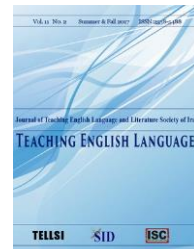


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**Research Paper**

## **An Investigation into the Impact of Rote and Mnemonic Strategies on Vocabulary Learning of Iranian Elementary EFL Learners**

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### **Abstract**

Vocabulary knowledge is a basis for language education and use as well as for achieving higher order language skills. It is also regarded as the key component of language education. It is believed that knowledge of Vocabulary Learning Strategies (VLSs) can be an effective device for understanding vocabulary. In this quasi-experimental study, the participants were divided into experimental and control groups. The Quick Placement Test was used to select sixty Iranian female students. Two strategy types (rote and mnemonic) were employed in the experimental groups and learners were instructed thirty vocabulary items from *Barron's 1100 Essential Words* during three sessions. These strategies were not instructed for the control group. Finally, an immediate and a delayed posttest were conducted. The collected data were analyzed both descriptively and inferentially through ANCOVA. It was found out that the group which used mnemonic strategy, rather than rote-based learning strategy, had a significantly better performance compared to the control group. This study implies that using VLSs can result in a better retention.

**Keywords:** Mnemonic Strategy, Rote Strategy, Vocabulary Learning Strategies, Iranian EFL learners

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## **1. Introduction**

Listening, reading, writing and speaking, as the major skills of language, are essential components of successful communication (Nation, 2003). It is evident that vocabulary is viewed as a basic component in language learning and communication. Vocabulary plays a key role in acquiring the main skills particularly in listening comprehension. The components of language, such as phonology, morphology, syntax, lexis, and grammar significantly correlate with higher order language skills and vocabulary plays a crucial role in language education. By the same token, Lewis (1993) contents that vocabulary is regarded as the major contributory factor in language education. Foreign language vocabulary cannot be learned in a short period of time and it requires repetition and instantaneous practice. Some strategies have been introduced to facilitate language learning. According to Gu (1994), second and foreign language learners apply and use Vocabulary Learning Strategies (VLSs) as the specific methods for learning new target words.

Numerous researches have been carried out as the core studies of vocabulary development in language education (Nation, 2001). It has been proved that the acquisition of VLSs leads to an influential and lifelong language learning. Nevertheless, knowing and using vocabulary needs to be distinguished. The objective of VLSs is to learn the word items and to apply them in variegated academic and professional contexts where they are needed, a process in which VLSs can play pivotal role (Baskın, Işcan, Karagöz, & Bıröl, 2017).

## **2. Review of the Related Literature**

### **2.1 Vocabulary Learning Strategies**

Weinstein and Mayer (1986) regard learning strategies as some of the methods for thinking and behavior that the learners usually employ to

promote the coding process. It is also considered as an attempt by the learners to acquire new words or to stabilize the vocabulary in their mind (Tok & Yigin, 2013). Most learners are interested in using language learning strategies to foster their target abilities pursuing their learning requirements (Mashhadi & Khazaie, 2015; Oxford, 1990). It is asserted that language learning strategies can play a critical role in making learners handle their own language learning (Oxford, 2011). In order to engender an independent learning context in line with their requirements, language learners usually use language learning strategies as effective ways by which these strategies make the achievement of proficiency in target language easier. These practices should be done in the extramural situations, given that there is no opportunity for the learners to employ these strategies just indoors.

It is believed that strategies of language learning are critical in making learners to be self-autonomous (Oxford, 2011). Learning a new word in a language does not happen in a moment; the learners must repeat and work hard to learn it completely. However, this process could not be followed just in the instructional-learning contexts; it requires a conscious work after the class. This means the learners should depend on their own abilities to follow this process. Essentially, in this case, the learners try to learn the vocabulary items by considering their own interests and needs (Apaydin, 2007). This indicates that learners attempt to acquire words independently. The choice of vocabulary learning strategies is highly dependent on learners' language levels (Baskin et al., 2017). In this procedure, learners acquire vocabulary items based on their own motivation and requirements (Apaydin, 2007). Language learners use VLSs as the basic steps for learning new English vocabulary items. There are some categories of VLSs which are suggested by many researchers (e.g., Gu, 2003; Nation, 2001; Stoffer, 1995).

