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The Effect of Visual Representation, Textual Representation, and Glossing on Second Language Vocabulary Learning

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Abstract

In this study, the researcher chose three different vocabulary techniques (Visual Representation, Textual Enhancement, and Glossing) and compared them with traditional method of teaching vocabulary. 80 advanced EFL Learners were assigned as four intact groups (three experimental and one control group) through using a proficiency test and a vocabulary test as a pre-test. In the visual group, students used flashcards; in the textual enhancement, every synonym and antonym were highlighted and numbered and in the glossing group new vocabularies were numbered and their explanations were provided in the margins or footnotes. Students in the control group learned vocabulary through traditional way by meaning explanation, translation, or providing synonyms and antonyms. All the other three groups had the same procedure as control group but besides these processes they had access to visual, textual, or glossing techniques, too. The results showed that in the posttest, all three experimental groups outperformed the control group. However, the highest improvement in both post-test and delayed post-test was for glossing group. As a whole, we can say improvement in vocabulary learning was respectively for glossing, then visual, and finally textual enhancement. Therefore, it can be concluded that using pictorial, textual cues and glossing enhance their interlanguage system.

Keywords: EFL, Glossing, Textual Representation, Visual Representation, Vocabulary Learning

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Introduction

EFL learners in Iran always complain about their difficulties in learning vocabulary. Furthermore, memorizing new vocabulary seems difficult for EFL learners. Besides, retention of the newly learned vocabulary is difficult. Learners can easily forget about what they taught. So, it is teachers' duty to search for different methods for teaching vocabulary in an appropriate way which can increase retention of new vocabulary. Therefore, this study aimed to find a proper technique for teaching vocabulary in EFL context. Vocabulary is one of the most important items in language learning since meaning cannot be carried out without lexicon. Brown (2007) believes that learning a language cannot be reduced to only learning vocabulary, although without vocabulary, communication in an L2 cannot occur in any meaningful way. There are some difficulties and problems in learning vocabulary. One of the major problems is the inability to retrieve vocabulary that has been taught. In this case, either communication breaks down or the student needs to convey the message in a different way by using strategic competence (Decarrico, 2001 as cited in Celce-Murcia, 2001). Therefore, teaching and learning vocabulary have received increasing attention in the related course syllabi where developing efficient techniques and strategies can promote second language learning (Nation & Chung, 2009). However, in the traditional approach to teaching vocabulary which is still common in teaching contexts, vocabulary is often taught unsystematically in class and teachers attempts to leave their students to learn vocabulary on their own without much instruction or guidance (Oxford & Scarcella, 1994). In addition, within the limited time of instruction in the classroom, it is not possible to teach large amounts of vocabulary items (Cunningham, 2005). Furthermore, learners also need to make use of incidental vocabulary learning (Schmitt, 2000; Schmitt & Frota, 1986). There have been a lot of studies investigating incidental vocabulary learning in second language learning (e.g., Fahim & Vaezi, 2011; Paribakht & Wesche, 1999). The results revealed that with the help of those studies, new words can be incidentally learned while reading. Besides, it is always stated that learners ought to have multiple exposures to the vocabulary items in different contexts in order to learn the words incidentally. Nonetheless, there is no agreement on how many times learners need to be exposed to the target words and what kind of exposure is needed for successful learning (Huckin & Coady, 1999). According to Krashen (1982), formal instruction is not really needed and comprehensible input serves as the necessary and sufficient requirement for L2 acquisition. Schmitt and Frota (1986) state that concept of noticing the gap helps learners to be aware of how their interlanguage differs from the target form. It also draws students' attention to different aspects of a given input; students notice the differences of meanings, integrate them in their interlanguage and successfully can recall them when it is needed. Lastly, another problematic point of incidental vocabulary learning through reading is about low proficiency level learners. There are many efficient techniques for teaching vocabulary such as textual-input enhancement, visual-input enhancement and glossing (Erturk, 2016; Fahim & Vaezi, 2011; Hasshemi & Pourgharib, 2013). Research in forming

