THE EFFECTIVENESS OF GRAPHIC ORGANIZER STRATEGY ON THE STUDENTS' LEARNING ACHIEVEMENT

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ABSTRACT

The present study examines the effectiveness of Graphical Organizer strategy on Student's language Learning Achievement at School. Graphic Organizer Model assist teachers focus on content in order to make it understandable for the students. The aim of this paper is to assess the effect of Graphical Organizer of students' learning foreign language. It is an experimentally study that conducted at intermediate School. The study adopted Pre-test, posttest, control group design for conducting the experiment.

Differences of students' achievement in both control and experimental groups, was checked through comparing the outcomes of their performance. The results show that students of experiment group, who studied through the ***GO*** *strategy, got higher marks than students of the control group. The findings of the study reported that GO Model proved an effective instructional strategy and that students' learning achievement was improved. The teachers have recommended to train on how to design and follow the steps of GO strategy in teaching. The value of the study, have efficient implications for teachers, curriculum designers and researchers.*

PROBLEM

The problem is to determine the effect of Graphical Organizer (GO) strategy on student's achievement of foreign language at Intermediate School. The major concern is the Graphical Organizer's introductory material that has its worth in making teaching learning meaningful and effective for the learners.

AIMS OF THE STUDY

The study aims at:

• determining the difference of student's achievement through Graphic Organizer model and traditional teaching at Intermediate School.

• assessing the impact of Graphical Organizer (GO) model on students' learning achievement in foreign language class.

• exploring the effects of Graphical Organizer (GO) Model and traditional teaching on students' understanding the

content of the foreign language.

HYPOTHESIS

It is hypothesized that:

• There is no significant difference in student's learning achievement taught through Graphical Organizer model and traditional teaching.

• There is no significant effect of Graphical Organizer strategy on students' learning achievement

• There is no significant difference in student's concept understanding taught through Graphic Organizer model and traditional teaching.

Theoretical Background

It is believed that teaching is supportive for any education system. (Puri, 2006) Teaching and education connect to each other and could not be isolated. Donna. M. Menters (1998, p.60) explains that teaching is the operation of transmitting knowledge, skills and values to achieve teaching objective which aims to accomplish comprehensible subject matter for students.

Using the concept of comprehension is one of the modern ways in teaching. David Ausubel (1963) generalized a theory of Advance Organizer as an introductory material, that will be used by teachers for the purpose of relate the prior information of students with the new one. GO is visual representation of a text or a topic like knowledge, concepts or ideas. They will help learners to reduce boredom, increase recall, create interest and explain information.

Graphic Organizer can be utilized as advance organizers or post organizers, after experiencing the learning material. The visual displays can be implicated successfully at several stages of the instructional process Hudson, Lignugaris-Kraft, and Miller (1993).

According to Siddiqui (1991), advance Organizer of the GO category is regarded as important resource of written material in the classroom.

A significant concern of educators is the preparation, using and organizing materials in such a way that help students to maximize their learning. In the theory of meaningful verbal learning, they advocate the value of Advance Organizers as facilitating the learning of written materials David P. Ausubel, (1963).

Others indicate that Graphical Organizer Model can successfully evolve by using substantive instructional context such as incorporate teaching model (Gardill; and Jitendra, 1999 since teaching is typically an interpersonal, interactive activity, including verbal communication, which is taking in charge the purpose of helping students learn or change what they are used to behave).

Types of Graphic Organizers

There are various types of Graphic Organizers. Some of them are the following:

The process of converting a mass of data, information or ideas into a graphic map and its different types gives the student a large amount of understanding and insight into the topic at hand. To create the map, the student must concentrate on the relationships between the items and examine the meaning attached to each of them. While creating a map, the teacher must also prioritize the information, determining which parts of the material are the most important and should be focused upon, and where each item should be placed in a map. The creation of Graphic Organizers also helps the student generate the idea as they develop and note their thoughts visually in a paper.

Graphic Organizers some which are also called maps, entity relationship charts and mind maps are pictorial way of constructing knowledge and organizing information. They help the student convert and compress a lot of seemingly disjointed information in to a structured, simple to read, Graphic display. The resulting visual display conveys complex information in a simple to understand manner.

