

The Effect of Using SMS on Iranian EFL Learners' Incidental/Intentional Vocabulary Learning

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Received: 2019-02-07

Accepted: 2019-03-10

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Abstract

Nowadays, there are a large number of teaching and learning techniques and programs designed in order to improve EFL learners' vocabulary competence. Most of the people on earth have mobile phone network, and nearly half of the users have more than one mobile device. Moreover, these electronic devices play an increasing role in educational programs. This study was intended to examine the impact of using short message service (SMS) on Iranian EFL learners' incidental and intentional vocabulary acquisition. In order to fulfill the intended objectives, 40 intermediate learners studying English in an Institute were chosen. The participants were divided into incidental and intentional groups. The participants were presented with a pre-test one week prior to the provision SMS trend and a post-test after that. Interpreting the obtained results, The results indicated that the intentional group could learn more vocabulary than the incidental group. In addition, a questionnaire was provided to the participants to check their satisfaction with the trend. It was revealed that the students were highly motivated learning the second language using mobile-assisted language learning (MALL) approach.

Keywords: Mobile-assisted language learning, incidental learning, intentional learning, short message service

1. Introduction

English is a language which is considered to be used as a lingua franca all around the world. A great number of courses are introduced in different countries in order to help EFL learners

acquire and use this language. English learning like the acquisition of any other language is composed of two main aspects, grammar learning and vocabulary learning. Thus, having good vocabulary knowledge has been considered to be one of the most important issues in the case of second language acquisition (e.g. Carter & McCarty, 1989; Coady, 2001; Laufer, 1986, 2005).

Understanding of at least 8,000 to 9,000 English word families is essential for comprehension of written text (e.g. Brown, 2001) and around 6,000 to 7,000 for comprehension of spoken language (Nation, 2006). Moreover, a large amount of vocabulary is needed for appropriate language use in different situations, including listening to lectures, communicating with others, reading books, and writing texts. Although a large number of scholars have recommended explicit vocabulary instruction (Ellis, 2005; McNicol, 2004; Nation, 1982; Paribakht & Wesche, 1997, among others), it is given less priority in second language classrooms (on the assumption that students will learn the vocabularies on their own). In fact, the need for learning new vocabulary has not been accompanied by sufficient suitable and applicable teaching remedies.

Till the first decades of the twentieth century, such an essential need was accomplished providing the EFL learners with lists of new words and their meanings (in their first language) to be memorized. Such a trend was mainly proposed by the classical methods like Grammar-Translation method. However, since the traditional style was boring and laborious, the scholars (Wilkins, 1976; Levy, 1997) proposed more practical approaches such as communicative, task based, integration (Lowe, 2003), and content based language teaching trends. These trends put more emphasis on the acquisition of L2 vocabulary (they do not consider language to be just a string of grammatical structures). According to these trends introduced during the last four decades, the vocabulary of the target language is mainly encouraged to be acquired incidentally (Ahmad, 2011; Huckin & Coady, 1999) as compared to intentional vocabulary learning focused on many studies (e.g. Hulstijn, 2001; Singleton, 1999). However, the types of the tasks, techniques, and strategies to be used in the newly proposed models have not been determined clearly.

In order to solve such a conflict (believing in explicit instruction and leaving it to the EFL learners providing no specific technique) over the restricted amount of class time, there is an increasing interest among second/ foreign language researchers, students, syllabus designers, and teachers in using technology (computer and mobile among others) for vocabulary instruction inside and outside the class. Taking advantage of the available technological devices in education is a new pedagogical treatment studied or explored by some researchers (Chinnery, 2006; Fransen, 2008; Kukulska-Hulme & Shield, 2008; Thornton & Houser, 2002, 2003, 2004, 2005).

Learning a new word involves learning its spoken forms, written forms, various meanings, and its idiomatic use. Such a kind of learning can occur faster, if the new words be demonstrated in the related contexts. However, for a second language acquirer, knowing a word initially means that he should be able to connect a word form with its most popular meaning. Therefore, success in vocabulary acquisition may highly depend on how well the form-meaning accordance takes place, at least at the very early stages of acquisition. However, it seems to be a good idea to expose the EFL learners to the new items applied in a text (alongside with the ordinary way of vocabulary representation) even at the most basic levels using any kind of method or device. There is no doubt that the context can help the EFL learners learn the vocabulary easier and better.