associations like using visual representation and textual representation (Cohen & Aphek, 1981) and using the Keyword Method like using glossing (Hulstijn, 1997) has shown to enhance retention better than rote memorization. Input enhancement attempts to draw learners' attention to linguistic form by adjusting the appearance of target structure (Farahani & Sarkhosh, 2012; Mediha & Enisa, 2014). It is claimed that using input enhancement can influence intake and learning (Rashtchi & Gharanli, 2010). Accordingly, Farahani and Sarkhosh (2012) state that textual-input enhancement makes a particular linguistic item more visible by adopting typographical cues such as bolding, italicizing, capitalizing and so on. Visual cues have the same role by using different types of visual aids such as flashcards, videos and pictures. In the ESL/EFL classroom, using visual aids can help students to strengthen and reinforce what they have learned. The reason is that they allow students to get the information through an additional sensory perception (Sadeghi & Farzizadeh, 2013). Glossing is one of the strategies for enhancing incidental vocabulary learning (Hong, 2010). Accordingly, Lomicka (1998) defines glossing as "typically located in the side or bottom margins, glosses are most often supplied for 'unfamiliar' words, which may help to limit continual dictionary consultation that may hinder and interrupt the L2 reading comprehension process" (p. 41). Glossing can be used as input modification (Ko, 2005). Firstly, instead of wrong guesses, learners get the help of knowing the meaning of a new word. It is an important issue because once learners make erroneous guesses, they seem reluctant to change them (Haynes, 1993). In addition, Hulstijn (1992) found that erroneous guesses will be prevented with the help of glosses. Secondly, instead of looking the new words up constantly, glosses help learners read and enjoy their reading without any interruption. Thirdly, with the help of glosses, learners can activate their prior knowledge on the topic with the new knowledge in the text and it is very beneficial for them in terms of understanding and remembering the content of the text. Furthermore, as they encounter words in a context and they make use of their prior knowledge about that topic, learning can become more meaningful and it may help retention of the learned words (Erturk, 2016). The other advantage of glosses which is mentioned by Ko (2005) is that it causes learners greater autonomy and learners can look up the unknown words. Liu (2001) researched vocabulary learning by comparing the use of rote learning and keyword method. He suggested that the keyword method led to a better recall of vocabulary items and it is considered as a device, which brought about a fast vocabulary acquisition.

In another study, Ko (2012) examined the effect of L1 and L2 glosses as well as no-gloss on L2 incidental vocabulary learning. In this study, 90 participants were randomly divided into three groups; no-gloss, L1 gloss, and L2 gloss. The first group read the text with no-gloss, the second group read it with L1 gloss, and the third group read it with L2 gloss. After reading the text, they were given immediate vocabulary tests and four weeks later they took the delayed vocabulary test. They were also asked to complete a student opinion questionnaire in order to see their reactions and opinions about glossing in reading texts. The results of the study revealed that on the immediate and delayed tests glossed groups outperformed no-

gloss group, but in the delayed test there was not any significant difference between two groups. The analysis of the student questionnaire showed that the participants preferred L2 glosses in their L2 reading materials. As mentioned earlier, Iranian EFL learners have difficulty in memorizing and retention of new vocabulary. It is very important for teachers to find effective ways to teach vocabulary. In this study, the researcher tried to investigate the effect of different vocabulary learning techniques on enhancing vocabulary learning. Accordingly, the present study tries to answer to the following questions:

1: Does textual input-enhancement have a positive effect on advanced Iranian EFL learners' vocabulary learning?

2: Does visual cues have a positive effect on advanced Iranian EFL learners' vocabulary learning?

3: Does glosses have a positive effect on advanced Iranian EFL learners' vocabulary learning?

4: Is there any significant difference among the effectiveness of visual cues, textual-input enhancement, and glossing methods on advanced Iranian EFL learners' vocabulary learning in the post-test and the delayed post-test?

