

The Effects of Graphic Organizer Strategy on Improving Iranian EFL Learners' Vocabulary Learning

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Abstract

This study aimed at investigating the effect of graphic organizer strategy on improving Iranian EFL learners' vocabulary learning. Fifty students participated in this study which lasted for one academic semester. The students were divided into two groups: one experimental group in which students were taught new vocabulary items through graphic organizers in form of clusters and pictures, and one control group whose students were taught the same items through traditional instruction. At the beginning of the program, the researchers conducted *Cambridge Mover Tests* in order to assure the homogeneity of the students' proficiency level. A pretest was subsequently administered on learners' vocabulary knowledge. Then the intervention commenced. At the end of the sessions, one posttest was conducted for measuring effectiveness of the treatment. Then the researchers analyzed the gathered data. Because there were two groups in this study, the researcher used t-test for analysis, paired t-test for comparing the results within groups, and independent t-test for comparing the results between groups. The results showed that graphic organizers were indeed conducive to L2 vocabulary learning by the learners.

Keywords: Graphic Organizer Strategy; Vocabulary Learning; Clustering.

1. Introduction

Nowadays psychologists, linguists and language teachers have been interested in vocabulary learning strategies. Vocabulary knowledge has an essential role in learning and using a language. Vocabulary is the key point in learning a language and is one of

most important matters in using a language (Zahedi & Abdi, 2012). It is highly important how many words you know in speaking or writing or reading in a foreign or second language (Nation & Meara, 2002). So educators need to pay attention to

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this and provide meaningful vocabulary instructions for language learners. The more words you know, the more you will be able to understand what you hear, and read, and so you will be able to write and speak more effectively. Learning vocabulary seems one of the easiest steps in learning a language but in fact it is one of the most difficult things to do. This is more challenging when it comes to foreign language learners with limited exposure to language and not having enough opportunity to use learnt words in real life. There are so many studies about the retention of words that are results of using different vocabulary strategies; this shows the effects of various strategies in the how of teaching and learning. (Yongqi Gu, 2003). Teachers help their students in learning vocabulary with direct and indirect means. We do not learn the majority of words we know through teaching. It seems vocabulary learning is implicit or incidental. In the late 1980s and 1990s so many studies were developed in this area; researchers tried to find the meaning of effective and efficient in short-term and long-term vocabulary learning (Cartner & Nunan, 2002). What vocabulary to work on must be determined based on the needs of the learners and the utility of vocabulary items. The common way of considering the usefulness of items is to find their frequencies and ranges in a relevant corpus. Cost-benefit approach to vocabulary suggests teaching words that are needed on particular occasions to learners based on what they need to learn. So high frequency words should be the main vocabulary goal of L2 learners. Vocabulary can be learned incidentally and deliberately. Learning from listening and reading is incidental and is less certain to occur than deliberate learning. In deliberate vocabulary learning, there is more attention, and as a result, this kind of learning is more goal-directed. These are so important in English because there is a relatively close

relationship between how many words you know and how much you are successful in reading, listening, and speaking (Nation & Meara, 2002). Graphic organizers are of significant importance in facilitating vocabulary learning. They have outstanding power in presenting words in connected forms to learners. Graphic organizer is a visual and graphic display that depicts information in various ways (Ellis & Howard, 2005). A graphic organizer shows the relationships between facts, terms and ideas within learning task and makes incremental growth.

2. Review of the Related Literature

2.1. Importance of the Vocabulary Knowledge

It seems impossible to overstate the power of words (Pilkulski & Templeton, 2004). Vocabulary is the main way for learning a language. Words are bases of language. Vocabulary is an important component of language use. The significant effect of vocabulary knowledge on second or foreign language learning has been emphasized recently (Zahedi & Abdi, 2012). In the early 1930s, it was found that there was a close relationship between English word knowledge and achievement in life. Success in earning and management was correlated with vocabulary scores. When the vocabulary knowledge is not enough, people have difficulty in expressing their thoughts and ideas and this usually results in physical aggressiveness. It can be said that low vocabulary is a kind of imperfection (Sedita, 2005). On the significance of vocabulary knowledge in communication, Wilkins (1972, as cited in Schmitt, 2010, p. 3) states “without grammar very little can be conveyed; without vocabulary nothing can be conveyed.”

