THE IMPACT OF TRANSLATION AND PICTORIAL METHODS ON IRANIAN EFL LEARNER'S VOCABULARY LEARNING AND RETENTION

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ABSTRACT

The aim of this research paper was to examine the impact of translation and pictorial methods on Iranian EFL learner's vocabulary learning and retention. Vocabulary learning is central and essential in the process of second/foreign language learning. One of the challenges facing the second language learner is how to learn a large vocabulary in order to speak, listen, read and write the target language effectively, and communicate successfully and properly with others. In this research, the total number of 60 Iranian elementary students participated from a secondary school in Bushehr, Iran. The learners were studying in two different classes of the seventh grade in "ALI school" in Bushehr state. All the students in our sample were of the same age group (12 years old) and they were male. Persian language is the medium of instruction in all Iranian schools. In addition; English language used as foreign language for Iranian students. In this study, fifty concrete words drawn from Prospect book (one book) and Iranian teachers have been using it for instruction for the Iranian elementary students in the seventh grade in the secondary schools in Iran. In this study, three tests such as translation test, picture test, and context-embedded test administered to the Iranian EFL learners. The outcome of this research paper showed that all the hypothesizes were rejected.

Contribution/ Originality

Learning vocabulary is an essential part of language learning. The aim of this article was to investigate the impact of translation and pictorial methods on Iranian EFL learner's vocabulary learning and retention in EFL setting. This research is one of the few researches on Iranian EFL students in Iran.

1. INTRODUCTION

The main purpose of this study was to examine the impact of translation and pictorial methods on Iranian EFL learner's vocabulary learning and retention. Since, vocabulary knowledge is regarded as an essential component of learning a second/foreign language for several reasons. Both native speakers and foreign learners recognize the importance of getting the words right because lexical errors are abundant among learners and disruptive too. Thus, it is important for learners to have good lexical skills in order to produce sentences and to understand them correctly (Gas and Selinker, 2001). Lines (2005) pointed that "vocabulary should be integrated into teaching the four skills listening speaking, reading and writing"(cited in Khansir *et al.* (2013)). Since, words play an important role in expressing our feelings, emotions, and ideas to others during the act of communication, foreign language teachers should attribute remarkable importance to vocabulary in their classes. It is evident that communication is a mutual relationship between the speaker/writer and the hearer/reader. The hearer/reader should comprehend what he hears or reads in the target language. Unless, he has sufficient knowledge of vocabulary, he cannot decode the message sent by the speaker or the writer. It follows from this that vocabulary is of great importance for real communication to take place. Although vocabulary has not always been recognized as a priority in language teaching, interest in its role in second language learning has grown rapidly in recent years and specialists now emphasize the need for a systematic and principled approach to teach vocabulary (Decarrico, 2001).

If we come to the history of vocabulary teaching in the past years, an obvious neglect of vocabulary in the language curricula and materials will be noticed. We have rich literature and recommendations on teaching different language components and skills except on vocabulary. Thus, the teachers were bewildered about how they could teach vocabulary. Of the reasons of this vocabulary neglect, different viewpoints of the rationales of language approaches and techniques can be mentioned. Decarrico (2001) enumerated the reasons of this neglect that "the low status of vocabulary study and vocabulary teaching was in large part due to language teaching approaches based on American linguistic theories that had been dominant throughout the 1940s, 1950s and 1960s ". Audio-lingual Method was the most typical of these American linguistic theories, in which a systematic attention was paid on grammar and pronunciation while neglecting the importance of vocabulary. Larsen-Freeman (2000) described this method by saying that "Vocabulary is kept to a minimum while the students are mastering the sound system and grammatical patterns." The assumption was that once students learned the structural frames, lexical items to fill the grammatical slots in the frames could be learned later, as needed. By emergence of generative

linguistics in 1960s, great changes were created in linguistic theory. Although the tenets of behaviorism and descriptive linguistics were supplanted with generative linguistics, the latter did not give enough attention to vocabulary as well. Decarrico (2001) claimed that "the main interests of generative linguists centered on rule-governed behavior and on the grammatical structure of sentences and not include concerns for the appropriate use of language".   After generative linguistics, the proponents of communicative competence and communicative language teaching held such secondary status for vocabulary. In this approach, the emphasis was on the sociolinguistic and pragmatic factors governing effective use of language, while vocabulary was taught mainly as a support for functional language use like the former language theories.

