

## The Effectiveness of Graphic Organizer Strategy to Improve Grammatical Knowledge Among the 1<sup>st</sup> Intermediate Students of Al-Imam Abdulaziz Bin Mohammad School

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**Abstract:** This study aimed to investigate the effectiveness of using Graphic Organizer strategy to improve grammatical knowledge for 1st intermediate students at Al-Imam Abdulaziz bin Mohammad School. Forty students from two classes participated in this study. Each class consists of 20 students. Students belonging to class A who represent the control group were taught using grammar translation way while those belonging to class B who represent the Quasi- experimental group were taught by using Graphic Organizer Strategy. Pre and post test were distributed to the Quise- experimental group and control group. The results of this study indicated that using Graphic Organizer strategy in teaching grammar improved students' proficiency in learning English grammar. As a result, the researcher suggests to apply the graphic organizer strategy on others stages such as secondary in order to investigate further results. The researcher also advises to generalize the using of graphic organizer to include others' skills such as vocabulary.

**Keywords:** Graphic Organizer Strategy, Grammatical Knowledge, 1<sup>st</sup> Intermediate Students, Teaching.

## فعالية استراتيجية تخطيط الدلالة في تطوير قواعد اللغة لطلاب الصف الأول متوسط بمدرسة الإمام عبد العزيز بن محمد

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إدارة تعليم المخوة || وزارة التعليم || المملكة العربية السعودية

الملخص: هدفت الدراسة إلى تحرى مدى أهمية استخدام استراتيجية تخطيط الدلالة في تعليم قواعد اللغة لطلاب الصف الأول متوسط في مدرسة الإمام عبدالعزيز بن محمد. عينة الدراسة تشمل 40 طالبا من فصلين بحيث يحتوي كل فصل على 20 طالبا . طلاب الصف "أ" يمثلون المجموعة الضابطة وتم تدريسهم بالطريقة التقليدية بينما طلاب الصف "ب" يمثلون المجموعة التجريبية وتم تدريسهم بطريقة تخطيط الدلالة. تم توزيع الاختبار القبلي والاختبار البعدي على المجموعتين الضابطة والتجريبية. وأشارت نتائج الدراسة إلى أن التدريس باستخدام استراتيجية تخطيط الدلالة طورت كفاءة الطلاب في تعلم قواعد اللغة ونتيجة لذلك فإن الباحث يوصي باستخدام استراتيجية تخطيط الدلالة لتدريس طلاب المرحلة الثانوية. وكذلك ينصح الباحث بتعميم استخدام تخطيط الدلالة ليشمل مهارات أخرى مثل المفردات.

الكلمات المفتاحية: استراتيجية تخطيط الدلالة، قواعد اللغة، طلاب الصف الأول متوسط، تدريس.

## 1- Introduction

Grammar plays an important role in teaching and learning a foreign language. Wang (2010) sees that the proficiency of language depends on learning its grammar (p.78). Many teachers agree that teaching grammar is the main factor to help the students to acquire the foreign languages but the matter lies in the way of teaching grammar.

Communication with native speakers is one of the main goals of teaching English in Saudi Arabia. So, we have to try new strategies that achieve this goal effectively. One of the main strategy in education is Graphic Organizer strategy. Wikipedia (2014) defines a graphic organizer as "a communication tool that uses visual symbols to express knowledge, concepts, thoughts, or ideas, and the relationships between them".

Elorriaga (2006) (quoted in Abo Nada, 2008, p.20) claims that researchers notice that representing information through visual way assesses the brain to absorb these information easily and quickly. Graphic Organizer strategy is one of the strategies that represents information visually.

There are many advantages of using Graphic Organizer as a tool for learning purposes. According to Malik and Zaman (2010), Graphic Organizer helps students to comprehend concepts easily. Therefore, their learning process takes place easily (p.6225). On the other hand, Al-Hinnawi (2012) indicates that through Graphic Organizer, students can easily increase their ability in building vocabulary (p.68).

