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The Integration of Graphic Organizers into Writing Workshops:
Perceptions of Saudi Second Language Learners

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Abstract

This thesis presents an evaluation of the effectiveness of applying the concept of graphic organizers as a pre-writing tool for Saudi second language learners. Second language learners in Saudi Arabia encounter problems that affect their coherence negatively while writing; for example, a lack of focus on the main ideas, repetition of ideas and an inability to deliver ideas logically related to the main theme. Thus, applying graphic organizers as a pre-writing tool is one solution that could solve this type of problem.

In September 2012, the researcher conducted a mixed method approach to gathering data. A focus group, questionnaire and multiple baseline design experiment were the tools used in the research. The sample involved second language learners at the Translation and Languages College at Kind Saud University in Riyadh. The sample comprised 76 second-year male students.

The research revealed that applying graphic organizers as a pre-writing tool is an effective technique for enhancing and increasing the coherence level of second language learners' writing. The ability to visualize the ideas in front of the writers was the main key issue that affected their writing positively. Graphic organizers managed to enable the participants to focus on their main ideas while writing, avoid repetition, and organize their ideas logically. Furthermore, applying graphic organizers was unexpected help to the teachers. They were able to check their students' track easily and in a short time.

Dedication

*In loving memory of my father
who would have been so proud of my accomplishments,
to my mother, my siblings and my wife
for their support and sacrifice,
an answer to a question in my children's eyes,*

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In completing this accomplishment, I would like to express my sincere gratitude and appreciation to those significant individuals who always supported and encouraged me throughout my academic journey.

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Chapter 1: Introduction

1.1 Abstract

English language teaching has been growing in importance around the world for decades. Teaching a language is considered to be an art, not a science (Palmer, 1965). By holding to this concept, the creativity factor can be enhanced in order to improve the process of teaching a language by teachers or curriculum designers. This thesis will briefly discuss the origins of English language teaching in the Kingdom of Saudi Arabia. It will also refer to some studies regarding the poor level of Saudi achievement in learning a second language. It will then outline the principles of teaching a foreign language.

A number of difficulties are associated with the teaching and learning process in writing classes. One of these difficulties is the issue of the lack of students' writing coherence. Different studies such as Meyer (1995), Gallick-Jackson (1997), Brennan (2006), Esmat (2006), Sharrock (2008), Alshehri (2010) have tried in different ways to solve this problem. One approach which has been effective is the integration of graphic organizers into writing workshops. They have been conducted in different situations to measure the effectiveness of graphic organizers in developing writing skills.

This chapter provides a brief overview of how the English language is taught in the Kingdom of Saudi Arabia. It then shows the relationship between the researcher and the research, followed by an illustration of the research problem with suggested solutions. Next, the research questions are provided, along with their objectives. After that, the methodology that has been used in the research will be illustrated. Finally, the significance of the research through its contribution to the community will be identified.

1.2 A brief background to teaching English in Saudi Arabia

The Saudi government has placed great emphasis on English, which has widely come to be recognized as the second language of the Kingdom. The importance of this language derives from many factors, such as the following: 1) English is the language of science and technology, and it is clear that for a country to adopt technology, the language of this field has to be known; 2) the discovery of oil brought foreign companies to the Kingdom and English has become the main mode of communication between the parties; and 3) to promote tourism in Saudi Arabia, the Saudi Commission for Tourism and Antiquities has also put great effort into promoting the English language. Many tourism companies in Saudi Arabia seek employees who have a high level of fluency in English in order to be able to communicate with their foreign guests.

English was introduced to Saudi Arabia as a foreign language by the Department of Education in 1925 (Al-Ahaydib, 1986). It is the only foreign language widely taught in the Kingdom. It is considered to be a core subject in late elementary, intermediate and secondary schools, as well as in some majors at university level, and is also an elective subject in others. Both male and female students have to pass an English examination to enable them to move to each new level. In fact, English performs an instrumental function as a medium of learning in many fields in Saudi universities; for example, at the King Fahad University of Petroleum and Minerals (KFUPM) and in some areas at King Saud University (KSU). According to Hafesth (cited in Almohanna, 2010), the Saudi English syllabus uses communicative functions, which implies the use of a communicative methodology aiming to enable students to use the language communicatively from the early stages.

The aim of the Ministry of Education is to teach English as a foreign language (EFL) in Saudi curricula to foster students' ability to comprehend and express themselves in basic English (Ministry of Education, 2000). The English language is taught at seven levels in

Saudi schools: one year at grade six in elementary school, three years at intermediate school and three years at secondary school, with around 1,000 hours of instruction during this period. Nonetheless, when students graduate from secondary school, they still struggle with and will not have reached the target prescribed by the Ministry, and still perform below the expected level of competence. This issue has been discussed for more than two decades, but there is still a gap between the English language and the Saudi student (Al-Ahaydib, 1986; Alfallaj, 1998; Al-Mohanna, 2010). There is more than one factor contributing to this problem. Almohanna (2010) stated that language learning settings, poor training of teachers, materials being unsuitable, negative attitudes of the students or a combination of all of the above have contributed to producing a low level of second language acceptance. In addition, the number of classes per week plays a significant role in the extent to which English is successfully learned. Three or four classes per week, each lasting 45 minutes, will not be sufficient for students to acquire a language perfectly (Al-Nofaie, 2010).

1.3 Researcher's relation to the research

The researcher taught English as a second language for six years at King Abdulaziz Military Academy. The students learned English as general English and English for specific purposes. The researcher found during that time that the students did not like English lessons, especially writing activities. Besides their low marks in writing, they did not show any enthusiasm towards writing activities. Accordingly, the researcher aimed to track these problems in order to reach an effective solution. The proposed solution is to apply the concept of graphic organizers as a pre-writing tool to enhance the coherence level of second language learners in their writing. Graphic organizers are identified as: “communication devices that show the organization or structure of concepts as well as relationships between concepts” (Ellis, 2004, p. 1). Witherell and McMackin (2005) p.4

described graphic organizers as “levelled visual planners on which students record information in a logical way”.

1.4 Research problem

Saudi English language learners face a challenge in terms of learning L2 writing skills (McMullen, 2009). The Saudi English teaching system produces learners who are considered ‘bad’ writers and who are not able to use the language communicatively (Al-Humaidi, 2008). In 2005, a survey was conducted at King Saud University to identify which was the most difficult EFL skill to teach/learn. There were 85 participants from the Department of English and Literature at the College of Arts who were asked about the most difficult EFL skill to learn. 67% of the participants responded that it was writing and 70% of the total attributed this difficulty to the use of unsuitable methods and techniques to teach the skill of writing. Ten professors in the Linguistics Department also participated in this survey. They were asked about the most difficult EFL skill to teach and 60% of them replied that it was writing. They suggested that appropriate approaches, methods and techniques for teaching EFL skills should be developed (AbuSeileek, 2006). Furthermore, a study carried out by Al-Humaidi (2008) at King Saud University found that the self-regulating processes of writing, including planning, are not being applied by Saudi EFL learners in their writing sessions. Al-Humaidi emphasized the role of knowledge-planning strategies in developing Saudi learners’ second language writing. Similarly, regarding the pre-writing process, Al-Hazmi and Scholfield (2007) have stressed that Saudi second language learners are weak at planning strategy while writing. To overcome this problem and enhance the level of coherence in students’ writing, the use of graphic organizers is suggested. Graphic organizers are useful for measuring students’ understanding and knowledge regarding a certain topic. Although students do not learn at the same pace, each one should demonstrate an understanding at a level that is developmentally appropriate (Witherell & McMackin, 2005). Bender (2002a)

acknowledged that learning can be observed in the pieces of writing that are produced by learners. Students demonstrate what they know and can do through the products they create. Graphic organizers can be used and applied at different levels, so teachers can choose what suits their students' levels.

Different studies applied the concept of graphic organizers into different contexts. Esmat (2009) found that students' scores increased significantly with the use of graphic organizers. Writing activities, with the use of the writing tools, improved the students' skills in the organization of their writing and their ability to focus on one topic. Another study was conducted in 2009 by Erica Powell, aiming to use the graphic organizers explicitly to teach students how to write thesis statements and how to use them to structure their thoughts before they began writing. The researcher planned to improve the structure and organization of their historical essays. Regarding the results, there was no improvement in the students' scores; however, their attitude towards writing improved as evidence was given by students to the effect that they felt the use of the T-chart had helped them (Cumming, 2003). Furthermore, Brennan (2006) compared students' pre- and post-tests in a study and found that there were positive differences in students' marks after practising using the graphic organizer software. The students achieved an improvement in their writing.

1.5 Research questions

In order to solve the problems described above, the researcher has devised the following question:

- *In what ways and to what extent do graphic organizers enhance Saudi second language students' writing (coherence)?*

The aim of this question is to check the effectiveness of the use of graphic organizers as a pre-writing tool in writing lessons. Thus, the following four sub-questions were derived from the main question:

- *What is the attitude of Saudi second language learners towards writing?*
- *Why do Saudi second language learners encounter mistakes related to the coherence level while writing?*
- *What are students' reactions to the use of graphic organizers in writing lessons?*
- *What evidence is there that graphic organizers improve students' coherence?*

The first sub-question aims to know more about students' attitude towards writing. The second question seeks the factors behind their lack of coherence while writing. The third question looks for students' reactions regarding the use of graphic organizers as a pre-writing tool. The fourth question asks for evidence that graphic organizers were an effective tool in increasing students' writing coherence.

1.6 Methodology

It is an essential step to choose a suitable method to gain appropriate answers to research questions. As Yin (2009, p. 11) stated, "Be sure to create the form of study question best matching the method". A mixed-method approach will be applied in this study. The mixed-method approach eliminates the 'Q' words (quantitative and qualitative) from its process. Mixed methods research means the integration or mixing process of quantitative and qualitative research in a single research (Bryman, 2012); the advantage of this usage is to enable each to complement the other. Gorard and Taylor (2004) suggested that mixing quantitative and qualitative methods is more powerful than isolating them. Applying mixed methods into research enables the researcher to gain advantage from the strengths of both types of data collection, gathering qualitative data and quantitative data

to answer the research questions (Cohen, et al., 2007). Moreover, collecting data using different methods and analysing them using different processes constructs internal validity for a piece of research. This mixing enables the researcher to gain advantage from the triangulation route. According to Bryman (2012) triangulation means applying more than one method of data while studying a social phenomena.

In such an approach, the researcher's point of view regarding the paradigms will justify the reason for the methodology related to the research itself. The methodology is also determined by the research question. Thus, the research question itself determines the researcher's view of the paradigm. According to Gorard and Taylor (2004), the researcher's personality, skills and ideology do not affect the choice of method; it is based on the research questions.

Through the few past years, the use of combining different approaches to undertaking research has been promoted by a number of researchers, such as Tashakkori and Teddlie (2003), Creswell and Clark (2007) and Plowright (2011). A series of frameworks can be used to build our thinking about research (Plowright, 2011). Even though there are slight differences between these frameworks, their aim is to support the integration of different elements of the research process to ensure the effectiveness and success of the study. So, in order to optimize the data collection process and to increase the width of data collection, this research will include mixed methods to ensure accurate and optimal results, since obtaining data from two different methods will confirm and authenticate the results. We can confirm, explain, verify and generate theory by combining methods at the same time (Tashakkori & Teddlie, 2003).

To return to the research questions, they will be answered as follows:

1. What is the attitude of Saudi second language learners towards writing?
2. Why Saudi second language learners encounter mistakes related to the coherence level while writing?
3. What are student reactions to the use of graphic organizers in writing lessons?
4. What evidence is there that graphic organizers improve students' comprehension or not?

Questions 1, 2 and 3 will be answered by applying a focus group to help in extracting more raw details from the participants and to know their point of view regarding this issue.

Questions 3 and 4 will be answered by applying pre-post tests and a questionnaire to gain a clearer image and tangible evidence about the idea of using graphic organizers in students' writing. The pre-post tests will be applied through the use of multiple base line design. This technique is based on measuring the intervention for different groups in different times. In addition, the pre-post questionnaire clearly indicates where there is any significance in the participants' feedback regarding the use of graphic organizers as a pre writing tool or not.

