

# The Role of Graphic Organizer Technique in Constructing English Vocabulary of Secondary Level Language Learners

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## Abstract

In the process of language teaching and learning, methods and strategies play a leading role. The purpose of writing this article is to explore the effectiveness of Graphic Organizer technique in order to build vocabulary of Secondary level English language learners. Since English has become an international language in terms of its use thus, the teaching/learning methodology should also be streamlined and simplified. The current study was designed at examining the usefulness of graphic organizers on enhancing high school students' English vocabulary. The sample of the study consisted of two sections with 60 students of grade 9<sup>th</sup> at a private secondary school in Lahore, Pakistan. The experimental group was taught by using Graphic Organizer technique for vocabulary teaching and the control group with the old-style method of vocabulary teaching. A pre-test was conducted at the start of the term in the academic year. Similarly, a post-test was conducted after the completion of the first term. The data of the pre-test and the post-test on vocabulary were collected and evaluated. The results of the study showed that the use of graphic organizer approach in vocabulary teaching had a progressive effect on augmenting English vocabulary of the learners. The outcomes of the study recommend that the appropriate use of graphic organizers strategy in teaching vocabulary could be an influential instrument for the development of English vocabulary of secondary level language learners.

**Keywords:** usefulness, technique, secondary, Graphic Organizer

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## 1. Introduction

At present English language has emerged as an international language. English language has appeared as the preferred language for global communication. Significance of this language can't be challenged as it has become a communal language for instruction too. New techniques and materials are being brought in practice to learn this global language across the globe. Various techniques and strategies are adopted to learn and adopt the language skills: Reading, Writing, Listening and Speaking. Learners of English language encounter lots of difficulties and problems to overcome the challenges of learning this language and acquiring the proficiency in communication. Graphic organizer is the theoretical construct that the visual and verbal organizational structure of the diagram consolidates information into a meaningful whole (Horton, Lovitt & Bergerud, 1990). Hence, students do not have the impression that they are being taught a series of unrelated terms, facts, or concepts. Furthermore, visuals seem to enhance retention and recall of vocabulary (Sigueza, 2005; Stirling, 2003). This notion is important because the world is moving into an era in which visual literacy is as important as language/textual literacy (Kang, 2004). Thus, Kang adds that English Language teachers should explore and exploit spatial instructional strategies to enhance learning and instruction. The graphic organizer strategy can be utilized in teaching vocabulary, among other courses, to English language students (Kang, 2004; London, 1999).

Getting good reading strategy skills can have a major effect in reading comprehension. Constructing knowledge can be achieved through suitable reading techniques. Teaching reading comprehension skills demands clear and direct instruction and regular support from the educator to the learner. Moats (2000) points out the most appropriate reading strategies as follows: making connections, questioning, inferring, visualizing, summarizing, using prior knowledge, evaluating and synthesizing. However, the project will only be focused in making connections and using prior knowledge if reading strategies were to be instructed. Acquiring the ability to implement this reading method through these two strategies can have a beneficial effect in the second or foreign language teaching setting as it requires critical thinking and deep analysis of the text. Making connections and using prior knowledge in order to be correctly conducted and to have a positive effect on second or foreign language learning has to be planned or established as a way of reading. It is important to make conscious connections while decoding the information in order to be an active and purposeful reader.

Teachers are continuously focus on familiarizing new vocabulary to students in all subject areas (Norfleet, 2002). Words that seem common to teachers can be a puzzle to the students. Thus, the teacher is faced with the dilemma of how to make new subject matter and vocabulary meaningful and easy to his/her students. Because vocabulary acquisition is crucial to academic development, the teaching situation becomes more difficult when the subject matter is English. And many native or non-native English speakers will want to improve and enlarge their English vocabulary whether at the school, college or the university level (Grieser, 2009). What makes the situation even more difficult is teaching new vocabulary of English as a foreign language.