Methodology

Participants

Participants of this study were 80 students in four intact groups. They were chosen among 91 students through a modified proficiency test and a vocabulary test based on the book they were studying in an English institute in Tabriz. All participants who were passing Pre-Toefl1 with the researcher as their teacher, were locals of Tabriz and bilingual, i.e. Persian and Turkish speakers. After taking part in a Nelson test, those who were placed 1 score above and below the mean score were selected. To be sure of their homogeneity, a vocabulary test was applied and the scores were used as pre-test scores.

Instrumentation

The following instruments were used in this research:

a) Nelson test as proficiency test from https://www.mometrix.com, b) A 25-item multiple choice vocabulary as pre-test and post-test, c) A 25-item multiple choice vocabulary as delayed post-test. Nelson test is a test of measuring reading ability among high school and college students. It has two subtests naming vocabulary and comprehension with both multiple choice questions (Brown, Fishco, & Hanna, 1993). This test was administered before the pre-test in order to determine the homogeneity of the control and experimental groups in terms of English language proficiency. The learners' vocabulary knowledge was tested by means of

the 25-item multiple choice test which was elicited from their course book (504 absolutely essential words).

The content validity of the tests was checked by two experts in the field of TEFL. They all confirmed that the tests have a high degree of content validity. In addition, these tests were piloted for a group of participants to see whether they can be used as a suitable measurement tools. The books which were taught for all of four classes were 504 absolutely essential words and Barron's TOEFL Preparation Book.

Data Collection Procedure

Nelson proficiency test was used before the treatment in order to be sure of the homogeneity of the participants. Those who got 1 score above and below the mean were selected. As a result, 80 participants were chosen out of 91. Accordingly, participants were randomly assigned to three experimental groups (text input-enhancement group, visual cues group, glossing group) and a control group. Then, a pre-test was given to students to find out about the initial vocabulary knowledge of participants. This study conducted in two month in 20 sessions which were held three days a week. During the treatment, in every session, one lesson of the book 504 essential words was taught to the participants besides the Barron's TOEFL Book.

In textual-input enhancement group, target vocabulary / words which were synonyms or antonyms with each other were bolded and numbered. It means that synonyms or antonyms had the same numbers and were bolded in the text. Teacher as the researcher of the class had to retype the texts in the book 504 to achieve her goal. The teacher read the texts, translated the key vocabularies into Persian language, and even explained their meanings in English. Furthermore, when needed, synonyms and antonyms were also given for each word. In visual cues group, a variety of visual techniques was used like pictures and semantic maps when vocabularies were presented to participants. Students in this group had to buy the flashcards for the 504 books and used it besides reading the book itself.

In the glossing group, students received the retyped texts from the researcher as their teacher. The revised texts were prepared in a way that the words were numbered and the meaning of those words was written for that number in the margins or in the footnotes. So students did not have to look for the meaning in the dictionary or even they did not have to guess the meaning. The meanings were available for them.

For the control group, vocabularies were taught within a passage in traditional method of teaching vocabulary which is common in Iran, i.e. providing Persian equivalent and translation of the text and explaining the English meaning or providing the synonyms or antonyms. All the other groups received the same method as the control group. However, in those three experimental groups, besides explaining meaning in English or Persian and providing the necessary synonyms or antonyms, other techniques like text enhancement, visual cues and glossing were provided. In this way, the researcher will recognize the effect of different

contextualized methods for learning vocabulary in comparison to the traditional decontextualized method.

This study was practiced for twenty sessions for all groups. After the treatment, the post-test was administered to the participants. The test included all the vocabulary items which had been used in the treatment. Every session lasted 90 minutes. After one month, researcher had Pre-Toefl2 class with the same students. The researcher as the teacher used another vocabulary test from the studied vocabulary in 504 book as a delayed post-test to find out about the effectiveness of different techniques for vocabulary learning.