1.7 Contribution to the community

Second language learners encounter mistakes related to coherence while writing. Applying the concept of graphic organizers into second language learners' writing as a pre-writing tool can help to increase the coherence level while writing. This technique enables writers to focus on the main idea. When they focus on the main idea, they can avoid repetition of ideas and deliver more logically related ideas. In addition, graphic organizers are a useful tool for visualizing the unorganized ideas in a writer's head so that

they can be tangible on paper. Furthermore, instructors can easily know that their students understand the lesson when they start their prewriting stage.

In conclusion, many obstacles face second language learners. One of these obstacles is the lack of coherence in writing. Different studies such as Al-Hazmi and Scholfield 2007, Al-Humaidi 2008, McMullen 2009, have stressed that Saudi second language learners suffer from such difficulties while writing. Thus, the present research aims to apply the concept of graphic organizers as a pre-writing tool to overcome this problem. A mixed-method approach has been applied in the present study to ensure the gathering of raw data and results from different methods. Eventually, the use of graphic organizers as a pre-writing tool can help learners of writing to focus on their main ideas, as well as organizing them in a logical sequence.

The next chapter is an explanation of second language teaching methods. It shows how each teaching method was designed and what the reasons were behind the evolution of other teaching methods.

Chapter 2: Literature review

2.1 Abstract

This chapter is divided into four main parts. The first part discusses the teaching methods for a second language. It identifies how each method was developed and illustrates the advantages and disadvantages for each second language teaching method. Then, the second part narrows the discussion to focus on one of the skills that has been taught. It discusses the approaches to writing skills. The third part illustrates the concept of graphic organizers as a pre-writing tool. It shows many types of graphic organizers with their appropriateness in improving the coherence of students' writing through organizing their ideas. Lastly, the summary with its recommendations is illustrated.

The chapter has been arranged in this way to:

- (1) Illustrate how second language learners learn a language through a particular teaching method.
- (2) Narrow the topic to one of the four skills that has been taught using these methods.
- (3) Show the research problem with its proposed solution through the concept of graphic organizers.

2.2 Foreign language teaching methods

2.2.1 Introduction

There are many principles the second language instructor should bear in mind while teaching a second language. These principles are directed by the teaching method conducted by the teacher or curriculum designers. Each teaching method serves and focuses on a number of goals while neglecting others to varying degrees. Each teaching method has its own features which serve in a particular area. Individuals vary in their motives for learning a second language. Some of them wish to learn for academic purposes, while others are interested in using English in the field of commerce. In other words, the needs of a researcher are totally different from those of the merchant. In fact, in each field, certain skills need to be concentrated on more than others, although for some, it is necessary to focus on all skills.

In the practice of teaching there are many different methods of teaching a foreign language. Some of these methods have been used from their point of origin until the present. These methods are governed and controlled by two factors: *technique* and *principles*. The latter involves five aspects of second language teaching: teacher, learner, teaching process, learning process, and target language (Larsen-Freeman, 2000). By combining these five aspects, it is possible to obtain the theoretical formation of the method.

In terms of techniques, they are considered to be the actions that illustrate the principles. In another word, the techniques are the activities and procedures conducted in the classroom toward these principles. Hence, techniques are derived from an application of the principles. If certain principles are shared by two methods, the application of these principles (i.e., the techniques) will be suitable for both methods (Larsen-Freeman, 2000). When these teaching methods develop into a new pattern, they draw on the positive aspects of the previous one (Brown, 2000). Brown (2007, p.17) noted that “one of the

best examples of the cyclical nature of methods is seen in the revolutionary Audio-lingual Method of the late 1940s and 1950s”.

Many teaching methods have been applied in second language classrooms over the years, starting from the grammar translation method and ending with the communicative approach, and there has been great debate among scholars and researchers regarding the pros and cons of each method. Indeed, it has been the limitations of each method and the changing demands of each period that have led researchers to develop new methods. These teaching methods are discussed in the following sections.

2.2.2 The Grammar Translation Method (GTM)

The oldest method in teaching a second language is known as the Classical Method. It is also, called the old method and it was based on no theories and no advocates (Richards & Rodgers, 2001). This method was used in teaching the Classical languages, such as Latin and Greek, which were the languages of thought and literature (Rivers, 1981). Later in the nineteenth century, this name was changed to the Grammar Translation Method (GTM) (Brown, 2007). Around the same time Plotz adopted its techniques in teaching modern languages in German and his ideas spread rapidly to other countries (Rivers, 1981). In fact, this method became the principal means of teaching foreign languages (Brown, 2007). This method is based on the process of teaching grammar and vocabulary. In this way, the learner will be able to read and write in the target language. After the students have learnt the basics of the language, they will go through advanced grammar and rhetoric. Curran and Dussap (2000, p.1), claimed that “this discipline was seen as the necessary mental gymnastics to equip pupils with the mental agility for all forms of higher education”. For this reason, European schools used this method while teaching modern languages. It also put great emphasis on teaching the language by using the first language. It was hoped that learners, when studying grammar in the target language, would become more familiar with the grammar in their own native tongue. As a result, this experience

would facilitate the learners' understanding of their own reading and writing (Larsen-Freeman, 2000).

This method is based on certain principles. First, its fundamental purpose is to enable the learner to read literature written in the target language. This will be accomplished by first learning grammar rules and vocabulary of the foreign language, reading in the target language, and then finally translating these texts into the native language. The form of translation could be written and/or spoken (Holliday, 1994). Learners are involved in a deductive style while learning grammar. When they acquire the grammar rules, they have to memorize them and are asked to provide the rules through other examples. This places only slight emphasis on skills such as speaking and listening. Then there is the teacher, who is the director of the class. Students follow their teacher to attain the knowledge they need. Only one-way interaction occurs: from teacher to learner. Learners' interaction is very rare at this stage. Lastly, the students and the teacher use the first language during the class to ask questions or to explain and clarify any ambiguity to the students. In other words, communication will be carried out in the native language, since communicating in the target language is not considered important (Howatt, 1984).

Patel and Jain (2008) claimed that translating words and sentences to the first language enabled a better, faster understanding, saves time and enhances the learners' translation process. Based on the principle of "moving from known to unknown", the knowledge included in the learners' first language assists them to understand the target language's rules and this method is particularly useful in classes with a large number of learners. In the same context, Brown (2007) asserted that the grammar translation method does not demand too many special skills from the teacher and that grammar and translation tests facilitate the assessment and evaluation of students. The grammar translation method was so useful when the aim at a certain period was to focus on reading and writing skills. However, what was suitable for teaching Classical languages where the oral and aural

skills were omitted, came to be considered as inadequate for teaching modern languages (Curran & Dussap, 2000). Learners could not use their acquired language in communication since the target language was hardly used in the class. Rivers (1981) stated that the lack of listening skills frequently put the learner in an embarrassing situation when using the target language. In addition to the students' passive role in the class, the surfeit of vocabularies and exercises could make the lessons boring for them. Finally, teaching by this method is considered as teaching rules instead of use, and “to speak any language, whether native or foreign, entirely by rules is quite impossible” (Ballard in Patel & Jain, 2008, p.77). Critics of this method believe that learners finish their instruction knowing about the language instead of knowing the language itself, which is based on both “theory and practice” (Curran & Dussap, 2000). In general, critics and reformers of GTM believe that spoken language is primary and that this should be reflected in an oral-based methodology. In their criticisms they maintained that the rules of grammar should be taught only after the students have practised context-taught grammar points. As far as the translation side of this teaching method is concerned, translation should be avoided, although the native language could be used in order to explain new words or to check comprehension. This teaching method laid the foundations for the development of new ways of teaching languages and raised controversies that have continued to the present day.

2.2.3 The Direct Method (DM)

By the latter half of the nineteenth century, the world's needs had changed. The goal of instruction had moved to focus on the communicative skills in language teaching. At this point, the GTM no longer worked effectively as it tends to neglect communicative skills and pronunciation; as a result, the Direct Method was created. Simply, it connects the meaning directly to the target language without any use of the translation process and no longer leans on the native language. Brown (2007) described it as a method which focuses

on using the target language as mean of teaching by emphasizing the oral communication skills and inductive grammar. This type of methods does not apply any kind of translation to the first language. The new concentration on the target language in the learning process also placed great emphasis on pronunciation. Teachers used the phonetic system to enable the learners to pronounce the words correctly (Rivers, 1981). Thus, this method was also called the Phonetic Method (Stern, 1991).

Among the reformers of the nineteenth century in building a methodology based on observing children's language learning was Gouin. In fact, applying natural principles to the learning process gave this method another name: the natural method. In the late 1960s, Sauveur also applied natural principles to his language classes. Intensive oral interaction in the classroom was implemented via the target language, as well as by employing questions in order to show and elicit the language (Richards & Rodgers, 2001).

The first and most important principle in using the Direct Method was in enabling the students to use the target language communicatively (Larsen-Freeman, 2000). In order to learn, they have to learn how to think in the target language. Rivers (1981, p.32) stated that: “the ultimate aim was to develop the ability to think in the language”. Patel and Jain (2008) confirmed that the Direct Method helps to speak the target language effectively since the focus on pronunciation, accent and intonation are important. *Learning by doing* is the principle of this method. It creates fluency in the learners while using the target language in speaking. Stern (1991, p.459) stated that “since the direct method class involves much use of the spoken language, stress is also laid on the acquisition of a good pronunciation”. By using the target language, the teacher is the only source for the students in providing more explanations for unclear expressions. The known words could be used to teach new vocabulary, through pantomime, demonstration and pictures. However, translation could be the last resort when the learners still cannot understand the meaning (Rivers, 1981). Sauveur and other believers in the Natural Method argued that

“a foreign language could be taught without translation or use of the learner's native language if meaning was conveyed directly through demonstration and action” (Richards & Rodgers, 2001, p.11). Also, this method does not teach grammar deductively as in the Grammar Translation Method. Grammar is widely taught inductively through practice (Brown, 2007). The teacher prepares the reading text after having a discussion on the same topic with students. Students are induced to find the meaning directly by assimilating and figuring out the meaning from the context instead of checking the dictionary. There is no translation in this method. Finally, to ensure that students have understood the materials, they have to answer questions by using the target language.

Although in this method it is the teacher who directs the class through the activities, the students' role in the process is less passive than it is in the Grammar Translation Method. The teacher and the student here enjoy much co-operation in the teaching/learning process. In addition, to prevent what was happening with 'boring' exercises in the GMT, the Direct Method provides an attractive and interesting way for learners to carry out related exercises (Rivers, 1981). In the same vein, Patel and Jain (2008) confirmed that learners were enthused while being taught by Direct Method. This method was widely accepted at private language schools. The highly motivated students, native speakers and small size classes played an essential role in this success (Brown, 2007).

On the other hand, the Direct Method is not useful with large classes (Patel & Jain, 2008). If the teacher does not pay close attention to the students, they may cover first language structure with target language vocabulary (Rivers, 1981). In other words, an over-generalization could occur in the learning process. Stern (1991) also raised the questions as to how the meaning could be conveyed without translation and how misunderstanding of the meaning could be prevented without using the first language. Moreover, it is difficult to illustrate all sentences with actions or pictures. In fact, many audiovisual aids are required to help the teacher in the lesson (Patel & Jain, 2008). In addition, this method

requires considerable effort from the teacher since fluency and a wealth of information are essential for the teacher's character to convey the explicit meaning without using the mother tongue (Rivers, 1981). Brown (2007) highlighted that the teacher's background and the number of students in the class affected the implementation of this method in public schools. Moreover, teachers whose teaching style does not match this method find it tedious (Curran & Dussap, 2000). Furthermore, the success of this method depends on students' level of development. This method can be effective for students who have a high level of intelligence (Rivers, 1981). In conclusion and in practical terms, the DM is a teaching method that is heavily dependent on a number of criteria and variables for both students and teachers. The presence of these variables, such as the teacher's personal teaching style and preferences and the students' own motivations for learning, make this teaching method one which may not be the ideal or the most productive method.