Zaini et al, (2010), indicates that the advantages of using Graphic Organizer in learning process are:

1. enhancing students' critical thinking.
2. developing learning comprehension.
3. helping to connect new knowledge with the prior knowledge.
4. helping students to identifying errors (p.21).

The ultimate goal of this study is to investigate whether or not Graphic Organizer as a teaching strategy has influence on the first intermediate students' grammar. So, The researcher thinks that without using Graphic organizer students make more errors while learning grammar. If they use Graphic Organizer, they make less and less errors. I deem that promoting the use of Graphic Organizer for improving grammar faculty is very important.

## 2- Problem statement

There is an obvious weakness in students' grammar which is clear from their speaking in the classroom and their writing in tests. So, the researcher believes that it is important to use Graphic Organizer for teaching grammar to improve students' proficiency. Therefore, the main questions were addressed by this study are:

1. Are there any significant differences between the means scores of the posttest and pre tests of the control and quasi-experimental group on the achievement test?
2. What is the effectiveness of using Graphic Organizer strategy to teach grammar knowledge compared with grammar translation way to the first intermediate grade in Al-Imam Abdulaziz bin Mohammad school in Al-Mikhwah district?

### 3- Previous Studies

#### 3.1. Previous Studies Related to the Effectiveness of Graphic Organizer in Teaching English Skills:

There are many strategies that can be used to teach English in our schools. One of these strategies is Graphic Organizer. Therefore, Graphic Organizer has its effectiveness in different areas in education. As a result, Graphic Organizer proved their necessity regarding teaching and learning English skills (especially reading and writing). The following studies show the effectiveness of using Graphic Organizer as an English teaching strategy.

Manoli and Papadopoulou (2010) have studied the effectiveness of using Graphic Organizer as reading strategy through reviewing related literature. The aim of the study was to investigate to what extent Graphic Organizer affect the text learning. The findings showed that there is a consensus among researchers that Graphic Organizer is an effective tool in activating prior knowledge, identifying and connecting the main ideas of the text as well as recalling information.

Lancaster (2013), has studied the effectiveness of using Graphic Organizer to teach writing skill especially in the areas of word choice and organization . It also investigated students' attitudes towards writing. The data were collected through a survey about students' attitudes and samples of students' writing. The participants were five students from first grade classroom. The mean of their age was 6.6 years. The participants were White Caucasian. The result showed that writing becomes easier after implementing Graphic Organizer. According to word choice and organization, the results showed that students increased the ability to choose words and to organize their wiring perfectly.

Tayib (2015) has studied the effect of using Graphic Organizer on writing. He conducted his research on 24 Saudi male students who registered on the preparation year at Umm Al-gura University . This study lasted six weeks during the academic year 2012-2013. The data was collected through students' writing samples before and after implementing Graphic Organizer and survey about students' attitudes about writing. The results showed that Graphic Organizer improved students' writing and influenced positively on students' attitudes about writing.

#### 3.2. Previous Studies Related to the Effectiveness of Graphic Organizer in Teaching Vocabulary and Grammar

Building vocabulary is a must in learning English. Therefore, one of the researches related to building vocabulary has been conducted by Al-Hinnawi (2012) where he investigated whether or not Graphic Organizer contributes to build students' vocabulary. The participants were one hundred and two students from Jordanian University who were divided into two groups. The experimental group was taught using Graphic Organizer and the control group was taught using grammar translation way. Pre and posttest were distributed. This study lasted one semester. The result revealed that the students who were taught using Graphic organizer excelled in building vocabulary. This means that Graphic Organizer has a positive effect on learning new vocabulary.

Salehi et al., (2013) has conducted their study to examine whether Concept Mapping as a teaching strategy has an influence on English Grammar among Iranian pre-university students. The participants of this study were 80 students in which 40 students represent the experimental group whereas the other 40 students represent the control group. Pre and posttest were distributed. The result showed that the proficiency level of students in the pretest was convergent while the experimental group in the posttest got a higher achievement in Grammar than the control group. So, Concept Mapping strategy has a positive influence in teaching Grammar.