According to Schmitt a large vocabulary is required for someone to use language in a desired way. As it was mentioned, people use language for communicating, conveying

thought, and sharing beliefs. So there is an important point here: the size of vocabulary that would be suitable for a language user to use language successfully and without breakdowns is of great importance. In English, vocabulary size results in limiting the types of texts someone can read. In other words, there is a close relationship between the number of words you know and how good you are at different language skills (Nation & Meara, 2002). On the importance of vocabulary, Krashen (1989, as cited in Schmitt 2010, p. 4) stated that "a large vocabulary is of course, essential for mastery of language". Rubin and Thompson (1994, p.12) point to the role of vocabulary in communication: "One cannot speak, read, or write a foreign language without knowing a lot of words. Vocabulary is at the heart of mastering a foreign language".

According to Blachowicz (2007, p. 1), there are principles for an effective vocabulary instruction, one of which is that "vocabulary learning takes place when students are impressed by words." Students learn words more effectively when they are ready to and when teacher involves them in discussions. Secondly "vocabulary learning takes place when students are active in discovering ways in which words are related to experiences and to one another." Research shows that when learners can make a network of meaning for a new word in their own way, they would learn better. That is, when they are active in the learning process, they are more successful (p. 2). The third one is that "vocabulary learning takes place when students personalize word learning". When learners use their past experiences for learning new words, they learn more successfully (p. 3). The fourth principle is "vocabulary learning builds on multiple source of information." When students should learn specific words, they need to use various sources of information (p. 4). The fifth principle is that "vocabulary learning takes place when students gain control over their own

learning." Research shows that when students select vocabulary themselves, they may learn better (p. 4). The sixth one is that "vocabulary learning takes place when students are aided in developing independent strategies." By independent strategies she means using context and using dictionary; it can be said that when learners read the words in context, their general vocabulary is also developed (p. 4). The last principle according to Blachowicz (2007) is "vocabulary learning is long-lasting when students use words in meaningful ways." When learners are exposed to new words with different types of instructions, different depths and types of learning may result (p. 5). There is no surprise that there should be effective strategies to teach vocabulary successfully and effectively.

2.2. Noticing Hypothesis

Schmidt (1990) is the first researcher who believes what is noticed becomes intake. Noticing means, to give importance to some aspect more than others. He states that noticing is essential in language teaching (as cited in Iwanaka, 2001). Schmidt (1990) states that noticing is the necessary and sufficient condition for converting input to intake. Noticing hypothesis was discovered by Schmidt. It implies that input does not become intake for language learner unless it is noticed, that is, it should be consciously registered. In vocabulary learning, noticing occurs when language learning strategy makes learners notice a word knowingly. It is a kind of de-contextualizing that learners notice the words as a discrete part of the foreign language. For example, the teacher writes a new word on the board and explains its meaning, parts of speech etc. so learners consciously are attended to them (Tsubaki, 2012). Graphic organizers as instructional tools that force learners to notice materials are supported with this Hypothesis in their effectiveness in language learning.

2.3. *Schema and Theory of Schema*

Schema theory was introduced in 1932 by British psychologist Fredric Bartlett. Richards and Schmidt (2002, p. 468) believe that schema means “a mental representation, plan or structure. A collection of organized and interrelated ideas, concepts and prior knowledge structures that are abstract representations of objects, events and relationships in the real world”. Schema is used to describe factors affecting comprehension (Al-Issa, 2006). Schema becomes more detailed by changes of learning, but always in adding new information, there is an attempt to connect them to prior ones. When people try to remember a story, they reconstitute the story in a way they remember; that is, they never memorize the details of an event or of a story in rote manner (Arbib, 2006). Rumelhart (1980, as cited in Karnal, 2013, pp. 35-41) believes that “Schemata can represent knowledge at all levels from ideologies and cultural truths to knowledge about the meaning of a particular word, to knowledge about what patterns of excitations are associated with what letters of the alphabet. We have schemata to represent all levels of our experience, at all levels of abstraction. Finally, our schemata are our knowledge. All of our generic knowledge is embedded in schemata.”