2.2.4 The Audio-Lingual Method (ALM)

When the United States engaged in the World War II, there was a need to supply the US Army with personnel fluency in German, French, Italian, Chinese, Japanese, and other languages. There was a pressing need to fill positions, such as interpreters and code-room assistants. At this stage, the first priorities were to understand a native speaker and speak the target language with a near native accent (Rivers, 1981). In 1942, the government of the United States commissioned American universities to create a specialized foreign language program for military learners. The aim of this programme was to enable learners to reach a level of proficiency in foreign languages. This method was called the Army Method.

The success of this method, which arose at a time of international interest in teaching foreign languages, led to its being adapted by educational institutes (Brown, 2007). Teachers, linguists and applied linguists were involved in teaching English as a foreign language. Moreover, the United States was considered to be an international power and

many foreign students went there to study in the universities. However, they were required to undergo an English programme before entering university. These factors led to the development of the American approach to ESL. By the mid-1950s it came to be known as the Audio-Lingual Method (ALM). ALM was considered unique among the earlier methods and gathered many proponents since it was based on well-articulated and well-coordinated theories (Kumaravadivelu, 2006). This method used dialogue as an essential way of presenting the language (Stern, 1991). It prioritized listening, followed by speaking, then reading, and last of all, writing (Richards & Rodgers, 2001). Since the infant acquired the native language by speaking, this led to the assumption that learners would acquire a second language easily if it was taught at the first stage in spoken form (Rivers, 1981).

The teacher's goal was to enable the students to use the target language communicatively. By concentrating on listening and speaking, there was a great emphasis on correct pronunciation and intonation, with attention to reading and writing activities at advanced levels while listening and speaking also continued to be taught at an advanced level (Rivers, 1981). The materials students listened to were chosen carefully. These materials contain structures commonly which were used in real situations where the language is spoken. ALM aimed to develop a cultural understanding of the target language. Students should use the target language automatically without any pauses for bilingual brain processes. The teacher was considered the leader in control of the students' language behaviour. In addition, the teacher was confronted with the task of presenting a good model for imitation (Larsen-Freeman, 2000). The idea was sequential: a good model would lead to good imitators and a good response from the learners would lead to a successful programme.

In contrast to the DM, the ALM made use of the native language versions in the dialogues. In addition, traditional translation exercises were used in advanced levels as translation

was taught as a skill. This ensured a valuable assistance in eliciting the learners' expression (Rivers, 1981). Moreover, as a result of the revolt against grammar rules which were considered to have been overused in the GTM, the ALM expected learners to spend the classroom time on active oral practice, since teachers believed in teaching the language instead of teaching about the language.

Although ALM has proved successful in developing fluency and comprehension in oral skills, there are certain risks that the teacher should be aware of when approaching this method. First, although learners will make great progress while repeating words and utterances, not knowing about what they are mimicking and being unable to apply what they have memorized in specific contexts is considered to be a shortcoming of this method. Therefore, learners have to be taught from the beginning how to apply what they have memorized in their exercises and then in practice in their real lives. In addition, memorizing and exercising techniques could become boring and cause students to dislike the lessons. Teachers have to show inventiveness and be resourceful to ensure success, i.e., by knowing when to change the method of presentation and how to attract the learners by presenting them with interesting situations to enable them to express themselves through what they have learned. Moreover, learners are taught to make various linguistic utterances without being given a clear idea of what has to be done in the process. At this stage, learners could face difficulty in applying these grammatical utterances to express their own statements. Rivers (1981, p.47) stated that: "with a well-structured sequence of dialogues and drills, there will be little need for lengthy explanations of structural relationships". Hence, teachers have to draw the learners' attention to crucial elements to be aware of the changes they have made and to understand the grammatical meaning of these.

Furthermore, the kind of learners who benefited from the ALM were young children and less gifted learners. The latter found difficulty with abstractions of grammar in the DM

since they had to learn the meaning of the words and the grammar functions inductively. In contrast, such learners in the ALM work as a group by mimicking, repeating utterances and manipulating structures with relative ease. Furthermore, gifted students sometimes became bored before the rest elaborate the training. Therefore, the teacher must pay attention to gifted students and give them additional exercises and practice. The ALM also requires a high level of energy and effort from the teacher. In fact, teaching many classes per day is very demanding mentally and physically, which could lead teachers to lean on reading and writing drills (Rivers, 1981).

Regardless of the fact that the ALM enjoyed a good reputation for years, in fact, there was a limitation that affected this popularity. Brown (2007) mentioned that Audio Lingual Method failed in reaching the level of communicative proficiency of long-term teaching. This made its popularity wane. There are a few similarities between the ALM with Situational Language Teaching (SLT) in that language forms are introduced and practised based on various situations that can be imagined. The order in which the language skills are introduced and their focus on accuracy through drilling the language are another two similarities. The two teaching methods are also similar in their approach to practising the basic structure and sentence patterns of the target language. These similarities reflect similar views about the nature of language and learning. However, these views were developed from quite different traditions.

2.2.5 The Silent Method (SM)

Although many learners benefited from the ALM and succeeded in achieving the stated goal, in the 1960s, an objection arose from cognitive psychologists and transformational-generative linguists to learning a language by forming a set of habits. They disagreed about the effectiveness of mimicry in learning a language. They also argued that rules are formed by speakers. This enables them to create and understand utterances. Consequently, language was considered to be more based on rule formation than habit formation. Hence,

a language must be acquired through the learners' thinking process or cognition, allowing learners to discover the language's rules. The "cognitive code" was a result of the emphasis on human cognition. It was applied to a new general approach to language learning (Larsen-Freeman, 2000). It is premised on the teacher being silent as much as possible in the classroom while the learners, in contrast, have to be encouraged to generate as much language as they can (Richards & Rodgers, 2001). According to Bruner (1966), language as a problem-solving, creative, and self-discovering process could be better achieved by means of the Silent Method. Only through this method could the student be elevated from a passive listener to the principal actor. This method emerged as an outcome of new ideas about facilitating the learning process, with learners creating and discovering the language under the teacher's control and indirect influence, instead of remembering and repeating what their teacher has said (Harmer, 2008).

The learners are assumed to be more enthusiastic since they are assuming their own learning. They participate in formulating hypotheses in order to discover the rules of the target language they are learning. Although the learners commit errors, it could be a sign to the teacher that they are actively testing their hypotheses. The learner's progress is gradual. Gattegno's Silent Way method did not emerge from the "cognitive code" approach; however, it shares some principles with it. The basic principle of the Silent Way is that "teaching should be subordinated to learning" (Larsen-Freeman, 2000, p.53). It aims to enhance the beginning learners' oral and aural abilities in dealing with the target language. Another goal is to achieve a high level of fluency and good pronunciation. In addition, the grammar has its portion through a basic practical knowledge (Richards & Rodgers, 2001). Innovations from Gattegno's method mainly come from the way in which classroom activities are organized and in the direct role the teacher is required to assume in directing and monitoring learner performance. In this case, the responsibility is placed

on the learners to figure out and test their hypotheses about how the language works, and the classroom materials used to elicit and practise language, i.e., to learn the language.

2.2.6 Community Language Learning (CLL)

When the revolution in linguistics urged language teachers and linguists toward a deeper structure of language, and when psychologists started to recognize the fundamentally affective and interpersonal nature of all learning, this led to the waning of Audio-Lingual Method and emerging of new teaching methods (Brown, 2007). Certain teaching methods appeared when the importance of the cognitive and affective factors was discovered. Psychological factors played an important role in the development of these methods for language learners' success.

A method called Community Language Learning (CLL) appeared, the principle of which was derived from the Counselling-Learning approach which was developed in the early 1960s by Charles A. Curran (Stern, 1991). The Community Language Learning Method (CLLM) directs teachers to think about their students as 'whole persons'. This means that teachers should not only look after the students' feelings and intellect, but they have to be aware of the relationships between students' physical reactions and their instinctive protective reaction and learning desire. After studying adult learning for years, Curran discovered that a new learning situation could make the learner feel threatened. The fear of looking foolish and the change inherent in learning are very threatening factors to them. He believed that to overcome this problem, the teachers should be "language counsellors". Basically, the term 'counsellor' means a "person who advises, assists and supports any one in a problem" (Richards & Rodgers, 2001, p.90). Therefore, what Curran meant is a person with a deep understanding who can grasp students' struggles while they are internalizing another language. This kind of "language counsellor" teacher, who can be sensitive to the students and understand their anxiety, will help them to overcome this anxiety fear and turn it into a potentially positive power which leads them to learning

success. Kumaravadivelu (2006, p.92) stated that “teachers are supposed to create a nonthreatening atmosphere in the classroom, forming a community of learners who build trust among themselves in order to help each other”.

In addition to enabling students to use the language communicatively, this method urges teachers to free the students from their defensive stance by building a good relationship with them. Students in the early stages will be very dependent on their teacher. However, in time, they will become independent and gradually come to feel secure when they continue studying. Learners will find themselves benefiting from more direct communication and less translation (Brown, 2007). Initially, there is considerable use of native language word equivalents. This will relieve stress at the beginning. Larsen-Freeman (2000) argues that in the early stages of learning through the communicative method, the students will benefit greatly from instruction in the both native and target language. By being able to visualize meaning, new combinations of words can be made, allowing for grammatical flexibility. Over time, the native language can be phased out and the target language becomes the sole language used in class (Larsen-Freeman, 2000). After many sessions, learners become independent as they reach the fluency level in the spoken skill of the target language.

However, it must be said that Community Language Teaching Method puts unusual demands on language teachers. Teachers here must be highly proficient and sensitive to intricacies of the language in both first and second language. In addition, the non-directive role of the teacher, particularly at the early stages, could affect the learning process negatively. Brown (2007, p.113) suggested that “perhaps only later, when the learner has moved to more independence, is an inductive strategy really successful”. Progression in this teaching method is topic-based and learners nominate things they wish to talk about and meanings they wish to communicate with other learners. In terms of the roles of

learners, this method is similar to the Silent Method because the learners are expected to develop independence, autonomy and responsibility.

2.2.7 Suggestopedia

The Suggestopedia teaching method was developed by the Bulgarian psychiatrist educator Georgi Lozanov. It is based on Suggestology, which is the “science of suggestion in all its different aspects” (Prashing, 2004, p.159). The method was based on Indian yoga and Soviet Psychology (Ho, 2000). Lozanov discovered that certain yogic techniques improve the concentration and the memory. Since human beings respond to non-rational and non-conscious influences, Suggestopedia aimed to exploit these influences and then direct them to become positive factors for the learners’ benefit (Stevick, 1976, p.42). Lozanov claimed that he was satisfied with this method since it is worked perfectly whether students spent time on outside study or not (Richards & Rodgers, 2001). Besides the decoration, furniture and classroom arrangement, the use of musical rhythm in learning is an essential feature in this method. Lozanov’s call for this was based on the functions that Gaston’s 1968, (cited in Richards & Rodgers, 2001, p. 100), suggestion that one purpose of music in therapy procedures is “to use the unique potential of rhythm to energize and bring order”. Lozanov asserted that students set some psychological barriers in their learning process. The fear of performing inefficiently, loss of self-confidence, and failure in the course puts the students in unfamiliar situations and stands in the way of their learning (Larsen-Freeman, 2000).

A unique system of foreign language teaching is produced by combining yoga relaxation and verbal suggestion with DM (Bancroft, 1982). Lozanov's concept of unconscious and conscious functions, which he referred to as "Double-Planeness", is an important theme in this method (Ho, 2000). The learner does not only learn from the direct instruction (conscious level) but will also benefit from the environment in which the instruction takes place (unconscious level).

In Suggestopedia, students are required to use the foreign language in everyday communication. It concentrates on tapping the mental power of the students by suppressing the psychological issues that students think about while learning. The teacher holds the authority in the classroom since he/she is in charge of initiating interactions with the groups or individuals. The students, on the other hand, have to show trust and respect to their teacher. Even if it is a general concept, it will nevertheless make the student feel secure and allow him/her to retain information better if they trust the teacher. They will be more natural and less inhibited.

This method gives much attention to speaking skills as well as the other skills through reading dialogues, memorization of vocabulary pairs and writing. The students' native language is emphasized through translation. In addition, vocabulary is focused on through large numbers of words. Dealing with grammar is obvious but with minimum rates since the focus on the use of the language will benefit the students more than a focus on its form (Larsen-Freeman, 2000).

