

The Effectiveness of Strategy-based Vocabulary Instruction on Iranian EFL Learners' Recall

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Abstract—This study investigated the preferred vocabulary strategies, used by Iranian intermediate EFL learners and also the effect of strategy-based vocabulary instruction on students' recall once immediately after the instruction period and once after a time interval (two weeks). In order to determine the learners' level of proficiency, NET (Nelson English Test) was administered to the intended population. Those students, whose score fell within the range of 28-33 were labeled as intermediate. To identify the learners' preferred vocabulary learning strategies, a questionnaire known as VOLSI (Vocabulary Learning Strategies Inventory) was given to them. The results indicated that there was not any significant difference between the mean scores of the participants in the control group and the participants in the experimental group (0.46). In simple words, the two groups were homogenous in terms of lexical knowledge at the beginning of the course. With regard to the obtained results for the two post-test phases, it was found that the post-treatment means of the two groups were significantly different in terms of recalling vocabulary. Taken together, the findings of this study support the foreign language research literature on vocabulary strategy training.

Index Terms—vocabulary knowledge, language learning strategies, vocabulary learning strategies

I. INTRODUCTION

During the last few decades, an enthusiastic interest has aroused among researchers to explore the role of vocabulary in foreign language classes. This motivated interest is said to have its roots in the fact that one part of learning a language depends on students' comprehension of what they read and hear. When students' vocabulary knowledge is limited, and they do not understand a considerable number of words, the processing of texts might become a challenging task for them. In other words, the more extensive vocabulary treasure students have, the better they can deal with reading comprehension texts. A large vocabulary opens students up to a wider range of reading materials. A rich vocabulary also improves students' ability to communicate through speaking, listening, and writing. Many researchers believe that vocabulary deficiencies are a primary cause of academic failure. They, in fact, consider the size of a person's vocabulary knowledge as a good predictor of his performance on different comprehension tasks. These researchers profess that direct and explicit instruction of a set number of vocabulary may lead to the improvement of academic success in all content areas. With regard to the fact that the role of vocabulary is not underestimated in language classroom anymore, and its status has started to undergo remarkable shifts, the present research was conducted. This study, in fact, was carried out to see whether it would lend support to the claim that teaching vocabulary through strategies facilitates storing and recalling new vocabulary items. Simply put, this study is an attempt to find out the most preferred strategies, employed by Iranian EFL students as well as the effect of teaching some of these strategies on recalling vocabulary items.

II. LITERATURE REVIEW

In the process of investigating and classifying LLS (Language Learning Strategies), there are some studies, which have specifically explored the effects of different strategies on vocabulary acquisition and recall. Kok and Canbay (2011), for example, investigated the effects of vocabulary consolidation strategies training on vocabulary learning. In their research, 34 participants took Vocabulary Level Test and Vocabulary Consolidation Strategy Inventory. The findings of their study revealed that the students who received vocabulary consolidation strategies training achieved higher scores at the Vocabulary Level Tests. At the end of their research, the authors concluded that their study lend support to the retention of vocabulary through the explicit strategy training. Barani, Mazandarani, and Seyyed Rezai (2010) also worked on the effect of applying audio-visual aids on 60 Iranian learners' vocabulary achievement. The results of their analyses indicated a significant difference between the mean scores of pre-test and post-test of the participants of the experimental group. Semantic mapping strategy and its effects on students' vocabulary learning was the topic of a paper written by Dilek and Yuruk (2012), who aimed to explore the effects of semantic mapping technique in comparison with traditional techniques in vocabulary learning. The findings were suggestive of the fact

that semantic mapping technique is much more effective than the traditional technique. Following the same line of inquiry, Zahedi and Abdi (2012) also worked on the strategy of semantic mapping and found that students' performance on vocabulary learning tests was significantly different from each other across experimental and control groups. Helping students to focus on etymology of words is another strategy which has been suggested for increasing students' vocabulary knowledge. Hashemi and Aziznezhad (2011, p.102) firmly believe that:

"This method is considered as one of the most systematic, enjoyable and effective ways of enhancing word power, which increases students' ability to figure out unknown and difficult words with ease and without continual reference to unabridged sources."