Another research was conducted by Abu Nada (2008), and he investigated the effectiveness of using Concept Map on improving grammar among ninth grade in Gaze Governorate. The participants were 113 male students from AL-Zaitun prep (A) school. Post and pretest were distributed for the experimental and the control group. The result of this study showed that using Concept Map strategy to teach grammar has influenced positively on students' grammar achievement.

In this context, Dahbi (2014) conducted an action research to investigate the effectiveness of using Graphic Organizer as a strategy to teach Grammar among Moroccan Second Year Secondary Students. The participants in this study were 46 students (6.5 % male and 93.5% female). Pre and posttest and questionnaire were distributed. The results of the tests showed that Graphic Organizer increased students' performance while the results of the questionnaire showed the positive response of students toward using Graphic Organizer in teaching grammar.

Finally, As a researcher , I notice that the previous studies prove that Graphic Organizer is an important strategy by which learning English becomes an effective process. There are differences and similarities between the previous studies and the researcher's study. The similarities include the following:

1. The participants of researcher's study include students of Intermediate stage as those of Abu Nada (2008).
2. The data is collected through pre and posttest as Al-Hinnawi (2012), Abu Nada (2008), Dahbi (2014) and Salehi, et al, (2013).
3. This study is about using Graphic Organizer strategy to teach grammar as Abu Nada (2008), Dahbi (2014) and Salehi, et al, (2013).

The differences between this study and the previous studies are represented in the following points:

1. This study is the first study in Saudi Arabia which studies the effectiveness of using Graphic Organizers on improving grammar Knowledge .
2. The participants of this study are 40 students. They study at the first intermediate grade.

#### 4- Methodology

The main aim of this study is to investigate the effectiveness of using Graphic Organizer to improve grammar knowledge. Therefore, the Quasi-experimental design is suitable to be applied in this study. This approach requires two groups of students: the control group and the experimental one. Grammar achievement test is distributed to the two groups as pre and posttest. The subjects of the experimental group were taught by using Graphic Organizer strategy while the subjects of the control group were taught by using grammar translation method.

##### 4-1 Sampling

The study community consists of 40 students of the first intermediate grade in Al-Imam Abdulaziz Bin Mohammad school for the school year (2014-2015 A.D.). In this study, the researcher depends on two kinds of samples . These samples of this study are the main study sample and the pilot study sample. Forty students of Al-Imam Abdulaziz Bin Mohammad School were the main sample of this study. They have been divided randomly into two equal groups since each class consists of 20 students. Class (A) represented the experimental group which was taught using Graphic Organizer while class (B) represented the control group which was taught using the grammar translation method. Table 3.1 illustrates the distribution of the main study sample .

**Table 3.1 The distribution of the main study sample**

School	Group	Class	Students no.
Al-Imam Abdulaziz bin Mohammad	Experimental	(A)	20
	Control	(B)	20
	Total		40

##### 4-2 Instrumentation

The researcher designed three Graphic Organizers to illustrate three grammatical lessons, which are verb be, verb have and present continuous tense, from the English syllabus of the first intermediate grade. This syllabus is called "Super Goal" and it has been edited in 2012-2013 A.D. The tool which is used in this study is an achievement test of English Grammar for the first intermediate students. To measure students' achievement in English Grammar, the test was distributed as pre and posttest. Pre-test was applied before the experiment while the posttest was applied after the experiment.

The achievement test was adapted from Abu Nada (2008). The researcher adds some modifications to adjust this test in order to fit the sample of this study. Thirty questions were distributed into the following three levels:

1. Knowledge level which consists of 10 questions to measure students' knowledge. These questions were designed to choose the correct answer out of four options.
2. Comprehension level which consists of 10 questions to measure students' comprehension. These questions were designed to correct the underlined words.
3. Applying level which consists of 10 questions to measure students' understanding. These questions were designed to do what is shown between brackets.