According to Malmir and Aghazamani (2019) in Iran's EFL setting, how

long a newly acquired vocabulary item stays active and functioning in mind has been among the main worries of Iranian English instructors. More frequently, numerous Iranian EFL learners complain and raise their concerns about overlooking the words they have already learned, which can be seemingly credited to the need of lexical retaining among them. Establishing appropriate vocabulary learning strategies may help the learners gain better retention of words.

## **2.2 Studies Related to Rote Memorization Strategy**

There are many reasons for emphasizing vocabulary learning and dictation; in this way, rote-based learning is regarded as one of the critical points in the scale of VLSs. The necessity of the breadth of word knowledge acts as one of the many reasons for using VLSs. Based on the theoretical level, investigation of vocabulary learning and spelling capability can help learners realize language acquisition as a whole (Mahmoudi-Gahroue, Youhanaee, & Nejadansari, 2019). Many individuals think of rote-based vocabulary learning as repeating the vocabulary items with the aim of memorizing them, without a clear understanding of the rationale or correlation included in the words that is acquired.

Rote learning in VLSs in Burmese EFL learners was studied by Sinhaneti and Kyaw (2012). The requirement for concrete realization of the role of rote-based learning strategy in vocabulary learning was investigated by them. Moreover, Burmese EFL learners' view on rote-based learning strategy was investigated and they concluded that rote-based learning strategies are applied more than any other strategies by the learners. Their findings also revealed that rote-based learning strategy is influential not only at the beginning phases but also in advanced phases of learning English language. Furthermore, engendering psychological connection strategy could be used as a main collective strategy of rote-based learning in learners' vocabulary

learning. Notably, the results indicated that Burmese EFL learners used rote-based learning strategies permanently in their vocabulary learning, seeing as they include five elements of the content analysis: Burmese educational/cultural context, EFL context, customary routine, examination demand/national condition, and failure to test the appropriate ways.

Iranian EFL acquirers' attitudes toward the function of rote-based vocabulary acquisition, and the influence of it on learners' improvement, have been examined by Rashidi and Omid (2011). They employed two types of (learners and teachers) questionnaires. Moreover, the researchers distributed a vocabulary quiz and a language aptitude test (ECCE). Various ways of analysis assessments such as descriptive analysis, factor analysis, correlation analysis and Chi-Square analysis were applied in this study. They maintained that EFL learners' beliefs in rote learning is influential in learning EFL vocabulary items. They reported that two types of strategies including reviewing and having structured review are influential for learners in learning new words. They found a constructive and important correlation between learners' views and the use of strategy. They maintained that the correlation between learners' views and their language aptitude is significant. However, they proved that there was an insignificant relationship between the use of strategy and language aptitude and there was a minor correlation between the items. They concluded that the relationship between views and vocabulary test scores was not significant.

The effect of rote-based learning was studied by Wu (2014). He formed a lexicon vocabulary learning technique with comprehensive procedures, called Cyclical Repetition Technique (CRT). Some fifty Chinese ESL university students participated in the experimental groups. In order to check out the influence and practicality of this technique, he used a pretest and two posttests. The findings revealed that this technique facilitated learners'

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vocabulary development and the participants who applied this approach in vocabulary learning processes, memorized the word items faster and effectively in terms of long-term retention.

On the other hand, Cheung (2000) was against rote-based learning. He believed that rote-based learning lacked creativity and it reduced the learners' problem-solving ability; however, it may lead to higher memorization abilities. Therefore, according to Cheung (2000), rote-based learning is considered a mechanical way of learning void of retention.