In contrast to Piaget (1970), schema theorists postulate that the learners' knowledge is not in the form of one body, but rather there is a network of information. So when new information does not fit in to this network, learners would not comprehend new information (Widemayer, 2007). There are three schema situations: no prior knowledge, some prior knowledge or incorrect prior knowledge. When the incorrect prior knowledge is not recognized by the teacher or learner, it causes so deep difficulties in process of learning (Duis, 2004). Research shows that there should be instructions which result in meaningful

learning and kind of learning process that helps learners to understand new information in the light of what they already know, instead of rote memorizing them. In this way, graphic organizer is supported by schema theory, because graphic organizers match the mind and help learners to learn new items in a connected form to their background information and in organized fashion.

2.4. *Involvement Load Hypothesis*

Involvement load hypothesis (ILH) was developed by Hulstijn and Laufer (2001) for L2 vocabulary learning. They believe that tasks with different involvement load result in different incidental learning. It was claimed that retention of unfamiliar words is related to the amount of involvement during processing these words (as cited in Jing *et al.*, 2009). There is no doubt that depth of processing is the significant factor in learning words. Involvement load hypothesis is based on the structure of depth of processing that was developed by Craik and Lockhart (1970).

Involvement load hypothesis is based on the assumption that stimuli are processed at several levels, that is firstly at shallow levels and then at deeper levels. Shallow levels take action in superficial analysis of input (e.g. lines, pitch...). Later levels match new data against stored learning (Yaqubi *et al.*, 2010). Involvement load has important pedagogical implications; it helps us to control task features and decide on what tasks would be more effective. Research indicates that degree of involvement differs according to the type of words. That is, low involvement is required for easy words but not for difficult ones (Martinez- Fernandez, 2008). As a result, as it was mentioned earlier since different task types result in varying degree of involvement load, there should be an effective instruction for teaching vocabulary and since GOs help learners to

be engaged deeply in the process of learning, increased learning is thus supported by this hypothesis.

2.5. Cognitive Load Theory

Cognitive load means the total cognitive activity imposed by task/problem on working memory. Gerven (2000) states that the base of cognitive load theory is that our working memory is limited with respect to the amount of information that it can store (as cited in Ayres, 2006). Cognitive Load Theory was introduced in 1980. This theory results in a framework for cognitive processes and instructional design (Paas, 2003). Principles of Cognitive Load Theory are as follows:

1. Working memory is extremely limited.
2. Long term memory is essentially unlimited.
3. The process of learning requires working memory to be actively engaged in the comprehension (and processing) of instructional material to encode to-be-learned information into long term memory.
4. If the resources of working memory are exceeded, then learning will be ineffective (Cooper, 1998, p. 3).

As it is evident, there should be an instructional tool that helps learners to learn successfully. The instructional tools should result in low cognitive load. Graphic organizers result in low cognitive load and as a result are supported by cognitive load theory.

2.6. Graphic Organizers and Learning Disability

As it was mentioned earlier, Graphic organizers can be used for learners with learning disabilities. So it is necessary to describe what a learning disability is. Learning disability is one of the most usual types of children's impairment; it can be said that 1 in 20 children have some kind of learning disabilities. The term is so wide and refers to any growing that is clearly

