
The role of short text messaging in Iranian EFL vocabulary learning and motivation

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To cite this article:

Atefeh Kamalian, Sima Sayadian. The Role of Short Text Messaging in Iranian EFL Vocabulary Learning and Motivation. *Science Journal of Education*. Vol. 2, No. 4, 2014, pp. 101-107. doi: 10.11648/j.sjedu.20140204.12

Abstract: Although the penetration of mobile phones in Asian countries keeps climbing, little research has explored the application of the short message service (SMS) in vocabulary learning in Iranian young adult learners. This study aims to examine the role of SMS on vocabulary acquisition and motivation of Iranian students. Sixty young female learners in Pre-Intermediate level were randomly distributed into two groups and they were given a list of words to make sentences with. The experimental group sentences were corrected by the teacher through SMS and the control group sentences were checked in their notebooks. Later, the post-test was administered. Utilizing the paired and independent sample t-test, and descriptive statistics, the data were analyzed. The results revealed that the experimental group outperformed the control group (Sig= 0.01, sig<0.05). The findings also revealed that both learners and parents had positive attitude toward using cell phones in vocabulary learning.

Keywords: Vocabulary Learning, Short Text Messaging (SMS), Motivation

1. Introduction

Vocabulary learning has become the topic of interest for many EFL practitioners all around the world. The more vocabulary an EFL learner acquires, the better communication he/she will have. Larsen-Freeman and Anderson (2011) state many techniques used for vocabulary learning in an age of technology one of which is mobile learning. The researcher believed that recently mobile learning has been used as one of the technologies in the field of teaching and learning. Learning anywhere and anytime is the most important advantage of mobile technologies. Thus, the significance of mobile learning lies in the fact that learning is delivered to a person, at a specific time and in specific place while using electronic devices (Ally, Schafer, Cheung, McGreal, & Tin, 2007). Regarding using cell phones, another merit involves their being personal and movable. Learners can not only utilize the cell phones anywhere and anytime they desire but also they can obtain the information, meaning. Moreover, they can keep in touch with the others via using this technology (Song, 2008). According to many studies conducted in the field of technology, the researchers proposed that using

short text messaging (SMS) would be a good instrument in regard to vocabulary learning in EFL contexts. Hence, mobile learning can overcome restrictions of time and space and also enables learners to study whenever and wherever possible. However, it may also bring about some problems, mobile phones as new addition to information and communication technologies have created new ways to help learners in the process of foreign language learning. Therefore, mobile assisted language learning (MALL) is available through many devices that cell phone is one of them. MALL designers sought to move away from the traditional methods of vocabulary learning; therefore, they decided to maximize the benefits of devices such as cell phones. On the other hand, learning outside a classroom requires nothing more than the motivation to do so where the opportunity arises from books, electronic resources, places and people. Therefore, students prefer to utilize cell phones more as educational devices because they are small enough to fit in a pocket or in the palm of one's hand. They can be carried around with relative ease and applied for learning activities such as vocabulary learning. The students are extremely engrossed in utilizing the cell phones for their low costs and small sizes to carry them in

their pockets. Seemingly, motivational aspects are important in education theory.

Previous studies (Cavus and Ibrahim, 2009; Kennedy and Levy, 2008; and Thornton and Houser, 2005) have found that the motivational orientation of students have significant impact on their vocabulary learning. Therefore, as the mentioned studies highlighted the effectiveness of motivation and mobile learning (M-learning) on vocabulary learning, the present study aims to investigate the role of short text messages (SMS) in Iranian EFL learners' vocabulary learning and motivation.

The post test items were the words taught during the term and some of them were selected randomly. One score was considered for each of the sentences and one for the multiple-choice items.

They were given 30 minutes to make sentences with the 10 words at the end chosen from the practiced words during the term. Since reliability and validity are important aspects of questionnaire design, the questionnaire was piloted in a similar situation among 30 students with the same level of language proficiency and background. Subsequently, the reliability was calculated by using Cronbach's Alpha formula via SPSS. The number of the students and their levels were the same and the questionnaire was piloted and the result was entered in analyze part of SPSS. The following result came out through Cronbach's Alpha formula. (see Table 1.1)

Table 1.1. Autonomy Questionnaire

Cronbach's Alpha	N of Items
.702	23

The rate of Cronbach Alpha was .702 which proves that the questionnaire was reliable because this formula shows that if the result is above .7 the questionnaire is reliable. To establish the validity of the instrument, these 23 items were reviewed and rated by six experienced teachers. The rate of Content validity ratio (CVR) was 7% which shows an acceptable degree of validity.

