find the opportunity to practice all those vocabulary items especially in a foreign language context and this may hinder their learning process. On the other hand, there have been great debates regarding the most effective way to learning and the retention of vocabulary. Nation (2005) believed that teachers can teach individual words explicitly, but the deliberate teaching of vocabulary is one of the least efficient ways of developing learners' vocabulary knowledge. It needs to be noted that incidental learning can be a useful method for learning new vocabulary from any context (Day, Omura, & Hiramatsu, 1991; Jenkins, Stein, & Wysocki, 1984; Saragi, Nation, & Meister, 1978). Moreover, Gass (1999) considers incidental vocabulary learning to take place "*as a by-product of other cognitive exercises (e.g. reading/listening) involving comprehension*" (p. 319). While it is not completely understood how incidental learning of vocabulary actually happens, there are some factors that determine the success of a learner when trying to infer meaning of a word. These factors could be the amount of exposure, word-guessing strategies, and the quality of the context in which the activities are presented. Schmitt and Schmitt (1995) in their processing hypothesis state that "*mental activities which require more elaborate thought, manipulation or processing of a new word will help in the learning of that word*" (p. 135).

Teachers should take a broader view of vocabulary knowledge in the process of vocabulary teaching and learning in an effective and principled way (Schmitt, 2008). This urges language teachers and researchers to look for alternative ways to conventional classroom teaching of vocabulary. One more modern approach toward the teaching of languages that could help teachers in teaching vocabulary is using different technologies available to students. Once Kukulska-Hulm and Shield (2007) mentioned that recent technologies including mobile phones have influenced vocabulary learning activities by their unique characteristics such as flexibility, immediacy, content sensitivity, portability, social interactivity, connectivity, and individuality.

Accordingly, the fundamental theories supporting this study include Social Constructivism, Socially Situated Learning and Activity Theory in Language Learning. Social constructivism as a sociological theory of knowledge which claims that human development is socially situated and knowledge is constructed through interaction with others (Vygotsky, 1978). In this study, the term social media strongly reflects the components of this theory. Interactive Tasks that promote negotiation of meaning among learners can facilitate foreign language learning. According to Koohang (2009), *"the design of learning activities in a constructivist model includes collaboration, cooperation, multiple perspective, real world examples, scaffolding, self-reflection, multiple representations of ideas, and social negotiation."* Another theory based on which the present study was proposed is Socially Situated Learning which claims that people will behave differently depending on the situation and the options available (Suchman, 2006). Social interaction and collaboration are key elements of the socially situated learning theory. This theory relies on environmental variables which question whether learning is fundamentally bound to a particular context in time and further argues whether abstract knowledge can be gained through concrete and abstract examples. The materials used for the intervention in this study provide learners with concrete examples such as pictures and abstract examples like memes to guess and use their own abstract knowledge to relate to vocabulary items. Additionally, as Mobile-Assisted Language Learning evolved to support students' language learning with an increased use of mobile technologies, the Activity Theory (Leontev, 1978, 1981; Lantolf & Appel, 1994) which represents the effect of using tools in language learning is appropriate to form the theoretical framework of this study. In Activity Theory people use external (in the context of this study mobile phones) and internal tools (plans, cognitive maps) to achieve their goals. Tools (which can limit or enable) can be also used for social interaction, and they influence both the behaviour of those who use them and also the social structure within which the participation takes place. With MALL, students are able to access language learning materials and to communicate with their teachers and peers at any time and in any place.

As there has not been due attention to this area, the aim of the present study was to investigate the effectiveness of learning vocabulary through Telegram as a social media application and the retention of those vocabulary items presented and also the learners' attitudes toward using Telegram in their vocabulary learning process.