behind what is expected for a special age. Learning disability occurs on its own or with some physical impairments or medical conditions. In some children, this impairment has a genetic root. Learning disability is a lifelong state. There are some ways to aid these children for having better life and also to lead them (Tsubaki, 2012). Students with learning disabilities have difficulty in remembering things; it can be said that they have problem in finding the connections of concepts and so they do not make sense of them and as a result they cannot remember learnt items when needed. Learning disability does not have anything to do with subjects' intelligence. Learning disability affects the brain's ability in receiving, processing, analyzing or storing the incoming information. This problem affects the learning speed (Daniel, 2005). Kelly *et al.* (2013, p. 1) state that "Researchers speculate that students with LD have difficulty in keeping up in biology courses because of the subject's rigorous language and specialized vocabulary." Although LDs are of different kinds, students that suffer from LD usually have more than one kind. The way that brain processes information is wonderful and is not simple. For example, in the simple act of looking at a picture, the only work of brain is not only forming lines into an image, the brain also should recognize what the image stands for, and then relates that image to other concepts that are saved in the memory, and then store that new information. Most of learning disabilities are of one of the two categories: verbal or nonverbal. People with verbal learning disabilities have problems with using words in spoken and written form. Some of them may be able to read or write but have difficulty in other skills; for example, they are able to sound out the sentences but they have difficulty in relating them to preexisting ones, and so to make sense of them. Nonverbal learning disability may

result in difficulty with some abstracts (for example fractions). Abstracts would be difficult to master for people with learning disability. According to Anne Ford (2007, p. 1) "Learning disabilities cannot be cured, but they can be treated successfully". Research indicates that students with LD have serious problems in comprehending, organizing and inference information from text. This problem increases in advanced levels because there is increased amount of information in different parts to master. Graphic organizers help these students to focus on outstanding concepts and provide a way of thinking that makes it possible to understand most of the meaning. So students perform better in tests because they are able to remember almost all of the new information. The effects of Graphic organizers on remembering, particularly in tests, have been studied so many times and results support the positive effectiveness of GOs (Daniel, 2005).

2.7. Graphic Organizers

A Graphic Organizer is a visual representation or visual display that shows the connections of facts in pictures (Hall, 2008). According to Chamot *et.al* (1999), graphic organizers have different names, such as semantic maps, visual organizers, structured overview, story map, framed outline, semantic feature analysis, cognitive map, semantic web, spider map, and charts of various kinds (as cited in Tsubaki, 2012). Because of the emphasis on language learning for communication and social interaction, new perspectives in language teaching became of great importance. The aim of language learning is defined as gaining communicative competence in a foreign language. So the strategies that result in this kind of competence are deemed as effective strategies (Mohammadi *et al.*, 2010). The effectiveness of graphic organizers in helping learners is so obvious. There are 12 studies for proving the

effectiveness of graphic organizers, 10 of which reported positive results (Hall *et al.*, 2008). In a report for National Center on Accessing the general curriculum at Center for Applied Special Technology the focus was on two main areas: comprehension, and vocabulary knowledge (Hall *et al.*, 2008). Graphic organizers guide learners' thoughts through describing and drawing visual maps or diagrams.

It can be said that Graphic organizers are effective strategies for enhancing and facilitating learning. They help learners to focus on areas that are of key importance for learning, and they also help learners to have a condition to structure connections, and to make meaning (Helfgott, 2013). Graphic organizers act as effective instructional tools. Understanding and retention can be enhanced and improved by providing alternative learning activities and environments (Delgado *et al.*, 2012). GOs are visual communication tools that make use of visual symbols to clarify ideas and concepts to help convey meaning. They help teachers and learners to map out their thoughts and ideas. This is done through forming powerful visual pictures of information (Chiang, 2005). For living in the world, people have to name things; without naming and remembering the names, accepting the existence of objects or phenomenon are too difficult to consider. So, there is no doubt that vocabulary is the building block of communication. In spite of the fact that words are small pieces, they are essential in forming structures, and as a result, the way by which these are taught to learners are of great importance (Barani, 2010).