Richard D Parsons (2001) believed that learning is a permanent change in behavior or capacity acquired through experiences. The learning takes place when it is related to the needs and experiences of the learner. The learning is favored when meaningful association is established.

Advance Organizer Model

According to Donald. C. Orlich (2009) that Advance Organizer Model is designed to teach organized bodies of content in a way that they can stay in the learners mind for long-term period. The Advance Organizer provide students with an overview and focus content differentiation provide item of information that can be more easily understood and integration provide meaningful learning by helping students understand the relationship among the elements of the content be taught.

Rose .A. Utley (2010) believes that the Advance organizer Model instructor needs to identify clear connection between past content and how the current topic relates to what has already known. The rationale is that if the learner makes a connection between the new information and previous knowledge, the learning experience will become more meaningful and learning will be facilitated. An advance organizer model is more than a review of what was and what will be covered and it is not the same as presenting the lesson objectives.

According to Siddiqui (1991) that David. P Ausubel is one of the few educational psychologists who address himself simultaneously to learning, teaching and curriculum. His theory of meaningful verbal learning deals with three concerns:

• How the mind works to process new information. (Learning).

• How teachers can apply these ideas about curriculum and learning when they present new material to students.(instructions)

• How knowledge is organized. (Curriculum content).

David Ausubel (1963), an education psychologist, did some interesting innovative work. He explained that at any point in time, a learner has an existing organization and clarity of knowledge in a particular

subject matter field. He called this organization a cognitive structure and relationship. Meaning can appear from new materials only if they are joined with existing cognitive structures of previous learning. In meaningful learning teacher teach new material, connecting it with the previous knowledge of the students.

Burnning et al, (1999) explain that an advance organizer is a small amount of verbal or visual information that presented to the learner before the introduction of the new material. Learning becomes meaningful if the new material is Burnning et al, (1999) explain that an advance organizer is a small amount of verbal or visual information that presented to the learner before the introduction of the new material. Learning becomes meaningful if the new material is provided when the learner has appropriate According to Siddique (1991) Advance organizer is powerful technique of presenting data. It may be produced in altering shape, as needed. It is presented on the level of generality and strives to seek relationships among the ideas. Beside this advance organizer in general terms noted that one cannot provide more detailed information without specific knowledge. Teaching is directed to help students increase the number of information and also to relate it with previous information.

Graphical Presentation of Advance Organizer

Graphical Depiction of the model shows that lesson starts with presentation of the advance organizers and imparts focus upon meaningful learning. This process works upon principles of assimilation. This diagram shows that new information can only be absorbed if it is related with the previous or prior knowledge stored in cognitive structure of a learner.

Types of Advance Organizer Model

Advance organizer can be categorized in to various types according to the content. They are explained as under:

Expository Advance Organizer

Expository organizers are especially helpful because they provide ideational scaffolding for unfamiliar material. Expository organizer provides new knowledge the students need to understand for the upcoming information. Expository Advance organizers simply describe the new content to which students are to be exposed.

Comparative Advance Organizer

Siddiqui (1991) discussed about comparative advance organizer that they are used with relatively most familiar material. These organizers connect new learning to previously learned material. They are designed to integrate the new concepts with basically similar concepts exists in the cognitive structure, yet they are also designed to distinguish between the old and new concepts in order to put off the confusion caused by their similarity.

Skimming Organizer

Skimming the information before reading can be a powerful form of advance organizer. This technique

can be very supportive when detailed information is not essential. Skimming approach can be applied by the teacher if there is any kind of shortage of time or to just give the overview of anything than this organizer can be of a great help for the teacher and as well as for the learner.

Narrative Advance Organize

Howard Pitler (2007) believed that Narrative Advance Organizer is usually stories articles or artistic works. It is also the new information in the form of a story.

Graphic Advance Organizer

According to Robert J. Marzano (2007) it is the visual representative for students. Graphical Advance Organizer is usually tables, charts or artistic works, which is best for the visual learners and slow learners to understand the relationship between the subject matter.