Translation and picture naming are the two vocabulary teaching strategies that are much discussed by psycholinguists nowadays. The reason behind such focus on these two strategies is that bilingual memory processes behind them have become favorable to be discussed by the researchers. In addition to their bilingual memory processes, different dimensions of translation and picture naming have been investigated as well. During the two former decades, several studies drew the theorists' attention to the role of different learning methods in foreign language (FL) vocabulary acquisition and bilingual memory representations and processes. The view that a relationship may exist between the ways a new word is learned and bilingual memory organization and processing goes back to at least 1954. However, lots of the researchers investigated the effects of the word teaching methods on the word recall and bilingual memory organization and processing. For example, Prince (1996) compared the roles of translation and context on foreign language (FL) vocabulary learning, concluding that translation learning is superior in terms of quantity, but an inability on the part of weaker learners to transfer their knowledge into L2 context. Comparing keyword method and rote rehearsal was the subject of Hell and Mahn (1997).

2. REVIEW OF LITERATURE

Many researchers have considered the effects of picture naming and translation on the learners' vocabulary recall are discussed in this review of literature: Laufer and Paribakht (1998) studied the relationship between passive and active vocabulary items. More interestingly, Barcroft (2002) compared the relationship between the semantic and structural elaboration in L2 lexical acquisition, resulting in the evidence that increased semantic processing can inhibit one's ability to encode the formal properties of new words. Modeling the role of L2 proficiency and topic familiarity in L2 incidental vocabulary acquisition was the subject of a research done by Pulido (2003). Potter *et al.* (1984) compared these two models in a study in which bilinguals performed picture and word naming in L1 and L2, and both L1-L2 (forward) and L2-L1 (backward) translation. The critical predictions for the word association and concept mediation models were: the word association model predicts that L1-L2 translation will be faster than L2 picture naming; because, picture naming involves concept retrieval, L1 lexical retrieval and L2 lexical retrieval while forward translation only requires L1 lexical retrieval and L2 lexical retrieval. So, picture naming is generally believed to require conceptual activation and thus, follow the route of picture

to concept to word. Translation from L1 to L2, on the other hand, may take two different routes, L1 to concept to L2, or L1 to L2 with the latter being more direct, and thus, faster. The concept mediation model predicts that both picture naming and forward translation require concept retrieval (either from an L1 word or a picture) and L2 lexical retrieval. The results were in accordance with the concept mediation model, as L2 picture naming was found to be as fast as forward translation. Potter *et al.* (1984) found this result to be strikingly similar in proficient and less proficient bilinguals. L2 processing was therefore assumed to occur through concept mediation at all levels of proficiency. Chen and Leung (1989) tested beginning L2 learners and proficient L2 speakers in picture naming tasks and translation tasks. It was found that the proficient group were equally fast in picture naming and translation in L2, suggesting that they seemed to rely on conceptual mediation in both tasks. Adult beginners, however, performed the translation task faster than picture naming, suggesting that they relied on the faster lexical route. Similar findings were discovered in a study by Chen (1990); he supported the fact that the non-proficient bilinguals were faster in the translation tasks than in picture naming tasks. Chen (1990) depicted a picture association model which didn't exist in the related studies before. In the picture association model, the representations of second language words and the corresponding images are connected. The main difference between Chen (1990) and the former ones is that the non-proficient bilinguals were absolute beginners, without any knowledge of L2; but the bilinguals in the former studies had some L2 knowledge. Lotto and De Groot (1998) compared picture naming and translation. In their study, two learning methods were contrasted: word learning, where L1-L2 equivalents were used, and picture naming, where L2 word was presented accompanied by its relevant picture. In this study, translation was used for one group and picture naming for the other. The results showed that in terms of both retrieval times and recall scores, Lotto and De Groot (1998) asserted, word learning (or translation) led to better performance than picture learning (or picture naming). The effect of learning method indicated that presentation of L1-L2 word pairs during learning provides a better opportunity for acquiring L2 words than does the presentation of picture-L2 pairs for the adult beginners. Alario *et al.* (2000) examined semantic and associative priming in picture naming. In their study, Bates *et al.* (2001) discussed four factors (frequency, semantic, length and word-initial fricative), which are integrated in picture naming and word reading. Francis *et al.* (2003) compared picture naming and translation based on repetition priming in both tasks.

3. PURPOSE OF THE STUDY

The purpose of the study examines the following areas:

a)   To find out the effects of translation and pictorial tasks on the elementary learners' vocabulary learning and retention,

b)   To find out the effects of these two strategies on the learners' delayed vocabulary retention through a context-embedded test,

c)   To find out the effectiveness of congruency/ in congruency between the learning condition and the testing condition.

4. RESEARCH QUESTIONS

The following questions are as follows:

1. Do translation & pictorial methods result in an increase in learners' vocabulary learning and retention to the same degree?