Now a days status of English is well established everywhere. Presently, in Pakistan, it is being taught as one of the compulsory subjects from Primary School until bachelors' level, in public as well as private institutions. As a main and compulsory subject at school, English is expected to be mastered by students as it would continue as a compulsory subject until bachelors. In these conditions the base of English language becomes vital to overcome the English language challenges that would come across to students in the higher studies. Having a good command of English helps us to have more opportunities in life, first of all, our career. Nevertheless, the concern of teaching methodology/strategy according to its efficacy in the classroom still remains unsettled. How to improve students' vocabulary, reading, writing, listening, speaking and grammar at middle and high school level, yet needs our attention to focus.

In the present study, the Graphic Organizers were used for vocabulary instruction to the experimental group. The researcher prepared Graphic Organizer Strategy for teaching vocabulary items in the lessons of recommended first semester English text course. The researcher employed various graphic organizers in the teaching sessions to orient and train the students on English vocabulary building through the use of Graphic Organizer technique in various segments. The students were instructed on how to learn each of the vocabulary items as they appear in different lessons and wordlist of textbook in terms of eight of its features; spelling, pronunciation, parts of speech, meaning in the first language, meaning in the foreign language, synonym, antonym and using it in an example by using graphic organizers. The researcher has tried to find out the role of Graphic Organizers in Vocabulary Instruction at secondary school level.

### ***1.1 Objectives of the Study***

The major objective of the study is to explore the effectiveness of Graphic Organizers in English vocabulary building of secondary level students. What they find more effective in the ELT classroom in terms of teaching strategies used by their teachers is, either they find the use of graphic organizer strategy more effective in the instruction of vocabulary or traditional way of teaching vocabulary.

### ***1.2 Research Questions***

1. What is the effect of Graphic Organizers strategy in teaching vocabulary to secondary level EFL/ESL students?
2. Which strategy/method of teaching is liked and followed by students in order to enhance English vocabulary?

### ***1.3 Hypotheses of the Study***

Based on the previous literature and the research questions, the following hypotheses can be drawn:

1. There isn't any positive effect of Graphic Organizers strategy in teaching vocabulary to secondary level EFL/ESL students.
2. Students don't show any likeness toward any strategy/method in order to enhance English Vocabulary.

### ***1.4 Significance of the Study***

The importance of this research could be analyzed in these ways.

1. It may be used as one of few empirical studies to investigate the role effect of Graphic Organizers strategy/approach in terms of vocabulary building.
2. Any teacher can seek help from the results and improve professionally from the findings in order to teach vocabulary by means of the Graphic Organizers strategy in his/her ESL/EFL class.

### ***1.5 Limitations of the Study***

1. The respondents (students) are grade 9<sup>th</sup> students at secondary school from a city background.
2. It only studies the result data of male students about their performance in vocabulary in pre-test and post-test.

## **2. Literature Review**

### **2.1 What is a Graphic Organizer?**

A graphic organizer is a visual and graphic representation of relationships among ideas and concepts. This instructional tool comes in a variety of formats—from loose webs to structured grids—that help students' process information they've gathered and organize their ideas (Bromley et al., 1995).

Graphic organizers make teaching and learning more rewarding. Visually appealing and accessible to both struggling and advanced students, graphic organizers help students to:

1. connect prior knowledge to new information (Guastello, 2000);
2. integrate language and thinking in an organized format (Bromley et al., 1995);
3. increase comprehension and retention of text (Boyle & Weishaar, 1997; Chang, K. et al, 2002; Moore & Readence, 1984);
3. organize writing (Ellis, 1994);
4. engage in mid- to high levels of thinking along Bloom's Taxonomy (application, analysis, evaluation, and synthesis) (Dodge, 2005).