Graphical Organizer

Organizers are used to set up or out line the information relationship between concept and propositions, a cognitive map is kind of visual road map showing some of the ways to connect meaning of the concept.

Patti Drapeau, (1991) explains that Graphic organizers are the teaching tools that can be use for all types of students. They help visual learner to see what the model are trying to convey and provide a structure that helps children to stay focused and attached in their studies.

Hope (2001) explained that Graphic representations can be used to understand text and solve a variety of problems of the student in grasping the learning material. Graphic organizer techniques can help students consider text and see how it is structured, what the similarities are and what the differences are.

Donald (2009) express that Graphical Organizer can be extremely helpful at the beginning of any lesson. The purpose of the Graphical Organizer Model is to provide a student with a structure of previous knowledge so that they understand each part of the hierarchy of knowledge in the lesson as well as the relationships among the parts. Graphical organizer model can be easily changed and re-arranged according to the subject matter and the level of the students.

In Antonaia (2003) explains that frames and graphic organizers can be powerful tools to help the student locate select, sequence, integrate and restructure information both from the prospective of producing information in written responses.

According to Kathleen (2009) Graphical organizers are mental maps that involve the student in active thinking through the representation of key skills such as sequencing, comparing, contrasting and classifying the subject matter. These mental maps represent complex relationships and promote clearer understanding of content to the learner.

Sprenger (1999) says that when semantic memory is not processed, in several ways, the brain has a hard time making neural connections. Semantic memory operates word by word and it used working memory. Each learning experience of the learner should be organized to present a short chunk of

information. She discusses the devices such as peer teaching, questioning, strategies, summarizing, role playing and graphic organizer that can be used to help students to built semantic memories.

According to Darolyn (2004) graphic organizers are in various forms. They are graphic, pictures, lines, circle and other shapes that organize your reading. Graphic organizer helps to guide the thoughts, which are inside the head of the learner. According to Laurie (2007) graphic organizers are more innovative and inspiring than traditional linear approaches to learning that most adults have been conditioned to. Since the brain's attention is selective. It tends to focus more on novelty, while ignoring the routine.

The Editor of Teaching English (2008) has describes graphic organizers provide the learner with the different way of seeing and thinking about information. GO also help the learners in removal of the language barriers, so they can focus on the connection between them.

Constructing Graphic Organizer Strategy

Diane (2009) give the suggestions for creating GO usually include the following steps:

• Analyze the learning task for words and concepts important for the students to understand.

• Arrange them to illustrate the interrelationships and patterns of organization.

• Evaluate the clarity of relationship as well as the simplicity and the effectiveness of the visual.

• Substitute empty slots for certain words in order to promote student active learning.

• Note the main idea and the key points.

According to Diane .E. Kern (2007) Graphical Organizers are visuals that show relationship between concepts, terms, facts or ideas in a learning activity. Other term related to graphical organizers that are visual, visual structures, concept maps, cognitive organizers and concept diagram. These are very helpful for those students and learners who have a great problem in understanding the relationship between the content which can be easily reduce by using the Graphical Organizer Teaching model in the classroom. It can be used in any subject or in any content. Linda (2010) believed that Graphic Advance Organizer would offer an opening over view to learner whether a flowchart, diagram, chart, table, map, figure or something else.

Laurie (2007) Graphic organizer that works visually to analyze concepts is the tree. If the topic involves a chain of events with a beginning and with multiple outcomes at each node, tree can be used. It is commonly used for hierarchical relationships, can also help learner to breakdown complex ideas.

Walch (2005) graphic organizer can be used to compare and contrast the content. It can compare two things which have same similarities and can be comparison between them. This type of GO is great for comparing things with common element but different content.

Joel (2005) believes that Contrast GO highlights the apparent likeness and differences between objects and events. Joel (2005) Flow charts were developed by logicians and early computer programmers. Their purpose was to visually depict procedural knowledge. Brisco (1990) discussed that flow charts are useful

to illustrate path, hypothesis, techniques, procedures and scheme.