Results

To check the assumption of parametric tests of normality, linearity, and homogeneity of regression lines, Paired-Sample *T*-Test and One-Way ANOVA were run to see if such differences among mean value were statistically significant or not.

The researcher assessed the normalness of data before conducting T-test and ANOVA test.

Table 1. Descriptive Statistics of Variables

	Group	N	Mean	Std. Deviation	Skewness	Kurtosis	Minimum	Maximum
Proficiency test score	Text-enhancement	20	29.40	2.542	-.138	-.576	25	34
	Visual	20	29.85	2.207	-.410	.405	25	34
	Glossing	20	29.45	3.034	-.027	-.747	24	35
	Control	20	29.90	2.972	.094	-1.077	25	35
Pretest score	Text-enhancement	20	7.10	2.337	.361	-.242	3	12
	Visual	20	7.35	2.390	-.025	-1.195	4	11
	Glossing	20	7.85	2.323	-.442	-.513	3	11
	Control	20	7.25	2.447	-.561	-.837	3	11
Post-test score	Text-enhancement	20	16.90	2.553	.018	-.867	13	22
	Visual	20	19.05	2.762	-.424	-.852	14	23
	Glossing	20	21.15	2.084	-.763	.405	16	24
	Control	20	15.00	2.128	-.765	-.570	11	18
Delayed post-test score	Text-enhancement	20	15.00	2.317	.141	-.306	11	20
	Visual	20	17.20	2.462	-.514	-.542	13	21
	Glossing	20	19.05	1.959	-.357	-.554	15	22
	Control	20	13.40	2.037	-.359	-.646	10	17

Table 2. The Result of One-Sample Kolmogorov-Smirnov Test

	N	Kolmogorov-Smirnov Z	Asymp. Sig. (2-tailed)
Proficiency test score	80	.914	.374
Pretest score	80	1.033	.237
Post-test score	80	.815	.521
Delayed post-test score	80	.879	.423

Tables 1 and 2 show the normalness of data in all tests which was assessed through using One-Sample Kolmogorov-Smirnov Test. Since the $p > 0.05$, we can conclude that all data of variables are normal.

Table 3. The Result of ANOVA for Comparison of Proficiency Test Score in Groups

	N	Mean	Std. Deviation	F	Sig.
Text-enhancement	20	29.40	2.542	.186	.906
Visual	20	29.85	2.207		
Glossing	20	29.45	3.034		
Control	20	29.90	2.972		

For having homogeneous groups, a proficiency test was used. According to the one-way ANOVA test in table 3, sig = 0.9 and $p > 0.05$. As a result there was not any significant difference between four groups based on proficiency level.

