

**THE EFFECT OF USING GRAPHIC ORGANIZERS ON WRITING (A CASE STUDY OF PREPARATORY COLLEGE STUDENTS AT UMM-AL-QURA UNIVERSITY)**

**Abdul-Majeed Tayib (Ph.D)**

English Language Center

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**ABSTRACT:** *The purpose of this study was to investigate the effectiveness of graphic organizers on students' writing ability as well as their attitudes towards this essential language skill. The sample of this study was composed of 24 Saudi male subjects registered in the preparatory program at Umm Alqura University during the academic year 2012- 2013. This study (a within subject design) was conducted in three phases and lasted for six weeks. Two main sources were used to generate data for the study: (1) samples of students' writing before and after the graphic organizers intervention (2) a writing attitude survey which was administered twice before and after intervention. The writing scores of the participants before and after the graphic organizers' intervention were compared and analyzed quantitatively using the test of significance to see if there were any differences between means of the scores. The data generated through the writing attitude survey was analyzed qualitatively to detect any changes in students' attitudes. The results of this study proved that the graphic organizers model had significantly improved the students' writing ability and had positively impacted their attitudes towards this skill. These results suggest that graphic organizers can be an effective support in teaching writing of learners of English as a foreign language.*

**KEYWORDS:** Writing Ability, Graphic Organizers, Attitudes Towards Writing, Cause/Effect Organizers, Compare/Contrast Organizers.

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## **INTRODUCTION**

Of all language skills, writing is commonly rated as the most demanding and the most difficult to master. Educators and language art teachers in America complain that their students "have limited writing abilities and struggle to write compositions that convey their thoughts and ideas" (Unzueta, 2009: p.1). If this is the case with native speakers of English, one could easily imagine how nonnative speakers of this language would suffer when it comes to learning this skill.

Arab learners of English, in particular, often face greater difficulty in attaining appropriate writing levels in this language. One reason for this is their language Arabic, being generically different from English. Another reason for the Arab learners' low achievement in writing; however, is due to lack of using proper techniques and suitable methods to teach this skill. Actually, the use of poor teaching approaches has negative impact on the students' English proficiency in general and on their writing performance in particular.

The low proficiency of students' English has led the Ministry of Higher Education in Saudi Arabia to introduce a preparatory year program that focuses on English and requires secondary school graduates to complete it successfully before they can start their university specializations. Indeed, this program has helped many students to upgrade their overall English language proficiency; however, their writing ability remains far below being satisfactory.

Graham, (2006) notes that students who do not learn to write well are at a disadvantage throughout their education. At college level, he says, where English is a medium of teaching, weaker writers are at risk; they are less likely to be able to express their learning to their instructors who often assess their performance through writing. Hence these students may fail their courses and consequently suffer academic delay, or even worse dismissal from college.

To avoid such tragic consequences, English language instructors and educators are urgently requested to look into this issue and develop writing teaching techniques and methods that may help Saudi students improve their writing proficiency. Educators in this part of the world may knock on the doors of western practitioners and see how they manage to overcome such a problem. Indeed, western practitioners have conducted several empirical studies and developed numerous techniques and strategies that proved to be effective in improving students' writing proficiency.

Some of these studies recommend that teachers should provide learning experience in risk-free setting and provide continuous positive feedback to students for greater chances to develop writing skills (Brown, 2011). Other researchers in the west propose that teachers should provide step-by-step instruction for struggling writers (Kajder, 2005). Others claim that building positive classroom experiences for learning is of paramount importance for learning writing successfully (Dunn & Finely, 2010). However, a wide spectrum of research has investigated and recommended the use of graphic organizers to augment the teaching of various writing processes (Capretz, 2003; Faull 2007; Novak, 1990; Servati, 2012; Parker, 2013).

Miller (2011), for instance, states that graphic organizers serve as visual representation of ideas that help learners organize their thoughts and apply their thinking skills to the content in a more orderly manner. Miller further adds that graphic organizers "often occur in the form of key words and allow students to focus more on the meaning rather than the format of complete sentence structure" (P.4).

Quite recently, Bishop (2013) reports that graphic organizers can be used to mitigate difficulties that less skilled writers face as these organizers can improve planning, organization, word choice and composition coherence. A few years earlier, Ching and Chee (2010) claim that organizers can help weaker learners to make sense of information and stay on the given topic as long as they are writing. Such techniques could be of some value for English as foreign language (EFL) learners and most particularly to the Preparatory College students at Um-Al-Qura University (UQU) whose writing proficiency is much lower than the required level.

Bearing in mind the importance of writing for such students and the possibility of using graphic organizers to teach this vital language skill, the researcher becomes interested in finding out whether the use of these occidental techniques would have any effect in improving the writing ability of Um-Al-Qura Preparatory College students. Furthermore, the researcher would like to find out if the use of such organizers would have any influence on the students' attitudes towards writing.

### **The Problem Statement**

Writing is a problem for many students including native speakers of English. According to the National Report Card from the US Department of Education (2008), most students in all grades underperform in writing. For nonnative speakers of English, the case is even worse and more critical. At Um-Qura University, where this study is conducted, more than (64%) of the students of the Preparatory College failed their end of term writing exam conducted in February

2012. Furthermore, in the colleges of medicine and engineering, where English is solemnly adopted as a medium of instruction, professors complain that their students cannot write proper reports or even short essays on topics relevant to their specializations. The negative impact of such insufficient writing ability is quite fatal. It threatens the students' academic future.

One of the major reasons for students' low performance in writing; however, is the traditional methods adopted to teach this skill. In fact teaching writing in this part of the world does not go far beyond "the teacher assigns a topic, the students write and the teacher evaluates and (at his/her best) provides feedback"(Marshi & Henatabad, 2011. p.79 ) Such an approach to teaching writing, in the researchers' point of view, is very unproductive and demotivating. It induces the learners to develop negative attitudes towards writing. To make teaching writing more fruitful and less boring, more modern innovative techniques such as graphic organizers are worth considering and being utilized in teaching English writing.