2. Which one of the translation and the pictorial learning results in better Performance in using the words properly in context?

3-Does the in/congruency between the learning and the testing condition have any effect on the students' performance in test scores?

5. HYPOTHESES OF THE STUDY

The following null hypotheses are formulated:

1. The translation and the pictorial learning do not have any effect on vocabulary learning and retention by the elementary learners.

2. The translation and the pictorial learning do not have any effect on using the words properly in context.

3. The in/congruency between the learning and the testing condition does not have any effect on the students' test score.

6. METHOD

6.1. Participants

In this research, the total number of 60 Iranian elementary students participated from a secondary school in Bushehr, Iran. The learners were studying in two different classes of the seventh grade in ALI school. In one class, the words were taught via translation; however, for the other class, picture-learning was taught. All the students in our sample were of the same age group (12 years old) and they were male. Persian language is the medium of instruction in all Iranian schools. In addition; English language used as foreign language for the Iranian students.
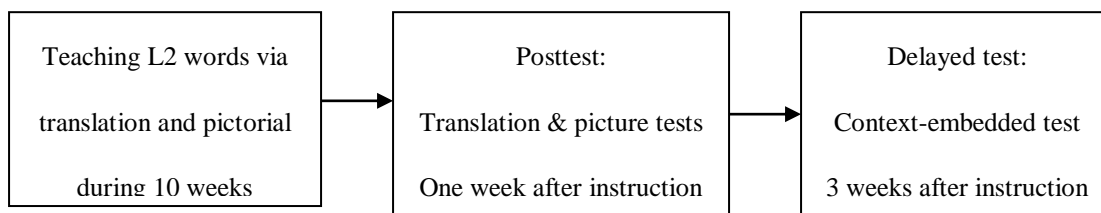
6.2. Instruments

In this study, fifty concrete words drawn from Prospect book (one book) Iranian teachers have been using it for instruction for the Iranian elementary students in the seventh grade in the secondary schools in Iran. Since, the main purpose of this study was to investigate the bilingual memory models among Iranian students in secondary schools; however, the researchers believe that it was better to select the words from the students' book. The students were instructed for 10 sessions. In each session, the researchers had to use 5 words in order to instruct their learners; because of the learners were elementary. The reason for exposing the participants to 5-6 words each session lies in George *et al.* (1973) that in general, no more than about eight new words should be presented at one time; otherwise, it is not manageable by the students. Therefore, 50 words were introduced to the learners during the instruction. In this book, some words (like bus, police, taxi, telephone, and class) whose pronunciations indicate their Persian meanings were

excluded. The students were not exposed to the target words before teaching. All the words were nouns and could be learned not only by pictures but also by translation. The translation of these words was used for the translation group and the relevant pictures of these words were presented for the picture group. In order to assess the vocabulary gain of the students of both groups, the researchers used three kinds of tests namely: Translation test, Picture test, Context test.

6.3. Procedure

In this project, 50 pictures were used for the picture group of the learners. It was necessary that all the participants in this group had a shared and common conception and image of the pictures in their minds. The results showed that all the students named the pictures correctly, showing that each picture has only one concept for the students. The study has been taken for 10 weeks and L2 vocabulary was instructed; in addition, one session was used for a week. For the translation group, L2 words were taught via matching with their L1 equivalents. In this way, all the L2 words were taught by the help of translation to this group. For the picture-learning group, each L2 word was introduced by its relevant picture. All of the words were concrete, so they could be visualized through pictures. For this group, no L1 equivalents were mentioned for the target words. The researchers (their teachers) pronounced the words correctly, and the students followed the researchers in pronunciation. The students were not allowed to use their mother tongue in describing and defining the new words. In case they mentioned L1 equivalents of the pictures, the teacher insisted on naming the pictures in English. The steps taken in this study are outlined in Figure 1.

Figure-1. The outline of the procedure of the study

Teaching L2 words via translation and pictorial during 10 weeks	→	Posttest: Translation & picture tests One week after instruction	→	Delayed test: Context-embedded test 3 weeks after instruction

However, in this research paper, the tests were conducted by the use of SPSS (Statistical Package for the Social Sciences) version 15.

7. RESULTS AND DISCUSSION

The aim of this paper was to investigate the impact of translation and pictorial methods on Iranian EFL learner's vocabulary learning and retention. In order to measure the effects of the translation-learning and picture-learning on the students' immediate vocabulary learning & recall, two conditions were used: congruent and incongruent conditions. When the learning condition was congruent with the testing condition and when they were incongruent. In the first case, that was congruent, the results of the tests (1) and (4) in this study used in order to be compared and

contrasted. Since, it was an inter-group comparison, an Independent-Sample T-test was utilized to compare the means and to measure the degree of the difference between the groups' means. The mean scores of the participants are shown in table 1 and figure 2, while their t-test results are shown in table 2.