### **2.2 Role of Graphic Organizers**

A graphic organizer is a resourceful technique that is used to present complex information by converting it into a simple and meaningful graphic display of the relationships between concepts (Kang, 2004). Graphic organizers can, on one hand, be used by students, as a study tool to better understand vocabulary meanings and then assess or review them for a test, including any new vocabulary items learned in the subject area. Teachers, on the other hand, can use the graphic organizer prior, during or following teaching a topic to organize the concepts taught. Suitable graphic organizers can be created or chosen by teachers alone, students alone, or both, to teach a certain set of vocabulary. Graphic organizers need to be as simple, clear, direct and teachable as possible (Jiang & Grabe, 2007). Mercuri (2010) confirms that graphic organizers are powerful; they can be part of a supportive classroom environment and integrative instruction; and they can be easy to implement tools that allow teachers to examine students' learning on a particular topic, assess ongoing learning, and design and modify instruction to meet students' needs.

### **2.3 Importance of Vocabulary Building in language learning**

Acquiring vocabulary is an essential component for English learners to resort on, specifically when they practice any type of writing skills. Vocabulary makes the learners able to think and select the proper and suitable words for the construction of sentences either in paragraph writing or summary production. Role of vocabulary always remains crucial and important in terms of writing or speaking a language. A person can't write clearly and accurately unless he/she has built up a vocabulary of words to express the things. The problem in both reading and writing is often because of an inadequate vocabulary. Therefore, learning vocabulary is very important for secondary school students. The effectiveness of Graphic Organizers Strategy on enhancing students' English vocabulary has already been recognized through various past studies.

According to Pittman (2003), EFL vocabulary building is the most important aspect of language learning, and Martin (1991) asserts that building a good vocabulary is a lifetime project for most educated people. Besides, confidence with vocabulary goes a long way in the four language skills of reading, writing, listening and speaking and with standardized test-taking (Pittman, 2003). Therefore, a student's existing language proficiency in vocabulary, grammar and idioms plays an essential role in text comprehension, for example (Xiao-hui, Jun, & Wei-hua, 2007).

### **2.4 Significance of Effective Ways in Vocabulary Building**

Certainly there's a cause to review beliefs against direct vocabulary instruction and to look for effective ways to balance vocabulary learning among EFL/ESL students through direct instruction and subsidiary experience (Dycus, 1997). Direct instruction involves determining which words should be taught, how they are taught, and when they are taught (Hall & Sabey, 2007; Templeton & Pikulski, 1999). Deciding which words to teach is considered important because words can be categorized into three groups (Hall & Sabey, 2007). The first includes words that students learn as part of their daily living and interactions with the language; the second category includes words which are likely to be unfamiliar to students but would be useful for them to know in order to be successful language users; while the third category includes the specific technical words which should be introduced as needed to understand the topic of study. Hall and Sabey (2007) suggest that the words of

the second category should be the focus of most vocabulary instruction.

Thus, teachers should improve vocabulary instruction and provide strategies to help students deal with the increase in new and difficult words (Hall & Sabey, 2007). In order to achieve a deeper understanding of the newly taught words, Stirling (2003) and Templeton and Pikulski (1999) argue that teachers should encourage students to record and memorize vocabulary items by following several steps and principles such as employing a strategy that ensures organizing the vocabulary items to be taught; learning the vocabulary item accompanied with its meaning in the mother language, its spelling, pronunciation, synonym, antonym, grammatical behaviour, associations etc.

### **3. Methodology**

#### **3.1 Subjects of the study**

The current study was conducted with 60 grade 9<sup>th</sup> students who were taught English vocabulary involving two strategies: Graphic Organizers Strategy and Traditional Teaching Method. The respondent sample consisted of 60 male secondary level students. These students were chosen because they were taught through both methods of teaching at the same time around 6 months to know their English language vocabulary building competence. There were two sections/groups involved each comprising of 30 students. The students belong to Punjab School, Lahore, Pakistan. The teachers involved to teach these Grade 9<sup>th</sup> students were male with Master degrees in English. These teachers are aged between 29 and 57 having diverse experiences (5 to 10 years) of teaching English as a second language at different levels. The students study a total of 8 contact hours of English per week, distributed among the four language skills. The students in the current study were the same in terms of their English language proficiency level at the time of registration belonging to the same school and age.

