

## **The Effect of Teaching Vocabulary through Text Messaging by Social Networks on Vocabulary Comprehension of Iranian Upper-Intermediate EFL Learners**

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**Abstract** – Mobile phones as new addition to information and communication technologies have created new ways to help learners in the process of foreign language learning. Given the importance of vocabularies for EFL learners, this study was an attempt to investigate the effectiveness of short messaging (SMS) via social networks on Iranian Upper-Intermediate EFL learners' vocabulary learning and retention. To this end, sixty university freshman students with upper intermediate proficiency level were chosen to take part in this study, 30 as control and 30 as treatment group. During 16 weeks of experiment, half an hour of the class time of each group was attributed to working on the book 504 words. At the end, both groups were given a teacher-made vocabulary test from 504 absolutely essential words, to see the effect of SMS on their vocabulary learning and the scores of each group were compared employing an independent t-test. The result of the t-test showed that both groups had improved in the post-test. Although there was not any significant difference between the groups in the post-test, the result of the delayed post-test showed that SMS via social networks had more significant effect on vocabulary retention compared to using traditional ways such as dictionary definitions, and the experimental group outperformed the control group.

**Keywords:** MALL; vocabulary retention; Upper-intermediate EFL learners; Short messaging

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### **1. BACKGROUND**

Language learning and use, under the influence of linguistic competence put forward by Chomsky (1965) from the discipline of linguistics and learning skills and strategies from the discipline of behavioristic learning from behavioristic psychology (Holth, 2003), has been looked at as a collection of linguistic components. The linguistic components necessary for efficient use of language has always been subcategorized as grammar, vocabulary, pronunciation, semantics, and pragmatics. Among the linguistic components, vocabulary, besides grammar and structure of the language, has always been under investigation by the scholars. In fact, a review of the huge body of research related to teaching and learning vocabulary in both ESL and EFL context can be an indication to the fact that there are very strong reasons for implementing a disciplined and systematic approach to first teaching and, as

a consequence, learning of vocabulary as a milestone and building block for development of comprehension which is undisputedly regarded as fundamental to improvement and success. Several researchers and vocabulary experts agree that vocabulary learning is in fact highly tied to comprehension in general and reading comprehension in particular (Cunningham & Stanowich, 1998; Nagy & Anderson, 1998; Mc Keown et al., 1983 among others).

Based on what was said on the place and instrumentality of vocabulary, one can say that by implementing a systematic and disciplined approach to teaching and learning vocabulary, learners can have vocabulary as a very important element in language learning and reading (Beck & Kucan, 2002). One of the technologies that can be used to help learners acquire a foreign language is mobile smart phones which are used dominantly by Iranian students for various purposes. The emergence of such technology has resulted in bringing about a new type of language learning called Mobile Assisted Language learning. As with other forms of technology, mobile assisted language learning (MALL) is a branch of technology-enhanced learning which can be implemented in numerous forms including face-to-face, distant or on-line modes.

In the EFL context of Iranian, the language learners, due to lack of enough time for being exposed to enough input and having adequate interaction between teachers, learners, and teaching materials, the learners do not enjoy the same rate of language learning experience as those in ESL contexts. In fact, it is not just to expect Iranian learners, no matter in which level of proficiency, to perform well on the tests of vocabulary since they do not have the required exposure to linguistic materials outside the classroom context. Still, the issue becomes tougher when one thinks of learners who suffer from the presence of language instructors who themselves might not have an authentic and comprehensive range of vocabulary in their command. On the other hand, regarding the importance of vocabulary for all four language skills and also predominance of existence of loads of various views on teaching vocabulary worldwide and in Iran, most without any scientific and research-based support, it seems very fundamental for those in the field to find their way through the misleadingly dominant views on vocabulary teaching and devise better ones. Therefore further studies are required to explore the effects of various approaches and techniques in teaching vocabulary.