Table-1. Descriptive Statistics of tests (1) and (4)

Group Statistics

groups	N	Mean	Std. Deviation	Std. Error Mean
translation	30	17.5500	.47976	.08759
picture	30	15.5667	.67891	.12395

Table-2. T-test results of the comparison of test (1) with (4)

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	20.177	.000	13.067	58	.001	1.98333	.15178	1.67952	2.28715
Equal variances not assumed			13.067	52.183	.000	1.98333	.15178	1.67879	2.28787

Figure-2. Mean score of the tests (1) and (4)
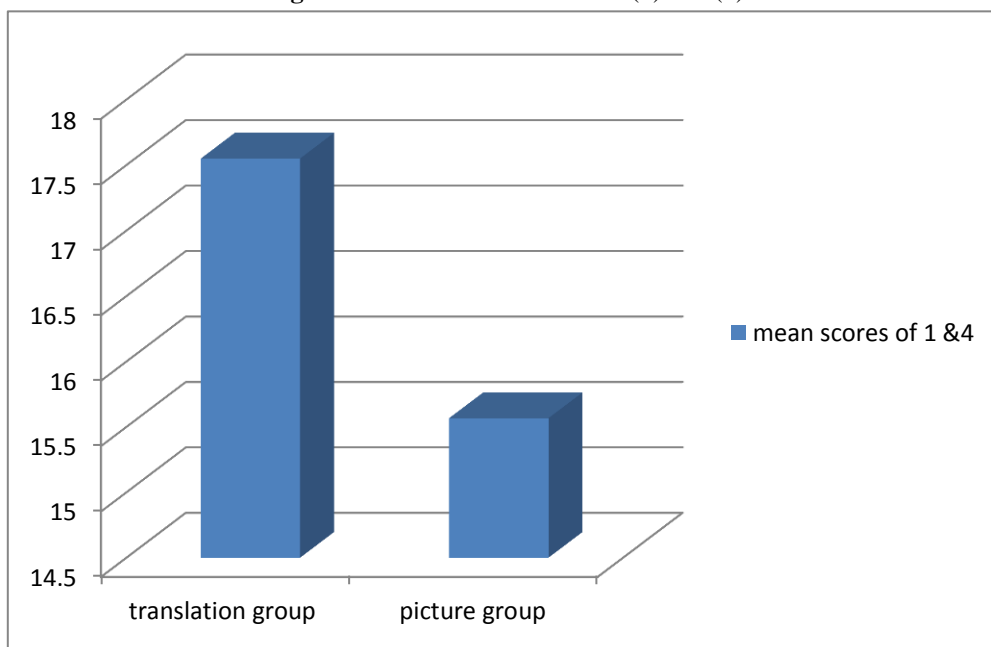
The descriptive statistics marked a difference between the means of the two groups. So, the results of the t-test suggested that the mean difference between two groups is significant. Since p-value is equal to 0.001, which is smaller than the significance level (0.05), the first null hypothesis can be rejected. So in this comparison, it can be claimed that the translation group was superior to the picture group in immediate vocabulary learning and recall in the congruent condition (that was when the learning condition and the testing condition were the same).

In this item, the incongruent condition (when the learning condition and the testing condition were incongruent) was investigated. In order to examine this variable, the results of test (2) and (5) used in order to be compared and contrasted. Since, it was an inter-group comparison, an Independent-Sample T-test was utilized to compare the means and to measure the degree of the difference between the groups' means. The mean scores of the participants are shown in table 3 and figure 3, while their t-test results are shown in table 4.

**Table-3.** Descriptive Statistics of tests (2) and (5)

Group Statistics

groups	N	Mean	Std. Deviation	Std. Error Mean
translation	30	15.8667	.47222	.08621
picture	30	14.1167	.21509	.03927

Table-4. T-test results of the comparison of test (2) with (5)

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	7.552	.008	18.472	58	.000	1.75000	.09474	1.56036	1.93964
Equal variances not assumed			18.472	40.537	.000	1.75000	.09474	1.55861	1.94139