2. Methodology

The methodology of this study was sequential Mixed Method as there was quantitative data collection and analysis followed by qualitative. According to Creswell (2009) this process is for collecting, analysing and mixing both qualitative and quantitative methods in a single study to understand a research problem. The alternative to randomization in this study made the design a quasi-experimental. In quasi-experimental design the participants are not assigned randomly to the treatment (Cook & Campbell, 1979; Mitchell & Jolley, 2010) and the grouping was intact grouping in this study. While real-life treatments are appealing to research, most researchers' choice is quasi-experimental design (Mitchel & Jolley, 2010). To estimate the results of the treatment an only post-test design was employed. All the text must be written using single line spacing, including the reference list. The article should normally consist of the following parts: introduction, context and review of literature, method, findings, discussion and conclusion.

2.1 Participants and Setting

The population for the present study included 32 Persian-speaking Iranian Business Management students, both male and female, who were taking English as a General course ranging in age from 18 to 35. As the design of the study was quasi-experimental according to Cohen, Manion, and Morrison (2011) the sample size of no fewer than fifteen cases is sufficient for this design. The participants were taught the Intermediate level of Select Readings book (second edition) as their conventional course book. The two intact groups were assigned as experimental (15 participants) and control (17 participants). As for the sampling for the focus group interview 10 participants of the experimental group were selected based on purposive sampling to be interviewed.

2.2 Instrumentation
A. Quantitative Measures

The Oxford Quick Placement Test version 2 was administered to determine the participants' level of English to ensure the homogeneity of experimental and control groups. Moreover, a researcher-made vocabulary test (multiple choice format) as a post-test was designed to examine the participants' learning of vocabulary items. The test items were selected from their course book. The reliability of the test was checked through piloting it with a representative sample and a Cronbach's alpha of 0.68 was obtained. According to the result of the pilot study, 4 items were deleted from the test and 46 items remained. The same test was used as a delayed test to check the retention after a time interval of three weeks.

B. Qualitative Measure

For collecting the participants' attitudes toward using Telegram Application in their vocabulary learning, the present study employed a Focus Group Interview. The focus

group Interview is a carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive, non-threatening environment. Focus group interview, according to Krueger (1998a, 1998b, & 1998c) is a useful method when investigating complex behaviours like attitude in this study and also to discover how different groups think and feel about a topic and why they hold certain opinions, to identify changes in behaviour, and also to investigate the use, effectiveness and usefulness of particular services. This interview was performed right after the treatment along with the post-test. To conduct the interview 10 pre-determined questions were prepared by the researcher to seek the attitudes of the participants.

C. Materials and Procedure

In the very first session, the experimental group received conventional and in-person instruction of the course book in the classroom by the teacher and after finishing each lesson, 7 randomly selected vocabulary items from different lessons of the conventional book were presented in a Telegram Group by the researcher. The vocabulary items were presented in the format of podcasts and sound tracks, vodcasts and video clips, pictorial items and memes. The participants were asked to make sentences with the related vocabulary items and use hashtags for the specific vocabulary items to be easily accessible for everyone in the group. The Participants could share those sentences in the group and they could be in interaction and make examples of each vocabulary and correct the peers' sentences under the control of the teacher and the researcher's guidance and instructions in the group. The time devoted to this process was approximately 15 minutes. This treatment continued for 8 sessions.

3. Data Analyses

For the analysis of quantitative data an independent sample t-test was run and inferential statistics were presented for possible differences between the two groups and the effect sizes. Moreover, for analysing and identifying qualitative data emergent theme coding was employed to identify themes. In this type of analysis, the researcher needs to identify and specify the emerging themes according to the participants' perceptions and segmentation of the responses by using labeling texts for finding themes (Bazeley, 2013; Creswell, 2012). According to qualitative research glossary, in an emergent theme finding concepts (explanatory ideas) are identified from the data in the first stages of analysis and given a label or code that describes them. Concepts which are closely linked in meaning can be formed into categories. Categories which have similar meanings can be brought together into a theme. The term 'emerging themes' refers to the development or 'emergence' of themes from the data and this overall method of analysis is referred to as 'thematic analysis'. Themes are important patterns in a specific data set which describe a phenomenon based on specific research questions.

3.1 Results for the Quantitative Data

An independent-samples t-test was run order to probe the first null-hypothesis. As displayed in Table 1 the experimental group (M = 105.80, SD = 9.12) had a higher mean than the control group (M = 90.53, SD = 27.66).