## **2. THEORITICAL FRAMEWORK**

### **2.1. The Importance of Vocabulary Teaching**

Teaching vocabulary as one of the most fundamental building blocks of any language teaching program has always been emphasized during the history of language teaching, but mostly on part of people who might not have talked through the lenses of research. Vocabulary is in fact central milestone to English language teaching because without sufficient vocabulary students cannot understand others or express their own ideas. Wilkins (1972) wrote that “while without grammar very little can be conveyed, without vocabulary nothing can be conveyed” (pp.111–112). Regarding the importance of vocabulary in language learning, Lewis (1993) went further and argued that “lexis is the core or heart of language” (p.89). The issue of teaching vocabulary as a central tenet in language teaching and learning is so crucial that after many decades of

being neglected and receiving little importance, teaching and learning second language (L2), vocabulary has now markedly come into the focus of interest of many applied linguistic researchers and language teachers (Barcroft, 2004; Decaricco, 2001; Read, 2000).

However, regarding the different viewpoints of the past and present about teaching vocabulary, there is something important to be noticed in order not to blur the borderline between the viewpoints. In the past, it was thought that vocabulary could simply be learned effortlessly, and received only incidental attention in many textbooks and language programs, that is no careful, research-based approach was supporting how to teach or learn vocabulary. This point is of utmost importance and has created a considerable amount of debate these days since mastering vocabulary is one of the most challenging tasks that any learner faces when learning a foreign language and, thus, many language learners devote a great deal of time on memorizing lists of L2 words and rely on their bilingual dictionary as a basic communicative resource; furthermore, they consider L2 acquisition as essentially a matter of learning vocabulary.

## **2.2. Mobile Assisted Language Learning (MALL)**

One of the technologies that can be used to help learners in learning a foreign language is mobile phones which are dominant in most students' life. Mobile Assisted Language Learning describes an approach to language learning that is assisted or enhanced through the use of a handheld mobile device. MALL is a subset of Mobile Learning (m-learning). MALL has evolved to support students' language learning with the increased use of mobile technologies such as mobile phones (cellphones), MP3 and MP4 players, PDAS and devices such as the iPhone or iPad. 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. The object of mobile-learning is to provide an educational environment in which students can learn without any limitation of time, place, or device, thereby realizing a more creative and learner-centered educational process. That is, by mobile learning many limitations imposed by the learners by mandatory teacher-dominated classes are easily relieved. This can be thought of as ideal especially in the field of language teaching in EFL contexts where out-of-class practice through the being-language is rare. However, despite the overwhelmingly rapid growth and potential of the wireless devices and networks, mobile e-learning or m-learning is still in its infancy and embryonic stage (Motiwalla, 2007).

## **3. RESEARCH QUESTION**

The present study is an attempt to answer the following question:

1. Does the application of text messaging through social networks affect the performance of Iranian Upper-Intermediate EFL learners in a significant way?

#### **4. RESEARCH HYPOTHESIS**

Following the abovementioned question of the study, this research is going to test the following hypothesis:

1. The application of text messaging through social networks does not affect the performance of Iranian Upper-Intermediate EFL learners in a significant way.

#### **5. METHODOLOGY**

##### **5.1. Subjects**

To investigate the effect of teaching vocabulary through out-of-class text messaging by means of social networks in the Iranian context, two groups of participants were selected, each consisting of 30 Upper-Intermediate EFL learners with the age range from 20 to 25 based on Longman Proficiency Test for vocabulary. The upper-intermediate EFL learners (30 as treatment and 30 as control) were selected and assigned into two groups based on Vocabulary section of Longman TOEFL Test. The participants of this study were 60 non-English young students at Mahan institute in Touysercan. One group was assigned as the experimental group (n=30) and the other as control group (n=30).

##### **5.2. Measures**

In the current study, two measures were used to collect the required data. The detailed description of instruments is as follows:

**1. Longman TOEFL Test as The English Language Proficiency Test.** First, to make sure of homogeneity of the EFL participating learners proficiency on vocabulary items, a test consisting of 40 multiple choice items from Longman TOEFL test which measured learners' proficiency of the learners regarding their vocabulary knowledge was given to the learners.