### **2.3 Studies Related to Mnemonic Memorization**

Mnemonics are introduced as those types of memory strategies that develop memory by encrypting information. Zimbardo, Johnson, and Weber (2006) believe that encoding procedure happens by associating newly learned and previous information with each other in long-term memory. Ellis (1995) believes that learners can develop their conservation of vocabulary items if they employ different mnemonic strategies, including visual and verbal methods. Visual cues include illustrations, visualization or methods for physical and imagery response. According to Thompson (1987), "mnemonics work by utilizing some well-known principles of psychology: They help individuals learn and recall better seeing as they ease the integration of new materials into current cognitive units and since they provide retrieval cues" (p. 203).

Many studies have been done to discover the ways in which the mnemonic method could make learners learn new vocabulary items and keep the items in their long-term memories. Keyword as a communication strategy method is in operation not only for young learners but also for adults (Gruneberg & Pascoe, 1996; Khaghaninejad, Ahmadi, & Shegeft, 2020). Brown and Perry's (1991) findings indicated that learners in the mnemonic group outperformed in the immediate test compared to other groups, and the

influence was higher in low-proficiency learners, whereas the learners in the combined mnemonic-semantic strategy could keep the vocabulary in their mind better than using one strategy in the delayed test.

The influence of teaching through memory strategies (e.g., mnemonics) was examined by Nemati (2010). The results disclosed that the learners in the experimental group had an improved performance at immediate and delayed posttests, and this represented the supremacy of memory strategies in both short-term and long-term memory. It was also found that, seeing as many learners do not develop sufficient comprehension of the vocabulary items, instructing memory strategies explicitly and increasing learners' awareness of these strategies could pave the way to learn new vocabulary items.

Sagarra and Alba (2006) found out different results. Based on short-term retention, those learners who employed keyword method outperformed the rote-based strategy group, and the rote group could perform better than the group learning by semantic mapping, where L1 vocabulary items associated with the L2 vocabulary items were accessible in a diagram. The scores of three-week delayed posttest demonstrated that based on long-term retention, the highest score was from mnemonic keyword method group followed by rote memorization and semantic mapping groups.

Ahmadi Safa and Hamzavi (2013) examined the influence of applying mnemonic key word approach as a vocabulary technic method on learning and keeping vocabulary in long-term memory in a standard EFL classroom setting. Vocabulary items were presented to the experimental group through mnemonic key word method and the control group memorized the vocabulary items using a traditional way of memorization. Some three posttests in a day were administered. The findings revealed that the learners in the mnemonic key word group significantly outperformed (vs.

memorization group) in both learning and retention of the newly learnt word items.

Fasih et al. (2018) explored the roles of mnemonic vocabulary instruction to develop content vocabulary learning in EFL classrooms. To that end, they selected third year senior high school students from six senior high schools in Zanjan. Their study included a control and an experimental group. For the latter, they instructed the word items through mnemonics. The findings indicated that mnemonic vocabulary instruction facilitated content vocabulary learning process. They added that the use of keyword mnemonics can assist teachers in educational programs.

The influence of employing mnemonic keyword strategies on immediate and delayed recall of EFL vocabulary items at elementary language levels was studied by Marzban and Azimi Amoli (2012). Two vocabulary mnemonic strategies of visualization and pictures were employed in the experimental group, while the learners in the control group did not receive any strategies. Besides, after treatment of two weeks, a posttest of vocabulary was conducted. The outperformance of the experimental group was proved by the results of the posttests and this resulted in the effectiveness of mnemonic strategies.

To enhance the secondary school learners' English ability, Du (2012) studied mnemonics. He used different methods and examined the influence and real use of memory devices to recognize the memorizing influence of mnemonics and to develop the secondary school learners' English knowledge. He developed an experimental approach to examine the vocabulary learning process of learners and their improvement in the examination score was checked. The findings revealed that mnemonics could facilitate a secondary school EFL learners' vocabulary learning process.



The potential of mnemonic method as one of the memory strategies (also called mnemonics) on English vocabulary learning was studied by Siriganjanavong (2013). The study endeavored to introduce Mnemonic Keyword Method to low proficient English learners, and it examined the possible effects of this method taking short-term and long-term memory into account. A purposeful sampling method from one intact class including 44 learners was employed. He also used some materials in the study including 40 target vocabulary items, half of which were instructed using Mnemonic Keyword Method and the rest through mixed methods, including word structure analysis, contextual clues, and opposite word-pairs. Some forty-vocabulary test and two cued-recall sheets were employed to check out the learners' retention of vocabulary. It was found that the group that received Mnemonic Keyword Method outperformed the mixed method group in terms of short-term and long-term memory.