After the researcher had designed the test, he investigated its reliability and validity through applying test on the pilot study sample (N= 27) using the following methods:

#### **A. Face Validity**

The test was introduced to three of specialist referees who works as supervisors in Al-Mikhwah district to know their opinions according to the following criteria:

1. The questions' validity .
2. Questions' agreement to their levels.
3. Questions' clarity and accuracy.
4. Suggestions for modifications.

All referees have agreed completely upon the following statements:

- 1- The questions are related to their levels.
- 2- All the questions are clear and easy to be understood.

#### **B. Internal Validity**

In this study, the internal validity of the test marks has been calculated using Pearson Correlation Coefficient after applying the test on twenty seven students who represent the pilot sample of this study. The internal validity has been calculated as follows:

1. Using the Correlation Coefficient Point Biserial in order to measure the correlation's strength between the total score of the test and the score of every question in the test.
2. Using the Correlation Coefficient Point Biserial in order to measure the correlation relationship between every question of the level's questions and the total score of every level alone. (See Table 3.2)
3. Using simple Pearson's Correlation Coefficient, which measures the relationship between two quantitative variables, to measure the relationship between every level of the test and each other from one side, and the total score of the scale from the other side.

**Table 3.2 The test questions correlation coefficient**

No.	Level name	Correlation With Own Dimension	Total G	Test total Correlation Coefficient	No.	Level name	Correlation With Own Dimension	Total V	Test total Correlation Coefficient	No.	Level name	Correlation With Own Dimension	Total V	Test total Correlation Coefficient
1	Knowledge	0.625	0.701	11	Comprehension	0.555	0.478	21	Applying	0.830	0.717			
2		0.728	0.729	12		0.581	0.542	22		0.809	0.717			
3		0.677	0.537	13		0.606	0.542	23		0.806	0.760			
4		0.574	0.537	14		0.664	0.595	24		0.706	0.705			
5		0.599	0.495	15		0.755	0.697	25		0.747	0.588			
6		0.570	0.487	16		0.773	0.748	26		0.734	0.670			
7		0.651	0.570	17		0.687	0.697	27		0.775	0.709			
8		0.768	0.802	18		0.755	0.737	28		0.856	0.771			
9		0.700	0.693	19		0.847	0.838	29		0.604	0.713			
10		0.628	0.581	20		0.728	0.795	30		0.488	0.595			

N= 27    \*\* 0.01    \* 0.05

It is clear from the results of table 1 that the correlation coefficient values between test questions and the related levels from one side and between it and the total score of the test from the other side range between 0.478 & 0.856. These values refer to the correlation between the questions of every level and the total score of that level. These questions relate to at 0.05 and 0.01 values which proves the validity of the test. To calculate the correlation values between the total level test score and the test total score, the researcher has used (Pearson’s Correlation Coefficient) as the following table illustrates:

**Table 3.3 The Correlation Coefficient of the scopes of the test**

The study instrument’s Levels	The correlation with the total test score	Significant-Level
Knowledge	0.943	<b>0.01</b>
Comprehension	0.962	<b>0.01</b>
Applying	0.943	<b>0.01</b>

The above table indicates that the correlation coefficient values between the test levels and the total test score have significance at 0.01. These values prove the internal reliability for the questions and the levels of the test.

### C. Reliability

In order to measure the reliability of the test questions, the researcher used (Cronbachs Alpha technique).The result was 0.979. which proves the high reliability for the test.

### 4.3 Processes

To ensure the equality of the two study groups in the pre-test, the study instrument (an achievement test) has been applied on the two study groups. Then, the results have been analyzed using SPSS and the Independent- Samples t-test to identify significance differences between the two groups as table 3.4 shows.