#### **3.2 Measures and Research Design**

This section is analytic part of the work. It provides data acquired through both the set research tools. The research study was designed as quasi-experimental research. The findings were reinforced by data samples and examples. This part discusses the methods of data collection and techniques for analysis. The research draws on quantitative data (for analytical purposes) through the students' classrooms tests performances on the basis of teaching strategy of vocabulary. The material taught to students in both experimental and control groups included all the vocabulary items of the chapters needed for passing their semester exam. The students of both groups were required to study vocabulary items on daily basis, with ten specified items each day. The specified items were the same for students of both groups.

#### **3.3 Procedure**

The study continued for one complete semester with one period every week. Various Graphic Organizers were employed by the researcher e.g. vocabulary organizer, vocabulary organizer mini dictionary, Frayer diagram, word wheel, vocabulary tree diagram and network tree. Evaluation step covered using and marking students' daily-filled out Graphic Organizers, concerning all the vocabulary items to be learned. Marked Graphic Organizers were handed over back to students in order to study them for more assessment as the experiment went on. Students were told that they would be tested on any vocabulary items they learn to measure their vocabulary building. While to implement the Traditional Method, the students of the control group were taught all the vocabulary items and their meanings in the first language as they appear in the different units and in the wordlist.

##### **3.3.1 Tools used in procedure**

- a. Graphic organizer technique of vocabulary instruction with vocabulary items in English based on the prescribed English lessons.
- b. Traditional existing method of vocabulary instruction with vocabulary items in English based on the prescribed English lessons.
- c. Reliable test of vocabulary in English.

##### **3.4 Stages of Data Collection**

The data was collected in two stages by means of pre-test and post-test results of the students. The validity and reliability of the tools were checked. Anyway, the data collected for the study followed two phases.

1. Learner's Pre-test
2. Learners Pre-test

### 3.4.1 The First Stage

The first stage consisted of pre-test with two different groups (experimental & control) of students each with 30 students, total 60 students in the start of the semester and the data were collected. They were tested on their prior vocabulary knowledge in the first week of the academic semester.

### 3.4.2 The Second Stage

At this second stage, the students' post-test results of the two groups( experimental and control) with total 60 students were collected, where one group was taught by such a teacher who used Graphic Organizer Strategy and the second group was taught by a teacher who focused on Traditional Method to teach vocabulary items to his students. The qualification level and teaching experience of the teachers were also equivalent. Here the two instructional actions were applied. Class tests and quizzes were conducted periodically for the evaluation purpose of vocabulary. These tests comprised of cultivated structures of the vocabulary items. All the tests were the part of formative assessment and the students were made aware of it in advance before serving the tests. In order to maintain the validity and reliability, the tests were marked and analyzed by two different teachers who were not directly or indirectly involved in teaching the two groups. At the end of the semester in 16<sup>th</sup> week, post-test was piloted to accumulate the final data. The attained data of the study was examined with the use of the Statistical Package for the Social Sciences (SPSS) to calculate statistics.

## 4. Results

### 4.1: Analysis of Pre-test and Post-test Data

To find answer to the set, two research questions' results of the pre-test and post-test were calculated and compared statistically with the intention of checking the students' vocabulary building progress. After matching the results a noticeable development was noted in the performance of the learners in vocabulary, post-test than in the pre-test. The results also conveyed that the group that was taught by the teacher who used Graphic Organizers Technique performed much better in vocabulary post-test than the students who were taught by a teacher with the use of Traditional Method. It was seen that Graphic Organizers Strategy is a powerful tool of language teaching in order to develop and build the vocabulary competence of the learners if it is used effectively. Subsequently, matching the results of the Pre-test and Post-test data, importance of Graphic Organizers was extensively recognized as majority of the students learned better vocabulary items than through the Traditional Method. Thereupon, these results endorsed and established the use of Graphic Organizers Technique for enriched vocabulary teaching and learning of the target language.

Table 1. Statistical analysis of data of Pre-test of both (experimental group and control group) students.