The effect of using digital games on Iranian children's vocabulary retention has been worked on by Aghlara and Hadidi Tamjid (2011). The researchers used a digital game named SHAIE in their experimental group consisting of 20 six- to seven-year old girls, and the usual traditional methods in their control group equally consisting of 20 girls. The experimental group members were provided with 45-day instruction period and were taught particular vocabulary items including names of animals, family members, colors, and numbers. The results of this study indicated that experimental group outperformed the control group. The findings, in fact, proved the positive effect of digital games on vocabulary learning. Alternatively, Marzban and Azizi Amoli (2012) conducted a research and explored the effect of mnemonic strategies on the immediate and delayed retrieval of vocabulary learning in EFL elementary learners. The results of the post-test which the participants took after two weeks period of instruction proved the superiority of experimental group to the control group. The impact of imagery strategy on EFL learners' vocabulary learning has also been investigated by Zahedi and Abdi (2012). 40 EGP lower-intermediate language learners participated in this study and were divided into two groups of experimental and control. The former group was provided with treatment of imagery instruction and the latter was provided with nothing. As expected, the experimental group outperformed the control group.

To bridge the gap related to the small number of works on the effectiveness of using a particular set of vocabulary learning strategies on students' recall specially in Iranian educational settings, the purpose of the research was to provide a more comprehensive picture of the role of explicit strategy-based vocabulary instruction on students' learning and recall.

III. RESEARCH QUESTIONS

This research serves mainly to shed light on the most frequently used vocabulary learning strategies by Iranian EFL students as well as the effectiveness of these strategies on their recall. More specifically this study strives to answer the following research questions:

1. Which vocabulary learning strategies are most preferably used by Iranian EFL learners?
2. Does strategy-based vocabulary instruction significantly affect Iranian EFL learners' immediate and long-term recall of new vocabulary items?

The present research sets out to follow a study conducted by Khatib, Hasanzadeh and Rezaei (2011). The analytical framework of this study was the taxonomy of strategies presented by Stoffer (1995), who designed a questionnaire called VOLSI (Vocabulary Learning Strategies Inventory), consisting of 53 likert-type strategies defined in terms of the nine strategy categories. The strategy subcategories are concerned with authentic language use, self-motivation, organizing words, creating mental linkages, memory, creative activities, physical actions, overcoming anxiety, and auditory processing.

IV. METHOD

A. Participants

After administering NELT (Nelson English Language Test) to the intended pool (100 students), 70 of them were considered as intermediate language learners and were chosen as the final participants. The age of these students ranged from 17-22. The scores were between \pm one standard deviation from the mean score based on the normal distribution of scores. After taking the proficiency test, the participants were divided into one experimental (consisting of 35 students) and one control group (35 students) randomly. The experimental group received strategic-based instruction, in which a particular set of vocabulary learning strategies based on Stoffer's (1995) model were taught to them by the teacher. In comparison, the control group was provided with the same vocabulary but with the traditional method of teaching vocabulary.

B. Instruments

1. Nelson English Language Test

In order to ensure about the homogeneity of the participants, Nelson English Language Test was used. This test consists of 40 separate tests. Each test consists of 50 items. The reliability estimate of the test was calculated through KR-21 formula in the pilot study, and it turned out to be 0.83. The validity of the test was also confirmed by three professional language instructors.

2. Pre-test

In order to assess the learners' original knowledge of vocabulary, a 30 multiple-choice item for pre-test was developed by the researcher and was administered to both the experimental and control group participants before the treatment when its reliability (0.79) was checked.

3. VOLSI (Vocabulary Learning Strategies Inventory)

This questionnaire which is a 53-item Likert scale ranging from one (never) to five (always) was administered to the participants in order to find about their preferred vocabulary learning strategies.

4. Post-test

In order to check students' degree of recall, a 30 multiple-choice vocabulary test was designed again based on what was taught during the instruction period. The participants of both groups took the test twice, once immediately after the instruction period and once on the delayed post-test after two weeks. The reliability of the test was also calculated before administration.

C. Procedure

Before starting the main part of the research, the Nelson English Test was administered to the intended population. Out of 100 students who took the test, those who gained the scores between 28 to 33 (± 1 standard deviation from the mean) were considered as intermediate learners and were chosen as the participants of the study. This test helped the researcher to ensure that all the participants were at the same level of language proficiency, and they were therefore homogenous.

Then the Vocabulary Learning Strategies Inventory was administered to the participants in order to find about their preferred vocabulary learning strategies. The students, in fact, were asked how frequently they use the strategies cited in the questionnaire. Completing this questionnaire did not take more than 20 minutes.