**2. 40 multiple choice items as the post test.** The second instrument was a 40 multiple choice items which was constructed and distributed among the students as delayed posttest. The tests were devised based on the units covered from the book 504 Words which was taught during the half-an-hour classroom sessions and were practiced at home either through paper and pencil assignments given to the control group or through the use of social network (Telegram) which was shared between the treatment group learners and the teacher.

The 40 teacher-made multiple-choice tests were piloted with similar learners, and the reliability of the test calculated using Cronbach Alpha which was .89. At the end of the experiment the test was given to the participants as a post-test. For the delayed post-test the order of questions was changed in order to prevent the practice effect.

##### **5.3. Procedure**

In order to conduct the study and collect the required data related to the research questions and hypotheses, the following procedure was followed.

First, the copies of the Longman TOEFL test on vocabulary section were distributed among the participants of the study to make sure of their homogeneity regarding their ability to performance on vocabulary items. The participating EFL learners were assured that the results would be used for this research and their marks would be kept completely confidential. They were also given a 40 item answer sheet and were asked to put their intended answer for each multiple choice item on the answer sheet. The test was given to 100 participant and 60 of them who answered within the score range of 15 to 25 were chosen as the participants of the study. Then, the 60 selected learners were randomly assigned to treatment and control groups, each consisting of 30 learners.

Next, both the treatment and control groups were taught for a semester consisting of 16 sessions by the same teacher. Each session, half an hour of the class time of each group was attributed to working on the book 504 words which had been introduced to the learners of both groups as side book. Each session, one unit of the book was covered for each group. Each group was supposed to have some extra work on the unit as at-home assignment. The participants of the control group were given some paper and pencil exercises to do at home. The assignment was related to the materials of the unit covered in the class time. They were wanted to complete the exercises of each unit which had been studied during the class time. Besides, they were required to do some paper and pencil exercises including finding dictionary definition for the new words, writing a sentence for each word, and writing a paragraph about a specified topic which had to contain at least 10 of the already- covered new words.

The participants of the treatment group had a half-an-hour interaction on the social networks called Telegram and Viber. They were divided into two groups, each group including 15 learners, one group contacted with the teacher through Telegram and the other group through Viber. Each group of the treatment learners had two half-an-hour sessions each week interacting with the teacher from the distance at a certain time. They had on-line interaction for half an hour about the materials of the unit covered in the class time. They messaged sentence examples containing new words and the teacher and other participants scaffolded. The teacher, during the on-line chatting, also sent them multiple- choice items on new words, and the learners discussed the alternatives with the teacher. Also, the teacher sent them short texts with blanks to be filled by new words, and then they discussed the answers together. Then, two weeks after the classes had been over, the participants of both groups (treatment and control) were given a booklet test containing 40 multiple choice items. The test items had been testing the words which had been taught during the class sessions. They were taken from the Longman TOEFL test on vocabulary items.

#### **5.4. Data Analysis**

Data analysis was conducted using the SPSS software. Based on the research questions different statistics were used. First, descriptive statistics was used to describe the characteristics of the sample regarding frequencies, central tendencies, and variations. Second, a preliminary t-test was run to see whether difference between the treatment and control groups regarding their performance on pre-test on Longman TOEFL test vocabulary items was statistically significant. The major purpose of this was to use this t-test result as an indicator for the posttest.

## 6. DATA ANALYSIS AND RESULTS

The purpose of this study was investigate and compare teaching vocabulary items to Iranian Upper-Intermediate EFL learners both traditionally and through social networks, Telegram and Viber in Iranian EFL context. In this way, the purpose of this research was to find out whether teaching vocabulary items to Iranian Upper-Intermediate EFL learners is practically significant than that of teaching them to the same learners by means of traditional ways common in the EFL classrooms. The present study was undertaken in a foreign language context, in which the issues of context could be looked at from a rather different perspective. Since in the EFL context of Iran, the learners are grappling with the sentence level grammar, teaching vocabulary as another main component of the language is in need of more consideration. The main purpose of the present study is two- fold. First, the study was going to find out whether teaching vocabulary through social networks has a better significance than teaching them traditionally. Second, the study is going to elicit the viewpoint of some of the participants regarding two different ways of teaching vocabulary: through traditional methods and through already emerged social networks.