According to the above-mentioned literature, it seems indispensable to know the ways in which learners use the strategies influentially to improve their vocabulary knowledge. Therefore, this study highlights the investigation of two major VLSs including rote and mnemonic strategies and their influence on vocabulary growth of Iranian elementary EFL learners. Accordingly, the following questions can be formulated:

1. Does adoption of rote strategy significantly affect Iranian elementary EFL learners' vocabulary learning?
2. Does adoption of mnemonic strategy significantly affect Iranian elementary EFL learners' vocabulary learning?
3. Which strategy(ies) can affect Iranian elementary EFL learners at the immediate and delayed posttests?

### **3. Design**

To conduct this study, a quantitative quasi-experimental design was employed. It examined the role of two specific strategies in English vocabulary learning. The groups who received special treatment were called

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experimental groups, which were compared with a similar group of learners who did not receive any treatment and was called as control group. The presence of a control group represents a control group design of the study.

In this study, two types of data were used. The independent variable was the type of the strategy applied to each of the two experimental groups and which was a nominal variable. The second one was the vocabulary development of the learners, which was the dependent variable. It was measured by a pretest and immediate as well as a delayed posttest by the researchers. The type of this variable is continuous.

### 3.1 Participants

Some sixty female EFL learners (aged 20-25) took part in this study. They were elementary learners of English as a Foreign Language. The participants were taking English classes at private language institutions and their native languages were either Persian or Turkish. According to the consent form completed by the participants, they were all satisfied to take part in the study.

### 3.2 Materials

In order to select elementary learners, a test called standard placement test of *Oxford University* and *Cambridge University* (2004, version 2) was used in this study. This test consisted of 60 multiple-choice items, a cloze comprehension passage, vocabulary, and grammar sections.

Another instrument used in this study was the fifth edition of *Barron's 1100 Words You Need to Know* (Bromberg & Gordon, 2018). This book is specifically designed for EFL students to take part in the standardized exams. The researchers selected it as the material for teaching vocabulary to the experimental groups. There are some reasons for the choice of this book as the material by researchers. *Barron's 1100 Words You Need to Know* provides the learners with a proven plan for improving their English vocabulary, while also preparing them for the exams. The vocabulary items and practice questions that appear throughout this book maximize learners'

understanding of words that are likely to appear in every section of the standardized exams. By following the program and mastering the words in this book, the learners can be ready to earn a higher score on these exams. The fifth edition of *Barron's 1100 Words You Need to Know* has an extensive, revised list of 1100 words with definitions, sample sentences, and improved exercises. This edition makes *1100 Words You Need to Know* one of the thoroughly sought books of its kind. Some thirty words were randomly designated to be taught to the two groups through rote, and mnemonic methods; however, the control group did not receive any treatments.

### **3.4 Data Collection Procedure**

The informed consent form as voluntary agreement form for the participation of the learners was distributed among them. This form provided enough information about the objective of the study, so that the learners easily decided upon their participation and continuation of their participation. To improve the chance of a clear outcome, a pilot study was used and it improved the design prior to the performance of the full-scale research project.

A Quick Placement Test (QPT) was used in this study in order to select those students whose proficiency levels were roughly the same. Although these students were in elementary classes according to the institution's rules, the QPT proved their elementary level. This test was provided by the researchers and 80 students were asked to participate in this study. In order to increase the internal validity of the study, randomization was employed for selecting sixty learners whose scores were above the mean that were classified into two groups of experimental and one control group.