### **Purpose of the study**

In response to the problem of student' insufficient writing ability , comes this research as an attempt to determine whether using graphic organizers helps to improve Saudi students' writing performance as measured by scores from a modified writing proficiency rubric developed by The Georgia Department of Education (2008). This research also intends to see how the use of such techniques impacts the students' attitudes towards writing.

### **Hypotheses of the study**

Through the use of graphic organizers to teach writing, it is hypothesized that:

1. Students' writing performance will improve significantly.

This hypothesis is based on the assumption that graphic organizers provide scaffolding or support for new information, help to focus attention, organize information, select relevant vocabulary and offer a reminder for previous information.

2. Students' attitudes towards writing will become more positive.

This hypothesis is based on the assumption that these organizers create an enjoyable learning atmosphere that enhances meaningful learning. Hence they serve to improve performance and prevent frustration and boredom.

### **Questions of the study**

This research is intended to answer two questions that are directly related to the above hypotheses.

- 1- What is the effect of using graphic organizers on students' writing performance?
- 2- How does the use of graphic organizers impact the students' attitudes towards writing?

### **Significance of the Study**

This research is significant as it attempts to investigate the impact graphic organizers may have on the writing ability and attitudes towards writing English of Preparatory College students at Umm- Al-Qura University towards this significant skill.

This study is also significant because its results would demonstrate the viability of using such an occidental innovative technique; the graphic organizers to improve the writing proficiency of a group of Saudi students as well as their attitudes towards this important skill. If this technique proves to be useful, then it goes without saying that it will be adopted to teach this vital skill to attain better writing performance. Better writing performance secures the academic future of the students and facilitates their educational progress.

## **LITERATURE REVIEW**

### **Theoretical considerations**

#### **The importance of writing**

Nancie Atwel (1998) a leading writing practitioner reflecting on the importance of writing, referred to it as a way of life. She explains that writing is a means to acquire and attain language, confirming that it is an important mode of communication through which life experience and personal views can be shared.

At another level, Graham and Perin (2007) describe writing as skill that draws on the use of strategies to accomplish a variety of goals. They affirm that writing is a means of extending and reinforcing knowledge. They add that writing acts as an effective tool for acquiring new information.

#### **Academic writing**

In the academic arena, Bishop (2013) notes that the ability to write well becomes increasingly important as students move up their educational ladder and go from the secondary to post-secondary education. In this stage, she says, writing represents a key element that determines students' success. This is because students are generally required to express their learning in writing and on the basis of their written responses, their academic achievement is evaluated.

Obviously, academic writing is more demanding than other types of writing; it involves selection of particular words or terms to form sentences following conventional patterns to create essays or to write answers or reports. Furthermore, academic writing needs prior knowledge of the topic of writing genre with its rules and writing format (Scott & Vitale, 2003). Generally, this type of writing is more developed than informal writing which one practices when he/she interacts with friends through personal letters or text messages. Academic writing has a particular purpose and it is composed in a more organized and coherent manner.

#### **Difficulty of teaching writing**

Albeit the importance of writing, many scholars and researchers admit that teaching this skill is a complex and cumbersome process (Calkins, 1994; Marten, Seagraves, Thacker & Young, 2005). Other researchers confirm that teaching writing is just as complicated as writing itself (Graham and Perin (2007). Ching and Chee (2010) admit that teaching writing is demanding and cumbersome.

As a teacher of writing for a long time, the researcher acknowledges the difficulty and complexity of teaching English writing. However, it should also be acknowledged that the

traditional methods which are widely adopted to teach this skill in this part of the world is one of the major causes for the poor level of the students' writing performance.

### **Effective writing teaching requirements**

Effective writing teaching requires the use of assistive devices to support and maintain the learning of this skill (Dell, Newton & Pertraff, 2008). It is not enough for the teachers of writing to be highly qualified, but that their practices of instruction follow scientific based research. Strangman & Dalton (2005) outlines the major principles of effective writing instruction. These involve providing support for recognition through (presentation), support for strategic learning through (expression) and support for affective learning through (engagement). Use of mind maps and graphics, says Strangman, provides the teacher with tools and strategies that help him/her to adhere to the above principles of effective writing teaching.

Currently, visual organizers are widely incorporated in teaching writing. These tools are claimed to provide learners with a concrete structural framework of information and help to focus the learners' attention on key ideas and the conceptual relations between these ideas rather than the apparently isolated facts (Delrose, 2011). In fact, the use of graphic organizers enhances understanding, organizing and meaningful learning, and in this way facilitates the complex task of learning writing while serving to prevent boredom (Janssen, Beissner & Yacci, 1993).

Lee (2004) regards graphic organizers as the most effective tools for teaching and improving writing skills. In fact, dozens of empirical studies were conducted to verify the efficacy of such organizers, and almost all of these studies asserted their viability for teaching writing. It is found that these organizers help the students visualize the abstract ideas, divide the writing tasks into smaller palatable parts, and monitor their writing progress (Unzueta, 2009).

### **Graphic Organizers**

Graphic organizers are defined by Bishop (2013) as visual displays of key content information designed to guide learners and to enhance their comprehension. They are sometimes referred to as concept maps, cognitive maps, or content maps, but they are all used to serve one purpose. They are meant, says Baxendell (2003) to help students clearly see how ideas are organized within a text or surrounding a concept. Through the use of organizers, learners acquire the structure of abstract concepts.

A graphic organizer is a visual graphic display that shows the relation between facts, terms or ideas within a learning task (Hall & Strangman, 2002). The visual representation of graphic organizers provides learners with a structural framework of information to be learned. This helps to direct the learners' attention to key concepts and conceptual relationships.

The use of such organizers, thus promotes understanding, and enhances organization and long term retention of information. It stresses meaningful learning which serves to facilitate learning and minimize boredom (Janssen, et al, 1993).

### **Types of Graphic Organizers**

Graphic organizers come in many different forms; each one is designed to suit a particular type of information. Following are a few samples of organizers and their uses as suggested by Hall and Strangman (2002).