Figure-3. Mean score of the tests (2) and (5)
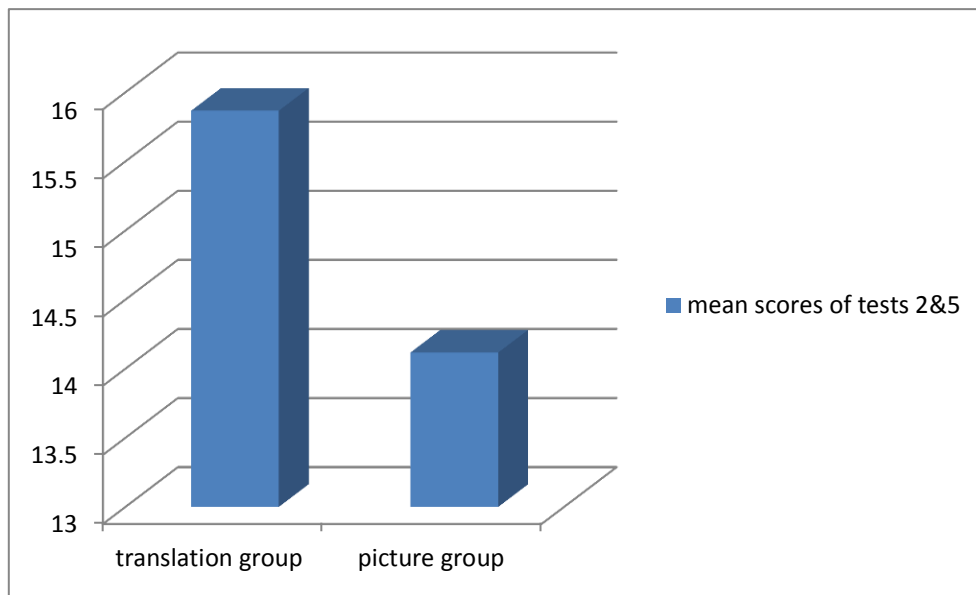
A difference between the means of the two groups was shown by the descriptive statistics. The first null hypothesis can be rejected because p-value is equal to 0.000, which is smaller than the significance level (0.05). Also the results of the t-test suggested that the mean difference between two groups is significant. So in this comparison, like the former one, it can be claimed that the translation group has outperformed the picture group in immediate vocabulary learning and recall in the incongruent condition. The results of this and the former section showed that the participants in translation group were better than those in picture group for immediate vocabulary learning and recall in both congruent and incongruent conditions.

The second point which was investigated in this study was the students' ability in delayed vocabulary retention, which was measured by a context-embedded test for three weeks after the instruction. By the help of the result of this context-embedded test, we can measure the students' ability firstly in delayed vocabulary retention, and secondly, in the use of the words properly in context. In so doing, the tests (3) and (6) were compared and contrasted. Since, it was an inter-group comparison, an Independent-Sample T-test was utilized to compare the means and to measure the degree of the difference between the groups' means. The mean scores of the participants are shown in table 5 and figure 4, while their t-test results are shown in table 6.

Table-5. Descriptive statistics of tests (3) and (6) Group Statistics

groups	N	Mean	Std. Deviation	Std. Error Mean
picture	30	16.6667	.47946	.08754
Translation	30	14.8833	.21509	.03927

Table-6. T-test results of the comparison of test (3) with (6)

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference		Lower	Upper
Equal variances assumed	54.663	.056	18.588	58	.012	1.78333	.09594		1.59128	1.97538
Equal variances not assumed			18.588	40.218	.000	1.78333	.09594		1.58946	1.97721

Figure-4. Mean scores of the tests (3) and (6)
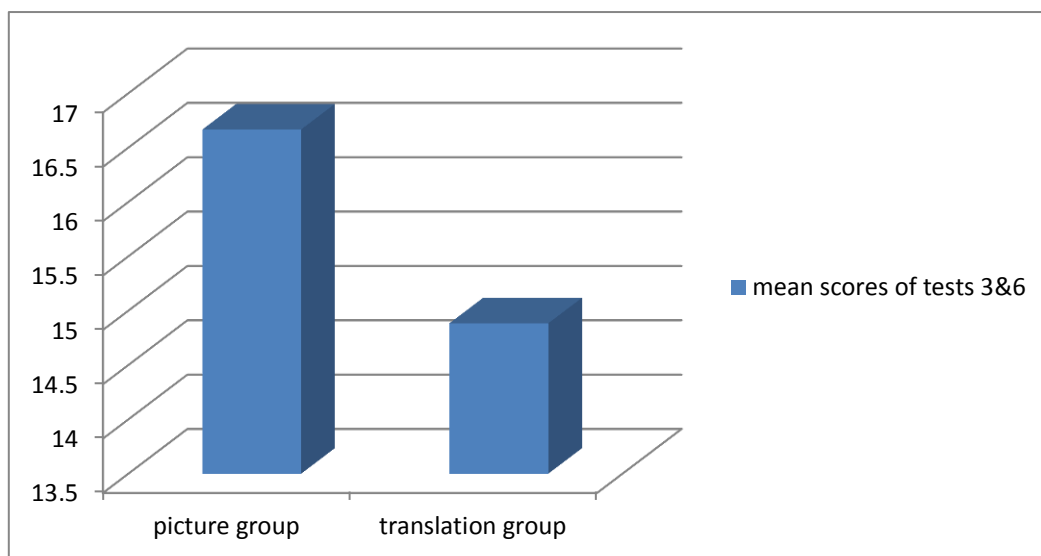
The significance of the difference between these two tests can be implied by the results of the t-test. Since p-value is equal to .012, which is smaller than the significance level (0.5), the second null hypothesis cannot be accepted. Unlike the former comparisons, in this comparison the picture group outperformed the translation group in delayed test, showing that the participants in picture group were better in the context-embedded test. But the translation group was better in immediate vocabulary learning and recall.