After administering Nelson English Test and VOLSI, the participants were randomly assigned to experimental and control groups. After this random sampling, a pre-test was administered. This pre-test, which included 30 multiple-choice vocabulary questions was developed by the researcher firstly to gain an understanding of the participants' vocabulary knowledge before the treatment and also to see whether there were any significant differences between the two groups' performance on the test. This test was piloted and given to a sample similar to the main population. Through the pilot study, the test was reviewed by some skillful teachers to remove the probable ambiguities and item characteristics such as item facility and item discrimination were checked. The goal of this pre-test, secondly, was to identify the unknown words by the participants of two groups. After administering the vocabulary test, some words that were already known by the participants were excluded. The criterion-related validity index and the reliability of the test were checked. The reliability estimate of the test which was calculated through KR-21 formula was found to be 0.79.

After the pre-test, the treatment began. In both groups, the same set of vocabularies was taught by the researcher. The experimental group received particular instruction on vocabulary learning strategies whereas the control group received traditional methods. Throughout the instruction of the experimental group, similar to the study conducted by Zahedi and Abdi (2012), the researcher tried to provide the learners with an appropriate definition of each vocabulary learning strategy first and then with an exemplification of it. The researcher, in fact, explained about the characteristics, usefulness, and applications of each strategy explicitly. The learners were then given the opportunity to practice what they have learned in applying the intended strategy in order to guarantee the participants' understanding of it. In control group, on the other hand, the researcher presented the same vocabulary items as the experimental group by writing them on the board in isolation, making students familiar with the pronunciation of vocabularies, explaining their parts of speech and finally translating them into Persian. The course consisted of 11 sessions (two ninety minute sessions per week). When the treatment finished, a post-test similar to the pre-test (consisting of 30 questions) was designed and administered twice once immediately after the program and once after a specific time interval. The reliability of this test was also checked and was found satisfactory. Through these two post-tests, the researcher aimed to find whether the treatment had been effective or not because they could reveal the degree of vocabulary recall in both experimental and control groups. The test included all the vocabulary items, which students learned during the instructional program. All students took the test once immediately after the end of the treatment and later after two weeks. The scores of the students in the two phases of post-tests in both groups were compared and submitted in to statistical analysis to draw the final conclusions.

D. Design

The present research was done based on a randomized pretest posttest experimental and control group design, therefore, it is experimental. The members of the experimental group were taught some vocabulary learning strategies, which are considered as independent variables and the control group received no special treatment. The participants' vocabulary scores were considered as the dependent variable of this study.

E. Data Analysis

The collected data were entered into 18.00th version of Statistical Package for Social Sciences (SPSS). In order to answer the research questions, the students' performances in both the experimental and control groups were measured on the pre-test and post-test, so independent T-tests were needed to compare students' performances on pre-tests and post-tests to check the impact of strategy instruction.

V. RESULTS

A. Results Related to the First Research Question

To answer the first research question, the questionnaire mentioned in the instrument part (Vocabulary Learning Strategies Inventory) was used to see what strategies were preferred among the participants. The following figure illustrates the preferred strategies in terms of the number of the participants who chose them.

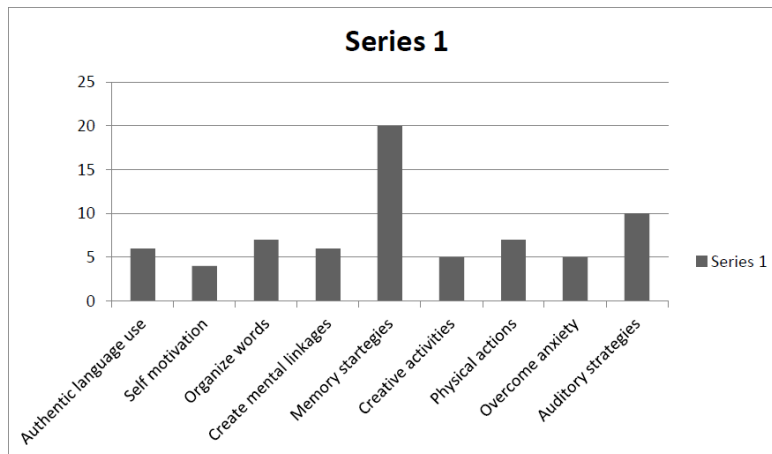


Figure 1. The preferred strategies by the participants

The result showed that 20 among 70 participants preferred memory strategies to other types of strategies.