According to Diane (2009) a number of authorities have addressed the impact of graphic organizer on students reading, understanding and recall. Graphic organizers developed as result of Ausubel's research in to benefits of using an advance organizer in the form of an introductory style passage to enhance the reader's acquisition of new knowledge.

Hawk's research (1986) favored the Graphic Organizer strategy because

(1) GO provided an overview of the material to be learned

(2) a reference point for putting a new vocabulary and main ideas in to an orderly pattern

(3) a sign for important information

(4) a visual stimulus for written and verbal information

(5) a brief review tool. Research on GO by Alvermann and Boothby (1986) suggested that the effect upon comprehension are increased when GO are partially constructed by as during reading or post reading activity. Novak (1991) indicates that learner constructed concept maps reflected learner understands of English concepts better than traditional forms of testing. Bean, Singer, Sorter and Frasee (1986) reported GO enhance result when used.

The researcher found no research study in the area of Graphical Organizer with reference to students' learning achievement. Therefore, the researcher decided to conduct a research study on the topic of "Impact of Graphical Organizer Strategy on Students' Learning Achievement in "English" at Intermediate School in Baghdad.

Procedure of the Study

It is an experimental study based on pretest- posttest control group design. The experimental method of research used to test hypothesis concerning cause and effect relationships. The experiment was conducted Al-Forat Intermidiate School for boys. Sample for the study was collected randomly from students of 2nd class of the school.

• The researchers developed lesson plan for English language based on Graphic Organizer teaching of 2nd class level for achieving the objectives of the study.

• A teacher made achievement test was constructed by the researcher and it was used as instrument for data collection.

• The validity of the instrument was checked through pilot testing and expert's judgment in which some items were modified. After validation of instrument and lesson plans the researcher randomly selected two teachers from sample school having equal academic and professional qualification B. Ed (Bachelor of Education) and teaching experience (5-10years). Out of 50 students of 2nd class, 40 students were selected randomly from the sample school. A teacher made Pre-test was administered on randomly selected students in order to as certain that they are similar. Then students were sent randomly in

control and experimental group.

There were 20 students in each group control and experimental. Teacher for control and experimental group were assigned randomly in both the groups for teaching. At the end of treatment period, a teacher- made posttest was administered on all students in control and experimental group on the same day and for the same duration. The tests were marked by the respective teachers, and results were tabulated by the researchers. Then the collected data was analyzed suitable statistical techniques were used for data analysis.

The following variables were controlled for experiment;
• Teacher's Academic Qualification;

• Teacher's Teaching Experience;

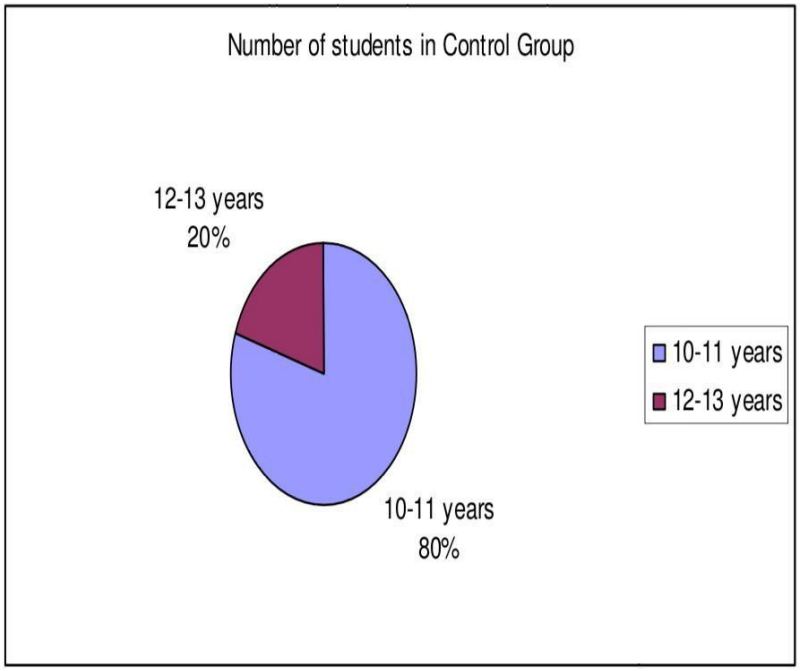
• Teacher's Professional Qualification;

• Content Taught; the selected content from the textbook of English for 2nd class level were taught to the students in Control and Experimental Group

• Facilities in Classroom; Facilities in classrooms of both groups were the same.