**Descriptive or semantic map:** this is commonly used for mapping generic information; it particularly works well for mapping hierarchical relationships. However, organizing a hierarchical set of information subordinate or superordinate elements is made easier by constructing a **Network tree**. When the information relating to the main idea cannot be organized hierarchically, **Spider map** is used.

**Cause and effect:** this is widely used to assist the students identify the major causes of certain events and their effects on surrounding atmospheres.

**Compare and contrast map:** this is commonly used to assist students compare and contrast concepts according to their main features or quality. A relevant method to compare concepts' features is to design a **compare / contrast matrix**.

**Series of events chain:** this is quite useful in helping students organize information or events according to the stages or steps of their occurrence. However, for organizing information that is circular with no specific beginning or ending, a cycle map is more effective.

### **Guidelines for effective use of graphic organizers**

For effective use of graphic organizers, they must be clear and simple (Egan, 1999). Organizers should be properly constructed and should not include too much information or distracters. Furthermore, teachers must give explicit instruction on how to organize information when a specific organizer is used. This will eventually lead the students to becoming more independent users of these organizers (Baxendell, 2003). Griffin and Tulber, (1995) suggest graphic organizers must be used repeatedly to give better results. They claim that using graphic organizers regularly in class assists the learners to internalize the organizing procedures.

In addition to the above, Marklay and Jefferies (2001) give some specific guidelines for using graphic organizers. These include verbalizing relationships between the concepts represented within the organizers, providing opportunities for students' input, connecting new information to past learning, making references to upcoming materials, and reinforcing decoding and structural analysis.

### **Previous Studies**

Using graphic organizers to improve students' writing proficiency has been widely investigated in the west. Over the last two decades or so, dozens of studies have been conducted in this area to prove that graphic organizers are an invaluable strategy educators can utilize to promote students' learning outcomes.

Of the early studies in this field is that of Cronin, Barkley and Sinatra (1992). It is a longitudinal study which lasted for four years. **Semantic maps** and graphic organizers were used as facilitators to increase reading and writing scores on Mississippi's State-Wide Test. The researchers first trained the teachers and helped them to begin classroom application. Then students were guided to use higher level thinking skills and apply these skills to their writing. To assess the outcome of this program, a checklist was used. This checklist concentrates on five areas: understanding of the task, semantic structure, sentence structure, vocabulary and language and mechanics. After the completion of each writing assignment, both the teacher and students used the checklist to evaluate the written product. The final results of this project and evaluation of data indicated constant improvement in the students' scores in writing and most of the students managed to pass the Mississippi State Test.

Sharrock (2008) conducted action research to study the effect of graphic organizers, specially the **concept map**, on students' writing. One third grade class was involved in a six-week study, and was given two personal narrative writing assignments. The assignments were graded using a writing rubric provided by the Georgia Department of Education. Results of this experiment indicated that the students using graphic organizers showed a significant improvement in their creative writing. It was revealed that graphic organizers help the writers keep to the topic by having their ideas in front of them as they were writing. They also helped the writer to present things in the correct sequential order.

Some other studies attempted to investigate the use of computer graphic organizers to improve students' writing. These include: (Lin, Strickland, Ray, & Denner, 2004; Lorber, 2004; Blair, R. Ormsbee, C. & Brandies (2002). Lin et al. (2004) investigated the use of hand written and computer graphic organizers as a pre-writing strategy for persuasive writing with 278 eighth grade students. They found that computer graphic organizers increased the number of ideas generated by the students in the planning stage more than with hand written graphic organizers.

Lorber (2004) conducted his study on expository writing with 67 eighth graders using computer graphic organizers. He found that graphic organizers increased the students' ability to organize their ideas and to effectively write compositions.

Blair, R. Ormsbee, C. & Brandies (2002) studied the effect of computer graphic organizers on narrative writing of 24 students with mild disabilities. The results indicated that there was a little improvement in the quality of the students' writing, but a considerable improvement in the quantity of their writing.

Stephanie Miller (2011) conducted a qualitative study to examine the effects of using graphic organizers as a pre-writing tool to increase students' writing proficiency. The researcher implemented **outline**, **detailed web**, and **compare and contrast** graphic organizers. Qualitative data were collected through action research as two fourth grade students and one fifth grade student in New York State read a text and used graphic organizers to organize their thoughts and ideas. Students then compiled a writing sample based upon the graphic organizers. Each graphic organizer was used three times. The 6 + 1 traits of writing rubric was used to assess students' writing. Results from this action research determined that the incorporation of **outline**, **detailed web** and **compare and contrast** graphic organizers improved the students' over all writing in all areas up to three points on a six- point- writing scale.

Laura Delarose (2011) explored the efficacy of graphic organizer as a strategy to facilitate higher complexity of syntactic and discourse structure in sentence and story formation. After seven weeks of intervention, the impact of graphic organizers was assessed by comparing spontaneously written stories to scaffolded stories as well as comparing sentence combining skills from pre- to post- test. The results suggested that graphic organizers could be effective tools used in the writing process to generate sentences and narratives containing more complex syntactical structures and discourse.

In 2010, Ching and Chee examined the effects of feedback on graphic organizer use and found that feedback improved the relevance of ideas. Thirty- six students taking a first year engineering class at an Asian university participated in this study. The first stage of the intervention involved surveying students to determine how much experience they had with graphic organizers. The study also involved modeling the use of various types of graphic

organizers. During the second stage, students had independently used the graphic organizers to complete a writing assignment. Ching and Chee found that the relevance of students' ideas increased in all but one sub- process, suggesting that graphic organizers might yield more meaningful writing.

Quite recently, Meera and Aiswary (2014) explored the efficacy of graphic organizers as a strategy to facilitate writing skills. Their sample consisted of 50 secondary school students. They adopted a quasi-experimental design where the experimental group was taught by using graphic organizers and the control group with the existing method of teaching. A pre-test was administered at the very beginning of the treatment and a post-test was given after the treatment. The data were analyzed using the test of significance of difference between means. The results of this study indicated that the graphic organizers developed the English writing skills of students.