B. The Results Related to the Two Groups' Performance on the Recall Test Immediately after the Treatment

To compare the post-treatment scores of two groups of experimental and control in respect of recalling vocabulary, an independent T-Test was run. Table 4.1 indicates the descriptive statistics of the two groups in relation to recalling vocabulary after the administration of treatment.

The findings in Table 1 indicate that there is a difference in the participants' performance on vocabulary learning. Whereas the mean score for the experimental group is 21.02, the mean score for the control group is 18.74.

TABLE 1
DESCRIPTIVE STATISTICS AND INDEPENDENT T-TEST FOR POST TEST SCORES

	Group	Mean	S. D.	T	Sig.
Vocabulary(post-test)	Experimental	21.02	2.96	3.513	0.001
	Control	18.74	2.45		

According to Table 4.1, vocabulary strategy instruction did result in the participants' vocabulary learning. As can be seen, p-value equals 0.001, which is lower than the significant level of 0.05. As a result, the post-treatment means of two groups in terms of recalling vocabulary are significantly different at the confidence level of 0.95. Figure 2 illustrates the mean scores of the experimental and control groups after the treatment.

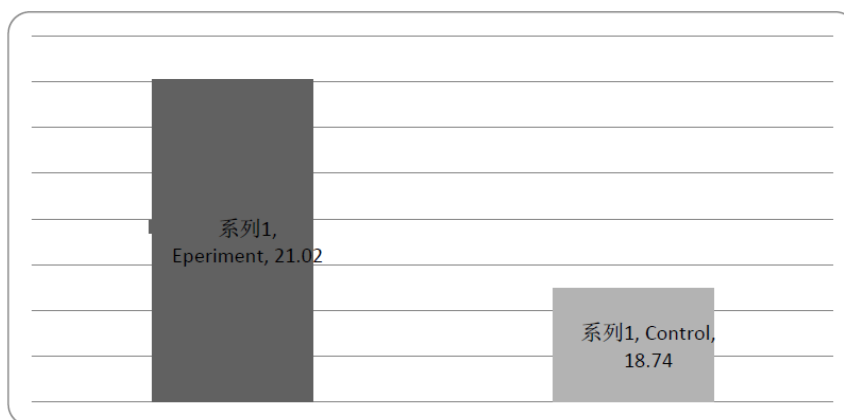


Figure 2. The mean scores of the two groups immediately after the treatment

C. The Results Related to the Two Groups' Performance on the Recall Test Two Weeks after the Treatment

To address another concern of the study which was the possible long term effect of strategy based instruction on vocabulary recall, another post-test was administered to the participants of the experimental group fifteen days after the

treatment. To find out any significant difference in the mean of the scores obtained from the pre-test and the delayed post-test, a paired T-test was run. The rationale here is that, if the mean of participants' scores on the delayed post-test is significantly higher than the mean of the participants' scores on the pre-test, then it could be concluded that the treatment i.e. strategy-based instruction has had a long term effect on vocabulary recall.

Table 2 illustrates the descriptive statistics of the paired T-test comparing the mean of the scores of the pre-test and delayed post-test of vocabulary belonging to the experimental group. As it could be noticed the p-value is 0.003, which is lower than the significant level of 0.05, and therefore it could be inferred that the strategy-based instruction has a significant impact on the long term vocabulary recall of the participants.

TABLE 2
THE DESCRIPTIVE STATISTICS COMPARING PRE TEST AND DELAYED POST TEST SCORES

Experimental	N	Mean	StDev
Pre-test	35	17.65	2.08
Delayed post-test	35	20.48	3.65

T-test Difference P-Value=0.003

Based on the forgoing results, it is concluded that strategy based instruction has a significant effect both on the immediate and long term recall of vocabulary.

VI. DISCUSSION AND CONCLUSION

As was mentioned before, vocabulary is an active part of a language the mastery of which not only takes place in the classroom or at school, but also over lifetime. Regarding the fact that the mastery of all the vocabulary in a language is not really practical for anyone, what can be done is to obtain certain strategies to speed up the acquisition of new words. So the study of vocabulary learning strategies is crucially demanded as an important step in SLA. Compared with the changes of grammar and pronunciation, the number of vocabulary is keeping on changing and enlarging, so teachers should help students to adopt effective ways to learn vocabularies more efficiently. In this study, attempts were made to check whether students' degree of recall is influenced by teaching particular vocabulary learning strategies both immediately after the instruction and after a time interval.