• Teacher's Period Length.

Graph No. 2



Interpretation

The above Table shows that students of both group (control and experimental) have more or less same age. The 40 students were present in the experiment of the study which were randomly assigned to both groups (control and experimental). There were 18 students in Experimental study which were according to their age level of their class and 16 students were in Control Group.

Interpretation

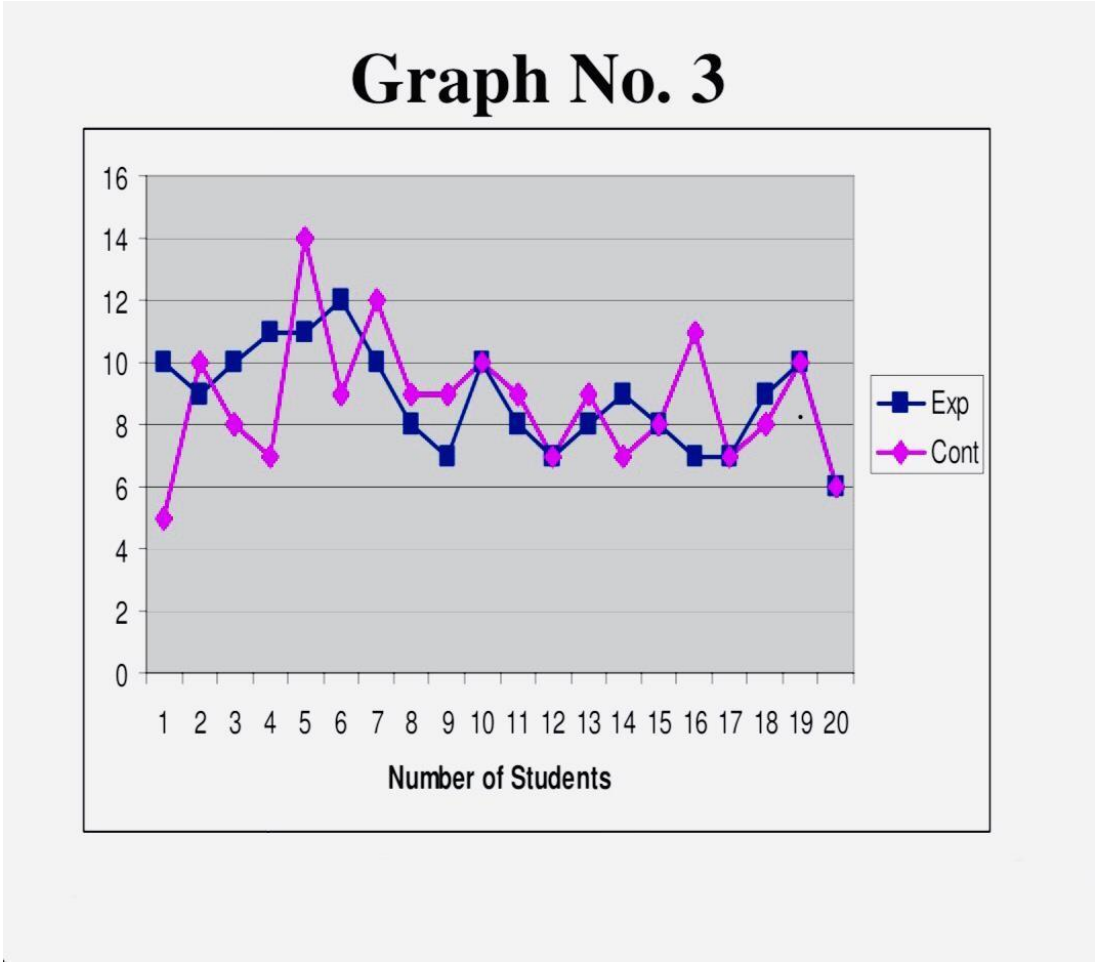
The above Table shows that 40 students were present in the experiment. Each group (control and experimental) had equal students. 20 students were in control group and 20 students were in experimental group. In both groups the students were randomly assigned to each groups (control and experimental).