### **Students' attitudes towards writing**

The ability to write clearly, consciously and efficiently is important to achieve academic success. However, many students have limited writing abilities and struggle to write compositions that adequately convey their thoughts and ideas (Unezueta, 2009). Indeed, the writing process can be very cumbersome and difficult to master. Actually many students are classified as low achievers in this skill. This situation is quite frustrating and leads many students to develop negative attitudes towards this essential skill.

Educators can play a major role in helping students overcome this problem. It is important for teachers to provide students with interesting, authentic and meaningful writing experiences (Chohan, 2011). When these types of experiences are provided for the students, they become more engaged and interested in their learning. According to Chohan (2011), writing is better learned when students are engaged, helped to organize their thoughts, and allowed to express their own experiences.

Lancaster (2013) reports that when students have the chance to participate in writing workshops and used a variety of graphic organizers, writing becomes meaningful, creative and more enjoyable. Furthermore, when learners are offered the opportunity to practice writing under stress-free conditions, they become more comfortable and confident in the writing process.

Marten ,L. Seagraves ,R. Thacker, S. &Young, L. (2005) add that teaching writing via the use of graphic organizers is meaningful and interesting because it effectively shows students' growth with respect to their writing abilities. Lancaster (2013) confirms that the use of graphic organizers in teaching is one way to create a learning atmosphere where students love writing. Teachers can prevent writing failure and students' frustration when successful, meaningful ways of teaching are used.

## **METHOD**

### **Participants and setting**

The participants of this study were the students of group 71 which was randomly assigned to be taught by the researcher. Group 71 is one of 104 groups that formed the total population of the Preparatory College at Umm-Al-Qura University. They were admitted to the university

after they had completed their secondary education successfully during the academic year 2012 – 2013. The researcher had no control over whom among the students were going to be assigned to his class, as the academic coordinator of the English Language Center prepares all class lists. The total population of students in all groups was 2425 male students. All members of this population were subjected to a placement test designed by Oxford University. However, students' distribution to their groups was not based on their scores in this test. The number of students in each group ranged between 23 and 26.

Group 71 which constituted the sample of this study included 24 subjects with their scores in Oxford placement test varied between 38% and 59%. They were all Saudi nationals living in Makah Al-Mukaramah in the western region of Saudi Arabia. Their ages ranged between 17 and 19 years, and they were all native speakers of Arabic. They studied English for 6 years before they joined the university.

The study took place in the Preparatory College premises at Umm-Al-Qura University. This college has four two-story high buildings, each building encompasses 30 classrooms. Classes are equipped with modern educational aids and each class is designed to accommodate 25 students. There is a desk computer for each student and a control desk for the instructor. The classes are well ventilated, well lighted and supplied with air conditioners.

### **Procedures**

This study (a within subject design) consisted of three phases. Those were the Baseline phase, the Experimental phase and the Post- experimental phase. It was carried out during the second half of the first semester of the academic year 2012 – 2013. It began on the 27th of November 2013, and continued for six consecutive weeks.

### **Data sources and research material**

The study used two major instruments for data collection: a writing rubric (see App. A) and an attitudinal survey (see App. B). The writing rubric based on The Georgia Department of Education Scale was selected and modified by the researcher to assess the various traits of students' writing.

The second instrument used in this study was the attitude survey. This survey was intended to measure the students' attitudes and feelings towards writing and their perceptions of the writing task..

A few weeks before the study, the researcher got the necessary permissions to conduct this research. The experimental group members were informed about the experiment and asked to sign a consent form showing their approval to take part in this study. This was done after the researcher had explained the possible benefits of the intervention. All necessary arrangements were made to see to it that the experiment would not interrupt the regular class daily routine. The English language program was assigned 16 hours a week. Four hours were ear- marked for teaching writing and the remaining 12 hours were assigned to teach other language skills, i.e., reading, listening, speaking and grammar.

### **The Baseline phase (week one)**

This began on the 27<sup>th</sup> of November 2013, after all necessary arrangements were made. This stage lasted for one week during which the researcher met twice with the participants. In the

first meeting, the participants were given some explanation of the intended experiment and its expected benefits for them. The concept of graphic organizers was briefly introduced and the participants were informed that they were going to learn more about these techniques and their use to enhance writing ability. A copy of the detailed plan for the coming weeks was distributed to participants and their questions and enquiries were carefully answered.

In the same session, the participants were given the writing attitude survey. This was a close-ended survey intended to collect some information about the participants' perceptions and feelings towards writing before the graphic organizers' intervention. This survey would be given to the participants once more at the end of the study to see if there were any changes in students' attitudes towards writing which could be attributed to the graphic organizers' intervention.

In the second session of this **Baseline phase**, the participants were informed that they were going to do their first writing assignment. It involved writing a comparison between two places. But before this, they were given a brief introduction on how to compare and contrast different entities. Some grammar points relevant to comparison were briefly explained and a writing prompt was clearly written on the board and read loudly. It read "*Compare between Amsterdam and Manama of Bahrain*". The participants were referred to their textbook, "Headway Plus" Special Edition by John and Liz Soars page 19 to read about the two cities. They then listened to an audio- vision of the text and worked in small groups to answer some general comprehension questions. The researcher then discussed the text with the students focusing on comparison and contrast between the two cities. The author's writing style for ways of comparison, sequence, organization of information and details was highlighted.

When the researcher felt that the students had understood the text, he asked them to write a three - paragraph composition in which they compare and contrast Amsterdam and Manama of Bahrain. They were given 45 minutes to complete this task. Before they started writing, the participants were reminded to follow the writing procedures that they had studied during the first half of the term. More specifically, they were reminded to plan, draft, edit and revise their writing.

The participants had completed the writing task within the designated time and their papers were collected and handed over for evaluation. Evaluation was carried out by two qualified raters using the writing rubrics designed for this study. The raters had received enough training on how to apply the writing rubrics prior evaluation. Their inter-rater reliability was quite high reaching (86 %). Each participant's paper was scored twice, once by each rater. These scores were then averaged and recorded to represent the students' writing ability before the intervention and without using graphic organizers.