Cell phone

The second required instrument to be applied in this study was cell phone. In order to work with cell phone, the researcher chose five units of New Parade book (written by Elizabeth Claire, 2000). The course lasted almost three months. In fact, the students were supposed to make sentences with several selected words as their assignments for each session by their cell phones. At first they faced with many grammatical and lexical parts of the sentences. So the researcher highlighted the students' mistakes by using capital letters. All the students had the chance to be checked. They were supposed to send the sentences each session via SMS during the defined time.

Interview

Next, the students were interviewed by the researcher. The whole interview was recorded and it took about ten minutes for each student. A list of the questions was selected which were designed by (Ahmadi, Helms, & Ross,

2000).The interview consisted of eight questions which was recorded in a stress-free situation and it took about 10 minutes for each student.

Moreover, the parents were interviewed by the researcher as well. In fact, at the beginning of the term, they were informed about their children's learning process through cell phone. At the end, the parents were interviewed as well by the researcher and were asked about their perception of their child's progress in vocabulary learning and whether they, themselves, were satisfied with their children work.

2. Result and Discussion

As started earlier, this study was carried out to determine the effect of short text messaging in Iranian EFL vocabulary learning and motivation. In order to reach a conclusion, two instruments were employed. A vocabulary test was administered and a face-to-face interview was conducted. Four questions were designed and the results came out. The results obtained for each of the foregoing will be considered in turn.

1) Is there any difference between students learning vocabulary through cell phones and those acquiring vocabulary items traditionally?

2) Does application of short messaging service affect the vocabulary learning of EFL learners?

3) Is there any relationship between Iranian EFL learners' motivation and application of short text messaging?

4) What are parents' perceptions toward using cell phones for learning vocabularies via SMS?

To answer the first question, that is to find out the difference between students learning vocabulary provided via SMS and those learned via pencil and paper, an independent sample test was conducted to estimate the mean score of the post-tests of both groups. Group one was considered as an experimental group and group two as a control group. In order to answer the first question, an independent sample t-test was applied to compare the outcome of experimental group with the control group.

Table 2.1. Experimental Group1 and Control Group2; Mean Scores of the Post-test

Group	N	Mean	Std. Deviation	Std. Error Mean
Post-1	30	18.0460	1.08846	.19873
test 2	30	16.5503	1.90104	.34708

There were 30 students in each group who were taken a pre-test as well as a post-test. The result of pre-test showed that the students were homogeneous regarding their proficiency level. After the treatment period, the students were given a post test. Table 2.1 showed the mean score and the standard deviation in both groups which were calculated for the post test. The mean score of the experimental group (group one) which received the teacher's treatment was (M=18.04, and SD= 1.08) and the mean score of the control group (group two) was (M= 16.55, and SD= 1.90). The findings revealed that the first

group which received treatment and worked with the cell phone outperformed the second group who worked in a traditional way

As shown in table 2.2 an independent-sample t-test was conducted to compare the experimental scores and control group scores. There was a significant difference in scores for experimental group ($M= 18.04$, $SD= 1.08$) and control group [$M= 16.55$, $SD= 1.91$; $t(58) = -.311$, $p= .001$]. The magnitude of the differences in the means was not the same and equal variance was not assumed. So, there was a significant difference between the mean scores of experimental and control groups.

To answer the second research question, that is whether application of short messaging service may leave any impact on the vocabulary learning achievement of EFL learners, a paired sample t-test was used. In this connection, group 1 was the experimental group so, they were asked to use their cell phones to make sentences for learning the vocabulary of each unit during the period of research. Thereby, they received teacher's instruction normally during their class time. In other words, the learners got the clues for each word of each lesson and then they were supposed to make a sentence with the new words. Table 2.3 indicates the mean (M) and standard deviation (SD) of this group.

Table 2.2. Independent Samples Test of both groups

		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	Lower	Upper	Lower	Upper	Lower	Upper	Lower
pretest	Equal variances assumed	1.035	.313	-.311	58	.757	-.10867	.34983	-.80894	.59160
	Equal variances not assumed			-.311	53.513	.757	-.10867	.34983	-.81019	.59286
posttest	Equal variances assumed	7.971	.007	3.740	58	.000	1.49567	.39995	.69509	2.29624
	Equal variances not assumed			3.740	46.169	.001	1.49567	.39995	.69070	2.30064

Table 2.3. Experimental Group's Mean Score of Pre-test and post-test

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	17.2982	30	1.34449	.17357
	Posttest	17.7237	30	1.71097	.22088

Table 2.3 sheds light on the mean scores of the pre-test and post-test of the first group. In other words, it reveals

that students' mean score in the post-test ($M=17.72$) has increased in comparison to their mean score in the pre-test ($M=17.29$). Therefore, it can be concluded that using SMS in vocabulary learning may improve students' knowledge of vocabulary. To clarify more on this fact, a paired sample t-test was administered. Table 2.4 illustrates the details.