Testing of Hypotheses of the Study

Ho1: There is no significant difference in performance of students in control group and experimental group in Pre-test.

Interpretation

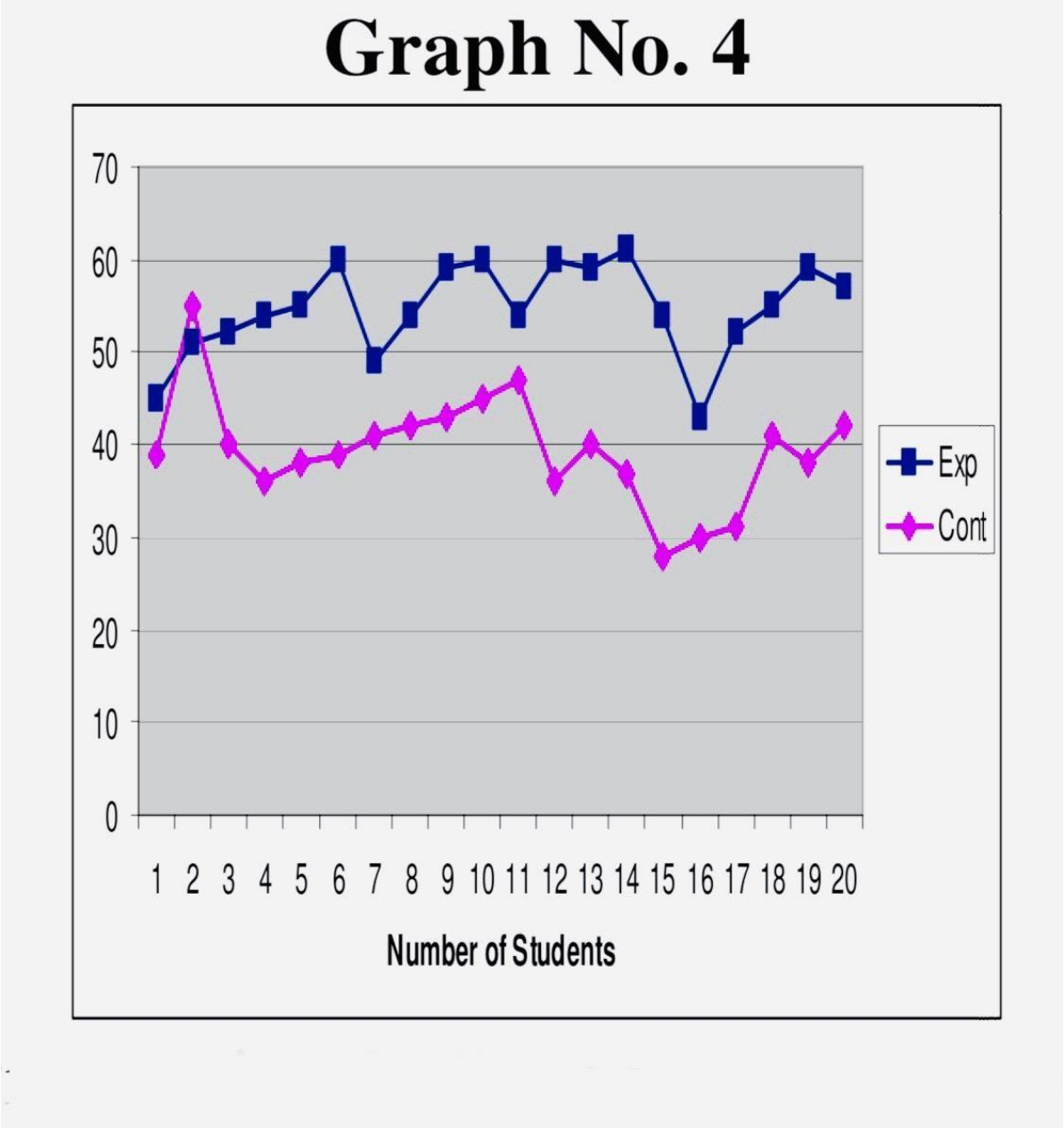
The above Table shows that calculated t value (.168) is less tabulated value (2.09). Therefore, the hypothesis stating that there is no significant difference in performance of students in control group and control group in pre-test is hereby accepted and it is concluded that there is no difference in the mean score of student's of control and experimental group and it is concluded that there is no difference in the performance of students in control and experimental group in pre- test. It means that students in both groups (Control and Experimental) were equal before the beginning of the experiment. Below is the graphic presentation of students' marks in pretest:



Ho2: There was no significant effect of Graphical Organizer (GO) model on students' learning achievement in English.

Interpretation

The above Table shows that calculated t value (8.708) is higher than tabulated value (2.09). Therefore the hypothesis is stating that there is a significant difference in performance of students in experimental group is hereby rejected and significant difference of performance of students in control group and experimental group in post-test where students in experimental group attained higher mean score(54.65) than the students in control group(39.40). That means that student have shown the great difference of understanding after the experiment. Students' performance in post-test is also presented below in graph:


Graph No. 4
70
60
50
40
30
20
10
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
Number of Students
Exp
Cont

Treatment Plan for Experiment

Table No. 1

Group	N	Pre-Test	Treatment	Post-Test
Control	20 (Randomly Selected)	T.M.T	Traditional Teaching Method	T.M.T
Experimental	20 (Randomly Selected)	T.M.T	Graphic Organizer Teaching Model	T.M.T
Total	40	(T.M.T= Teacher –Made Test, N= Number of students).		

Analysis of Data and Interpretation

Table: No 2 Age of the Students in the Experimental group:

Age Group	No. of Students in Exp	No. of students in Control
10-11 years	18	16
12-13 years	02	04
Total	20	20

Table No. 3 Number of Students in Group.

Group	N	Percentage
Control	20	50%
Experimental	20	50%
Total	40	100%

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Table No. 4. Comparison of Results of Students of (Experimental and Control Group) in Pre-test

Group	N	Mean	df	t	significant			
Control	20	8.75	38	.168	.867	Experimental	20	8.85
38								
Level of Significant at .05				Table Values 2.09				

Table No. 5. Comparison of Results of Students of (Experimental and Control Group) in Post-test

Group	N	Mean	df	t	significant
Control	20	39.40	38	8.708	.000
Experimental	20	54.65	38		.000

Conclusion

The result came out that there was no significance difference between both group (control and experimental) students in Pretest. Both groups have shown the same result. This means that before the experiment the students of both groups have same understanding the content. They were appeared similar in their pre-test.

The findings of the result came out that there was a significance difference in result of the both groups (Experimental and Control) students in post- test. After the experiment, students of experimental group show different result than control group and this difference of result has proved that how much the new method is been liked by the students. It was concluded from the result of teacher made Pre-test that there was no significance difference between the students of both Group (Experimental and Control) before the beginning of the Experiment. It was concluded from result that there was a significance difference of performance in teacher made post-test of

English among the students of both group (Experimental and Control). It was concluded from the finding that students in Experimental Group (taught through graphic organizer model) performance was better than students in Control Group (taught through traditional method). Keeping in view the findings of the present study it is suggested that the use of Graphical Organizer Model can make learning easier for the students and they can understand concepts more easily through graphic organizers.

As in present study experiment for the study was conducted in a boy school. Further researcher may be carried out to include male and female, public and private sector school and comparison in performance through use of graphic organizer may be investigated to determine the differences between different sample groups and teachers may be trained specifically in how to develop and how to use of Graphical Organizer Model for explanation of concepts. Furthermore, the impact of using Graphical Organizer Model in teaching of other subjects may be investigated and GO may be used for developing Graphical skills in students to portray their ideas.

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