By inclusion of the delayed retention variable, it is necessary to compare the performance of each group across their post- and delayed-tests. For the translation group, the tests (1) and (3), and for the picture group, the tests (4) and (6) were compared and contrasted. Since, both comparisons were intra-group ones; a Dependent–Sample T-test was used to compare the means. The mean scores of the participants in both groups are shown in table 7, table 9, Figure 5 and Figure 6, while their t-tests are shown in table 8 and table 10. The results of the comparisons of post- and delayed-tests of both groups can clearly suggested that the translation group had better performance in post-test than in delayed-test. In contrast, the picture group had better performance in delayed-test than

in post-test. So, these results showed the outperformance of the picture group, not translation group, in delayed vocabulary retention.

Table-7. Descriptive Statistics of tests (1) and (3)

Translation Group	Number of subjects	Mean	Std. Deviation	Std. Error Mean
Post test	30	17.0333	2.24328	.49666
Delayed test	30	14.4333	2.35453	.49099

Table-8. T-test results of the comparison of test (1) with (3)

Picture Group	Mean	Number of subjects	Std. Deviation	Std. Error Mean
Post test	16.1667	30	2.67547	.67561
Delayed test	15.3333	30	2.45329	.54616

Table-9. Descriptive Statistics of tests (4) and (6)

Translation Group	Paired Differences							
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	t	df	Sig. (2-tailed)
Post test Delayed test	1.52000	2.90287	.58057	.32275	2.72315	2.618	29	.023

Table-10. T-test results of the comparison of test (4) with (6)

Picture Group	Paired Differences							
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper	t	df	Sig. (2-tailed)
Post test Delayed test	1.65000	3.43211	.45622	2.76864	.17646	2.233	29	.030