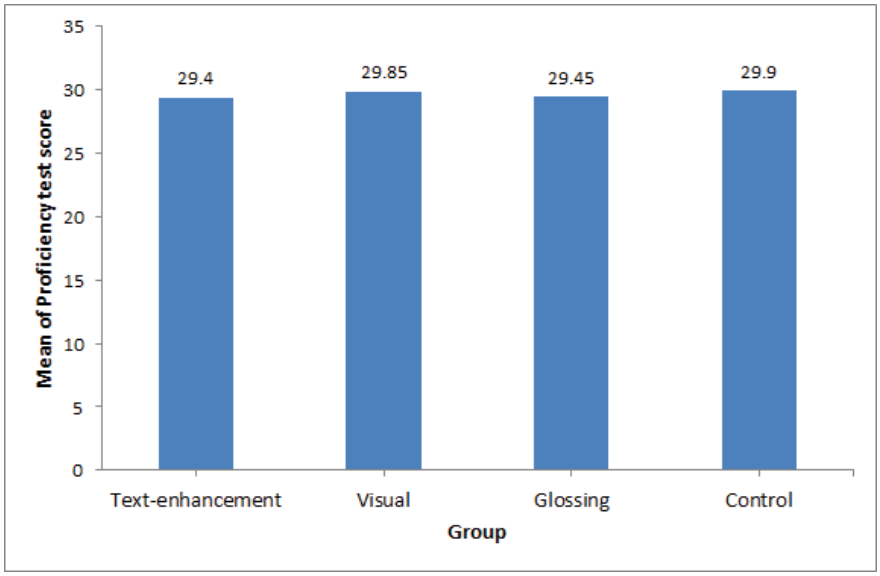

Fig 1. The Result of Mean Scores for Comparing Proficiency Test Score in Groups

Table 4. The Result of ANOVA for Comparison of Pretest Score in Groups

	N	Mean	Std. Deviation	F	Sig.
Text-enhancement	20	7.10	2.337	.375	.772
Visual	20	7.35	2.390		
Glossing	20	7.85	2.323		
Control	20	7.25	2.447		

For being sure of the homogeneity of learners in using vocabulary an ANOVA test was applied. Table 4 shows the results of one-way ANOVA for the pre-test scores. It was revealed that *sig*. = 0.772 and $p > 0.05$. As a result, there was not any significant difference in vocabulary use between these four groups in the pre-test.

Table 5. The Result of Assumption of Homogeneity of Regression Slope for Post-Test Score

Source	Type III Sum of Squares	df	Mean Square	F	p-value
Group * pretest	5.211	3	1.737	1.670	.181
Error	74.884	72	1.040		

In this study, Covariance analysis has been used. Analysis of covariance has assumptions like normal distribution of dependent variables, homogeneity of slope of regressions and homogeneity of variance of dependent variable. As table 5 shows, p value is 0.181 and $p > 0.05$. Then Homogeneity of slope of regressions between groups in the post-test are confirmed.

Homogeneity of variance of dependent variable was assessed through Levine Test. P value is 0.153 and $p > 0.05$ which proves the homogeneity of variance of dependent variable between all groups.

Table 6. The Result of Analysis of Covariance for Post-Test Score

Source	Type III Sum of Squares	Df	Mean Square	F	p-value	Partial Eta Squared
pretest	357.204	1	357.204	334.480	.000	.817
Group	348.391	3	116.130	108.742	.000	.813
Error	80.096	75	1.068			
Total	26854.000	80				

Table 6 shows the Analysis of covariance for Post-test scores. According to the results ($F = 108.74$, $p = 0.001$), there is a significant difference between four groups in the post-test.

Table 7. Adjusted Mean for Post-Test Score

Group	N	Mean	Std. Error
Text-enhancement	20	17.162	.232
Visual	20	19.084	.231
Glossing	20	20.728	.232
Control	20	15.126	.231

Table 8. The Result of LSD Test for Pairwise Comparisons of Post-Test Score in Groups

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
Text-enhancement	Visual	-1.922*	.327	.000
	Glossing	-3.565*	.329	.000
	Control	2.037*	.327	.000
Visual	Text-enhancement	1.922*	.327	.000
	Glossing	-1.644*	.328	.000
	Control	3.959*	.327	.000
Glossing	Text-enhancement	3.565*	.329	.000
	Visual	1.644*	.328	.000
	Control	5.602*	.328	.000
Control	Text-enhancement	-2.037*	.327	.000
	Visual	-3.959*	.327	.000
	Glossing	-5.602*	.328	.000

*. The mean difference is significant at the .05 level.

In table 8, LSD test for Pairwise Comparisons of Post-test scores in groups has been shown. The results revealed that there is a significant difference between the effectiveness of all three experimental groups (Text-enhancement, Visual, and Glossing) with the control group. It means that all the students in the experimental groups outperformed the learners in the control group. Furthermore, according to the results of tables 8 and 9, those students who received glossing performed better than the other three groups. Then the learners respectively in the visual group and the last one text-enhancement group had high scores. However, the best vocabulary teaching technique in this study is using glossing for teaching new vocabulary. For checking the effect of these three methods for vocabulary learning, the results of delayed post-test was also assessed. The normalness of data for delayed scores is shown in Table2.