### **The Intervention phase**

This phase started in the second week of the study and lasted for four weeks. Each week, the researcher met the students twice. The meetings were scheduled on Mondays and Thursdays from 8.00 a.m. to 10.00 a.m.

#### **Introduction of graphic organizers (week two)**

In the first meeting of this phase, the participants were carefully introduced to the concept of graphic organizers. Students were informed that these organizers were used elsewhere and proved to be very effective in enhancing writing ability.

In an attempt to clarify the concept of graphic organizers, the participants were informed that they were visual representations that portray relationships among key concepts and that they serve as maps for information. They can create a meaningful diagram that helps users expand and explain a certain concept. With regard to writing, the students were told that these organizers would allow for brainstorming of new ideas that relate to the main theme of writing; create links that connect new ideas to previous knowledge, help to outline and then aid in writing the ideas in sequential order. Students were also informed that there were numerous types of graphic organizers; however, this study would focus on only three types of them. These were; (1) **series of events chain** (2) **cause and effect** and (3) **compare and contrast**. The students were then given blank copies of these organizers and their main parts were briefly explained.

Actual training on how to use graphic organizers began in the second session of this week. The training involved teaching participants how to brainstorm main ideas and expand them through supporting ideas. The three targeted graphic organizers were highlighted and projected on the white board one at a time, and their components were once more explored, but with more depth this time. The researcher then listened to the participants' questions and enquiries and provided some simplified answers for them. The participants were told that they would be given more detailed information about each of these organizers and more intensive training on how to use them as part of their writing activity. At the end of the session, the participants were given some handouts that discuss the concept of graphic organizers and their various uses to aid comprehension and the writing process. They were also given some electronic sites that deal with graphic organizers.

### **Introduction of series of events chain (week three)**

In the first session of this week, the researcher made a quick review of the three graphic organizers that would be used in this study. Then the **series of events chain** was singled out and projected on the white board. The participants were informed that this organizer, i.e., the **series of events chain** would be the focus of their training and application for this session. Templates of this organizer printed on 4 x 4 papers were distributed to the students and its major parts were explained. Students were then taught how to add or delete boxes or clusters to the main organizer as needed. Later, they were given explicit instructions on how to use this graphic organizer to generate ideas, to take notes and to organize writing tasks. The investigator told his students that they were going to use the **series of events chain** graphic organizer to write a composition under the title "*What do children of Gaza want to do when they grow old?*" This prompt was written on the board and read aloud to the students.

The participants were then instructed to turn to their textbooks, "Headway Plus" and to read silently a text on page 43 entitled "Gaza Children". This was followed by a mini lesson in which vocabulary items and grammar points relevant to the text were explained. The students then listened to an audio-version of the text. In the meantime, students were asked to pay attention to the author's style of presenting the main and supporting ideas and how these were organized in the text. Students were then asked to work in small groups to identify and list the main ideas mentioned in the text. With the help of the students, the researcher used the **series of events chain** organizer which was projected on the board to list the ideas identified by the students. The researcher drew the participants' attention to how these ideas were organized chronologically and according to their importance. Finally, the researcher modeled the use of this graphic organizer to write a three- paragraph composition in response to the prompt "*What do the children of Gaza want to do when they grow old?*"

In the remaining time of the class, the students' questions and enquiries were carefully answered and dealt with. For homework, the participants were given blank **series of events chain** graphic organizers and asked to read the text "Gaza children" one more time and try to use their organizer to list the main ideas and supporting details and to be ready to use them to write their own composition in the next session.

In the second session of this week, the **series of events chain** graphic organizer was reviewed and its major parts were highlighted. Participants' homework was carefully checked. When the researcher was sure that all participants had filled their organizers correctly, he then asked them to write their three - paragraph composition following the model of the previous session. The students were encouraged to work together in their small groups. The graphic organizers provided them with visual representations of what they were writing about. In the meantime, the researcher directed the participants on how to use their organizers to generate and organize ideas, how to use proper vocabulary items and linking words to write more sophisticated fluent sentences. The participants were constantly reminded to start their composition with planning, then drafting and to practice peer editing before they finally write and submit their fair copy for correction.

At the end of this session, students' compositions were collected to be checked over the weekend. For homework, the participants were given blank **series of events chain** organizers and asked to use them to brainstorm and generate ideas to write a three-paragraph composition in response to the prompt "*What do you want to do in your future life?*"

#### **Introduction of cause and effect organizers (week four)**

The first meeting of this week, started with a quick review of **series of events chain** graphic organizer and how it could be used to brainstorm to generate ideas and to organize writing. The students were then given back their previous assignment with feedback and remarks on how to improve their future writing performance.

After that the **cause /effect** graphic organizer was introduced in the same way as the **series of events chain organizer**. A blank **cause and effect** organizer was projected on the white board and copies of this organizer were distributed to participants. Different parts of this organizer were identified and their functions explained. The participants were told that they were going to use this organizer to write a composition under the title "*What causes the academician to destroy priceless books and what are the effects of his act?*"

The participants read, listened to and discussed a text under the same title in their "Headway Plus" textbook. With the help of participants, the researcher, identified and listed the possible causes and the main effects of the academician act of destroying precious books. Then the researcher modeled the use of **cause and effect** graphic organizer to list these causes and effects and used them to write a model three -paragraph composition. Students' questions and enquiries were keenly listened to and carefully answered. For homework, the participants were given blank **cause and effect** graphic organizers, asked to reread the same text on the academician who destroyed priceless books and list the major causes and effects of this pathetic act using their **cause / effect** graphic organizer and utilize it to write a composition.