In Mayer's (2003) opinion, graphic organizers help learners to organize new information by outlining, arranging and sequencing the main ideas and accordingly to find the connections with prior knowledge. Also graphic organizers help students to recognize the missing data or

unclear connection in their strategic thinking. The proponents of applying graphic organizer strategy in language learning believe that information is organized hierarchically in mind in a top-down form (Zaini *et al.*, 2010). Cognitive approach to learning attempts to describe how new information is processed and represented in the brain. Cognitive learning theory contends that memory arranges and encodes information and guides it and finally stores it (Tsubaki, 2012). Learning would be achieved in the best way if the process of learning is meaningful as a whole (Zaini *et al.*, 2010). Studies have indicated that meaningful learning can be assisted by means of graphic organizers.

According to Ellis (2005), there are three important reasons why graphic organizers should be used. Firstly, while using GOs students would remember the subjects that you are teaching, and the information would be less complicated and unclear; students would learn how to discriminate what is important to know from what may be interesting but not basic. Secondly, semantic information processing demands are reduced; when the how of information processing becomes clear, it might result in facilitating understanding and as a result facilitating learning, and finally learners will be strategic learners. When learners know how to think about the concepts, and when they know the way parts of concepts are organized, they would learn better. Graphic organizers are models for teachers to use for helping students through organizing information, and connecting it to a longer cognitive structure, that results in the organization of the discipline itself (Dell'Olio *et al.* 2007). Strickland (2012) found some features that are common in an effective graphic organizer: an effective GO is brief; it is like a bridge that connects unknown points to known ones. Graphic organizers are used as introduction to new information, and also they provide an

abstract of new materials, and as a result they facilitate structuring new materials. They provide concrete models for learners to get new items (Mohammadi, 2010). Research suggests that graphic organizers increase comprehension because of several reasons: GOs match the mind; they show clearly how concepts are connected to prior knowledge to help comprehension; organizers support the memory; they help keep information and make it ready to use when it comes to higher thought processes; organizers result in involving learners with a combination of the spoken and printed texts and diagrams.

Semantic mapping is one type of GO. Zahedi and Abdi (2012), believe that semantic mapping is one of the most useful ways that can help learners at any level in learning vocabulary. They state that semantic mapping brings the links of a text to consciousness for deepening, getting and learning vocabulary items. Semantic mapping results in making networks for new words. Zahedi and Abdi (2012) worked on semantic mapping with 40 female students of 19 to 27 in Miandab University. They concluded that semantic mapping, as a strategy that supported by depth of processing, resulted in deeper level of processing and, as a result better remembering. Gairns and Redman (1986) gave supports for the effectiveness of grouping words, based on semantic features in giving an effective way for learning (as cited in Thinkhlam, 1997). Al-Jabri (2005) reported positive effects of clustering of L2 words. Soleimani (2012) found the promising effects of clustering new words on vocabulary learning. Radwan (2011) states that the role of vocabulary in learner's proficiency is so important and words should not be taught in isolated manner. Radwan believes that for teaching vocabulary, the strategies should be used which enhance learners' receptive processes. One of these strategies is semantic mapping.

He examined the effects of semantic mapping instruction, on vocabulary development of adult ESL learners at the both receptive and productive levels. The results support the effectiveness of semantic mapping instruction on vocabulary teaching (Radwan, 2011). Keshavarz, Atai, and Mossahebi Mohammadi (2006) also examined the effect of semantic mapping strategy instruction on vocabulary learning of intermediate EFL students. Their findings confirmed the hypothesis that semantic mapping has crucial effect on vocabulary learning of intermediate students.