Table 9. The Result of Assumption of Homogeneity of Regression Slope for Delayed Post-Test Scores

Source	Type III Sum of Squares	df	Mean Square	F	p-value
Group * pretest	4.963	3	1.654	1.111	.350
Error	107.232	72	1.489		

In table 9, p value is 0.350 and $p > 0.05$. Therefore, Homogeneity of slope of regressions between groups in the delayed post-test are confirmed.

Levine Test of Equality of Error Variances for Delayed Post-test score was assessed. P value is 0.676 and $p > 0.05$ in Levine Test, which proves the homogeneity of variance of dependent variable between all groups in the delayed post-test.

Table 10. The Result of Analysis of Covariance for Delayed Post-Test Score

Source	Type III Sum of Squares	df	Mean Square	F	p-value	Partial Eta Squared
Pretest	256.755	1	256.755	171.635	.000	.696
Group	306.623	3	102.208	68.324	.000	.732
Error	112.195	75	1.496			
Total	21635.000	80				

The Analysis of covariance for the delayed Post-test scores is shown in table 10. According to the results ($F = 68.32$, $p = 0.001$), there is a significant difference between four groups in the delayed post-test.

Table 11. Adjusted Mean for Delayed Post-Test Scores

Group	N	Mean	Std. Error
Text-enhancement	20	15.223	.274
Visual	20	17.229	.273
Glossing	20	18.692	.275
Control	20	13.506	.274

Table 12. The Result of LSD Test for Pairwise Comparisons of Delayed Post-Test Scores in Groups

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
Text-enhancement	Visual	-2.007*	.387	.000
	Glossing	-3.470*	.389	.000
	Control	1.716*	.387	.000
Visual	Text-enhancement	2.007*	.387	.000
	Glossing	-1.463*	.388	.000
	Control	3.723*	.387	.000
Glossing	Text-enhancement	3.470*	.389	.000
	Visual	1.463*	.388	.000
	Control	5.186*	.388	.000
Control	Text-enhancement	-1.716*	.387	.000
	Visual	-3.723*	.387	.000
	Glossing	-5.186*	.388	.000

*. The mean difference is significant at the .05 level.

According to the results of LSD test for Pairwise Comparisons for the delayed post-test scores in table 12, all learners in the three experimental groups (Text-enhancement, Visual, and Glossing) outperformed the learners in the control group. As tables 11 and 12 show, learners in the glossing group gained the highest marks and performed better than the other groups. As a whole, the highest score respectively belong to glossing, then visual, and then text-enhancement. To summarize, we can conclude that glossing is the best method for teaching vocabulary and it helps learners to remember the vocabulary better and for longer time.

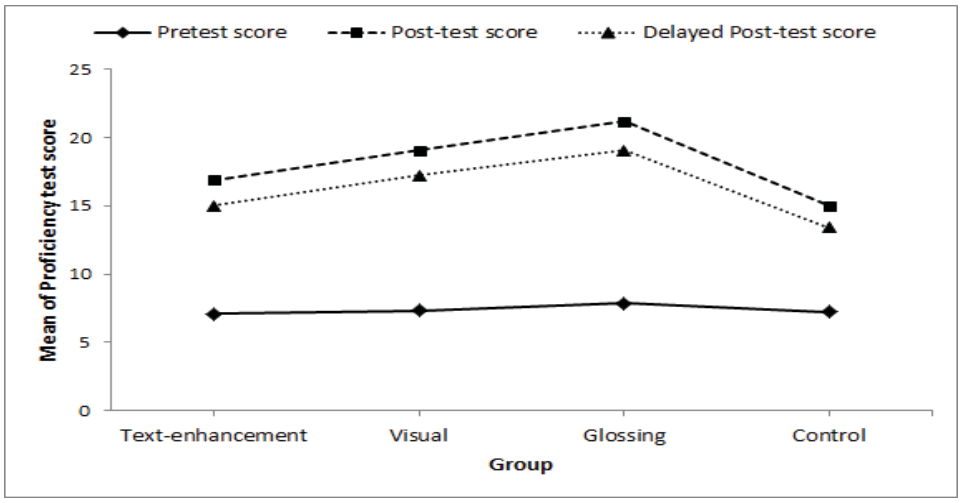

Fig 2. Mean of Vocabulary Scores in the Pre-Test, Post-Test and Delayed Post-Test for All Four Groups

Results revealed that glossing method was better than visual and text-enhancement method respectively. All of these three new vocabulary teaching methods are better than traditional method of teaching vocabulary in the control group.