Before the treatment, a 20 multiple-choice test of vocabulary with four possible answers, and 10 matching items, which had been administered to a pilot group, were employed as a pretest by the researchers. During the

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pretest, the researchers were present and observed each learner to avoid cheating. After the completion of the pretest, each experimental group received one type of vocabulary learning strategy in the class. The treatment was given to the two groups. The researchers gave the rote and mnemonic strategies for the two experimental groups respectively. Some thirty words of *Barron's 1100 Words You Need to Know* were taught for each group. The control group received the conventional method of PPP (Present, Practice and Produce). The treatment lasted for about ten minutes in each session. After the treatment sessions, some 20 multiple-choice vocabulary test with four distractors and ten matching test items were used as an immediate posttest for the three groups. In this test, the order of the questions and some of the items were changed by the researchers to increase the content validity. Two weeks later, the delayed posttest of 20 multiple-choice items and ten matching items were implemented among the three groups. Vocabulary retrieval was measured by this test in groups.

#### 4. Data Analysis

This study was carried out to examine the influences of two common strategy types including rote and mnemonic strategies on Iranian elementary learners' short-term and long-term vocabulary development. For this purpose, both descriptive and inferential statistics are used.

##### First Research Question

The mean (M), standard deviation (SD) and the number of participants (N) are shown in Table 1. Rote strategy has a higher M than the control group; in this way, it affects Iranian elementary learners in both short-term and long-term time spans.

Table 1

*Descriptive Statistics of Rote and Control Groups in Immediate and Delayed Posttests*

	Groups	M	N	SD
<b>Immediate posttest</b>	Rote Memorization Group	35.90	20	7.90
	Control Group	25.750	20	7.16
	Total	30.825	40	9.04
<b>Delayed posttest</b>	Rote Memorization Group	34.65	20	9.04
	Control Group	27.05	20	7.61
	Total	30.85	40	9.10

In order to compare the influence of rote-based memorization strategy with the control group on Iranian Elementary EFL learners' vocabulary development, a one-way between-groups analysis of covariance (ANCOVA) was used in this study. The type of interaction (rote-based strategy and control group) was an independent variable and the scores on the test after the intervention were dependent variables. Besides, the participants' scores on the pre-intervention conduction were regarded as the covariate in the analysis.

Table 2 displays the significance difference in rote-based memorization strategy compared with the control group (Sig.= .000); in this way, it seems possible to conclude that rote-based memorization strategy group had an enhanced functioning compared to the control group on vocabulary learning test scores.

Table 2

*ANCOVA Analysis of the Pre- and Post- test of Rote Memorization Strategy*

Dependent Variable: Scores

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2616.02 <sup>a</sup>	2	1308.01	84.05	.000	.82
Intercept	27.99	1	27.99	1.79	.188	.04
Covariates	1585.79	1	1585.79	101.90	.000	.73
Groups	684.94	1	684.94	44.01	.000	.54
Error	575.75	37	15.56			
Total	41199	40				
Corrected Total	3191.77	39				

a. R Squared = .82 (Adjusted R Squared = .81)

## Second Research Question

The mean (M), standard deviation (SD) and the number of participants (N) are shown in Table 3. Mnemonic memorization strategy has a higher M than the control group, so it affects Iranian elementary learners in both short-term and long-term time spans.

Table 3

*Descriptive Statistics of Mnemonic and Control Groups in Immediate and Delayed Posttests*

	<b>Groups</b>	<b>M</b>	<b>N</b>	<b>SD</b>
<b>Immediate posttest</b>	Mnemonic Memorization Group	39.30	20	5.42
	Control Group	25.75	20	7.16
	Total	32.52	40	9.2
<b>Delayed posttest</b>	Mnemonic Memorization Group	39	20	5.38
	Control Group	27.05	20	7.61
	Total	33.02	40	8.88

To compare the influence of mnemonic memorization strategy with the control group on Iranian Elementary EFL learners' vocabulary development, ANCOVA was applied in this study. The type of interaction was an independent variable and the scores on the test after the intervention were dependent variables. Moreover, the learners' scores on the pre-intervention conduction were regarded as the covariate in the analysis.

Table 4 depicts the significance difference in mnemonic memorization strategy compared with the control group (Sig. = .000); that is to say, the mnemonic memorization strategy group had a better performance in comparison to the control group on vocabulary learning test scores.