Nowadays, there are a large number of teaching and learning techniques and programs designed in order to improve EFL learners' vocabulary competence. 90% of the people on earth have mobile phone network, and 41% of users have more than one mobile device (Facer, 2004; Lu, 2006; Marshall, 2007; Nah, White, & Sussex, 2008; Song & Fox, 2005). Moreover, these electronic devices play an increasing role in educational programs. Laptops and personal digital equipment are replaced by smart phones. Thus, mobile as an easy to access device is available each and everywhere, and can be considered as a good help facilitating foreign language acquisition specially vocabulary learning. The new linguistic items and constructions of the target language can be individually studied by the EFL learners. Moreover, since the tension of the classroom environment and the boring structure of language teaching books do not exist in

such a kind of learning; therefore, the EFL learners may get more motivated learning the intended foreign language.

Thus, the current study was carried out in order to investigate the acquisition of English vocabularies by adult Persian EFL learners. The study was intended to identify to what extent the participants could acquire the functional properties of the specified vocabularies. The distinguishing point in this study was the application of a handy technological device (mobile phone) into the process of learning.

The second issue explored in this investigation was to identify the effect of applying incidental and intentional trends in the process of vocabulary acquisition. The research was designed to compare the two treatments and their effect on the acquisition of new words by Iranian EFL learners.

As the motivation of the EFL learners in language learning increases, they improve in different aspects of that language. However, in some cases, the old, fossilized, and laborious methods and techniques in language learning may motivate the EFL learners. Therefore, the last goal of this study was to shed more light on the effect of applying short text messages (SMS) in incidental and intentional trends proposed to the participants. The research questions considered for the purpose of this study were the followings:

- 1- Can using SMS improve Iranian EFL learners' incidental learning of vocabulary?
- 2- Can using SMS improve Iranian EFL learners' intentional learning of vocabulary?
- 3- Can using SMS improve Iranian EFL learners' motivation of learning vocabulary?

2. Methodology

In this part, some information is provided about the participants, instruments and procedures used in this study.

2.1 Participants

The participants in this study were chosen carefully out of about one hundred Iranian EFL learners studying English at Farhang-Pajuh language institute. In order to prepare equal

conditions for each and every candidate, an Oxford Quick Placement Test, as an indicator of proficiency level, was administered to the candidates. Out of all the candidates tested, 40 students were labeled as intermediate learners due to the scores obtained in Oxford Quick Placement Test. Since the study was intended to explore on the productivity and influence of two treatments, the selected participants were divided into two groups (20 participants in each group).

It is worth mentioning that the selected participants were aged from 16 to 33. Considering gender, there were both male and female participants performing in each group. Moreover, the participants were surveyed regarding their linguistic background such as their L1, prior studies in English, and residence in English speaking countries.

2.2 Instruments

In order to conduct the current study and come to the reliable results, three different kinds of tests were employed. First of all, an Oxford Quick Placement Test was used in order to identify the participants' proficiency level. Then, a pre-test and a post-test were developed (adapted from Beglar & Hunt, 2005), before and after the application of the treatment, in order to assess the participants' performance on the vocabularies proposed to them during the investigation.

In addition to the above-mentioned tests, at the end of the process, a questionnaire was provided to the participants in order to understand their attitude towards the proposed treatment. The questionnaire was composed of ten sentences. They were supposed to choose among one of the answers of "I agree", "no comment", and "I disagree". According to their responses, the researcher could measure the participants' satisfaction and motivation toward the proposed treatment.

2.3 Procedure

As mentioned previously, in order to select the intended participants from the present candidates, the Oxford Quick Placement Task was administered. Since the major focus of this study was on

the intermediate students, the selected participants were divided into two groups to be proposed to the intended treatments (incidental and intentional treatments).