Figure-5. Mean scores of the tests (1) and (3)
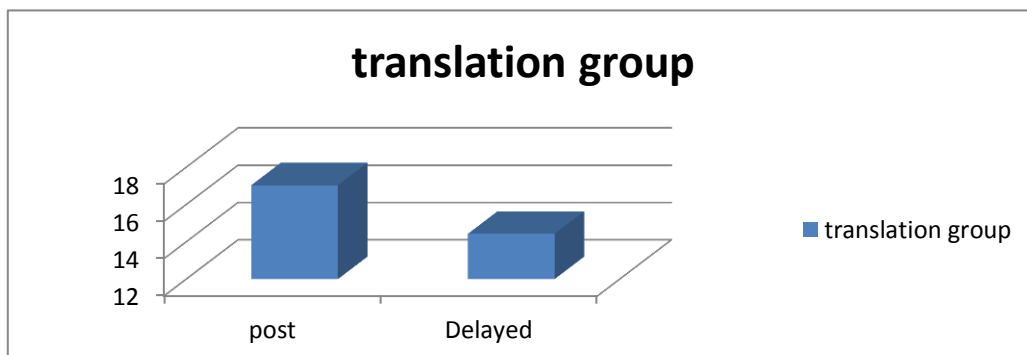
Figure-6. Mean scores of the tests (4) and (6)
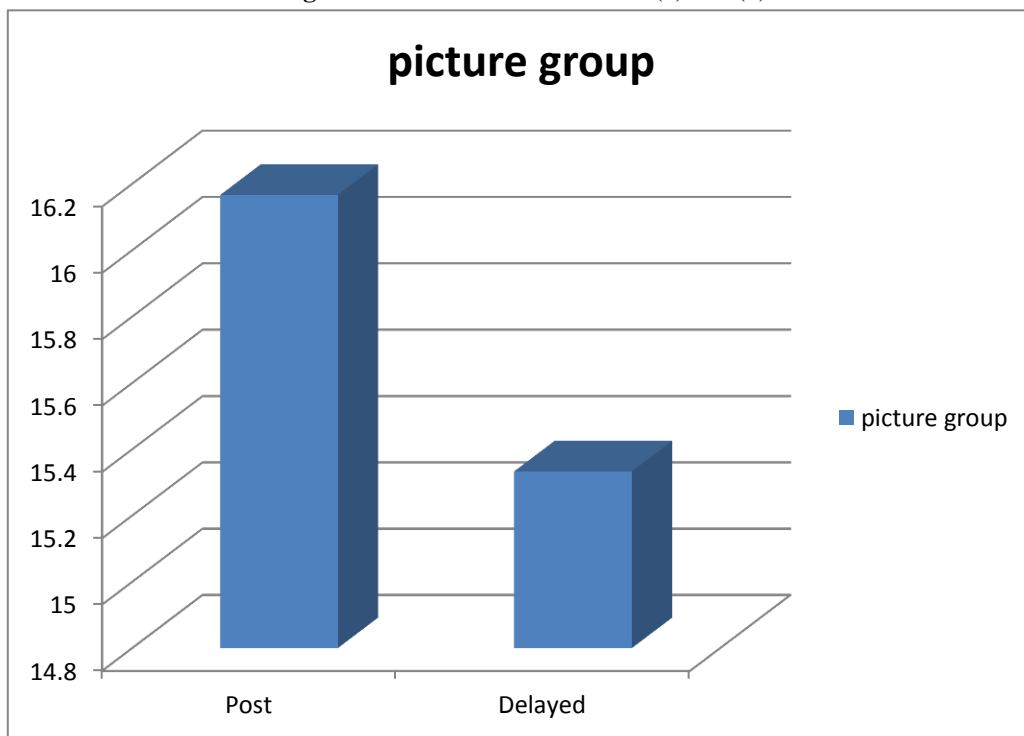
In order to investigate this subject for the picture-learning group, the tests (4) and (5) were compared and contrasted to each other. Like the former section, since the comparison of the tests (4) and (5) was an intra-group comparison, a Dependent–Sample T-test was used to compare the means and to measure the degree of the difference between the groups' means. The mean scores of the participants are shown in table 13 and figure 7, while their t-test results are shown in table 14.

Table-13. Descriptive Statistics of tests (4) and (5)

Paired Samples Statistics

Tests	Mean	N	Std. Deviation	Std. Error Mean
Test 4	15.5667	30	.67891	.12395
Test 5	14.1000	30	.20342	.03714

Table-14. T-test results of the comparison of test (4) with (5)

Paired Samples Test

Picture group	Paired Differences							
			Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
	Mean	Std. Deviation		Lower	Upper			
Test 4 Test 5	1.46667	.55605	.10152	1.25903	1.67430	14.447	29	.000

Figure-7. Mean scores of the tests (4) and (5)
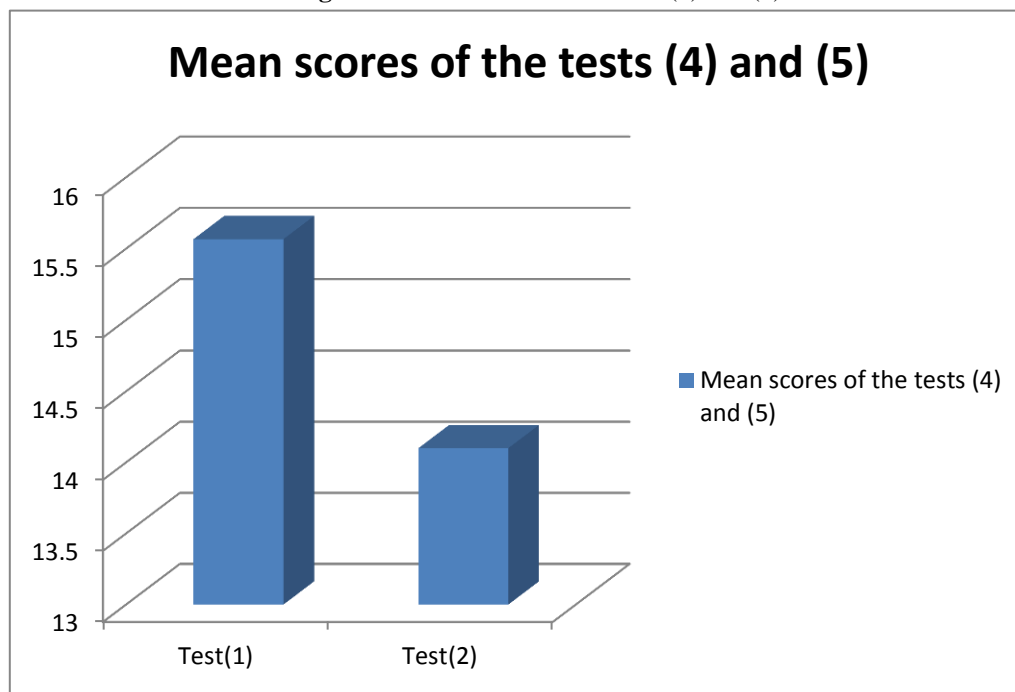
The descriptive statistics showed that there is a difference between the means of the two tests. Also the results of the t-test support the significance of such discrepancy. In this comparison, the third null hypothesis can be rejected by considering p-value (0.00) which is smaller than the significance level (0.05). So in this comparison, it can be claimed that the picture group was better in test (4) than (5). In other words, it means that the picture group has got better results when the testing condition was congruent with the learning condition rather than when they were incongruent. As it can be inferred from the results of this section and the former one, both groups had better performance when there was a congruency between the learning condition and the testing condition.