**Table 3.4 Groups Statistics of The Pre-test**

Groups	Level	No.	mean	Std. Deviation	Levene's Test for Equality of Variances		T	df	Sig. (2-tailed)
					F	Sig.			
Control	Knowledge	20	3.90	1.165	1.674	0.204	38	0.470	No Sig.
Exp.		20	4.05	0.826					
Control	Comprehension	20	2.75	1.293	0.006	0.941	38	0.122	No Sig.
Exp.		20	2.70	1.302					
Control	Applying	20	2.75	1.251	0.675	0.416	38	0.806	No Sig.
Exp.		20	3.05	1.099					
Control	Total	20	9.15	1.348	1.329	0.256	38	1.249	No Sig.
Exp.		20	9.60	0.883					

It is clear from Table 3.4 that there is no significance between the two groups; the control which is taught through using the traditional method and the experimental one which is taught through using Graphic Organizer strategy. The two groups are equal in the pre-test because that the value of  $T = 1.249$  is bigger than 0.05. It is also clear from the above table that  $F = 1.329$  at Sig. 0.256 is also bigger than 0.05.

Statistics in this study include Means, Standard Deviation, Correlation Coefficient Point Biserial, Cornbachs Alpha Equation, Independent- Samples t-test and Blake's Modified Gain Ratio.

### 5- Findings

To answer the study's hypotheses, the results have been analyzed statistically through SPSS in which it is used to know the significant differences between the pre and posttest means of scores of the experimental group in the levels of the achievement test and the total score of the test. Moreover, the t-test is used to examine the Independence - Samples as in the following Table 4.1:

**Table 4.1 t-test results of the achievement test**

Test Dimensions	Exp. Group	No	Mean	Std. Deviation	df	T	Sig.
Knowledge	Pre-Test	20	1.40	0.995		12.735	0.000



Test Dimensions	Exp. Group	No	Mean	Std. Deviation	df	T	Sig.
Comprehension	Post-Test	20	6.45	1.468	38	10.622	0.000
	Pre-Test	20	1.10	0.553	38		
	Post-Test	20	5.90	1.944	38		
Applying	Pre-Test	20	1.10	0.852	38	12.125	0.000
	Post-Test	20	6.40	1.759			
Total All	Pre-Test	20	3.60	0.883	38	15.976	0.000
	Post-Test	20	18.80	4.162			

It is clear from Table 4.1 that the results illustrate that:

- 1- The (t) value is 12.735, this means that there is statistically significant difference at 0.01 between the means scores of the experimental group which had been taught through using Graphic Organizer strategy in the pre and posttest in the first level (knowledge).
- 2- The (t) value is 10.622, this means that there is statistically significant difference at 0.01 between the means scores of the experimental group which had been taught through using Graphic Organizer strategy in the pre and posttest in the second level (comprehension).
- 3- The (t) value is 12.125, this means that there is statistically significant difference at 0.01 between the means scores of the experimental group which had been taught through using Graphic Organizer strategy in the pre and posttest in the third level (applying).
- 4- The (t) value is 15.976, this means that there is statistically significant difference at 0.01 between the means scores of the experimental group which had been taught through using Graphic Organizer strategy in the pre and posttest in the total score of the test.

The researcher uses " Blake's modified Gain Ratio" equation to identify the effectiveness of using Graphic Organizer strategy to teach Grammar for the first intermediate grade in Al-Imam Abdulaziz bin Mohammad school in Al-Mikhwah district. As a result, the following Table 4.2 clarifies the gain ratio in the achievement skills.

**Table 4.2 Gain Ratio in the Achievement Skills**

Test Levels	Application	No	Mean	Std. Deviation	Gain Ratio
Knowledge	Pre-Test	20	1.40	0.995	1.092
	Post-Test	20	6.45	1.468	
Comprehension	Pre-Test	20	1.10	0.553	1.019
	Post-Test	20	5.90	1.944	
Applying	Pre-Test	20	1.10	0.852	1.126

Test Levels	Application	No	Mean	Std. Deviation	Gain Ratio
	Post-Test	20	6.40	1.759	
Total All	Pre-Test	20	3.60	0.883	1.083
	Post-Test	20	18.80	4.162	

It is clear from the Table 4.2 that the results indicates that:

1. The means of students' scores in the first level of the achievement test (i.e. knowledge level) in the pre and posttest are 1.40 and 6.45 , and the modified gain ratio is 1.092. This ratio lies in the Blake's range 1-2 which means that it has statistically significant value.
2. The means of students' scores in the second level of the achievement test (i.e. comprehension level) in the pre and posttest are 1.10 and 5.90 , and the modified gain ratio is 1.019. This ratio lies in the Blake's range 1-2 which means that it has statistically significant value.
3. The means of students' scores in the third level of the achievement test (i.e. applying level) in the pre and posttest are 1.10 and 6.40 , and the modified gain ratio is 1.126. This ratio lies in the Blake's range 1-2 which means that it has statistically significant value.
4. The means of students' scores in the total score of the achievement test (i.e. knowledge , comprehension and applying levels) in the pre and posttest are 3.60 and 18.80 , and the modified gain ratio is 1.083. This ratio lies in the Blake's range 1-2 which means that it has statistically significant value.

According to the above results, the researcher concludes that using Graphic Organizer in teaching grammar increases the proficiency of the first intermediate students of Al-Imam Abdulaziz bin Mohammad school in knowledge, comprehension and applying levels of the achievement test.

These results agreed with the results of the previous studies mentioned in this study and this indicates the effectiveness of using Graphic Organizer in teaching grammar, vocabulary as well as English skills such as reading and writing.

→ This study has some limitations. First, It has been applied only on 40 participants. In order to get more results, the researcher would advise to apply it on a huge number of participants. Second, the study has focused on some grammatical rules such as using verb "be", using verb "have" and present progressive tense. If it has been conducted on other uses, such as past or future tense it may give different results and highlight the importance of Graphic Organizer. Finally, the study has been applied on the first Intermediate grade. If it is applied on elementary or secondary grades, the results would show much more the importance of using Graphic Organizer.

## References

- Abu Nada, M, K. (2008). The Effect of Using Concept Maps on Achieving English Grammar Among Ninth Grades in Gaza Governorate, M.A Theses, The Islamic University. Gaza
- Al-Hinnawi, A, N. (2012). The Effect of the Graphic Organizer Strategy on University Students' English Vocabulary Building, English Language Teaching , V (5), N (12).
- Dahbi, M. (2014). Implementing Graphic Organizers to Teach Grammar to Moroccan Second Year Baccalaureate Students: An Action Research Project. IOSR Journal of Research and Method in Education, V(4), Issue 5, Ver.I. pp.37-42
- Elorriaga, J.A. (2006): Application of A Concept Mapping Tools.. from:<http://cmc.ihmc.us/cmc2006Papers/cmc2006.pdf>
- Lancaster, K. (2013). An Examination of Using Graphic Organizer to Teach Writing: A case study. Eastern Illinois University.
- Malik, S, K. & Mazin, N. (2010): Effect of graphic organizer teaching model on students' learning achievement. Elixir Online Journal, V (42), pp.6220-6227
- Manoli, P. & Papadopoulou, M. (2012). Graphic Organizer as a reading strategy: Research Findings and Issues, V(3), N(3), pp. 348-356
- Salehi, A, D., Janadar, S.,& Khodabandehlou, M. (2013). Concept Mapping: A Teaching Strategy on Iranian Pre-University Students' English Grammar. Indian Journal of Fundamental and Applied Life Sciences, V(3), N(2), pp. 228-235
- Tayib, A. (2015). The Effect of Using Graphic Organizers on Writing (A Case Study of Preparatory College Students At Umm-Al-Qura University), International Journal of English Language Teaching, V (3), N (1), pp. 11-31
- Wang, F. (2010). The Necessity of Grammar Teaching, English Language Teaching, V (3), N (2)
- Wikipedia, the Free Encyclopedia, Grammar, Retrieved 4th October .2014
- Wikipedia, the Free Encyclopedia, Graphic Organizers, Retrieved 4th October .2014
- Zaini, S, H., Mokhtar, S, Z., & Nawawi, M. (2010). The Effect of Graphic Organizer on Students' Learning in School, Malaysian Journal of Education Technology, V (10), N (1), pp. 17-23