In order to come to the main process, a pre-test and a post-test were developed. Before carrying out the main research, a pilot test was conducted to find out the flaws and shortcomings of the tests designed. The tasks were administered to six intermediate EFL learners in order to modify the defective items.

First of all, the participants were presented with a test consisting of 20 items. This test was administered prior to the provision of the trend. Although there was no limitation of time doing the tasks, the pre-test task was completed by the EFL learners in 30 minutes.

Then the participants in both incidental and intentional groups were proposed to the trend. The first group (incidental group) was not aware that they were subject to a process of vocabulary learning. They would just receive an SMS at any time during the day. Moreover, the text in the SMS was only a sentence including the intended vocabulary. No definition of the new word was presented to these participants.

On the other hand, the participants in the second group (intentional group) were totally informed that they would go on a learning process facilitated by new technological devices. The intended SMS was sent to them at a particular time every day. The text included the definition of the intended vocabulary attached by a sentence as an example. It is worth mentioning, in order to increase the chance of learning, each SMS was sent to the participants (in both groups) two times. Thus, the vocabularies were reviewed for the EFL learners. One week after the provision of the last SMS, a post-test (see appendix B) was given to the participants in both groups. The test, as mentioned above, was intended to measure the acquisition of intended vocabularies.

At last, the participants in both incidental and intentional groups were proposed to a questionnaire measuring their attitude toward the technological treatment provided to them. The EFL learners' answers to the questionnaire were to determine their opinion about the treatment proposed.

3. Results and discussion

First and foremost, in order to evaluate and compare the performances of the participants in pre-test and post-test in both incidental and intentional groups, a paired-samples t-test was conducted. Such an analysis was used to identify the significance of the difference between the performances of the two groups in pre-test and post-test. Then, concerning the items in the post-test task, an independent-samples t-test was employed in order to have a comparison between the performances of incidental and intentional learners. As mentioned previously, all the participants in both groups were proposed to a questionnaire measuring the EFL learners’ satisfaction and opinion about the application of mobile phones (short text messages) into vocabulary learning process. The participants’ agreement or disagreement on the proposed trend was identified conducting a frequency analysis on each of the items in the questionnaire. The detailed analysis is provided below:

3.1 Incidental Trend

As mentioned before, in order to demonstrate the performance and improvement of the group proposed to the incidental trend, a paired-samples t-test was conducted. The results are represented in Table 1. The numerical findings show that there was a statistically significant improvement in the performance of the participants from pretest (M = 8.55, SD = 3.50) to posttest (M = 11.80, SD = 4.15), $t(19) = 6.10, p = 0.005$. The mean increase of the obtained scores was 3.25 with a 95% confidence interval ranging from 4.36 to 2.13. The eta squared statistic (0.66) indicated a large effect size.

The actual performance of the participants receiving incidental trend is illustrated in Figure 1. As it is demonstrated in this figure, the performance of the Iranian EFL learners has improved significantly from the pretest to the posttest.

Table 1. Paired Sample T-test Results of Incidental Group

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Incidental Group	pretestscore - posttestscore	-3.250	2.38140	.53250	-4.36453	-2.13547	-6.103	19	.000

3.2 Intentional Trend

As it was stated before, the participants in the second group were proposed to the intentional trend. In order to demonstrate the performance and improvement of the group proposed to this trend, a paired-samples t-test was conducted. The obtained results are represented in Table 2. The numerical findings show that there was a statistically significant improvement in the performance of the participants from pretest (M = 8.30, SD = 3.48) to posttest (M = 14.20, SD = 4.98), $t(19) = 7.00$, $p = 0.0005$. The mean increase of the obtained scores was 5.90 with a 95% confidence interval ranging from 7.66 to 4.13. Moreover, the eta squared statistic (0.72) indicated a large effect size.

The actual performance of the participants who were proposed to the intentional trend is illustrated in Figure 1. As it is demonstrated in this figure, the performance of the Iranian EFL learners has improved significantly from the pretest to the posttest.