In the second session of this week, the participants started with a quick review of the **cause / effect** graphic organizer and its use to identify and list causes and effects to eventually write compositions. The researcher then checked the students' homework which was assigned in the previous session. After that, a new prompt was written clearly on the board. It stated "*What*

*are the main causes and effects of drug addiction in modern societies?"* There was no text to be read this time, but the participants were encouraged to use their general knowledge to tackle this issue. At this point, the researcher projected a large **cause/effect** graphic organizer, and together with the students, they used this organizer to brainstorm the causes of drug addiction and the major effects of such a practice. In conference form and with the help of the researcher, the students managed to identify some causes and effects of this phenomenon. The participants were then instructed to work in groups of fives to address this issue in writing. Students were reminded of the major steps of writing such as planning, drafting revising and editing. In the meantime, the researcher walked around the class to assist the students as they transfer their ideas from the graphic organizer to write their three- paragraph essays. Final copies of students' writing were submitted to be corrected over the weekend.

### **Introduction of Compare / contrast organizer (Venn diagram) (week five)**

The fifth week started with a quick revision of the two previously studied graphic organizers: the **series of events chain** and the **cause / effect** organizer. Then the third and last organizer of this study was introduced in the same way like the two antecedent ones. The **compare / contrast** organizer or (**Venn diagram**) was presented and its use to scaffold writing was carefully explored. Blank copies of this organizer were distributed among students. A large **compare / contrast** organizer (**Venn diagram**) was projected on the white board and its different parts were highlighted with different colors.

The participants were told that they were going to use this organizer to write a comparison between two markets. A prompt was written clearly on the board and read loudly. It stated "*Compare and contrast the floating markets of Bangkok and the souks of Marrakech*". Participants were then referred to their textbook, "Headway Plus", page 35 to read silently about the two markets. After that the students listened to the same material on an audio-cassette. Some vocabulary items and grammar points relevant to the text were discussed with particular emphasis on comparative and superlative adjectives with linking words.

Students were asked to read the texts again and try to list points of similarities and differences between the two markets. The researcher then modeled filling the **Venn diagram** using information provided by students. The two markets were represented with two intersectional circles with Bangkok occupying the left and Marrakech the right circle. Things particular to Bangkok were put in the left circle and those particular to Marrakech in the right one. Things that were common to both cities occupied the intersectional area between the two circles. The researcher used this diagram to model writing a three- paragraph essay on similarities and differences between Bangkok and Marrakech. This was done in collaboration with participants. Students were then instructed to write their composition using their graphic organizers only. The researcher provided help for students while writing their compositions. Team work and peer editing were encouraged and widely practiced. Final copies were collected and marked by the researcher and returned to students with feedback.

In the second meeting of this last week of the intervention phase, the researcher reviewed the three graphic organizers studied over the last three weeks with some focus on the last organizer, the **Venn diagram**. Students were instructed to use it to write a comparison between their secondary schools and the Preparatory College. They were encouraged to work together and use the **compare /contrast** organizer to brainstorm ideas, and use the diagram to organize and write their composition. Students were constantly reminded of the major steps of writing and

to look at their graphic organizers when writing and to practice peer editing. Final copies of students' compositions were handed over to the researcher for correction and feedback.

At the end of this session participants were told that they were going to take a writing test the following week but this time, they would be allowed to use a graphic organizer to facilitate their writing task. They were also informed that they would be given the writing attitudes survey again.

### **The Post intervention phase (week six)**

In the first session of this phase, the participants were told that they were going to write an essay that compared and contrasted two people they learned about in their course; namely, "Bruno & Maria Cruz". A prompt was written clearly on the board and read aloud to the students. The prompt stated: "*Write a comparison between Bruno Cruz, the racing driver & his wife Maria, the tennis player*". Students were then instructed to open their textbook, "Headway Plus" page 58 and read silently the article about Bruno and Maria's lives. Students then listened to an audio-version of the text. Vocabulary items and grammar points relevant to the text were explained. The students were given blank copies of **compare / contrast, (Venn diagram)** and asked to use it the same way it was used during their training period to write their three - paragraph essays. Participants were allowed 45 minutes to complete this task. Before writing, the students were reminded of the basic steps of the writing process and urged to constantly look at their graphic organizers while writing.

When the participants completed the task, they handed it over for evaluation. Evaluation was done by the same raters who assessed the **baseline** writing. The scores of the students were averaged and recorded to be compared to their scores before the intervention or before they received their graphic organizer's training. Results of this comparison would help to answer the major question of this study and to reject or verify its main hypothesis.

In the second meeting of this last week of the study, the participants were administered the writing attitudes survey. It was the same survey which was given to them during the **baseline period**. The participants' responses to this questionnaire were used to check if the use of graphic organizers had changed their attitudes towards writing.

### **Data analysis**

For data collection, the researcher used two major tools: a writing rubric and an attitude survey. The writing rubric, based on the one provided by the Georgia Department of Education, was used to assess the students' writing samples before and after they received their graphic organizers training. This rubric assessed the participants' writing in five areas: content, organization, word choice, sentence fluency and convention. Two well trained raters evaluated the writing samples. Their inter-rater reliability was high reaching (86 %). In each area a student could receive a four for exceeding expectation, a three for meeting expectations, a two for approaching expectation and a one for not meeting expectation. The total score of each participant could range from twenty to four. Percentage wise, each student's score could range between 100% to 25% in each sample.

The data composed of the participants' writing scores during the **baseline phase** and after the **graphic organizers' training** were summarized in the following sections.

The data set was analyzed and tested statistically, using descriptive statistics. In this case, the mean scores of writing with graphic organizers were compared to that of writing without graphic organizers to see if there was a significant difference in the students' mean scores using a t-test. The results of this test would be used to verify or reject the first hypothesis of the study which stated that "The use of graphic organizers would improve students' writing ability". This same result could also be used to answer the main question of the study: "What is the impact of using graphic organizers on students' writing performance?"