Table 1: The Descriptive Statistics of Groups
in Vocabulary Test (post-test)

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Scores	Equal variances assumed	14.452	.001	-2.039	30	.050	-15.271	7.490	-30.568	.027
	Equal variances not assumed			-2.147	19.839	.044	-15.271	7.112	-30.113	-.428

Table 2: The Results of the Independent-samples t-test
for Vocabulary Test (post-test)

	Groups	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Scores	1 Cont	17	90.53	27.668	6.710
	2 Exp	15	105.80	9.120	2.355

The results of the independent-samples t-test, t (30)=19.83, p= .04, as displayed in Table 2 indicated that the experimental group significantly outperformed the control group, thus, rejecting the hypothesis stating that there was no significant difference between the two groups.

Figure 1 demonstrates a comparison of means of the posttest of the control and experimental groups' performance to check their vocabulary learning.
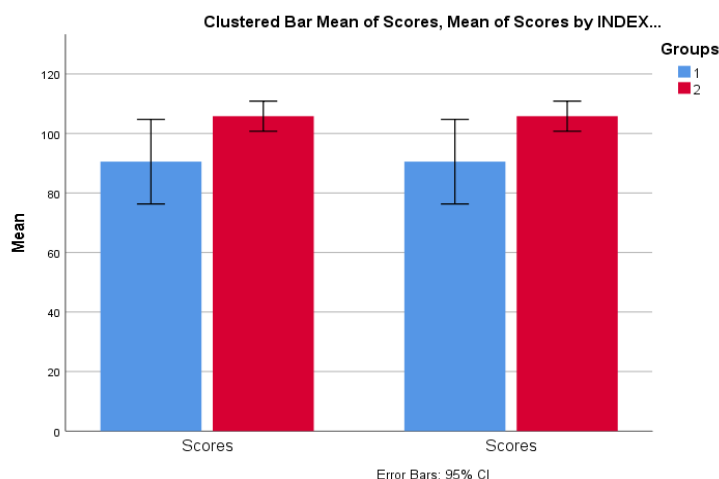
Figure 1: Comparing Means Posttest in Control (1) and Experimental (2) Groups

Also, a paired-samples t-test was run to evaluate the effect of learners' Vocabulary learning on their vocabulary retention. As displayed in Table 3 the mean of Retention test (M = 109.40, SD = 9.69) is a very close to the mean of Learning test (M = 105.80, SD = 9.12), t(14)= 1.63, p= .12. The eta square statistic (0.42) indicated a small effect size. Accordingly, the results show that there is no significant difference between the experimental group's performances in two tests confirming the second hypothesis.

Table 3: Mean and Standard Deviation of Learning and Retention tests
in the Experimental Group

		Mean	**N**	**Std. Deviation**	**Std. Error Mean**
Pair 1	ExpLearning	105.80	15	9.11	2.35
	ExpRetention	109.40	15	9.68	2.50

As the results in table 4 show the mean scores and variances of both tests indicate that there is no significant difference in experimental group's vocabulary learning test and vocabulary retention test. Therefore, the result confirms that using Telegram application as a supplementary material in vocabulary learning of the experimental group does not have a significant effect on learners' delayed retention of the vocabulary.

Table 4: Paired Samples Test between Learning and Retention tests
in the Experimental Group

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	ExpL ExpR	-3.60	8.54	2.20	-8.33	1.13	-1.63	14	.12