Sample/Students	No. of Students	Mean	Mean diff	Level of Significance
Experimental group	30	0.52	0.04	NS
Control Group	30	0.48		

Statistical analysis of the obtained data on the basis of Pre-test don't show a significant difference in students' results of experimental group and control group (Table 1). The mean difference between the two groups is 0.04 which is quite ignorable. It shows that there is no substantial dissimilarity in the mean pre-test scores of English vocabulary test between experimental and control group. This shows that the two groups are more or less alike with respect to vocabulary awareness.

Table 2. Statistical analysis of data of Post-test of both (experimental group and control group) students.

Sample/Students	No. of Students	Mean	Mean diff	Significance Level
Experimental group	30	0.68	0.36	Significant with 0.36 Mean diff
Control Group	30	0.32		

Statistical analysis of the collected data on the basis of Pre-test display a notable difference in students' results of experimental group and control group (Table 2). The mean difference between the two groups is 0.36 which is quite high and indicates the effectiveness of Graphic Organizers Strategy over Traditional Method. It shows that there is substantial divergence in the mean of Post-test scores of English vocabulary test between experimental and control group. The result of the Post-test between the mean gain scores of the experimental and control group clearly shows that there is a substantial rise in the mean scores of experimental group when compared to that of the control group. This is due to the employment of Graphic Organizer for enhancing English vocabulary of secondary school learners in the experimental group. It shows that there is a considerable variance in students' likeness of learning vocabulary with Graphic Organizers in their ELT classrooms. Therefore, this result provides the answer to the second research question "Which strategy/method of teaching is liked and followed by students in order to enhance English vocabulary?" The outcomes also disapprove the validity of the research hypotheses. This result is consistent with some studies such as Zaghlool (2004); Nilforoushan (2012); Al-Hinnawi, (2012); (Meera and Aiswarya 2014); (Rani and Yennam 2021) according to these researchers students learned better vocabulary with the Graphic Organizers Strategy.

**4.2: Analysis of Pre-test and Post-test data in terms of grades**

Table 3(a) Students' achieved grades in vocabulary Pre-test (experimental group)

Letter Grade	A	B	C	D	F	Total
No. of Learners	02	04	9	10	5	30

Table 3(b). Students' achieved grades in vocabulary Pre-test (control group)

Letter Grade	A	B	C	D	F	Total
No. of Learners	01	04	10	9	6	30

The data provided in Table 3(a) and 3(b) indicate almost same performance of learners' both the groups in vocabulary Pre-test. Pre-test results don't show any significant difference in students' results of experimental group and control group (Table 3(a), 3(b)). It means that the level of the students is almost same in terms of their vocabulary knowledge and awareness.

Table 4(a) Learners' achieved grades in vocabulary Post-test (experimental group)

Letter Grade	A	B	C	D	F	Total
No. of Learners	06	13	05	03	03	30

Table 4 (a) represents the details of grades of learners of experimental group who were taught by a teacher who used Graphic Organizers as vocabulary teaching technique and maintained serious learning environment. It is

clear from the grades of the learners that students learned well due to the technique that was adopted for English vocabulary teaching by the teacher.

Table 4(b) Learners' achieved grades in vocabulary Post-test (control group)

Letter Grade	A	B	C	D	F	Total
No. of Learners	02	6	07	9	06	30

Table 4(b) indicate the average performance of learners who were taught by a teacher who didn't use Graphic Organizers technique for teaching vocabulary lessons, but used Traditional Method with no variable strategies. He just focused on translating the texts, allowed and used mother tongue for all the time in the class of learners, gave them meanings of the words in their mother tongue as a result of that the performance of the learners is not as good as shown in Table 4(a) where the Graphic Organizers were used effectively for the sake of vocabulary item teaching. Summarizing the results of Table 4 (a) and 4 (b) clearly indicates the difference in the performance of students in Post-test Exam in each group (experimental and control). Moreover, learners obtained higher grades in Table 4 (a) than in 4 (b) because of the use of Graphic Organizers. It is evident from the results that effectiveness of teaching methodology/strategy has a great impact on the performance of learners in tests and exams. It is prevalent in the calculated data through the mean difference between the two groups as well that is 0.36 which is quite high and indicates the effectiveness of Graphic Organizers Strategy over Traditional Method. It all displays that there is substantial divergence in the mean of Post-test scores of English vocabulary test between experimental and control group, same as in the students' attained grades in vocabulary tests data.