Discussion

Iranian EFL learners always have difficulty in learning and retention of new vocabulary. This study tried to find an effective technique for teaching vocabulary which help learner to facilitate retention of newly learned vocabulary. For conducting this research four intact groups (three experimental and one control group) were selected. These three experimental groups received visual, textual, and glossing techniques respectively. Students, in the control group, learned vocabulary through traditional way by meaning explanation, translation or providing synonyms and antonyms. The results of the first question, second, and the third questions revealed that all these new vocabulary learning techniques (visual, textual, and glossing) had positive effect on improving vocabulary learning. In the fourth question which is done among these four groups to assess which group performs better than the others, the results showed that glossing group outperformed the other groups in vocabulary learning. Students who were taught through glossing benefited more than other techniques in vocabulary learning. It seems that using glossing can enhance perceptual salience and noticing better than visual and textual enhancement. The findings of the present study are in line with the previous studies (e.g., Erturk, 2016; Ko, 2012; Liu, 2001) which reveals the positive effect of glossing in vocabulary learning. It can be concluded that glossing by providing immediate meaning and explanation to the given words can help retrieval and increase students interest by providing an enjoyable context for learning.

According to Schmitt and Frota's (1986) concept of noticing the gap, glossing helps learners to be aware of how their interlanguage differs from the target form. It also draws students' attention to different aspects of a given input; students notice the differences of meanings, integrate them in their interlanguage and successfully can recall them when it is needed. Furthermore, the mean score from pre-test to post-test shows improvement in all groups. This improvement is respectively as follows: the highest improvement is for glossing group; then, visual cues, textual enhancement, and finally the control group. All of these techniques are useful for vocabulary learning; however, glossing is the most useful one. It can be concluded that even in the delayed post-test, results were the same and glossing group showed a significant difference in mean score in comparison to the other groups. Glossing put learners in a problem solving condition, and helps learners to develop their inferencing ability, reading ability, and eventually lexical learning. It may also help develop autonomous reading. By glossing, learners get feedback from the answers and make further adjustment to the understanding of the context in which the new word is used. In addition, the findings of this study are in line with previous studies about the effectiveness of text enhancement (Farahani & Sarkhoh, 2012) and visual representation (Sadeghi & Farzizadeh, 2013) on learning vocabulary. All these three new strategies towards vocabulary learning are based on contextualized language learning which increase incidental noticing. Delayed post-test revealed that contextualized teaching (using visual, textual, and glossing) was more permanent than the traditional and decontextualized teaching. According to the obtained results,