To this end, this study is an attempt to investigate the effect of teaching of vocabulary through social networks on vocabulary knowledge of Iranian EFL learners. It also aimed at comparing the performance of two groups, through-the-traditional-methods-taught and through-social network-taught groups, on their delayed posttest regarding their knowledge of metaphoric retention.

### 6.1. Descriptive statistics of the Data

Before probing into analyzing the data related to the research questions of the study, a descriptive statistics for the pre-test data is presented to better help the reader make a rough guide into subsequent interpretations.

**Table 1: Descriptive statistics for the groups**

		Case Processing Summary					
Tra-social		Cases					
		Valid		Missing		Total	
		N	Percent	N	Percent	N	Percent
Vocabulary knowledge	1 pretradiional	30	100.0%	0	.0%	30	100.0%
	2 presocial	30	100.0%	0	.0%	30	100.0%

**Table 2: Descriptive Statistics for Normality Assumption of Both groups in the Pre-test Descriptives**

trasocial		Statistic	Std. Error			
Vocabulary	1 pretraditional	Mean	<b>10.10</b>	<b>.312</b>		
Knowledge		95% Confidence Interval for Mean	Lower Bound	<b>9.46</b>		
			Upper Bound	<b>10.74</b>		
		5% Trimmed Mean		<b>10.09</b>		
		Median		<b>10.00</b>		
		Variance		<b>2.921</b>		
		Std. Deviation		<b>1.709</b>		
		Minimum		<b>6</b>		
		Maximum		<b>14</b>		
		Range		<b>8</b>		
		Interquartile Range		<b>2</b>		
		Skewness		<b>.012</b>	<b>.427</b>	
		Kurtosis		<b>.279</b>	<b>.833</b>	
		2 presocial		Mean	<b>10.07</b>	<b>.262</b>
				95% Confidence Interval for Mean	Lower Bound	<b>9.53</b>
	Upper Bound			<b>10.60</b>		
5% Trimmed Mean				<b>10.07</b>		
Median				<b>10.00</b>		
Variance				<b>2.064</b>		
Std. Deviation				<b>1.437</b>		
Minimum				<b>7</b>		
Maximum				<b>13</b>		
Range				<b>6</b>		
Interquartile Range				<b>2</b>		
Skewness				<b>-.050</b>	<b>.427</b>	
Kurtosis				<b>-.476</b>	<b>.833</b>	

There are some general assumptions that apply to all parametric techniques especially the technique used in the present study, t-test.

The first assumption is that the parametric approaches assume that dependent variable is measure at an interval level; that is, using a continuous scale rather than a discrete category, the assumption which is not violated in the present study. Second, the scores or population must have been observed randomly, and third there must be independence of observation in the study; that is, each observation or measurement must not be influenced by any other

observation or measurement. As Steven’s (1996) puts it, violation of the mentioned assumption makes the interpretations messy and subject to unreliability.

More important than not, for parametric techniques of analysis, including t–test, it is highly assumed that the population from which the samples are taken are normally distributed. However, with a large sample sizes (for example 30 which is observed in the present study), the violation of normal distribution of measures should not cause any major problems.

Next, the preliminary t-test was conducted to probe more into the statistical information related to both groups of the study can be more illuminating.

**Table 3: Descriptive statistics for pretest**

Group Statistics					
trasocial		N	Mean	Std. Deviation	Std. Error Mean
Vocabulary Knowledge	1 pretraditional	30	10.10	1.709	.312
	2 presocial	30	10.07	1.437	.262

**Table 4: Independent t-test of pretest measure**

		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
Vocabulary knowledge	Equal variances assumed	.495	.485	.082	58	.935	.033	.408	-.783	.849
	Equal variances not assumed			.082	56.338	.935	.033	.408	-.783	.850

Another important assumption is that the parametric techniques are obtaining populations of equal variance so that type 1 or type 2 errors are not committed. In fact, it is highly important that the variability of scores of each group is similar. As the first section of the table shows, the Leven’s test for equality of variance is assumed. Since the sig. value for Leven’s test is larger smaller than .05, the second line of the table is a good indicating measure for the present study. The independent sample t-test results show that, there is no significant difference in scores for traditional (M= 10.10, SD=1.70) and social methods (M=10.071, SD=1.43;t=(58) =.08, p=.9 two-tailed.