Table 2.4. Paired Sample T-test for Experimental Group (Group1)

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					lower	Upper			
Pair	pretest - posttest	.42550	1.56460	.20199	.02132	.82968	2.107	59	.039

A paired-sample t-test was conducted to evaluate the effect of SMS on students' vocabulary learning. There was a statistically significant increase in learners' scores in experimental group from pre-test ($M= 17.29$, $SD= 1.34$) to post-test [$M= 17.72$, $SD, 1.71$, $P<05$], which means using SMS posited a positive effect on learners' vocabulary learning and they revealed a better performance in their final exam.

On the other hand, the second group was taught in the classroom in a traditional way. Thus, the role of the teacher was to provide the necessary feedback for the students in their notebooks after they made sentences with new vocabularies. Table 2.5 elaborates on the mean score and

standard deviation of the second group that is the control group (group 2).

Having a meticulous look at the table 2.5, it was proposed that the mean score of the post-test is less than that of the pre-test. Thereby, it can be inferred that making sentences in the note book in a traditional way is not as effective as using cell phone. For further information, a paired sample t-test was performed as well.

Table 2.5. Control Group (group 2) Mean Score of Pre-test and post-test

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	pretest	17.4090	30	1.87632	.34257
	posttest	16.6887	30	1.69638	.30971

A paired-sample t-test was conducted to evaluate the effect of sentence making on a piece of paper or in the notebook on students' vocabulary learning. There was not a statistically significant increase in learners' scores in group2 from pre-test (M= 17.77, SD= 1.53) to post-test [M= 16.55, SD, 1.90, $P>.05$], which means using a traditional method of teaching vocabulary and sentence making did not posit a positive effect on vocabulary learning of learners. As a matter of fact, they revealed a better performance in their pre-test (Table 2.6).

Table 2.6. Paired Sample T-Test for Control Group (group2)

	Paired Differences						t	Df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
				Lower	Upper				
Pair 2 pretest – posttest	.72033	2.02166	.36910	-.03457	1.47523	1.952	29	.061	

To answer the third research question which is whether there is any relationship between Iranian EFL learners' motivation and application of short text messaging, an interview was designed extracting learners' opinions about text messaging and their answers were analyzed utilizing descriptive statistics consisting of the frequency and mean scores of each question. The questions with the highest percentage that majority of the students agreed upon them are questions 7, 8, and 6. They really enjoyed using cell phones for learning vocabulary and making sentences. The list of the questions is available in Appendix II. Percentage of each question is illustrated in a graph in appendix IV(Figure 1).

Thereafter, the learners' parents were interviewed being asked about their opinions regarding learning English via cell phone and sending messages. As the learners, 30 parents were interviewed about their children's usage of the cell phone. Their perceptions were analyzed and this result was achieved that 90% of parents believed that using SMS or cell phone was beneficial for sentence making.

This study explored the efficacy of mobile learning for learning lexical items. The results of this investigation suggest that making sentences via the cell phone is more effective in teaching and learning unknown vocabulary than making sentences in the notebook in a traditional way. Participants learned and recalled more words and grammatical points when the correct sentences were provided via cell phone than when sentences were checked in the notebook or on a piece of paper. Furthermore, the students' were more motivated in the experimental group than the control group and their parents approved the positive effect of using cell phone for vocabulary learning. It should be noted that the result of this study was in-line with Cavus and Ibrahim (2009), Thornton and Houser (2005), and Bahrani (2011). These results are viewed as a starting point for further exploration into the use of mobile technology for vocabulary learning and motivation enhancement.

The study findings regarding these two groups indicated that learners in group one which had the opportunity to use their cell phones at home purposefully demonstrated a better performance in their final exam. They benefited from their teacher's feedback in class and at home via cell phones and SMS. As it was mentioned before, regarding pre-Intermediate learners who used cell phones and SMS for making sentences, a positive effect was observed in learning vocabulary.