This method aims to speed up the learning process; for example, by accelerating text information intake. This is based on the human mind's ability to absorb a certain amount of information at once, and then store this information in its long-term memory bank. The text layout is designed as newspaper columns. This reduces the movement of the eye which enables the reader to read fast. Another thing which enhances this acceleration is the format of the words' layout. Certain words are selected from the text and underlined. These words are repeated in bold on the right side in each column. In this way, the selected words will be stored in the reader's memory even without them being read consciously (Prashing, 2004).

An overall problem with this teaching method could be said to be its referring to language to be learned as 'material', with suggestion being at the heart of this theory. This requires

placing too much emphasis on the use of indirect support materials, including classroom fixtures and music, to aid language learning. This view of language as ‘material’ only does not conform to the principles of SLA.

2.2.8 The Communicative Approach (CA)

Like many other teaching methods, focusing on the communicative skills while using the target language is the goal of the communicative approach. The acquisition of linguistic structures or vocabulary has been highlighted by many methodologists. This belief is also held by the supporters of the communicative approach. On the other hand, they argue that teaching structure and vocabulary alone could be insufficient preparation for any communication situation. This is based on the concept that “students may know the rules of language usage, but will be unable to use the language” (Larsen-Freeman, 2000, p.123). Its origins lie in the changes in British language teaching traditions in the late 1960s (Richards & Rodgers, 2001).

While communicating, people use the language to accomplish certain functions such as arguing, persuading, or promising (speaker and listener or writer and reader). These functions are carried out within a social context. Communicative competence is the goal which involves the ability to use a language appropriately in a given social context. The activities allow students to become involved in real communications, such as role-play and simulation in a scene at an airport or television programme. CLT focuses on the content rather than the form (Harmer, 2008). In order to achieve this, knowledge of the linguistic forms, meanings, and functions are the basic elements needed by the students (Larsen-Freeman, 2000).

Learners are expected to achieve grammatical competence, discourse competence, communicative competence, sociocultural competence and strategic competence. Grammatical competence refers to the forms of grammatical sentence level and to the

ability to recognize and to make use of lexical, morphological, syntactic and phonological feature of language. Discourse competence is not concerned with isolated words or phrases, but deals with the interconnectedness of a series of utterances to form a text. There are two important processes in communicative competence. The first process is called the bottom-up processing when the overall meaning of the text is being gleaned by identification of isolated sounds or words. The other process, which is the understanding of the theme to interpret isolated sounds or words, is called top-down processing. Sociocultural competence is related to the social rules of language use. It requires an understanding of the social context in which language is used as well as the participants and their shared information. Social conventions such as turn-taking, tone of voice and appropriateness of content should be known to the participants. Strategic competence refers to the coping strategies used in unfamiliar contexts, with constraint due to lack knowledge of rules or when there are limiting factors in their application such as fatigue or distraction (Murcia, 2001)

The relationship between the teacher and the student starts somewhat formally since the students follow the teacher with the drills provided. Moreover, the teacher acts as an advisor in answering the students' questions and monitoring their performance. Eventually, the teacher becomes a "co-communicator" who engages in communicative activities with the students (Littlewood, 1981). The communicative Approach is essentially a learner-centred approach and relies on the target language while ignoring the students' native language. The target language should be used not only in communicative activities, but also in explaining the activities or assigning homework to the students. It is an excellent opportunity to make everything in the classroom related to the target language. The students will realize that the target language is a vehicle for communication, not just an object to be studied (Larsen-Freeman, 2000). For non-native speaker teachers who are not proficient in teaching a second language effectively, the use of technology

such as videotapes, audiotapes, computer software, etc. will help to overcome this problem (Brown, 2007).

According to Harmer (2008), CLT has been criticized because there are relatively uncontrolled demands of language use on the part of students by native-speaker teachers, and thus the teacher is expected to respond to all language problems. In addition, some critics have claimed that the communicative activities are no more or less real than traditional exercises, since involving the learners in writing a letter or finding out train times is as contrived as many traditional exercises. Furthermore, although the aim of this approach is to develop the learners' accuracy and fluency from the beginning, it was argued that the explicit teaching of grammar was eroded in CLT, students' accuracy being sacrificed to fluency. However, despite these arguments, the communicative approach was a notable departure in the field of teaching and learning and resulted in the wide usage of these communicative activities in classrooms all over the world.

2.2.9 Summary

After providing a brief overview of second language teaching methods, it can be noticed that all these methods have been effective to some degree or another in teaching a second language. These approaches were related to each other as a chain with each one was “born” from the previous one. Although some of these methods were suitable for a certain period in time, they were used widely regardless of limitations and criticisms. For example, the GTM enjoys a unique popularity in the eastern world (Abdel Raouf, 2010). Shannon (2006) stated that the GTM and the ALM were both still the predominant teaching methods in Taiwan.

After this discussion about the teaching methods of a second language, the following chapter will address one skill, in learning a language, i.e., writing. Similarly to teaching methods, there are many approaches to teaching the writing skill. Different approaches

suits different learners and different tasks. Indeed, different approaches with their advantages and disadvantages had placed a clear mark on the circulation of learning process.

2.3 Approaches to writing

2.3.1 Abstract

From the previous section's discussion of second language teaching methods, it is clear that some teaching methods have focused on certain skills while others have neglected the rest. Each teaching method was developed or created to overcome the limitations of preceding ones and to meet the new needs of the world at that time. In this section of the chapter, there will be a focus on one of these skills, the writing skill, in teaching second language learners.

The writing skill has been and is still taught via a variety of approaches and teaching methods. A description of each approach and its characteristics will be discussed. Then, there will be a review of the current situation regarding second language learners' writing performance in the Kingdom of Saudi Arabia. Different studies have been conducted on this issue in a number of countries, including Saudi Arabia, with the aim of finding a solution. One of the proposed solutions is to use a graphic organizer strategy in order to achieve a sound level of coherence in students' writing. Most of the studies conducted in this area have had satisfactory findings. Therefore, the question arises as to whether this strategy would be effective when conducted in different situations, whether involving Saudi second language learners or not.

2.3.2 Introduction

An underlying assumption is that thinking precedes writing and that self-discovery and cognitive maturation can be encouraged by the free expression of ideas (Elbow, 1998). The writing skill is learnt, not taught, and the role of the teacher is to be non-directive. In fact, the teacher should facilitate and provide writers with the space to construct their own meaning with minimal interference through a cooperative and encouraging environment. Since writing is a developmental process, teachers are encouraged not to impose their views or suggest responses to topics in advance (Hyland, 2009).

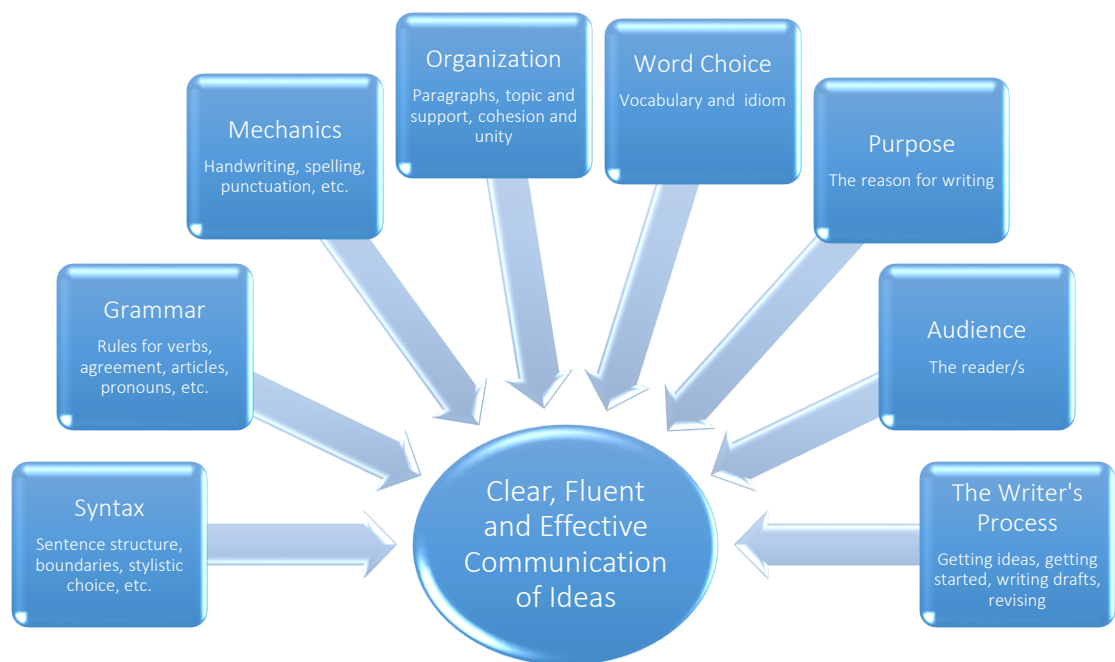
Teaching through workshop environments has been popular, as this provides peer support and opportunities for students training in composition strategies. This technique can be conveyed across situations, helping students to brainstorm, draft and improve their work together, with advice on how their writing can be structured according to the demands and constraints of particular situations and also the needs of particular readers (Hyland, 2009). Grabe (2003) and Johns (1997) suggest paying attention to the audience and to teachers' and peers' feedback with research on particular readers and appropriate reading as elements which can help students to anticipate the expectations of particular readers. Therefore, practising writing with a subject close to the writer's interests and experience will give him or her support and motivation. Teachers, while providing encouragement and helping to solve any difficulties as they occur, will also contribute to producing a good piece of written text.

2.3.3 Does writing help students to learn?

Raines (1983) states that writing reinforces the level of vocabulary, grammatical structures and idioms. In addition, when students practise writing they have a chance to be adventurous with the language, to go beyond what they have just learned to say and to take risks. Moreover, students become more involved with the new language while expressing their ideas with the constant use of eye, hand and brain. So, how can the

writing skill be taught? What are the approaches that teachers apply during the learning process? In fact, there is no single answer to the question of how to teach the writing skill in ESL classes. While there are teachers and teaching styles or learners and learning styles, there will be many answers to such a question. Since EFL/ESL writing first emerged as a distinct area of scholarship in the 1980s, a number of theories supporting teachers' efforts to understand L2 writing and learning have been developed (Hyland, 2003).

These theories differ from each other in focusing on different features of teaching second language writing. Raimes (1983) provides a diagram that demonstrates what writers have to deal with while producing a piece of writing. As teachers have emphasized various features of the diagram, combining them with how they think writing is being learned, they have developed a variety of approaches to teaching writing (see Figure 2.1).



Source: Raimes, 1983

Figure 2.1: Important features of good writing

2.3.4 Approaches to teaching writing in an ESL class

2.3.4.1 The controlled-to-free approach

Returning to the second-language teaching methods described in Chapter One, the audio-lingual approach, which was developed in the 1950s and early 1960s, has dominated second language learning. It gives priority to speaking, and writing serves to support speech in that it raises the mastery level of the learner's grammatical and syntactic forms. This direction was established from the existence of structural linguistics and the behaviourist learning theories of second language teaching which were dominant in the 1960s (Silva, 1990). This type of approach to writing is based on a sequential process. In the beginning, the learners start with sentence exercises, after which they are given paragraphs to copy or manipulate grammatically. They do this by changing questions to statements, plurals to singulars, or present tenses to past. They might also change words and clauses or combine sentences.

The way to look at writing is to see it as a product on a paper or screen with a coherent arrangement of words, clauses and sentences. This piece of writing should be structured according to a system of rules based on the written language itself. So, to conceptualize second language writing in this way directs the attention to the writing as a product, also encouraging a focus on formal text units or grammatical features of texts. In order to include the essential building blocks of texts, this view stresses that learning to write in a second or foreign language generally involves linguistic knowledge, vocabulary choices, syntactic patterns and cohesive devices (Hyland, 2003).

This controlled composition makes it relatively easy for learners to write a great deal while avoiding errors. This kind of learning makes it simple for the teacher to mark the papers easily and quickly since the learners have a limited opportunity for making mistakes. Learners can depend on their abilities in trying some free compositions of word choice to express their own ideas after they reach a high intermediate or advanced level

of proficiency. Indeed, this approach focuses on accuracy instead of fluency or originality by concentrating on three features of the above diagram: syntax, grammar, and mechanics (Raimes, 1983).