it was found out that the learners who were taught by contextualized method like glossing, visual representation, and text enhancement could remember the words more frequently than the learners who were taught by the traditional method. The findings of the study showed that the experimental groups made an important progress when compared to the control group. While the control and experimental groups made some progress in the post-tests and the delayed post-test, the control group received lower scores in comparison to other three experimental groups. Therefore, it was clearly seen that contextualized teaching by using text enhancement, glossing and visual/textual representation had a positive effect on the improvement of the learners' vocabulary knowledge. The study also revealed the fact that contextualized methods were more effective than traditional methods in vocabulary teaching. The main reason of these significant differences is that students could derive the meanings of the new words easier by making connection between the word and meaning. It seems that learners who were taught vocabulary in the context by using contextual methods were more successful than the ones who learned vocabulary by the traditional method and just translation. Research in forming associations (Cohen & Aphek, 1981) and using the Keyword Method (Hulstijn, 1997) has shown to enhance retention better than rote memorization. In general, shallower activities may be more suitable for beginners, because they contain less material that may only distract a novice, while intermediate or advanced learners can benefit from the context usually included in deeper activities (Cohen & Aphek, 1981). Techniques which involve the use of both visual and verbal mental imagery to relate a word to be memorized with some previously learned knowledge can be beneficial in learning vocabulary. Furthermore, Keyword Method that in which a meaning of a word is given or it is highlighted in the text as one mnemonic technique that has shown to be superior to any other deliberate vocabulary learning strategy. It can be claimed that using textual cues helped students in textual group to pay more attention to particular items in the given input (Farahani & Sarkhoh, 2012). That is, enhancing a particular feature in the text is fundamental in noticing and subsequent intake. Therefore, all these three techniques, textual enhancement, visual representation, and glossing as an input-enhancement technique had a positive impact on the rate and accuracy of L2 acquisition. It seems that through mere translation and speaking about synonyms and antonyms connection between word and meaning cannot occur. In this case, interlanguage system in students of control group would not improve. Because of that, we do not see any significant enhancement in the control group from pre-test to post-test. The results may be well matched with the view of Krashen (1982) that formal instruction is not really needed and comprehensible input serves as the necessary and sufficient requirement for L2 acquisition. We can conclude that visual cues, textual input-enhancement, and glossing are not techniques which may assist learners in acquisition process, but a kind of Focus on Form approach which facilitates L2 acquisition (Fahim & Vaezi, 2011).

Conclusion

Vocabulary teaching is one of the most difficult skills to be taught especially in EFL context. EFL learners in Iran most of the time complain about their difficulties for memorizing and remembering the learned vocabulary. It is teachers' responsibility to find a method or technique which can improve learning and retention of new vocabulary for EFL learners. The researcher tried to examine the effect of three different vocabulary teaching techniques that can be beneficial in vocabulary learning. The results of this study revealed that there is a significant difference between visual, textual and glossing groups in vocabulary acquisition. Students in glossing group respectively outperformed students in visual, textual, and control groups. The results of questions one, two, and three revealed that all textual, visual, and glossing techniques had positive effect on improving vocabulary learning in the posttest and the delayed posttest. However, question four revealed that glossing group outperformed the other groups in the posttest and delayed posttest. It can be concluded that glossing is a kind of input enhancement which increase intake and learning. Glossing can enhance incidental learning. Glossing helps learners to read and enjoy the text without any interruption or being have to look for a meaning in the dictionary. Glossing helps learners to know the meaning of new words instead of having wrong guesses dealing with unfamiliar words. As a whole, glossing is beneficial in understanding and remembering the content of the text. It also increases learners' autonomy since learners by themselves can look up the meaning of unknown words.

It is highly recommended that students be provided with numerous opportunities to pick up and recall vocabulary items. According to the results of this study, using pictorial/visual, textual, and glossing provide lots of opportunities for learners to embrace lexical items in their interlanguage system. When students learn vocabularies through the use of synonyms/antonyms, definition and even translation, they forget them easily in the future. But when they learn vocabularies by textual/visual cues and glossing, they rarely have difficulty in remembering them. This also refers to the basic role of visual/textual aids and glossing in successful acquisition of lexical items for textbook authors, syllabus designers, and curriculum developers. It is also essential that lexical items should be presented in a meaningful context accompanied with appropriate, stimulating visual/textual, and glossing cues**.** Thus, teachers while teaching vocabulary should observe using textual/visual representation and glossing in their teaching methods for better acquisition and longer retention of the lexicon. It must be mentioned that students' level and language proficiency is important and can be a vital issue in teaching vocabulary. It seems that advanced level students can use these techniques properly. All learners who were chosen for the study were advanced level learners, so, the results of this study can be related to just advanced level EFL learners. To be sure of these results, this study should be repeated with students with different language proficiency, language background, and even different gender.

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