3. Conclusion

This study intended to determine the effect of short text messaging in Iranian EFL vocabulary learning and motivation. Using two groups of experimental and control groups, the first group was asked to make sentences via cell phone that aimed to improve vocabulary learning and enhance their motivation, while the second group was required to make sentences in a traditional way (notebook). Thereby, to analyze the data paired, and an independent sample t-test for both groups were utilized, and the findings revealed difference for the experimental group was significant (smaller than $p= 0.05$ ($\text{sig} < 0.05$)) in their vocabulary learning and sentence making. Thus, there was a significant difference between the groups. Therefore, the present study provides evidence that most of the grammatical and spelling mistakes were improved through sending SMS. Seemingly, L2 young learners may benefit using the cell phone which is used timely, constant, and available anywhere and anytime in order to improve their vocabulary learning and sentence making, and enhance their motivation. The most important factors influenced by mobile learning and SMS consisted of decreasing the level of the stress, improving the level of vocabulary learning as well as the grammatical points, and enhancing the motivations.

So, it is hard to escape the obvious conclusion that using a new kind of technology has a positive effect on learning. Many researchers studied about mobile learning and they reached the positive result of its influence on learning. Cavus and Ibrahim (2009), Thornton and Houser (2005), and Bahrani (2011) found the same results that clarified the positive effect of SMS on learning vocabulary. The sig of this study for the experimental group was < 0.05 that showed a significant difference between the two groups. Therefore, this study result was in-line with the result of Khazaie and Ketabi (2011) who reported the same results and found $\text{sig} < 0.05$. These study findings also supported those of Tabatabaei and Goojani (2012) regarding issue of

enhanced motivation for the experimental group. Tabatabaei and Goojani (2012) also concluded that students had been motivated more through using SMS for vocabulary learning. Stone (2004) also confirmed that the

learners were more motivated through the cell phone than those used the traditional means. Hence, not only the vocabulary level of the learners was enhanced but also their motivation was affected positively through

Appendix

Appendix I: Post-Test

In the name of God, the Compassionate, the Merciful
Name:

Part A: Read and choose the best option

- 1) My aunt is a She brings the mails.
a) secretary b) waitress c) pilot d) mail carrier
- 2) Her sister is a nurse. She works in a health clinic and helps.....
a) healthy people b) country people c) sick people d) city people
- 3) My mother is a She types letters in the office.
a) secretary b) coach c) mail carrier d) teacher
- 4) Her uncle flies an air plane. He is a
a) nurse b) doctor c) pilot d) truck driver
- 5) Ali's father is a farmer. He keepsin the barn.
a) cows b) polar bears c) ostriches d) sheep
- 6) It's black and white. It lives on the plains. It is a
a) dolphin b) penguin c) kangaroo d) zebra
- 7) A: This big bird can walk but can't fly
B: It's a/an.....
a) eagle b) parrot c) ostrich d) owl
- 8) These buildings are in the country. They don't have to be red but they usually are.
a) restaurants b) barns c) farms d) museum
- 9) Doctors can listen to people's heart beats by.....
a) thermometers b) injections c) stethoscope d) scalpel
- 10) Zebra's body is
a) black b) stripped c) colorful d) gray
- 11) My father cuts the grass with a which is a little bit noisy.
a) rake b) shovel c) lawnmower d) fork
- 12) I have a blue pair of shoes like my coach.
a) boots b) low-heel shoes c) sandals d) sneakers
- 13) Whenever my sister has an Arabic class, she doesn't want to go because she feels
a) happy b) bored c) excited d) interested

Part B: Make a Sentence with the Following Words.

Shepherd:

Traffic lights:

Food tray:

Letter:

Whistle:

Bored:

Windy:

Bike:

Lion:

Barn:



Appendix II: Students' Interview

Age:	Gender:	Father's educational level:	Mother's educational level:
Number of children:			
1-How much do you like to use SMS for vocabulary learning?			
Very much	Much	Average	Few
2-How much do you feel learning is extended during use of SMS?			
Very much	Much	Average	Few
3-To what extend has your learning been improved via SMS?			
Very much	Much	Average	Few
4-To what extend do you like to learn and need to be informed about the others' reactions in an informal situation?			
Very much	Much	Average	Few
5-How much do you think using a new technology like SMS can be effective in learning?			
Very much	Much	Average	Few
6-Was using SMS in an informal situation effective in reducing your anxiety and stress?			
Yes	No		
7-To what extend did using SMS help you in learning grammar in an informal situation?			
Very much	Much	Average	Few
8-Did using SMS improve your level of learning in English vocabulary learning?			
Very much	Much	Average	Few

Appendix III: Parents' Interview

Name:

Parent's name:

Mother's educational level and job:

Father's educational level and job:

1-Is the cell phone useful for learning vocabulary and sentence making in your opinion? Why?