Also, the critical level of significance is significantly beyond .05 (.93 as the table show), and this can clearly indicate that there is no statically significance difference between the groups which could in itself be an evidence for normality of measures and equality of variance between the means of the two groups of the present study.

**6.1.1. Research Question**

Independent sample t-test was run to compare the post-test means of the two independent samples, namely traditionally-taught group and through-the-social-network taught group in order to see whether teaching vocabulary through recently emerged social networks affect vocabulary knowledge of Iranian EFL learners in a significant way. First, according to Table 6 the sig. value for Leven’s test is less than .05, which necessitates considering the second line in the t-test table. As Table 6 shows, the result of conducting independent t-test conducted to compare the independent means of the two measure (traditionally-taught versus through-the-social-networks taught), there is a significant difference in scores for the through-the-social-networks (M=32.42, SD=3.42) and traditional group (M=2d0.93, MD= 2.25;t= 46.256, p=.000, two-tailed). The magnitude of the differences in the means (mean difference=.76: 9.95- 13.03) is very large (eta squared=.14) which is an indicator to proving the effectiveness of effect size. Therefore, hypothesis of the study which claims that the application of text messaging through social networks does not affect the performance of Iranian Upper-Intermediate EFL learners in a significant way was rejected, thereby validating the claims put forward by the first research question.

**Table 5: Descriptive statistics for the posttest**

Group Statistics					
	trasocial	N	Mean	Std. Deviation	Std. Error Mean
Vocabulary	1 postsocial	<b>28</b>	<b>32.4286</b>	<b>3.42570</b>	<b>.64740</b>
knowledge	2 posttraditional	<b>30</b>	<b>20.9333</b>	<b>2.25806</b>	<b>.41226</b>

**Table 6: Independent t-test for posttest measure**

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Vocabulary knowledge	Equal variances assumed	<b>8.549</b>	<b>.005</b>	<b>15.186</b>	<b>56</b>	<b>.000</b>	<b>11.49524</b>	<b>.75697</b>	<b>9.97885</b>	<b>13.01163</b>
	Equal variances not assumed			<b>14.977</b>	<b>46.256</b>	<b>.000</b>	<b>11.49524</b>	<b>.76752</b>	<b>9.95053</b>	<b>13.03994</b>

The analysis of data in the previous chapter yielded some interesting and valuable facts about the effect of the application of text messaging through social networks on the performance of Iranian Upper-Intermediate EFL learners , and also elicited the viewpoints of a sample of Iranian Upper-Intermediate learners towards the application of SMS through social networks in vocabulary learning.

## **7. RESULTS AND DISCUSSION**

The mastery of English language teaching not only consists of knowledge about linguistic components such as grammar, vocabulary, and lexical items and skills(listening, speaking, reading, and writing), but also the ability of the learners to recognize pragmatic, interactional and paralinguistic norms of language which can help the learners in coping with communication opportunities which come about for them. Therefore, besides teaching superficial components of the language under study, conscious noticing to hidden layers of language seems necessary, especially the way interactional patterns which lead to learning are managed the parties involved in learning- teaching process. The present study was designed to investigate the effect of application of text messaging through social networks on the performance of Iranian Upper-Intermediate EFL learners regarding their vocabulary learning. Besides, it was to elicit the attitude of a sample of Iranian Upper-Intermediate learners towards the application of SMS through social networks in vocabulary learning.