Basically, writing is seen as a product that emerges from the writer, who constructs the commands of grammatical and lexical knowledge. On the other hand, the result of imitating and manipulating models that are provided by the teacher is seen as writing development. Table 2.1 shows models for learners which allow them to generate risk-free sentences.

Table 2.1: Substitution table

There are The	Y	types kinds classes categories	of X	:A, B, and C. .there are A,B, and C.
X	consists of can be divided into classes	Y	categories classes kinds types	these are A, B, and C. :A, B, and C.
A, B, and C are	kinds types categories	of X.		

Source: Hamp-Lyons and Heasley, 1987, p.23

Many of those who adopt this view consider writing as an extension of grammar: a means of reinforcing language patterns through habit formation and of testing the learner's ability to generate well-formed sentences. Others consider writing as a complicated structure that can be learned only by developing the skills to manipulate lexis and grammar (Hyland, 2003).

Writing is emphasized by its structural orientation as combinations of syntactic and lexical forms and good writing is the demonstration of knowledge of these forms and of the rules used to create texts. The main criteria for considering good writing here are accuracy and clear exposition. On the other hand, the communicative content has no importance at this stage and will be dealt with later in student's development. Writing classes currently use many of these techniques at lower levels of language proficiency. They help in increasing the confidence of beginner writers, building vocabulary and providing the scaffolding for writing development.

In fact, although many second language learners benefit from the structural orientation approach while learning how to write, serious problems can occur. One of these problems arises when formal patterns are presented as short fragments which tend to be based on the intuitions of the writers of the materials instead of the analyses of real texts. This not only holds students back from building their writing beyond a few sentences, but it can also be misleading or confusing when they try to write in different situations. According to Hunt (1983), attempts have been made to measure students' writing improvement through their increased use of formal features such as relative clauses or the 'syntactic complexity' of their texts. It has been argued that syntactic complexity and grammatical accuracy are not the only features that improve writing and may not be considered as the best measures of good writing (Hyland, 2003).

Moreover, writing instruction does not only aim at explicitness and accuracy, since written texts are a response to a particular communicative setting. It is difficult to consider a universal indicator of good writing because good writing is always contextually variable. Writers understand that various meanings and relationships can be conveyed through different constructions, so look to their audience and comparable texts when deciding the content of their own text and how they want to express themselves. From the other perspective, readers look to their own contextual and linguistic assumptions when

obtaining meaning from a piece of writing. This has been demonstrated in the body of literature examining reading comprehension and knowledge-based inference (Barnett, 1989).

For the above reasons, writing has been seen only as a surface form by a few second language writing teachers. However, it is equally unhelpful to see language as irrelevant to learning to write. It is important to have control over surface features, and an understanding of how words, sentences and larger discourse structures can shape and express the meanings students want to convey is needed. Formal elements are included in courses by most teachers, although they also see beyond language structures in order to ensure that students can apply this knowledge to particular purposes and contexts in parallel with writing grammatically correct texts (Hyland, 2003).

2.3.4.2 The free-writing approach

In this approach, there is a strong emphasis on the quantity of writing rather than the quality. It focuses on a wide range of free writing on given topics, with only minimal correction of errors. Advocates of this approach believe that content and fluency should have priority in presenting a piece of writing and students should not worry about form. As a consequence, grammatical accuracy and organization will gradually follow when once ideas are transferred onto paper.

Some English as a Second Language (ESL) teachers begin their classes with a free writing exercise. They ask their students to write freely on any topic for five to ten minutes without worrying about grammar and spelling. By doing this, teachers emphasize the writing fluency of their students. Students face difficulties initially, but after performing this exercise more and more often, the anxiety which arrested the words inside the students vanishes. They start putting words down on paper and writing more fluently. Teachers do not care about correcting these short pieces of writing; they just read them

and perhaps comment on the ideas that the writer has expressed. This approach puts great emphasis on the “audience” and “content”, particularly as the free writing often revolves around subjects in which the students are interested (Raimes, 1983).

2.3.4.3 The paragraph-pattern approach

This approach focuses on something different from the accuracy of grammar or fluency of the content. It stresses another feature, which is organization. It is based on copying paragraphs, analysing the form of model paragraphs and imitating model passages, with scrambled sentences arranged into paragraph order. General and specific statements are also identified, and the topic sentence pointed out. Since people from different cultures construct and organize their communication with each other differently, the learners themselves still need to see, analyse, and practise the particularly “English” features of a piece of writing, even if they are good at organizing ideas in their first language.

It is clear that second language learners need to understand the appropriate grammar and vocabulary while learning to write in English. In fact, there are other factors which should be known besides grammar and vocabulary while teaching writing. For instance, relating structure to meaning is an important principle, which makes language use a criterion for the choice of teaching materials. Hence, certain communicative functions are presented by particular language forms, and the functions which are most relevant to students’ needs can be taught. Functions are the means for achieving the ends of writing. This orientation is sometimes called “current traditional rhetoric” or the “functional approach”. It is significant when second language learners are being prepared for academic writing at a higher level, at college or university, for example.

This approach aims to help students develop effective paragraphs through the creation of topic sentences, supporting sentences and transitions, and to develop different types of paragraphs. Connected sentences are produced by the students where they are guided by

prescribed formulae and tasks which tend to focus on form in order to strengthen model writing patterns positively. Tasks such as reordering sentences in scrambled paragraphs, writing paragraphs from provided information or selecting appropriate sentences to complete gapped paragraphs are included in the free writing methods for the sentence level activities.

It is clear that this orientation is greatly influenced by the structural model, where paragraphs are seen almost as syntactic units within given slots. It makes it a short step to applying the same principles to entire essays. The production of texts can then be seen as composed of structural entities such as the Introduction, Body, Conclusion, and particular organizational patterns such as narration, description and exposition are also taught. In general, according to common functions of written English, courses are organized to meet and fulfil these needs.

Table 2.2: Contents page from a functionally oriented textbook

Unit 1	Structure and cohesion
Unit 2	Description: process and procedure
Unit 3	Description: Physical
Unit 4	Narrative
Unit 5	Definitions
Unit 6	Exemplification
Unit 7	Classification
Unit 8	Comparison and contrast
Unit 9	Cause and effect
Unit 10	Generalization, qualification, and certainty
Unit 11	Interpretation of data
Unit 12	Discussion
Unit 13	Drawing conclusions
Unit 14	Reports: studies and research
Unit 15	Surveys and questionnaires

Source: Adapted from Jordan, 1990

Comprehension checks on a model text are included in each unit. After this, there are exercises which focus on the language used to convey the target function and this develops the abilities of the students to use them in their writing. These tasks enable the students to develop an outline into an essay, or imitate patterns of parallel text in their own essays. As a consequence, these offer solid scaffolding for writing by supporting second language learners' development (Hyland, 2003).

However, the tasks referred to above are largely concerned with patterns which have been separated from the whole, as the activities involve meaning and strategies to be followed on the day, rather than exercises that have any wider purpose for the students. According to Hyland (2003), focusing on form or function means that the personal experiences and practical purposes of the writer are detached from the writing. Guided composition, for example, is one of the methods based on the assumption that texts are objects which can be taught independently of particular contexts, writers or readers and that writers can fully represent their intended meanings by following certain rules. However, writing is more than an act of arranging elements in their best order, and writing instruction is more than the act of assisting learners in order to execute and remember these patterns. The awareness of this has led teachers to focus on and involve the writer with other features while teaching writing.

2.3.4.4 The grammar-syntax-organization approach

More than one feature is stressed in this approach. Some teachers believe that the writing process cannot be taught as separate skills that are learned one by one. Therefore, a combination of writing tasks which enable the students to pay attention to the organization, the necessary grammar and the syntax at the same time is worked out. For example, learners need to know more than the appropriate vocabulary while writing a set of instructions to operate a machine. This approach focuses on the forms of verbs and the

organizational plan based on chronology; sequence words like “first”, “second” and “finally”; and sentence structures like “when...then”. At the pre-writing stage, all these features are discussed and prepared before starting the task. According to Raimes (1983, p. 8), “this approach links the purpose of a piece of writing to the forms that are needed to convey the message”. In this way, the students can notice the relation between what they are trying to write and what they need to write about.

This approach includes a set of topics and themes of interest which establish a coherence and purpose for the course or that start with a sequence of key areas of subject matter with which students will deal. Learners can write meaningfully about these topics when they have some knowledge of them. According to Hyland (2003), students of all ages and abilities can benefit from such an approach, with its popular organizing principle for second language writing, wherein many teachers shape their courses according to the topics that students choose for themselves.

Writing activities are often organized around social issues such as pollution, relationships, stress, smoking, etc. and these themes or topics normally form the basis of process courses. In fact, when learners do not have the familiarity with such topics, they could be disadvantaged in such classrooms. However, students at the academic level can benefit from these integrated writing activities and these in turn can encourage learners to think about issues in new ways. In order to create an effective text, students may receive help from their teacher in obtaining the appropriate cognitive knowledge of topics and vocabulary they will need. This knowledge is acquired by development exercises which involve students in reading for ideas in parallel texts, reacting to photographs, and various kinds of brainstorming drills in order to create ideas for writing and organizing texts.

Figure 2.2 illustrates an exercise using mind mapping to stimulate ideas for an account of personal experience. This kind of activity helps learners to build a list of issues. It also

helps in identifying relationships between these issues and to set them in order according to their importance and priority while writing (Hyland, 2003).

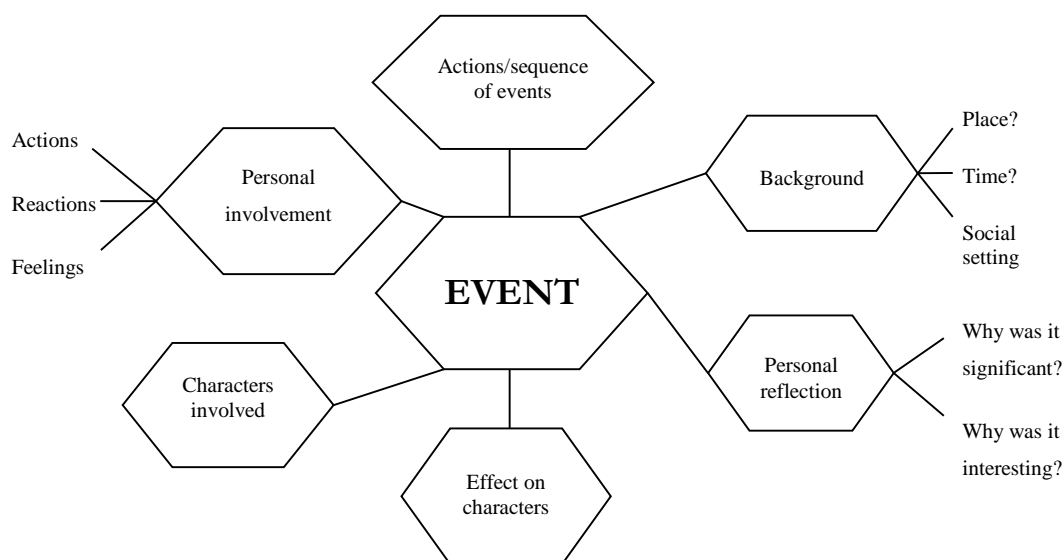


Figure 2.2: Spidergram for brainstorming a writing task

Teachers help their students with data collection techniques when they are being asked to conduct research of some kind, either by using the Internet or the library. A key element of these classes is group work, where cooperation among students in collecting information, generating ideas, focusing priorities and structuring the way they will organize their texts present practical reasons for genuine communication. Furthermore, content orientation can be applied to form the basis of courses which focus more on language structures and functions. These courses will help students to generate, develop and organize their ideas on a given topic. In fact, the content orientation method relies heavily on reading. It helps learners to acquire the skills and confidence to give them the ability to read texts expertly as a basis for producing their own texts. According to Krashen (1993), practising writing alone does not mean that the learner will acquire

second language writing skills successfully, and this should be enhanced with extensive reading.