Table 2. Paired Sample T-test Results of Intentional Group

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Intentional Group	pretestscore - posttestscore	-5.900	3.76829	.84261	-7.66361	-4.13639	-7.002	19	.000

As mentioned before, Figure 1 demonstrates the performance of the participants in both incidental and intentional groups. The bars presented for pretest scores show similar percentage of correct performance by the subjects in each group (Incidental T = 8.55, Intentional T = 8.30). On the other hand, the bars representing the posttest scores show significant improvement on the part of Iranian EFL learners. The last point worth considering in Figure 1 is the noteworthy difference between the performances of the incidental and intentional groups in posttest.

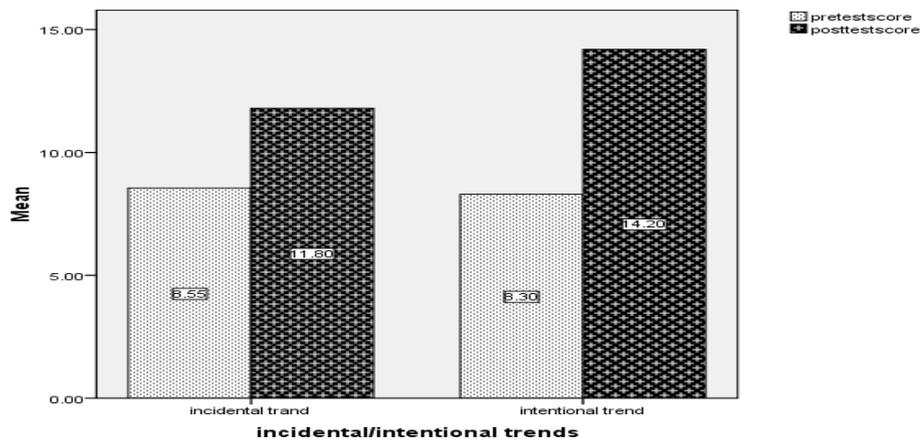


Figure 1. Bar Graph on the Performance of Both Groups in Pretest and Posttest

3.3 Incidental/Intentional Pretest Comparison

As it is illustrated in Table 3, the performances of the two groups of incidental and intentional trends in pretest were compared conducting an independent-samples t-test. The obtained results show that there was no significant difference in pretest scores of the incidental group (M = 8.55, SD = 3.50) and the intentional one (M = 8.30, SD = 3.48), $t(38) = 0.226$, $p = 0.822$ (two-tailed). The magnitude of the difference in the means (mean difference = 0.25) was very small (eta squared = 0.009).

Table 3. Independent Samples Results on Pretest Scores

		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
Pretest score	Equal variances assumed	.261	.612	.226	38	.822	.25000	1.10400	-1.9849	2.4849	
	Equal variances not assumed			.226	37.99	.822	.25000	1.10400	-1.9849	2.4849	

3.4 Incidental/Intentional Posttest Comparison

The performances of the two groups of incidental and intentional trends in posttest were compared conducting an independent-samples t-test. The obtained findings are illustrated in Table 4. The results show that there was a significant difference in posttest scores of the incidental group (M = 11.80, SD = 4.15) and the intentional one (M = 14.20, SD = 4.97), $t(38) = 1.656$, $p = 0.0005$ (two-tailed). Moreover, the magnitude of the difference in the means (mean difference = 2.40) was very large (eta squared = 0.88).

Table 4. Independent Samples Results on Posttest Scores

		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
Posttest score	Equal variances assumed	.808	.374	-1.65	38	.000	-2.40000	1.44950	-5.3343	.53436
	Equal variances not assumed			-1.65	36.80	.000	-2.40000	1.44950	-5.3375	.53750

3.5 Satisfaction and Motivation Analysis

As mentioned previously, all the participants in both groups were proposed to a questionnaire measuring the EFL learners' satisfaction and opinion about the application of mobile phones (short text messages) into vocabulary learning process. The participants' ideas about the designed sentences (the sentences were about the effect of applying SMS in the process of vocabulary learning) were identified by marking one of the three options of negative effect, no effect, or positive effect. Then, conducting SPSS Frequency Statistics, it was revealed that a large number of participants in both intentional and incidental groups were satisfied with the proposed trends. In fact, the application of mobile phones in the process of second language learning was highly motivating (incidental group = 77.3%, intentional group = 80%).