## 5. Discussion

The results of the current study and other studies could be endorsed to some differences due to certain reasons. Firstly, some of the previous studies learners were studying English as EFL learners while in the present study the learners have studied English as ESL. Secondly, the gender of subjects in the present study are only male students while in most of the other studies are both male and female students. Thirdly, the learning experience of the present study learners with the use of Graphic Organizers is first time at school level for around 6 months while in other studies students studied English for two or more semesters at same or higher levels. In the current study, overall grading of experimental group and control group has also been represented in Table 3(a), 3(b) and 4(a), 4(b) that gives a clear picture of the students' performance in terms of Graphic Organizer Strategy and Traditional Method of vocabulary teaching.

The outcomes of the study indicate the positive role of Graphic Organizers that could also be attributed to different causes. Firstly, usage of the Graphic Organizer Strategy might have supported the learners to develop their vocabulary building through visual illustrations as now a days students like learning through visuals. The second reason could be that learning the target vocabulary items in an appropriate, clear and illustrated manner might have developed the students' knowledge of the different vocabulary items. It was noticed that gradually and with the passage of time students showed better performance in building their vocabulary with the use of Graphic Organizer Strategy than the Old-style Method of teaching vocabulary items, where the learners are made to memorize the items without noticing their any other implications or inferences.

## 6. Conclusion

The core objective of the study was to explore the expediency of Graphic Organizer Technique for English language learners of secondary level in terms of enhancing their vocabulary. Statistical analysis of the collected data shows that there is a significant difference in students' likeness of studying English vocabulary in their ELT classrooms with Graphic Organizers as in the Graphic Organizer Strategy, the students are guided better in terms of vocabulary features and find more activities that are productive in vocabulary building. Analysis of the Pre-test and Post-test results' statistics clearly show that learners who were taught by the teacher who used Graphic Organizer as a teaching strategy with putting equal focus on vocabulary, all relevant features performed much better as compared to the learners who were taught in the conventional way by the teacher who used Outdated Method. To summarize the results of Table 1 that clearly indicate almost the similar performance of students' both groups in Pre-test with just 0.04 mean difference which is quite low or trivial in terms of its significance level. The result of the Post-test between the mean gain scores of the experimental and control group clearly

shows that there is a substantial rise in the mean scores of experimental group when compared to that of the control group. However, the experimental group learners obtained higher scores in Table 2 than those in control group which has been indicated with mean difference of 0.36 that is quite significant.

It is evident from the results that effectiveness of teaching technique/strategy has great influence on the performance of learners in vocabulary post-test, as Graphic Organizer is a very effective vocabulary teaching tool. The principal aim of using Graphic Organizer Technique is to develop and build learners' vocabulary at secondary school level. Statistical data of the tests has produced a considerable difference in terms of learners' performance on the bases of practiced method/strategy of teaching. These results may also motivate language teachers towards using Graphic Organizers for the sake of vocabulary teaching. The results of the study recommend that the Graphic Organizers strategy is more effective than the traditional instruction in vocabulary developing skill of secondary school level learners. The findings of the study disclose some benefits of Graphic Organizers when they become a part of regular teaching. Different forms of Graphic Organizers are useful for language teaching and learning. This strategy becomes a source of students' motivation as well. It streamlines the teaching and learning process and makes more communication through strengthening the learners with new and more vocabulary items. The study recommends further research in this field at different levels with varied samples in terms of gender, age, academic level and period of time with ESL/EFL educational background.

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