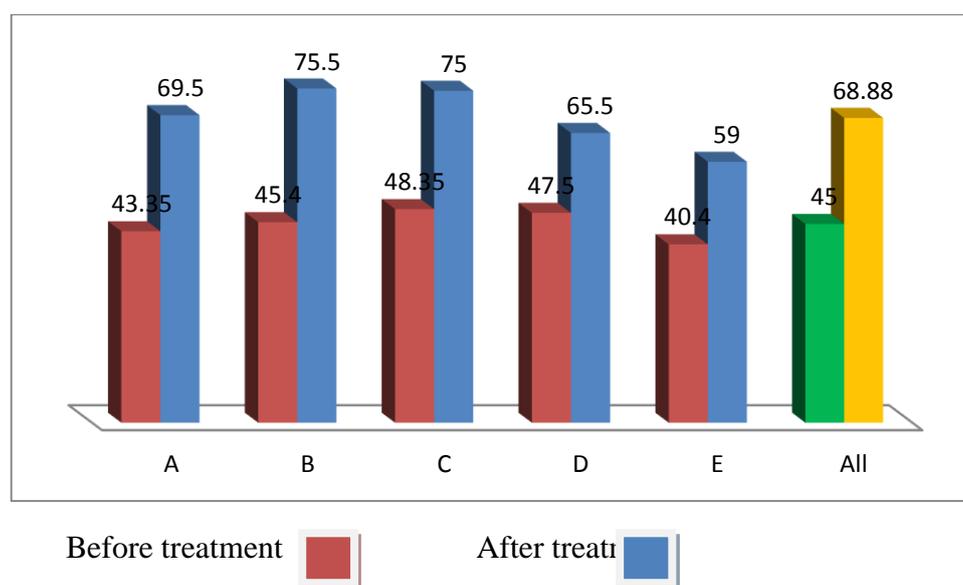
The second hypothesis of the study; namely, "The use of graphic organizer will positively impact the student's attitudes towards writing" was checked using information from the attitudinal survey that was administered before and after the graphic organizer's intervention. Participants' responses to the survey were compared to see if there was any change in the sample's perceptions or feelings towards this skill.

## RESULTS

The objective of this action research was to investigate the effects of graphic organizers' training on student's writing performance as well as its effect on their attitudes towards this essential language skill.

Data were mainly generated through writing rubrics that evaluated students' writing sample's before they received their graphic organizers' training compared to their writing after they completed a six-week training period on how to use these organizers as writing tools. Another instrument used to collect data for this study was the attitudinal survey which was intended to gather information about the participants' feelings towards writing before and after the graphic organizers' intervention.

The scores of the participants' in writing before and after they received their graphic organizers' training are shown in figure 1 below: It shows the participants' level of performance in the five traits of writing according to the rubrics suggested by the Georgia Department of Education.



**Figure 1: A graph for the mean scores for writing with and without graphic organizer**

A- Content, B-organization, C-word choice, D-sentence fluency and E-convention.

All - the average mean performance of all participants' in the five writing traits.

The above graph reveals that the mean score for writing was increased in all five traits after the graphic organizers intervention; however, the maximum increase was observed in organization reaching (75.5%) instead of (48%) and word choice reaching (75%) instead of (48.5%). The overall mean score for writing after the participants had received their graphic organizers' training did increase significantly to approach (68.88%). It was only (45%) before intervention. The difference in mean between the writing of students before and after they received the graphic organizers' training was almost (24%). This finding clearly indicates that students' writing has shown a higher mean than their writing before this intervention.

However, for more accurate results, the test of significance of difference between mean scores for writing before and after they received their graphic organizers' training was performed using SPSS computer program version 20.

**Table No (1): Means, Standard Deviations and T-value of the group before and after they completed the graphic organizers' training**

One-Sample Test						
Group	N	M	SD.	T-value	$\alpha$ -Coeff.	Sig. level 0.01
Before training	2 4	45	1.84 0	7.073	.000	Sig. at 0.01
After training	2 4	68.8 8	1.83 4			

The data in the above table reveal that the obtained t-value is 7.073 which is well above the limit of 0.01 of significance. This means that the writing scores of students have increased significantly as the result of the graphic organizers application.

This result can be cited to verify the major hypotheses of the study that students' writing ability has significantly improved as a result of using graphic organizer's to support their writing process.

This same result can be used to answer the main question of the study which inquires about the impact of using graphic organizers on teaching writing to Preparatory College students at Umm-Al-Qura University. It is obvious that graphic organizers' training has helped these students to significantly improve their writing ability.

### Results of the attitude survey

The attitude survey was administered twice once before and once after the participants had completed the graphic organizers' intervention. Responses to the survey questions were compared and summarized in the table below:

**Table 2 : Writing attitude survey**

1	How do you rate writing in term of difficulty? <ul style="list-style-type: none"> <li>• Before graphic organizer training</li> <li>• After graphic organizer training</li> </ul>	Easy 8 14	Difficult 12 6	Medium 4 4
2	How do you feel when it is time for writing? <ul style="list-style-type: none"> <li>• Before graphic organizer training</li> <li>• After graphic organizer training</li> </ul>	Excited 3 13	Nervous 12 6	Neutral 9 5
3	Do you think writing is fun or boring? <ul style="list-style-type: none"> <li>• Before graphic organizer training</li> <li>• After graphic organizer training</li> </ul>	Fun 5 15	Boring 10 4	Not sure 9 4
4	Do you often try your best to accomplish your writing task? <ul style="list-style-type: none"> <li>• Before graphic organizer training</li> <li>• After graphic organizer training</li> </ul>	Yes 10 16	No 10 5	Sometimes 4 3
5	What is the most difficult part of writing for you? <ul style="list-style-type: none"> <li>• Before graphic organizer training</li> <li>• After graphic organizer training</li> </ul>	Planning 8 6	Writing 2 12	Organizing 12 6

The above data which were generated through the attitudinal survey can be used to verify the second hypothesis of this study which stated that the use of graphic organizers will positively impact the attitudes of students towards writing. This is clearly shown in the students' responses which changed radically after they had completed their graphic organizers training and used them as instruments for writing. For instance, when the participants were asked to rate writing in term of difficulty, almost half of the participants ranked writing as difficult, but when asked the same question after the graphic organizers' intervention (58 %) ranked it as easy. When asked about their feeling when it was time for writing, only (12 %) of the participants said they felt excited when it was time for writing. However, after the intervention more than (50 %) of the participants said they found writing exciting. Before graphic organizers' training, only (21 %) said writing was fun and (42 %) said it was boring. This feeling towards writing had changed dramatically after the graphic organizer intervention and (76 %) rated writing as fun and only (15 %) said it was boring.