Margosein *et al* (1982), examined the effect of semantic mapping on high school students, and found that semantic mapping had a significant role in learning target words. Brown and Perry (1991) explained different types of vocabulary learning strategies on the keyword and semantic mapping (processing). Their work was with Arabic speaking EFL learners. The conclusion was that keyword method, while combined with semantic mapping, results in more learning. Ziad (1995) also is one of the researchers in semantic mapping whose findings suggested that learners should focus on words with similarities. The results of research support the effectiveness of semantic mapping (as cited in Keshavarz *et al*, 2006). According to Ellis and Sokmen (1997), semantic elaboration depends on different techniques of semantic feature analysis, ordering, pictorial schemata and semantic mapping (as cited in Thuy, 2007). Abdollahzadeh and Amiri (2009) also examined effect of semantic mapping on vocabulary learning of EFL learners. Their conclusion was that their treatment group demonstrated significant superiority over the control group in the posttest. Barcroft (2004) believes that semantic mapping is increased evaluation of an item with regard to its meaning. Semantic map decodes the connections, and relationships of different but related items. This results in deeper learning and, as a consequence, longer

retention of learners' items (Abdollahzadeh *et al.* 2009).

3. Method

There are two research questions in this study.

1. Does graphic organizer strategy have any effect on Iranian EFL learners' vocabulary learning?
2. Does graphic organizer strategy result in improving Iranian EFL learners' vocabulary learning?

The design of the study is quasi-experimental, that is without any random assignment. The independent variable was the GO strategy and the dependent variable was EFL vocabulary learning. A total of 50 language learners with an age range of 8 to 13 participated in this study which lasted for one academic semester. They were selected from Turkish and Persian backgrounds, from 7 classes. They were from one of the institutes of the Tabriz. Before starting the program, a proficiency test (*Cambridge Mover Tests of listening, speaking, reading, & writing*) was administered to the participants in order to assure their proficiency levels. After that a pretest on students' vocabulary knowledge was conducted to the two groups of experimental and control for comparability. Then the researchers started the program. They selected the words from learners' source book. For the experimental group, the researchers used graphic organizers in the form of pictures and clusters for teaching the new words. To perform this instruction, the researchers spent several sessions training the learners EFL vocabulary items through GOs. They taught related words (cluster of words) through their pictures. Spelling, pronunciation, part of speech, meaning in the first language, meaning in the foreign language were taught for each new item. For example, they drew a house with its different parts and taught the name of those parts by means of pictures. Sometimes they drew a picture

and asked learners to guess possible words (nouns & verbs) in that picture. The control group was taught the same materials through traditional instruction. Here learners were given the target words with their meanings in their first language. They were expected to study the new words of each session outside the class. They were also encouraged to make use of English-Persian dictionaries for finding the meaning of new items in a way they already knew, that is without special training. At the end of the program, one posttest was conducted to both groups of experimental and control. For analyzing the data of the study, the researchers used the Statistical Package for the Social Sciences (SPSS). Since there were two groups, the researchers used t-test. They used paired t-test for comparing the results within groups and independent t-test for comparing the results between groups.

4. Results

According to the Table1 (paired-samples t-test for control group) the difference of two means in control group is -0.12, standard deviation is 1.05, and standard error of

mean is 0.21. Lower confidence interval is -0.55 and upper confidence interval is 0.31. The t value is -0.569 and degree of freedom is 24 and level of significance was calculated as 0.574. According to values that were calculated and confidence interval there is no significant difference between the scores of pretest and posttest in the control group. As a result, the traditional instruction was not successful in vocabulary teaching, the $p > 0.05$ proved the correctness of results.

As reported in Table 2, the distance of means of the pretest and posttest in experimental group is -4.8, standard deviation is 2.36, and standard error of mean is 0.47. Lower bound of confidence interval is -5.77 and upper bound of it is -3.82. The t value is -10.15 with degree of freedom of 24, and the level of significance is 0.000. Due to the confidence interval which does not include 0, there is meaningful difference between pretest and posttest of the experimental group. The null hypothesis is rejected here and it is proved that graphic organizer strategy improved the vocabulary learning in this group.