In discussion of this study, however, the present study was intended to investigate the efficacy of two different learning methods in the acquisition of concrete simple words by elementary Persian speakers learning English. In this study, picture-learning and translation-learning were compared and contrasted. In the picture-learning condition, English words in combination with pictures representing the words' referents were presented to one group of participants. In the word-learning condition, the English words in combination with their Persian translation equivalents were presented to the other group of participants. The immediate vocabulary learning and recall by the language learners was the first one. The second variable was the students' ability in delayed vocabulary retention which was measured by a context-embedded test. Finally, the in/congruency between the learning condition and the testing condition was analyzed.

The purpose of research was to measure the effects of translation-learning and picture-learning on the elementary students' immediate vocabulary learning and recall. In order to reach the aim of this

study, there were two conditions which were congruent and incongruent. For the congruent condition, tests (1) and (4) and for the incongruent condition, tests (2) and (5) were compared and contrasted. The results of this project showed that the translation group outperformed the picture group in both congruent and incongruent conditions. This superiority means that the translation group was better even when the participants received a test format which was totally different from the one they were accustomed to during instruction. In other words, the effect of learning method indicated that presentation of L1-L2 word pairs during learning provides a better opportunity for acquiring L2 words than does the presentation of picture-L2 pairs, at least for our participants. The recall data also suggested that for our participants word learning is a more effective method to acquire an L2 vocabulary than is picture learning: word learning produced higher recall scores than picture learning.

8. CONCLUSION

Research on bilingualism has a long history, and interest in bilingualism has been growing in many disciplines. During the past two decades, there has been great progress in the development of models of bilingual memory as well as in methodological techniques. "Word association" model and "concept mediation" model are the two important bilingual memory models among several others which have been investigated and explored in the past. Translation and picture learning have been considered to be two vocabulary teaching techniques which have word association and concept mediation model as their theoretical basis respectively. In the related studies, it has been proposed that the non-proficient bilinguals used the word association model in learning and recalling the L2 words. But the proficient participants used the concept mediation model instead.

Therefore, the present study investigated the effects of translation and pictorial on Iranian elementary learners' immediate vocabulary learning and also delayed vocabulary retention. The in/congruency between the learning condition and the testing condition was examined as well. The research paper gave strong evidence for the superiority of translation learning over picture learning for the participants for the immediate vocabulary learning and recall, but for the delayed vocabulary retention tested by a context-embedded test, the picture learning group outperformed. Also the participants had better performance in the congruent condition between the learning and the testing than in incongruent condition. . The results showed that participants in both groups were better when there is congruence between testing and learning conditions. Generally the result showed that the elementary learners have a great dependence on using their mother tongue in the primary stages of foreign/second language learning. The findings of this study showed that the all hypothesizes were rejected.

9. LIMITATIONS OF THE STUDY

There are some limitations that constrain the generality of the results of the present study and their practical implications. The first concerns with the number of the words. In order to have more reliable results, the number of L2 words in this study should increase since it can have a great effect

on the groups' performance. The second is that only the elementary language learners participated in this study, while the intermediate and advanced participants could have taken part in the study, especially to test the developmental model. The third limitation is that in the present study only the learning & recall also retention scores of two groups were compared, while the reaction times should be compared in order to have valid and reliable results.

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