Table 4

*ANCOVA Analysis of the Pre- and Post- test of Mnemonic Memorization Strategy*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2855.96 <sup>a</sup>	2	1427.98	102.79	.000
Intercept	317.73	1	317.73	22.87	.000
Covariates	1019.94	1	1019.94	73.41	.000
Groups1	1313.26	1	1313.26	94.53	.000
Error	514	37	13.89		
Total	45685	40			
Corrected Total	3369.97	39			

a. R Squared = .84 (Adjusted R Squared = .83)

**Third Research Question**

The actual difference in the mean scores between the two experimental groups in comparison with the control group is quite large at the immediate posttest. Table 5 shows the mean score for each group.

Table 5

*Descriptive Statistics of Two Groups on the Vocabulary Learning in the Immediate Posttest*

Groups	Dependent Variable: Scores		
	Mean	N	SD
Rote Memorization Strategy	35.9	20	7.90
Mnemonic Memorization Strategy	39.3	20	5.42
Control Group	25.7	20	7.16
Total	33.65	60	8.44

As it is clear in Table 5, mnemonic strategy group with the mean score of 39.30 had a higher mean score than the rote strategy group with the 35.90 at immediate posttest. Moreover, it is revealed that the rote strategy group with the mean score of 35.90 performed better than the control group with the mean score of 25.75. It is evident that the mnemonic strategy had the highest mean, and it was considered as one of the vital VLSs (vocabulary learning strategies) at the immediate posttest.

The tangible disparity in the mean scores between the two experimental groups in comparison with the control group is quite large at the delayed posttest. Table 6 shows the mean score for each group.

As it is seen in Table 6, the mnemonics strategy group with the mean score of 37.10 had a better performance compared to the rote strategy group with the mean score of 34.65. Likewise, rote strategy group with the mean score of 34.65 had a better performance than the control group with the mean score of 27.05. Therefore, it is clear that the mnemonic strategy had the highest mean, and it was regarded as one of the important VLSs at the delayed posttest.

Table 6  
*Descriptive Statistics of Two Groups on the Vocabulary Learning in the Delayed Posttest*

Dependent Variable: Scores				
Groups	Mean	N	SD	
Rote Memorization Strategy	34.65	20	9.04	
Mnemonic Memorization Strategy	39	20	5.38	
Control Group	25.05	20	7.61	
Total	24.67	60	8.75	

As it is revealed, the experimental groups had higher means than the control group. However, it is approved that mnemonic strategy group had a higher mean score than the rote and control groups. In order to complete these findings, Table 7 informs us whether there was an overall significant difference in pre- and post-intervention between the different groups.

The findings revealed that there was a significant difference in the experimental groups' scores in comparison to the control group (Sig. = .000); therefore, the experimental groups outdid the control group on vocabulary learning test score.

Table 7  
*ANCOVA Analysis of the Pre- and Post-test of the Strategies*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	4389.64 <sup>a</sup>	4	1097.41	66.16	.000	.77
Intercept	573.5	1	573.5	34.5	.000	.31
Covariates	2196.3	1	2196.3	132.4	.000	.63
Groups	1427.3	2	475.7	28.6	.000	.53
Error	1243.9	75	16.5			
Total	101268	80				
Corrected Total	5633.5	79				

a. R Squared = .779 (Adjusted R Squared = .76)

## 5. Discussion

Language learning strategies are the major components that show how well the learners learn a foreign language. In the language learning process,



vocabulary learning is a challenging job that the learners face (Ghazal, 2007; Mashhadi & Khazaie, 2015) and in this case, the learners should be assisted to become independent during the process of language learning. In addition, according to Ghazal (2007), this is possible through teaching learners to utilize VLSs in an efficient way.

This study examined the effects of two common strategies among Iranian elementary EFL learners. It included two experimental groups, which were taught vocabulary items through two different strategies. However, the control group did not receive any of these strategies. The results revealed that the experimental groups outdid the control group, and at the same time the mnemonic strategy group outperformed the rote and control groups.