Table1. Paired-Samples T-Test Results for the Control Group

PretestCont/PosttestCont							
Paired Samples Test							
Paired Differences							
95% Confidence Interval of the Difference							
Mean	Std.Deviation	Std.Error Mean	Lower	Upper	t	df	Sig.(2-tailed)
-0.12000	1.05357	.21071	-.55489	.31489	-.569	24	.574

Table 2. Paired-Samples T-Test Results for the Experimental Group

PretestEx/PosttestEx							
Paired Samples Test							
Paired Differences							
95% Confidence Interval of the Difference							
Mean	Std.Deviation	Std.Error Mean	Lower	Upper	t	df	Sig.(2-tailed)
-4.80000	2.36291	.47258	-5.77536	-3.82464	-10.157	24	.000

Table 3. *Independent-Samples T-Test Results for the Pretest and Posttest Scores of the Two Groups*

		Levene's Test Equality of Variances		t	Df	Sig.(2-tailed)	Mean Differences	Std Error Differences	95% Confidence Interval of the Difference	
		F	Sig.						Lower	Upper
Pretest	Equal variances Assumed	0.608	.439	-1.35	48	.893	-.08000	.59251	-1.2713	1.1113
	Equal variances not Assumed			-1.35	47.085	.893	-.08000	.59251	-1.2713	1.1119
Posttest	Equal variances Assumed	1.116	.296	-7.613	48	.000	-4.76000	.62525	-6.0171	-3.50286
	Equal variances not Assumed			-7.613	41.907	.000	-4.76000	.62525	-6.0171	-3.49812

Based on Leven test for equality of variances in the table 3, Sig. (2-tailed) for both groups is 0.893. It means, there is no significant difference in means of both groups in pretests and confidence interval of the difference proved the results. According to the following table, there is a significant difference in means of both groups in the posttests since the p value is less than the level of significance (i.e. 0.000 < .05). The role of graphic organizer strategy in vocabulary learning has also been supported here.

5. Discussion & Conclusions

The researchers taught the vocabulary items to control group through traditional instruction in which words with their first language equivalents were given to learners. Learners were asked to memorize them. The process of teaching/learning was not successful. And the results affirmed the failure in learning. The scores of pretests of control group were approximately the same,

so there was no meaningful improvement between the two groups. The mean of pretest of control group was 12.12, and the mean of posttest of this group was 12.24. This little change maybe because of intervening variable. Here this variable would be parents' aids in memorizing words (intervening variable is a variable that is not controlled, but may have effect on the results). The experimental group learned new vocabulary items through pictures and clusters in form of combination of both. It can be said the GO strategy had a significant and meaningful effect on learners' vocabulary learning. It is evident in comparing the results of pretest and posttest of experimental group. The researcher recorded all the sessions. It was evident that learners improved step by step during implementing the treatment. When learners found the connections between words, they learned them successfully. The comparison of two groups of experimental and control showed that control group could not

find the connection among words because of rote learning and as a result failed to learn meaningfully and could not remember words when needed. Making use of pictures helped learners in the experimental group to have an imagination of words, and using pictures in form of cluster of words helped them to learn words in a form that when they could not remember one word, with recalling the cluster related to that word, after a while they remembered the forgotten word through a meaningful connection. The results of the study suggested that the GO strategy was more successful than the traditional instruction in improving Iranian EFL learners' vocabulary learning. Graphic organizer strategy resulted in a step-by-step improvement in vocabulary learning. Yet these findings need further research where the GO strategy can be incorporated into the different EFL courses at different levels. Another research in the area of interest may be repeating this study with an increased sample size. The results of this study suggest a number of implications that need to be taken into consideration by EFL teachers, educators, textbook writers, and syllabus designers. Graphic organizer is recommended for successful learning in EFL/ESL classes. Teachers could use Graphic organizers to help students become independent learners who have a so effective way for discovering, consolidating, and remembering new words. Teachers can use GOs for brainstorming of learners to aid them in remembering related items of new words. By including GOs in their everyday lessons, teachers can help learners to write coherently. Learners would be successful readers by means of GOs in a way they would be able to comprehend the main messages of texts. So selecting the correct type of GOs due to the special purpose is of great importance, and this should be kept in mind by teachers. Particularly for beginners, GOs result in more success because of their diversity and also their colors, which attract learners. Syllabus designers could make use of GOs in textbooks for achieving best results.

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