2-What's your idea about using cell phones for learning vocabulary?

3-Have your child improved her vocabulary learning through using cell phone in comparison with previous terms?

4-Which method do you think is effective? Using cell phones and making sentences via SMS or making sentences in the notebook traditionally?

5-How was the progression of your child in sentence making?

6-Do you want your child to continue it and use it in other fields of language learning? (Installing dictionaries or didactic CDs)

7-How do you evaluate last term? Are you satisfied with using cell phones for learning vocabulary for the first time? How was your child work?

8-Please let me know if you have any ideas about using cell phones for vocabulary learning and making sentences with them!

Appendix IV

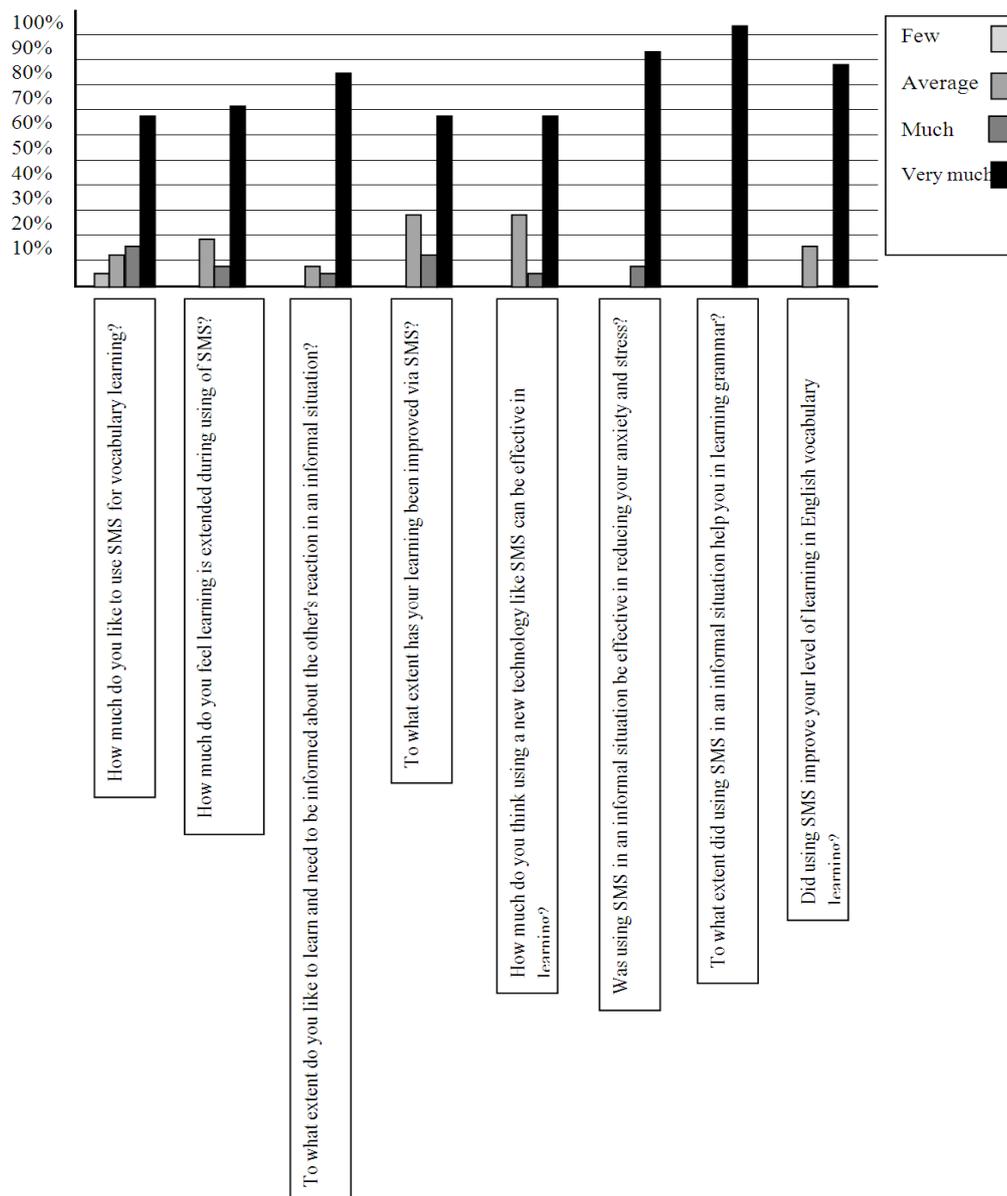


Figure 1. Students' interview questions

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