The descriptive statistics and the independent samples t-tested conducted on their performance of TOEFL test for vocabulary section revealed that the two groups of the Iranian Upper-Intermediate EFL earners were homogeneous regarding their performance on vocabulary tests before the treatment. However, this was not the cases regarding their performance on vocabulary items in the post test as he results of the independent samples manifested. For the research hypothesis of the study which claims that the application of text messaging through social networks does not affect the performance of Iranian Upper-Intermediate EFL learners in a significant way, the hypothesis was rejected, thereby validating the claim that teaching vocabulary through social networks can affect the performance of Iranian Upper-Intermediate EFL learners in a significant way. This is in line with the theories which follow Vygotsky's Sociocultural theory in claiming that it is through interaction by different means ( people, artifacts, and language) that knowledge is created. Learning through interaction and learning in interaction, following the principles of sociocultural SLA are gaining increasing importance in the field of language pedagogy day after day.

Regarding the importance of interaction in learning in general and in language learning in particular, one can claim that mobile phones can be a big help. Useful, to the point practice is what which is possibly wanted in and out of interaction from the viewpoint of those who are following sociocultural SLA in ESL and EFL classes during the recent years(Walsh, 2011; Lee, 2007, among others). When scaffolding between the novice and the expert is supported by supporting technological devices, the opportunity for learning increases since the amount of adaptive collaboration between the learner and semiotic tools such as the text and tasks

enhances. One of the main tools for development and learning in viewpoint of socioculturally oriented theories is artifacts, which beside social interaction itself, and language as a higher mental tool for functioning in the world (Vygotsky, 1978, 1987) can contribute to development. Mobile technology, as a newly emerged artifact, can for sure help to this phenomenon a lot.

More interestingly, the participants of the experimental group, as the results of second research question shows, highly admired the use of social networks in their learning process. Regarding their positive attitude on the use of social networks, the interesting point was that they highly admired the presence of a social networks because of its motivating the learners, getting them actively involved in the learning process, having a lot of interaction, and being aware of committed mistakes. This shows that learners have a positive attitude towards social networks; therefore, EFL instructors can have the as a teaching aid in their duty. The interesting point was that the learners knew that the social network makes them actively involved in the process. This is a gain validating the claims put forward and discussed above regarding the beneficial effect of interaction on learner learning and improvement.

## **8. CONCLUSION**

Based on the results of statistical analyses, one conclusion that can be drawn is that most Iranian Upper- Intermediate EFL learners can perform well on vocabulary tests if they are supported by the social networks such as Viber and Telegram. The Iranian Upper-Intermediate EFL learners, also, positively perceived the presence of smart phones and social networks for their learning. In this regard, the significant evidence was provided to confirm the use of social networks in classroom context and outside-the-classroom contexts since they can provide clear and appropriate purposes for learning contents, reflect real world practice, require learners to use target language for a communicative purpose, provide opportunities for learners to negotiate meaning, use and expand their existing language resources, motivates the learners, makes them aware of their committed mistakes on line, notice how language is used and finally involve learners in a mode of thinking and doing.

The result of independent samples t-test showed that the performance of Iranian Upper-Intermediate learners significantly improved on vocabulary tests when out-of-class activities and assignments were supported by social networks. This proves the fact that the emergence of technology in general and social networks in particular has to be welcomed as an inevitable fact in the educational contexts, especially when the purpose is learning a language. Further, since language learning and teaching in an Iranian context is faced some limitations regarding the real use of language in communicative situations, the presence of social networks is going to be rewarding. Language education in the EFL context of Iran cannot provide enough real-use situations for the learners to communicate through the targeted language; however, the presence of social networks can, to a great extent, make up for such deficiencies and put the learners on the road to success regarding communicative use of the language.

The most important finding of the study was the overwhelming agreement of learners with the contribution of the social network messaging in helping student for employing interactional strategies. This means that the Upper-Intermediate learners, consciously or

subconsciously, have realized the importance of the fact that interaction is a necessary requirement and they need to make up for it in their language learning attempts if they want to succeed.

To sum up, on the basis of the findings of this study, as well as present research on the topic, there is a strong indication that language learning in general, and vocabulary learning in particular, can be best acquired through social network messaging embedded in the process of language learning. The results of the present study suggest that the striking potential role of social networks to positively enhance different aspects of language learning should not be underestimated in the current activities of Iranian English language context.

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