Figure 2 illustrates the comparison of means of the participants' performance in the experimental group in learning and retention tests to check the effectiveness of using Telegram in vocabulary retention after three weeks of time interval from having the test.
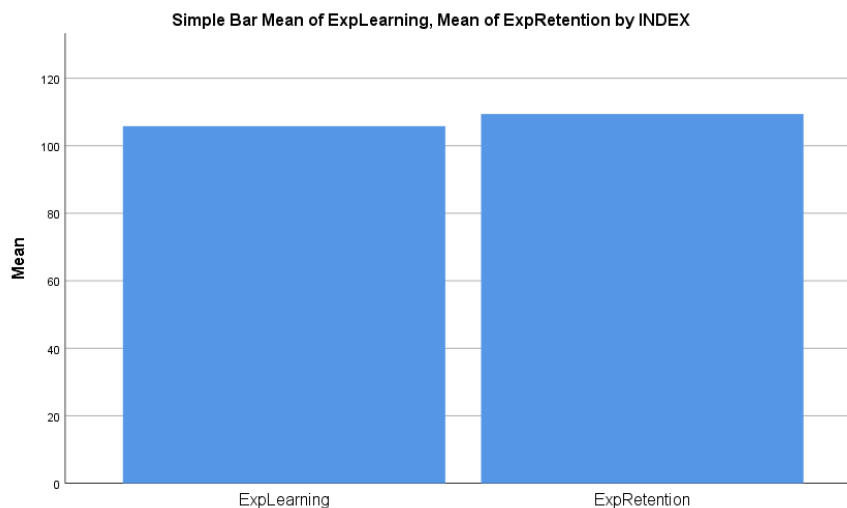

Figure 2: Comparing Means of Learning and
Retention performance of Experimental Group

4. Results for the Qualitative Data

The following 10 questions were asked from the interview participants to investigate the participants' attitudes toward using Telegram as a social media application in their vocabulary learning.

1) What is your attitude toward using social media in language learning?
2) How does social media affect your vocabulary Learning?
3) What is your attitude towards using Telegram App.?
4) Can Telegram be a good supplementary material in vocabulary learning along with conventional classes? / Did you find it useful?
5) How have you been involved in this process?
6) What did you like the best about this process?
7) If you could make a change what would you change about this process?
8) Which format of the materials did you find the most useful? (Podcast, vodcast, video or pictures)
9) Tell me about positive experiences or disappointments you have had with this process.
10) You can add anything that is missed…

The emergent theme finding was conducted and 7 themes were labeled after analysis of the responses. Accordingly, the following themes were found. Features like simplicity of the installation, the ability to share multimedia files were coded as theme 1 and called User-friendliness. Unlimited number of references and availability of the materials for a longer time were coded as theme 2. The features of platform

compatibility and the ease of launching the application on PC and mobile phones was coded as Theme 3.

The features of ease of use, online help, and its ubiquity, were coded as theme 4 which is user interface. Using the application as supplementary material and an outside the class practice, more exposure to the materials and the participants' involvement were coded as theme 5. The use of multimedia materials and having interaction through the application were coded as motivation and were set as theme 6. The dependency on the internet and using VPN for using the application and the speed of program operation was coded as theme 7 which is operational consistency.

Table 5 describes the labels given to each theme which were found according to the interviewees' responses and the questions of the interview.

Table 5: Focus Group Interview Themes

	Themes
Theme1	User-friendliness
Theme2	Availability of Materials
Theme 3	Platform Compatibility
Theme 4	User Interface
Theme 5	Outside Practice
Theme 6	Motivation
Theme 7	Operational Consistency

Table 6 presents the percentages of interviewees' responses to themes found in the interview analysis.

Table 6: Percentage of the Themes Related to the Interviewees

Interviewees ID	Theme 1	Theme 2	Theme 3	Theme 4	Theme 5	Theme 6	Theme 7
Int. 1	1	1	0	0	1	1	1
Int. 2	1	0	1	1	0	0	0
Int. 3	1	1	1	1	0	1	0
Int. 4	1	1	1	1	1	1	0
Int. 5	1	0	1	0	0	1	0
Int. 6	1	1	1	1	1	1	0
Int. 7	1	1	1	1	1	1	0
Int. 8	1	1	1	1	0	1	0
Int. 9	1	1	1	1	1	1	1

Int. 10	1	1	1	1	0	1	0
Percentage	100%	80%	90%	80%	50%	90%	20%

The significant and major points revealed from the qualitative analysis were that 90 % of the interviewees believed that using this application as a supplementary material is more motivating than only conventional classrooms materials and it can be more effective than books because of the inherent ability of sharing different types of multimedia materials. Moreover, 100% of the participants believed that in case of its accessibility and ubiquity, and user-friendliness of the application, it is a suitable platform. The vocabulary list of every session was available anywhere and anytime in their mobile phones and 80 % of the students shared this positive attitude toward this feature of the online platforms and Telegram. As half of the students were reluctant to practice outside of the class, 50% of the interviewees who were more active believed that having interaction and being more exposed to the words' pronunciations and examples helped them to learn those words.