2.3.4.5 The communicative approach

In this approach, writers are encouraged to behave like writers in real life. They continuously ask themselves: Why am I writing this? Who will read it? These two questions in this approach stress both the purpose and the audience. Generally, the teacher is only audience for the students' writing but this approach holds that when writers write for real readers in a truly communicative act, as a sequence they will do their best. Therefore, when teachers use the communicative approach in writing, they extend the readership. Students' writing will be extended to other students in the class who read it and then rewrite it in another form, make comments or summarize it without becoming involved in any corrections. Students can also participate as real classroom readers by role playing, exchanging letters, and writing back to each other (Raimes, 1983).

This orientation pertains to the writer rather than the form. Many writing teachers from liberal arts backgrounds who follow first language composition theorists such as Elbow (1998) and Murray (1985) consider the goals of their classroom to be fostering second language students' expressive abilities and encouraging them to find their own styles to produce writing that is fresh and spontaneous. In these classrooms, writing is considered a creative act of self-discovery, since it is organized around students' personal experiences and opinions. According to Freire (1974), this approach can help to generate self-awareness of the writer's social position and literate possibilities. Moffett also states that it facilitates "clear thinking, effective relating and satisfying self-expression" (Moffett, 1982: p.235).

This perspective illustrates that writing is learned, not taught, so writing instruction is non-directive and personal. In fact, writing is a way in which personal meanings are

shared and where the power of the individual is being emphasized by the writing courses to construct the writer's own views on a topic. Teachers give space to students to make their own meanings within a positive and cooperative environment. Since writing is a developmental process, the teachers know it will be for the students' benefit if they do not impose their views, offer models or suggest responses to topics in advance. Instead, stimulating the writers' ideas through pre-writing tasks is the alternative method. They can apply these activities through journal writing and parallel texts. Since writing is considered an act of discovering meaning, it is crucial to engage with students' assertions, and the response should be a central means of initiating and guiding the ideas (Straub, 2000). Murray (1985) stated that teachers should respond to the ideas that learners produce instead of dwelling on formal errors.

Indeed exploring the writer's beliefs, engaging with others' ideas and connecting with the readers are considered strong aspects of the expressivist approach. However, the writer's asocialist view is found to a great extent in this approach. In addition, second language students who come from cultures which regard self-expression in a different light can be disadvantaged by this individualistic approach. In addition, forming a clear principle by which to teach and evaluate "good writing" is difficult. Despite the influence of this approach in first language writing classrooms, expressivism has been treated cautiously in second language contexts. Although many second language learners have learned successfully through this approach, other learners may still experience difficulties, as it tends to neglect the learners' cultural backgrounds, the social consequences of writing, and the purposes of communication in the real world (Hyland, 2003).

2.3.4.6 The process approach

The shift from concentrating on the product to concentrating on the process has been the main priority of this approach. Writers who are taught by using this approach ask themselves: "How do I write this? How do I get started?" Student writers should bear in

mind that what they first put down on a piece of paper will not necessarily be considered the finished product. As novice writers, they should not expect that the words they write down will be perfect right away. In fact, giving the student the time to work on the writing process as well as receiving appropriate feedback from the readers, whether the teacher or the other students, will enable the writers to establish new ideas and sentences as they plan, write a first draft and revise what they have written for a second draft. Many current writing classes involve pre-writing activities such as discussion, reading, debate and brainstorming. This approach does not look for errors, nor does it give the writers a topic to be completed in a restricted amount of time. Students are given two crucial supports. The first support is the time to try out ideas and the other is the feedback on their drafts. Essentially, this is based on discovery, where the writing process becomes a means of discovering new ideas and new language forms through cooperative group work.

The process approach to writing teaching shares a similarity with the expressive orientation, in which they, the writers, are emphasized as independent producers of texts. Furthermore, the process approach goes further in dealing with the issue of the teacher's act of helping learners perform a writing task. The consistency of recognizing basic cognitive processes as central to writing activity and stressing the need to develop students' abilities to plan, define a rhetorical problem, identify the purpose and evaluate solutions are considered numerous incarnations of this perspective (Hyland, 2003).

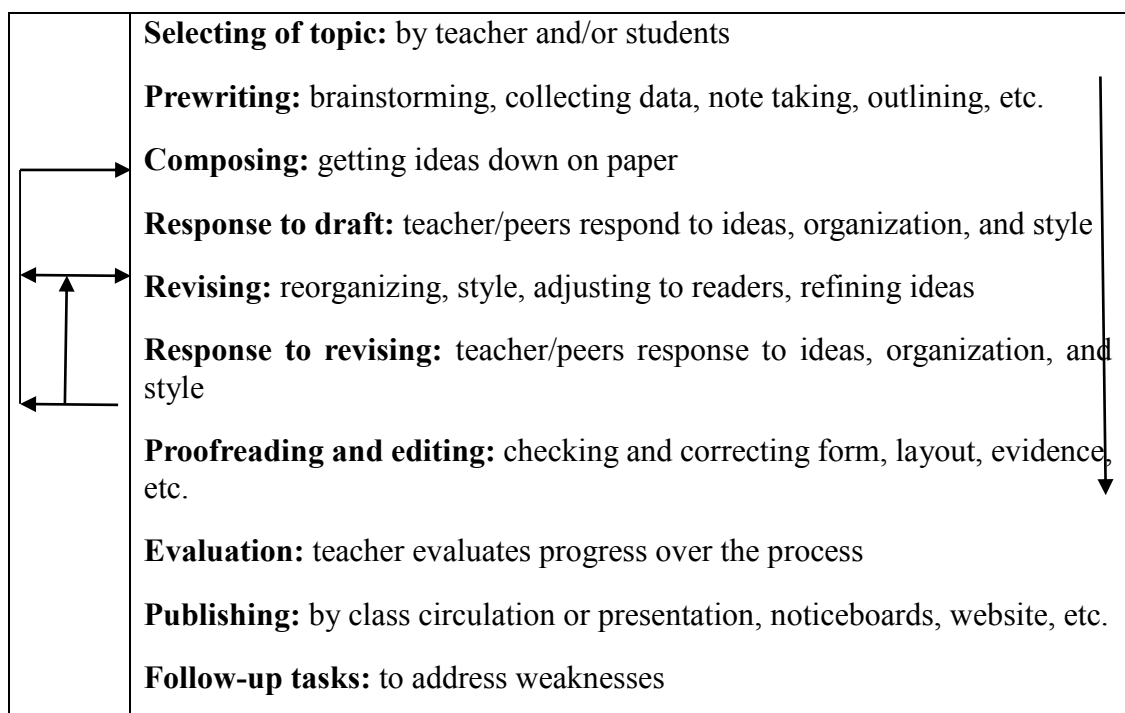
Raimes (1983, p. 10) stated "There is no one way to teach writing". Teachers can use a wide diversity of techniques to enhance students' writing. A mixture of different techniques from different approaches will help where students need them. In fact, all the approaches mentioned here overlap each other. Few classrooms can be found where the teacher adheres to one approach and excludes others. Techniques drawn from other approaches, such as controlled composition, free writing, sentence exercises and

paragraph analysis, can be employed by a teacher who is using a communicative or process approach. Such techniques are useful in all approaches.

The model for writing processes most widely accepted by second language writing teachers is the original planning-writing-reviewing framework which was established by Flower and Hayes (Flower, 1989; Flower and Hayes, 1981). According to Zamel (1983, p.165), this process sees writing as a “non-linear, exploratory, and generative process whereby writers discover and reformulate their ideas as they attempt to approximate meaning”.

As shown in Table 2.3, the processes of planning, drafting, revising and editing do not occur in an orderly sequence. In fact, they are recursive, interactive and potentially simultaneous, and students can review, evaluate and revise the work even before any text has been produced at all. The writer can step backwards or forwards at any point in any of these activities; for example, checking the library to collect more information, revising the plan to include new ideas or rewriting for readability after peer feedback

Table 2.3: Process model of writing instruction



This describes what happens at each stage of the process and integrates cognitive factors more closely with social factors (Flower, 1994). This process orientation has been adopted by a significant number of writing teachers; the main focus and approach of such courses have had a major impact on writing research and teaching in North America. Students are being guided by the teacher through the writing process and to avoid an emphasis on form to assist them in developing strategies for generating, drafting and refining ideas. Teachers can do this by setting pre-writing activities to generate ideas about structure and content. They can encourage brainstorming and outlining, also requiring multiple drafts, giving extensive feedback, seeking text-level revisions, facilitating peer responses, and finally, the surface correction is delayed until the final editing (Raimes, 1992).

In this orientation, the teacher's priority is developing students' metacognitive awareness of their processes; in other words, the students' ability to reflect on the strategies they use to write. Besides composing and revising strategies, this orientation lays great emphasis on responses to writing. One of the most influential texts in a writing process class is the response, which is the point at which the teacher's intervention is most obvious and perhaps most crucial (Hyland, 2003).

Clearly, cognition is the central element in the above process. Thus, researchers are becoming increasingly aware of the complex processes involved in planning and editing, the influence of the task in hand, and the importance of assessing the activities in which writers are actually engaged when they write. However, although such understanding can contribute to the ways teachers teach, contradictory studies and the difficulties of "getting inside" writers' heads to report unconscious processing have hampered process models. According to Grabe (2003), while a clearer understanding of the writing process was obtained from the concept of multiple processing models, no complete model yet exists that enables us to anticipate students' relative difficulty in performing particular writing tasks, topics or their likely progress given certain kinds of instruction. In addition, it

remains unclear whether an exclusive emphasis on psychological factors in writing will provide the whole picture, either theoretically or pedagogically. Another factor to be considered are the forces outside the individual that help direct the writer to define problems, outline solutions and form the text (Faigley, 1986; Bizzell, 1992). According to Hyland (2003), the process of writing is considered a rich mixture of elements, of which cognition is only one. According to Swales (1990, p. 220) the approach to the process overemphasizes “the cognitive relationship between the writer and the writer’s internal world” and, as a consequence, a clear perspective on the social nature of writing or on the role of language and text structure in effective written communication is not offered. Encouraging students to make their own meanings and to discover their own text forms does not actually afford them clear guidance on how to build the different kinds of text they have to write (Hyland, 2003).

2.3.5 Can writing help students to learn a second language more effectively?

During the writing process, students do not “complain”, as usual, about finding the appropriate words or forming suitable grammar. Instead, they are facing difficulties in finding and expressing the ideas in their heads in a new language. This is a problem relating to communication and not just to writing. Teachers can formulate a situation where students are given the opportunity to listen, speak, read and then write using the new language. When students practise the four skills within the framework of a one given topic, they will succeed in formulating communicating their meaning. For example, to ensure communicative practice among the students in the four language skills to help them generate ideas as a pre-writing exercise and revise these ideas as a rewriting exercise, they start with a discussion, whether as a group or with the teacher. Then, they make lists of the ideas they have gathered regarding a certain topic. After this, they compare their ideas with each other. They start writing a draft and then each student reads his or her classmate’s paper. Students compare and discuss their descriptions with those of other

students in the group. When they exchange their papers, they also check the spelling, punctuation and grammar. It could be considered a risky procedure for learners to correct each other, since they could encounter many mistakes. However, their discussion will help increase their knowledge and the teacher's concern when monitoring and tracking the students during these exercises will ensure that they are kept on the safe side.

In theory, this method shifts a writing class from the silent mode students have become used to and fills the class with a variety of language skills activities. Therefore, teachers should bear in mind the classroom activities that will help their students to use the new language in a meaningful way so that speaking, listening, and reading skills will help them to write with more confidence.

2.3.6 Summary

Some teachers follow and adopt only one of these orientations in teaching their classes. By contrast, a diverse range of methods have been adopted by others which demonstrate several perspectives, accommodating their practices to the limitations of their teaching situations and also regarding their beliefs about how students learn to write. However, it is quite rare to find the "pure" application of a particular theory. It is common for one to predominate in how teachers conceptualize and organize their work in the classroom (Cumming, 2003). According to Hyland (2009), teachers lean towards recognizing and drawing upon a number of approaches but typically show a preference for one of these. So, even though distinct classroom approaches are rarely represented, it is useful to examine these conceptions one by one in order to find out more clearly what each tells us about writing and how it can support our teaching.