The above data can be used to verify and accept the second hypothesis of the study that the use of graphic organizers has positively impacted the student's attitudes towards writing.

The same data can be used to answer the second question of the study "What is the impact of using graphic organizers on students' attitudes towards writing? Obviously, the use of graphic organizers has a positive impact on students' attitudes towards writing.

## DISCUSSION

This study has shown that the use graphic organizers and explicit instruction can be an effective intervention to teach writing to students of English as a foreign language (EFL). However, to get the maximum benefit of this intervention, graphic organizers should be presented in a

creative way. Students are more likely to benefit more by these organizers if they are introduced in an exciting, creative manner. Graphic organizers may not serve as effective writing tools unless they are clear and straightforward. Complicated organizers are likely to confuse students and hinder their learning process.

Most importantly, when teachers use graphic organizers to teach writing to EFL learners, they must model their instruction tasks before they require their students to do these tasks independently. Indeed, teachers need to serve as facilitators for students' learning. Writing is the most complex process for EFL learners, and in order to help these students handle this cumbersome task, teachers need to guide them carefully and provide them with every possible technical and psychological support.

### **Implication to research and practice**

The use of graphic organizers has by-and-large been an occidental technique. Very few teachers in this part of the world are familiar with the graphic organizers concept. Because of this, it is crucial for all teachers of English in the region to receive comprehensive training on graphic organizers and how to use them as supporting writing instructional tools.

The findings of this study have indicated that the use of graphic organizers results in student's motivation. Students began to view writing as easy, interesting and more exciting. This feeling about writing has reflected positively on students' attitudes towards this skill. This in turn had motivated the students to learn English better. Thus, graphic organizers should be incorporated into the teaching of English to EFL learners. For the very same reason, curriculum designers and textbook writers can incorporate these organizers into the textbooks to motivate the students and make the learning of writing a more enjoyable experience.

### **CONCLUSION**

From the results of this research, it can be concluded that graphic organizers are effective instruments to develop the students' writing ability. The use of such organizers with a group of the Preparatory College students at Umm- Al- Qura University in Saudi Arabia did have a significant positive impact on students' writing as well as on their attitudes towards this skill. Participants' mean score in writing increased from (45%) to( 68.88%) with a difference of (25%). Advanced statistical analysis proved that this difference between the two mean scores is significant at 0.01, and that it is due to the graphic organizers' intervention. Furthermore, the participants' attitudes towards writing have changed dramatically. The students started to view writing as easy, exciting and interesting after they had completed their graphic organizers training.

### **RECOMMENDATIONS FOR FUTURE RESEARCH**

This research has focused on the use of only three graphic organizers and a limited sample of writing .Future research, however, should try to investigate the effect of other organizers on specific writing genres such as persuasive, narrative and expository writing.

Additionally, in future research, the effect of using non-traditional computer graphic organizers needs to be explored and investigated. These could be more effective in teaching writing in this modern time of technology and globalization.

This study has dealt with a sample of Saudi male subjects and proved that graphic organizers are effective in teaching writing to these subjects. Future research, however, needs to investigate the efficiency of such techniques in teaching writing to female learners of English in Saudi Arabia,

Finally, another study needs to be conducted to check if graphic organizers could be equally effective as tools for teaching other language skills such as reading comprehension, listening and speaking.

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**Appendix A****Writing rubrics**

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Category	4	3	2	1
Content	Paper is clear and focused. It holds the reader's attention.	. Some details are extraneous. Development is weak.	. Details are spotty and/or poorly developed.	. Details are lacking. There seems to be no purpose or central theme.
Organization	The introduction is inviting, Conclusion is strong. Body paragraphs have clear transition, and are in a powerful order.	, but is not particularly inviting to the reader. The conclusion ties things up pretty well.	The introduction states the main topic . Conclusion , but fails in providing details	There is neither clear introduction of the main topic nor any clear conclusion. Paper begins and end in limbo,
Word choice	Writer uses vivid words and phrases that linger or draw pictures in the reader's mind	Writer uses a few vivid words and phrases that linger or draw pictures in the reader's mind,	Writer uses words that communicate clearly, but the writing lacks variety, punch or flair.	Writer uses a limited vocabulary that does not communicate strongly or capture the reader's interest.
Sentence fluency	All sentences are well-constructed with varied length, structure and beginnings.	Most sentences are well-constructed with varied structure and length. 1 or 2 sentences begin the same.	Most sentences are well-constructed but have a similar structure, length, and/or beginning.	Sentences lack structure and appear incomplete or rambling.
conventions	Writer makes no errors in spelling, capitalization, grammar, paragraphing or punctuation,	A writer makes 1 or 2 errors in spelling, homonyms, grammar or punctuation,	Writer makes a few errors in spelling, paragraphing, grammar, homonyms and/or punctuation	Writer makes many errors in spelling, homonyms, grammar, and/or punctuation. The paper is difficult to read

**Appendix (B) Writing Attitude Survey**

<b>1</b>	How do you rate writing in term of difficulty?	Easy	Difficult	Medium
	•Before graphic organizer training			
	•After graphic organizer training			
<b>2</b>	How do you feel when it is time for writing?	Excited	Nervous	Neutral
	• Before graphic organizer training			
	• After graphic organizer training			
<b>3</b>	Do you think writing is fun or boring?	Fun	Boring	Not sure
	• Before graphic organizer training			
	• After graphic organizer training			
<b>4</b>	Do you often try your best to accomplish your writing task?	Yes	No	Sometimes
	• Before graphic organizer training			
	• After graphic organizer training			
<b>5</b>	What is the most difficult part of writing for you?	Planning	Writing	Organizing
	• Before graphic organizer training			
	• After graphic organizer training			