Table 5. Frequency Results on Iranian EFL Learners’ Opinion

participants			Frequency	Percent	Valid Percent	Cumulative Percent
incidental group	Valid	negative effect	1	4.5	4.5%	4.5
		no effect	4	18.2	18.2%	22.7
		positive effect	15	77.3	77.3%	100.0
		Total	20	100.0	100%	
intentional group	Valid	negative effect	1	5.0	5%	5.0
		no effect	3	15.0	15%	20.0
		positive effect	16	80.0	80%	100.0
		Total	20	100.0	100%	

The numerical statistics presented in Table 5 are visually shown in Figure 2. As it is apparent, an ignorable number of the students had negative ideas about some aspects of mobile assisted language learning (MALL).

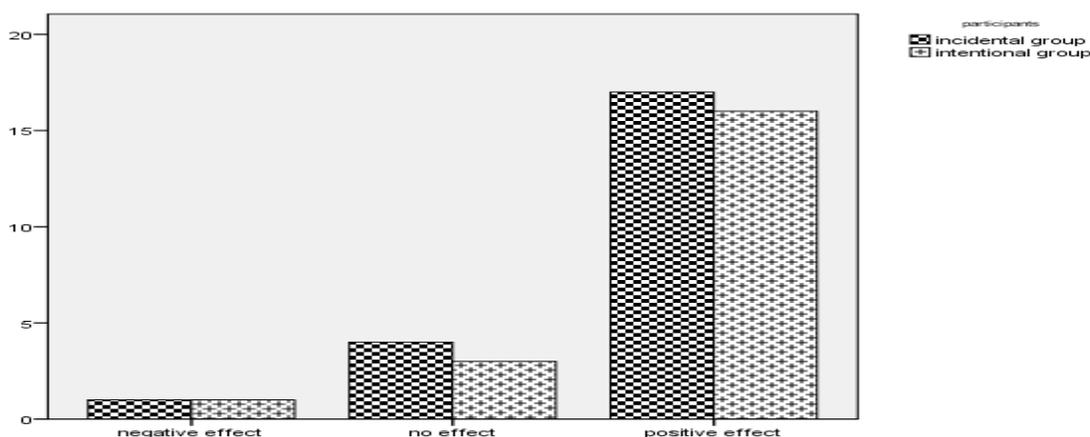


Figure 2. Bar Graph on the Performance of Both Groups in Motivation Test

4. Conclusion

This study was carried out in order to investigate the acquisition of L2 vocabularies by adult Persian EFL learners. In order to fulfill the before mentioned objectives, some research questions were proposed.

The first research question was concerned with the acquisition of vocabularies through incidental trends using SMS. Exploring the pool of obtained data, it was revealed that the learners' performance on vocabularies has improved substantially. Thus, these structures are acquired by a large number of the participants. The collected responses out of the tasks along with the conducted statistical procedures show that the learners' production in posttest is acceptable.

Considering the second question, it was revealed that the participants in this group not only can learn through the intentional SMS, but also outperform the ones in the incidental group. A large number of the students in this group gained near full scores.

On the other hand, the third question addressed the role of SMS on learners' motivation. The results obtained by conducting and analyzing the questionnaires show that a predominant number of the participants in each group were highly satisfied with the SMS sending trend. In fact, just an ignorable number of the learners had negative or no idea about the application of technology into the language learning process (e.g. Salaberry, 2001). As a whole, the findings demonstrated that the EFL learners seem to be highly affected with the proposed trends.

Moreover, it is worth considering that this study was mainly concerned with the problems caused by pedagogical shortcomings in the area of vocabulary learning. It seems that the pedagogical methods proposed during the last two centuries do not propose any specific technique for vocabulary learning. In spite of the provision of dozens of methods the EFL learners are mainly obliged to rely on the old ways of vocabulary learning (memorize the lists of the new words in each chapter). In fact, the EFL learners are left on their own in this area, which can be challenging for a large number of the learners. Therefore, it would be a good idea to provide accessible and applicable techniques and devices for vocabulary acquisition by EFL learners.

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