Since second language learners still encounter many mistakes regarding unity and coherence in their essay writing, this situation is still under investigation through many studies in an attempt to solve this problem. Many studies have proved that the use of

graphic organizers contributes to curing this dilemma. Since Saudi second language learners still suffer from this dilemma, would it be effective to incorporate graphic organizers into writing workshops in the Saudi context? In the next chapter, a definition of the concept “graphic organizers” will be illustrated with their various types. In addition, a number of studies that applied the use of graphic organizers into writing will be discussed.

2.4 Graphic organizers

2.4.1 Abstract

This section of the chapter explains the concept of graphic organizers and the importance of applying this technique in students' writing. This section will illustrate some types and examples of graphic organizers as well as the purpose of applying each one in class. The use of graphic organizers is not based only on one or two learning theories; there are three learning theories that are the basis and support for the application of graphic organizers to students' writing. After discussing the theory of integrating graphic organizers into the writing skill, different studies will also be used to demonstrate the effectiveness of this technique.

2.4.2 The concept of graphic organizers

Adjunct aids are one approach which has been applied to overcome poor text structure. They are also called adjunct displays. Their aim is to indicate which information is important and also how this information is being structured. Adjunct aids fall into three categories: outlines, advance organizers and graphic organizers (Robinson, 1998). Graphic organizers are one type of adjunct display. Graphic organizers are identified as “communication devices that show the organization or structure of concepts as well as relationships between concepts” (Ellis, 2004, p.1). Witherell and McMackin (2005, p.4) described tiered graphic organizers as “leveled, visual planners on which students record information in a logical way. The recorded information is then used in the writing activity”. Graphic organizers are also identified as “visual representation(s) of knowledge. It is a way of structuring information, of arranging important aspects of a concept or topic into a pattern using labels” (Bromley et al., 1995, p.6). Moreover, they have been described as “visual representations that help gather and sort information” (Parker, 2006, p.4).

They aimed to enable the students to understand important inter-concept relations by displaying information spatially. Concept maps, flow diagrams, tree diagrams and matrices are common types of graphic organizers. Figure 2.3 shows the three parts of adjunct displays in a tree diagram mode.

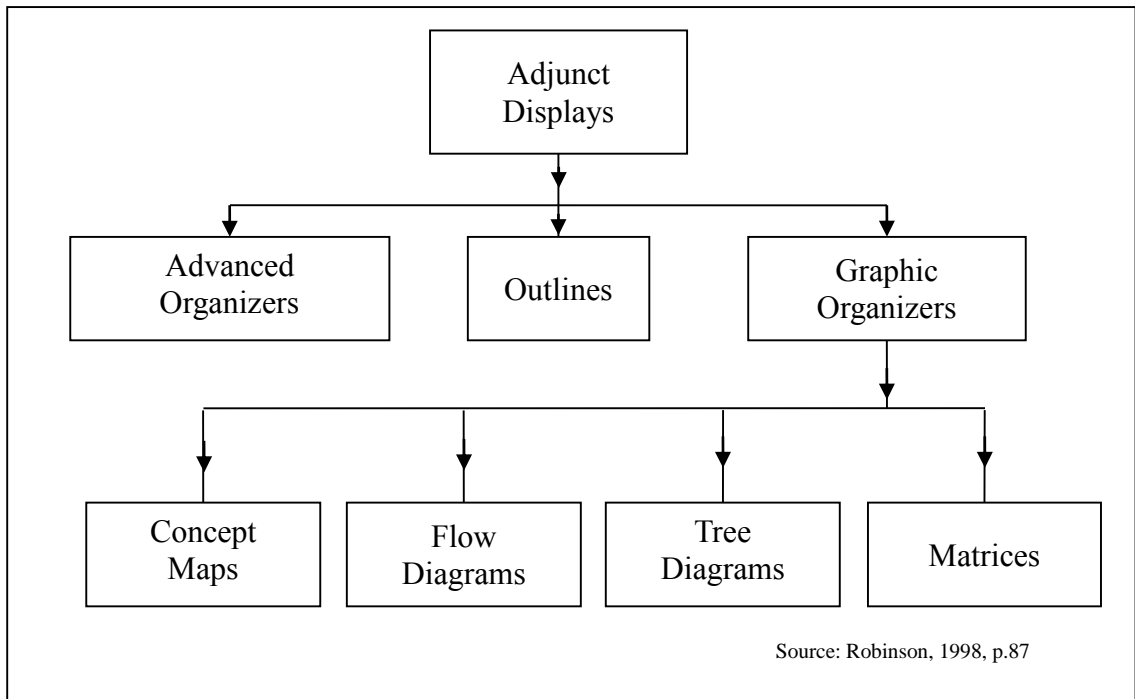


Figure 2.3: Example of a tree diagram

Figure 2.4 shows a review paper on graphic organizers as an example of a flow diagram.

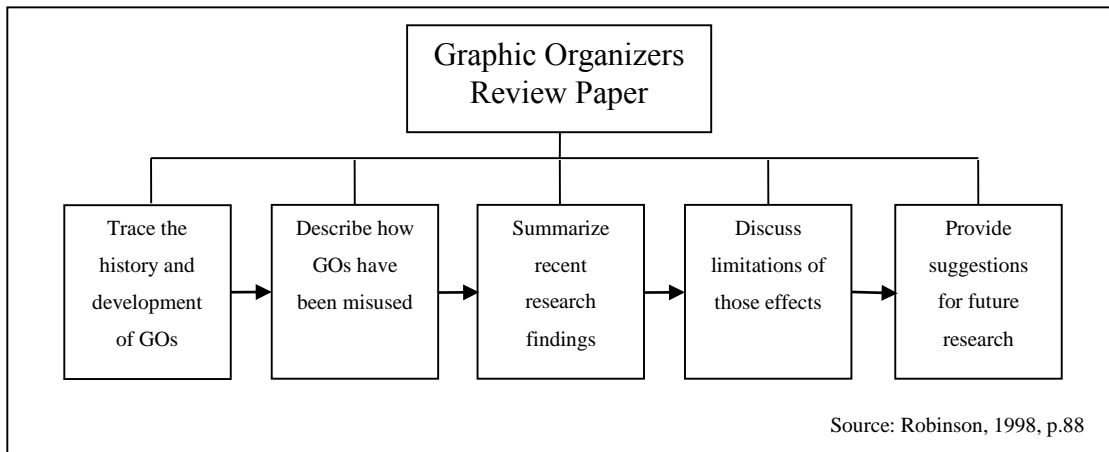


Figure 2.4: Example of a flow diagram

Figure 2.5 is an example of matrix graphic organizers showing the configuration, contents and type of concept.

Type of GO:	Concept Maps	Flow Diagrams	Tree Diagrams
Configuration:	Spatial	Spatial	Spatial
Contents:	nodes(concepts)and labelled links (relations) read in any direction	Concepts and arrows read left to right	Concepts and their subordinate concepts read top to bottom
Type of concept relation shown:	Any that can be labelled	Sequential	hierarchical

Source: Robinson, 1998, p. 88

Figure 2.5: Example of a matrix

Figure 2.6 below is an example of a concept map.

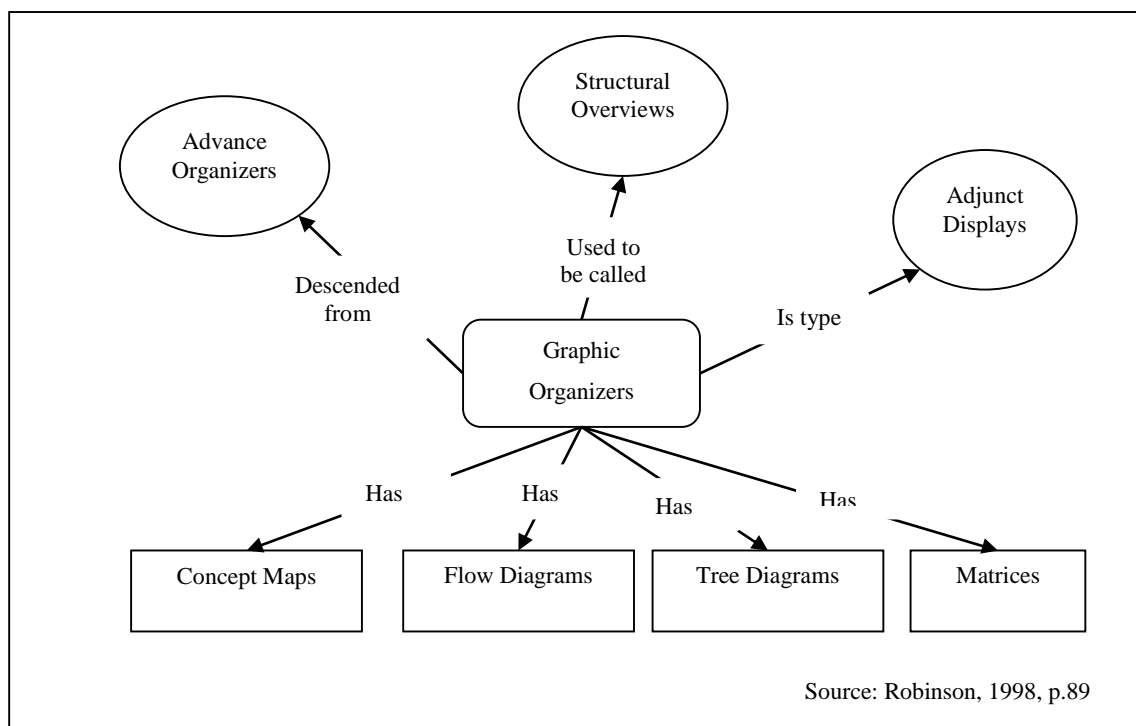


Figure 2.6: Example of a concept map

Since graphic organizers help to ‘map out’ the ideas in a visual way, they are referred to as maps. Graphic organizers in recent years have been applied under different names.

Spider maps, Venn diagrams, and T-charts are some examples of commonly used graphic organizers (Parker, 2006). A wide variety of designs can depict the same basic information structures. For example, many compare/contrast graphic organizers are designed differently; however, they serve the same purpose, which is to reveal a visual frame to the students of how the information is structured. Figure 2.7 illustrates some of these types (Ellis, 2004).

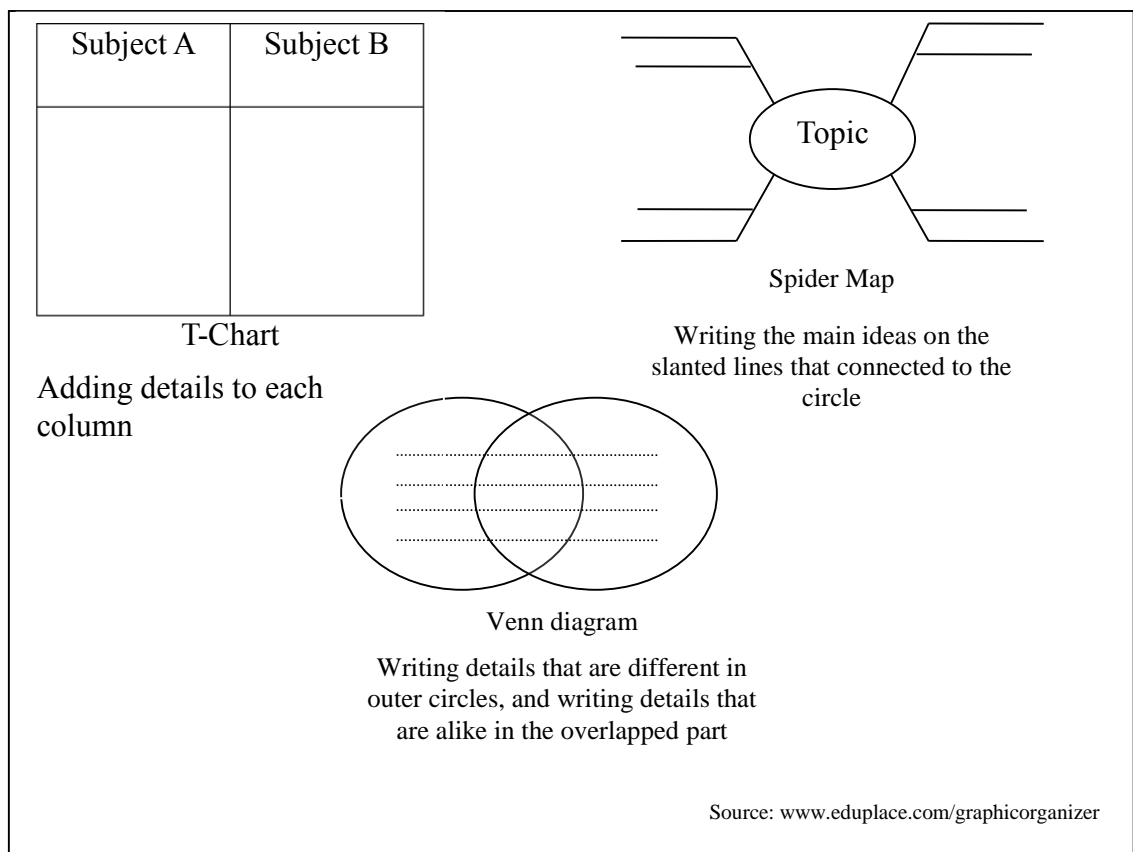


Figure 2.7: Common types of graphic organizers

According to Witherell and McMackin (2005), the development of graphic organizers is based on Ausubel's theory of meaningful verbal learning. The meaningful verbal learning theory states that when learners have little background on introduced materials, their learning will be improved when structured and clear methods for organizing the information are provided to them. These graphic organizers were based on the application of the cognitive theory of meaningful reception learning into practice. Ausubel argued