RQ1: Does adoption of rote strategy significantly affect Iranian elementary EFL learners' vocabulary learning?

The findings of this study revealed the effectiveness of rote memorization on Iranian EFL learners' vocabulary development. The experimental group which received rote memorization strategy, outperformed the control group that did not receive any strategies. This study approved the findings of Sinhaneti and Kyaw (2012) and discovered that the rote memorization leads to better results compared to the control group; however, it did not outperform the mnemonic strategy group. This finding supports the results reported by Rashidi and Omid (2011) who were of the opinion that the positive beliefs about rote learning leads to better learning outcome and retention of vocabulary items.

The results of this study are also in line with Wu's (2014) study who acknowledged that those who use Cyclical Repetition Technique (CRT), as a technique for rote-based strategy, memorize English words rapidly and efficiently. On the other hand, the findings of this research rejected Cheung's (2000) findings and showed that rote memorization is not just a mechanical

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way of learning vocabulary without understanding anything. It is because, even in posttests, the rote memorization strategy group outperformed the control group and this proved that it really affects the learners' long-term memory which cannot be defined just in terms of mechanical learning.

RQ2: Does adoption of mnemonic strategy significantly affect Iranian elementary EFL learners' vocabulary learning?

RQ3: Which strategy (ies) can affect Iranian elementary EFL learners at the immediate and delayed post-tests?

The findings revealed that mnemonic strategy has a crucial influence on Iranian elementary EFL learners' vocabulary development. The findings corroborate Sagarra and Alba (2006) who maintained that in short-term retention, the group who used keyword strategy outperformed the rote memorization group. Moreover, this study highlighted the findings of Marzban and AzimiAmoli (2012) who indicated that the keyword mnemonics strategy influences immediate and delayed knowledge recall of vocabulary acquisition in EFL elementary learners. The findings of this study are also in line with Du's (2012) study who revealed that mnemonics can enhance the middle school students' English proficiency. The results of the study also confirmed the findings of Gruneberg and Pascoe (1996), who explained the efficiency of mnemonic method as a communication strategy among older learners. Brown and Perry (1991) found out the positive influence of mnemonic-semantic treatment on learners' proficiency which is in line with the findings of this study.

The findings corroborate Siriganjanavong's (2013) study who proved that mnemonic keyword method is an influential strategy for recalling vocabulary items both in short-term and long-term memory. The results of this study also proved Nemati's (2010) research as it was revealed that the learners of the experimental group who received mnemonic strategies as a type of memory strategy outperformed both in short-term and long-term scores. This study is

also in line with the findings of Fasih et al. (2018), who proved the positive effects of mnemonics on learners' vocabulary expansion.

The results also approved the findings of Ahmadi Safa and Hamzavi (2010), who reported that material developers should notice mnemonic strategy as an efficient strategy for vocabulary instruction and learning at earlier stages of language progress. They stated that mnemonic key word method is a crucial technique which results in long-term retention of vocabulary in beginner learners' EFL classroom.

## **6. Conclusion and Implications**

This study investigated two commonly used strategies (rote and mnemonic) among Iranian EFL learners. For the aim of the study, the experimental groups received two different strategies. The results of the experimental groups are compared with the control group, which did not receive any strategies, and it became clear that among Iranian EFL learners, the strategies lead to better progress and long-term vocabulary learning.

The findings could be used in classroom learning. Besides, this study reminds the teachers that there is no best method in a classroom as there is no single language instructional strategy that fits all learners. Language learners have different abilities, preferences and styles; therefore, to be a positive teacher, one needs to be conscious of the learners' differences. This approach helps teachers to address the needs of learners.

Different vocabulary learning strategies (other than rote and mnemonic strategies) and their effects on vocabulary development can be investigated in future studies. These strategies can be examined in different skills and sub-skills of language learning (other than vocabulary learning). This study also could be done in different contexts. Finally, these VLSs (rote and mnemonic) can be taught in schools in order to acknowledge and study the differences that exist between these two contexts.

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