However, 2 students still believed that they were not interested in spending their time on social media and internet and they preferred the conventional classroom instructions. And, the dependence of the application to the internet and the filtration policy employed by the government imposed some limitations; therefore, only 20% of the participants were satisfied with its operational consistency. Finally, by analyzing the interview, it can be inferred that most of the students (90%) were keen on using such a supplementary material. The results of this analysis confirm the quantitative data analysis.

5. Discussion

The results indicated the better performance of the experimental group. This might be related to the ubiquity and accessibility of the smart phones and online interactive applications. The study of Thornton and Houser (2005) which claimed that mobile phones can effectively help foreign language learners in their learning process by using short message texts can be a good example of using mobile in learning vocabulary which is in line with the findings of the present study. Availability of the materials and the visualized nature of materials might have had a positive influence on the vocabulary learning of the experimental group in this study.

In terms of using other social networking applications in vocabulary learning, in an experimental study conducted by Rajayi and Poorahmadi (2017) on the impact of teaching vocabulary through Kik application on improving intermediate EFL learners' vocabulary Learning, the results showed that using Kik application can have a significant impact on EFL learners' vocabulary learning.

As far as retention was concerned, the results revealed that there was no significant difference between the experimental group's learning and retention performance. It can be concluded that using Telegram Application in vocabulary

learning had no significant effect on retention of the vocabulary items in learners. Although the participants of the experimental group outperformed in both tests as compared to the control group, the researchers of this study assumed that the participants could have performed better in the retention test if they had the motivation to keep being active and interact with each other and the teacher during the time interval. In a study conducted by Malmir and Rajabi (2016) the effectiveness of short messaging (SMS) via social networks EFL learners' vocabulary learning and retention were investigated. The results of the posttest revealed that both experimental and control groups performed similarly and there was no significant difference in their posttest results. However, the results of the retention test suggested an improvement comparing the control group.

Concerning the attitudes of the Iranian EFL learners towards Telegram as a mobile-assisted language learning device or a social networking tool, the findings recommended a positive attitude towards such an application. In conformity with these results, there are studies including the investigations conducted by Zamani and Mohammadzadeh (2013), Fageeh (2013), Nourbakhsh (2017), and Zarei, Heidari and Ameri-Golestan (2017).

From the results of this study, the researcher proposes some pedagogical implications to EFL teachers, learners, practitioners, material developers, policy makers, educationalists, teacher development training course holders and researchers. This integration can create motivation and more engagement on the part of the learners. The learners had this chance to have access to the authentic and reliable pronunciations and spellings of the words. This opportunity can make language learners able in increasing their vocabulary knowledge in an effective and convenient way by sharing authentic, visualized, and contextualized materials. Authentic materials and context are found to have positive effects on learners' motivation (Zohoorian, 2015). The materials utilized in the context of this study were multimedia materials such as podcasts, vodcasts, videos, pictures and memes which may increase the chance of learning words because of their impact on visual and auditory memory of the learners. Some sources which the researchers of this study found the most useful were vodcasts and videos. Hence, to create them, the appropriate videos can be downloaded as MP4 format from the following websites www.youtube.com, www.englishcoursetube.com, www.LipLix.com. Policy makers of the educational institutes should provide opportunities for teachers and learners to introduce more social media applications and their specific features in order to find the most applicable ones according to their needs. Collaborative language learning and teaching can be employed in the teaching process of foreign languages through using reliable networking systems such as emailing, blogging, or other social networking sites and applications which are available in different contexts.

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