This study sought to investigate the impact of strategy-based vocabulary instruction on the immediate and long-term vocabulary recall of Iranian EFL learners. Moreover, the current study was an effort to probe the most preferred vocabulary learning strategies, used by the participants. The first research question of this study attempted to unravel which vocabulary learning strategies are mostly preferred by Iranian intermediate EFL learners. Out of nine strategy types, memory strategies were found as the most frequently used strategies among the participants. One of the reasons could possibly be found based on "Depth of Processing Hypothesis". This hypothesis was proposed by O'Malley and Chamot (1990) and Oxford (1990). Based on Depth of Processing Hypothesis, the more cognitive energy a person has in manipulating and thinking about a word, the more likely they can recall and use it later (Craik & Lockhart, 1972; Craik & Tulving, 1975). Thus, here it could be inferred that, most probably learners are in favor of this type of strategy since it helps them recall the vocabulary items better.

Another possible explanation regarding the popularity of this type of strategy could be found in Oxford's remarks. Oxford (1990) believes that memory strategies, sometimes called mnemonics, have been used by people for years. Based on what she asserts it could be inferred that because memory strategies have been with us for such a long time perhaps learners are more accustomed to employing them since they know how it works quite well.

In Iranian settings, in fact, what matters to the students most is the memorization of vocabulary since they think becoming successful in the language learning process itself and also in different types of tests is crucially dependent on the number of words one has previously memorized. Oxford (1990) also believed that memory strategies are crucial in that they can help learners' develop their autonomy and can lead to a longer retention of vocabularies and their meanings. Apparently the majority of participants chose memory strategies as their preferred type of strategy because they think this type of strategy facilitates the storing and recalling of vocabularies more in comparison with other strategy types mentioned in the administered questionnaire.

In the present study, the findings related to the second research question indicated that the experimental group outperformed the control group both in short-term (immediate post-test) and in long-term (after two weeks) recall tests. This means that teaching through using strategies was an effective way of learning and remembering the vocabulary items for the experimental group participants.

The results of this study are in line with some studies which have been done before. In a study conducted by Asgair and Mustapha (2011) on vocabulary learning strategies, for example, some strategies such as learning a word through reading a text, the application of monolingual dictionary, the application of various English-language media, and applying new English words in daily speech are related to memory strategies. Determination and meta-cognitive strategies were most frequent strategies among the learners, and the learners were keen in using them. The results of this study also have things in common with other studies carried out on the effect of using vocabulary strategy instruction on recalling vocabulary (Hashemi & Azizinezhad, 2011; Kok, & Canbay, 2011). They all showed that using vocabulary instruction had positive effect on recalling vocabulary. The findings of the present study are also congruent with Zahedi

and Abdi's (2012) study in which the researchers found that learners' vocabulary learning is affected and hence improved through a particular type of memory strategy namely semantic mapping significantly. Following the same line of research, Dilek and Yuruk (2013) also taught particular target vocabulary items through Semantic Mapping technique. According to the results, semantic mapping technique was found to be more effective than the traditional technique in vocabulary learning. The findings of the present research are also consistent with Nemati's (2013) study. The results revealed that strategy training could significantly boost long-term retention of vocabulary items. The experimental group students, in fact, outperformed the control group within the same period of instruction, which means that teaching through direct strategies was an influential factor for remembering vocabulary items.

The results of the present research similarly corroborates with another study conducted by Kok and Canbay (2011), in which statistically significant differences were found between the experimental group members who were provided with explicit vocabulary strategy training and control groups in favor of the experimental group at the vocabulary levels.

Taken together, the findings of this study support the foreign language research literature on vocabulary strategy training. The results of the present study, in other words, confirm the idea that recall degree of vocabulary increases through explicit vocabulary strategy instruction. Through this research, the importance of vocabulary learning is once again emphasized and pedagogical awareness of vocabulary strategies in the field of second language teaching is increased.

The issue of language learning strategies can be further investigated from different perspectives. Researchers are encouraged to focus on the following suggestions:

1- The subjects of this study were males and females aging between 19-22. It can be replicated with young learners and with other age groups. 2- The subjects of this study were all intermediate students. A similar research can be carried out with the subject of other proficiency levels. 3- A similar study may be done with more sessions on a longer time span to investigate the long lasting effect of using vocabulary instruction. 4- A study may be done combining two or more variables i.e. vocabulary instruction and other types of vocabulary strategies to investigate the effect of a combination of variables on learners' recalling vocabulary.

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