that the existing knowledge of an individual is an important variable in learning new material in a content area. Hence, his developed hypothesis was that the success in learning new meanings will be achieved when these new meanings are related to information which was previously learned. Moreover, if the existing information has been concisely and clearly organized, it will enhance the new learning. As a result, Ausubel stressed that the learner's existing cognitive structure facilitates the retention and learning process (Griffin and Malone, 1995).

The content, process, or product of a graphic organizer can be modified by the teacher in order to meet diverse learners' needs. Teachers have the responsibility of modifying the product when using tiered graphic organizers (Tomlinson, 1999). Different levels and different kinds of graphic organizers can be chosen to suit diverse students' needs. Indeed, learning can be observed and evaluated through the product where the learners' knowledge can be demonstrated through the products they create (Bender, 2002b). Learners at this stage are shifted from traditional thinking to creative thinking (Drapeau, 2009).

2.4.3 The importance of integrating graphic organizers into the classroom

The notion that students learn through a variety of pathways is supported by current neurological research, as neuroscience has confirmed that the brain is affected by emotion, stress, and physical activity. Graphic organizers hold great promise for use for different kinds of instructional strategies. They are popular because of their ease of use, and they greatly aid visual learners in the classroom, as well as being a helpful means for all learners to organize and review information (Drapeau, 2009).

The main principle of applying graphic organizers to the classroom is the activation of the student-centred approach where the students are given the green light to depend on themselves to create and use their own words while dealing with any kind of graphic

organizers in their tasks (Gallavan & Kottler, 2007). Graphic organizers can be excellent tools to help learners organizing their ideas as well as applying more organized and ordered ways to the content. They give the learners a deeper understanding of all the ideas that surround the original topic (Cochrane, 2010). They help the learners to make sense of information, as they enable them to verbalize relationships between various pieces of information and anticipate new learning by previewing information, and help them to decode information (Merkley & Jefferies, 2001).

Since graphic organizers are considered to be visual models that work as aiding tools and concepts, their usefulness is evident in equipping teachers and students with concepts to organize, understand and apply information. They help students sort, show relationships, make meaning and manage data easily before, during and after the reading and discussion activity (Crawford & Carnine, 2000). According to Gallavan and Kottler (2007), many state curricula require the application of graphic organizers in social studies. When these organizers are used effectively, the student becomes more motivated, demonstrates faster short-term recall, and show greater long-term achievement. Graphic organizers foster students' motivation as they are fun to apply to the lesson and provide variety of choices (Drapeau, 2009). MacKinnon and Deppell (2005) stressed that students who are empowered by using graphic organizers can take responsibility for their own learning. Applying graphic organizers in the class room enables the students to negotiate, personalize meaning, share information with others easily and make group presentations.

Applying graphic organizers in the classroom is one way to improve students' learning and performance (Parker, 2006). Fisher and Frey (2008) stated that these visual tools illustrate visual representations for complex ideas. In fact, graphic organizers can help learners to understand, in a visual way, how complex ideas are organized in a text. The next step in learning is for them to apply this structure to their own ideas. Moreover, organizers offer solid representations for structuring abstract ideas and help learners to

notice the hierarchy or sequence of ideas (Fountas & Pinnell, 2001). Graphic organizers help learners to ‘chunk’ information by prioritizing, sequencing, evaluating, and building on new information. Drapeau (2009, p. 7) stated that “without the ability to structure information, the management and retrieval of information can be overwhelming”. Indeed, by using just a few words, learners can clarify concepts, organize ideas and information, and show complex relationships between the elements. Furthermore, graphic organizers give the teachers a clear idea of how their students think (Parker, 2006).

Applying graphic organizers in the classroom does not help only the students. They also supply teachers with techniques which assist them in planning their lessons. In fact, graphic organizers provide teachers with tools for designing curriculum, implementing instruction, facilitating assessment, showing relationships between content and context (Merkley & Jefferies, 2000/2001). Since students have diverse needs in the present-day classroom, teachers have to be capable of designing lessons that meet the requirements for each individual’s needs. Moreover, consistent outcomes for all learners have to be ensured by teachers.

However, teachers suffer from time constraints, which place limits on the amount of individual instruction that can be given (Witherell & McMackin, 2005). Through the use of graphic organizers, these instructional tools enable teachers to identify when and where learners need their assistance (Drapeau, 2009). At this point, the teacher can act fast to solve the problem of where information needs more clarification regarding the topic itself, changing the layout of the graphic organizer to another mode, or discussing with the learner how to express the answer using limited words. According to Wills and Ellis (2010), the problem for those students who experience difficulties in understanding graphic organizers usually does not reside in an innate cognitive disability that prevents success. Rather, the problem arises when the students do not learn how to read and understand these graphics. Moreover, poorly designed graphics could be confusing to the

students. Research has shown that unclear graphic organizers are not effective instructional tools (Boyle & Yeager, 1997; Egan, 1999). Hence, it is important that teachers choose and apply a clear and straightforward graphic organizer to facilitate the learning process for the learners. Further, unclear relationships shown by graphic organizers will limit and affect instructional benefits. In fact, the learners could be confused by poorly constructed graphic organizers and become disorganized in understanding new concepts (Robinson, 1998). Therefore, considering the objectives of the lesson and paying attention to the strategies to reach these objectives are the teachers' responsibility where they can decide which graphic organizer to use with all, some or even individual learners (Drapeau, 2009).

Both teachers and researchers have found that applying graphic organizers is beneficial for students' learning. This advantage is not considered in terms of making learning more interesting and varied alone, but it also increases the students' ability to retain and recall (Parker, 2006). The Institute of Advancement of Research in Education (2003) stated that learners who applied graphic organizers showed improvement in overall achievement and in specific content area. Moreover, the time that is spent in individual instruction will be minimized and spent on more useful activities in the class.

2.4.4 Graphic organizers and writing

Graphic organizers are vehicles which target critical and creative thinking, which can help in developing learners' cognitive abilities. Moreover, learners can process their thinking about the content they are dealing with, by applying the formats provided by using graphic organizers. In addition, graphic organizers enable teachers to identify the process of a student's thinking, because they can pinpoint the areas where learners' thinking is illogical, unclear or weak. Furthermore, they can provide a deeper understanding of the content, which teachers try to convey.

According to Parker (2006), when students apply graphic organizers to their writing, the information used in their organizers becomes personal as students use their own words in their task. This also provides students with a unique way to take notes during lectures or in reading tasks. These organizers can help students develop creative ideas, especially if they are combined with brainstorming activity. Moreover, students will benefit by clarifying their thinking. Organizers can also be effective in demonstrating students' understanding of a given topic.

Graphic organizers can improve student achievement. Many studies have revealed that applying graphic organizers in writing classes, for instance, improved their level (Drapeau, 2009). According to Reiss (2005, p.75), "the graphic organizer allows ELL [English Language Learners] students to give a maximum amount of information with only a minimum amount of language". In other words, using this technique allows the learner to talk about content information without having language barriers, which interfere with communication. Graphic organizers help writers keep their ideas in front of them while creating the first draft in a piece of writing (Lorenz et al., 2009). Meyer (1995) stated that applying graphic organizers in the pre-writing process in a writers' workshop environment leads to a considerable improvement to all learners. Therefore, introducing a levelled graphic organizer in teaching the writing process will overcome these obstacles. When learners start their exercise at different levels, there will be a gradual, steady progress in their writing.

In addition to enhancing the comprehension skill in students' writing, applying graphic organizers in to the lesson will also enhance other skills. For example, the speaking and listening skills will be improved indirectly when students start the brainstorming process as a pre writing task in the lesson (Fisher & Frey, 2008). According to Egan (1999), applying graphic organizers to the students' activity promotes interaction between them.

The advantage of this interaction is that it helps in socializing English language learners and giving them the opportunity to practise their listening and speaking skills.

If sufficient emphasis is placed on teaching students how to use graphic organizers strategically, there will be an improvement in students' achievement tests. Although there may be no immediate improvement, there is likely to be improvement over time. Hence, students will achieve better scores when they know how to apply the graphics to structure their ideas in their pre-writing process (Wills & Ellis, 2010).

2.4.5 Graphic organizers and learning theories

Graphic organizers facilitate the comprehension process. Since comprehension is considered to be the ability to understand and derive the meaning from the text and requires learners to organize strategies when they do not understand, graphic organizers facilitate this process as they enable the learner to be consciously aware of what needs to be done in order to support his/her own learning, planning and executing the strategies, then reflecting on their effectiveness (Fisher & Frey, 2008). As a process, graphic organizers connect several pieces of isolated information. The new information is filed into an existing framework. In this process, the old information is retrieved and the new information is attached. By using those organizers, students can make connections and absorb new information into what they already know. In fact, students are provided with a mental filing cabinet where they can store and retrieve their knowledge easily. The idea of applying graphic organizers is based on the idea of understanding how the brain works. According to the educational neurological research, the brain tries to identify patterns in order to make meaningful information (Parker, 2006).

Olsen (1995, p.5) stated that "From brain research we have come to understand that the brain is a pattern-seeking device in search of meaning and that learning is the acquisition of mental programs for using what we understand". The information is stored in the brain

similarly to the way in which graphic organizers show information. In this way, a large amount of information is screened. Then, it finds patterns which link this information together. By doing this, it is easier for the brain to extract the meaning from a visual format, such as a graphic organizer, than from searching for the meaning and the relation in a normal text (Parker, 2006).

Teaching techniques and learning strategies played an essential role in enabling the learners to achieve this satisfactory level in writing where they have focused on how the brain processes the information. Since graphic organizers are effective in this process, it was effective to apply them into the classroom (Wills & Ellis, 2010). In 2003, the Institute for the Advancement of Research in Education (IARE) issued a review of the research on graphic organizers and their relationship to learning. In fact, there is more than one cognitive theory that enhances the idea of applying graphic organizers into the classrooms in order to help the students processing and retaining information. Examples of theories that provide the fundamentals for explaining the graphic organizers characteristics which support the learning process are the schema theory (Dye, 2000), the dual coding theory (Marzano et al., 2001), and the cognitive load theory (Adcock, 2000). They are discussed as follow:

2.4.5.1 Schema theory

Schema theory considers the memory as composed of a network of schemas. A schema is “a knowledge structure that accompanies or facilitates a mental process” (Wills & Ellis, 2010, p.2). A schema is a structure that is organized. It is located in the memory and combined with other schemas in which contain the sum of an individual’s knowledge. It contains nodes and links which illustrate the relation between the node pairs. Schemas are also dynamic. This means that learning new information causes a formation of new schemas (Winn & Snyder, 1996).

The use of graphic organizers can help students link the existing knowledge organized in schemas to new knowledge (Institute for the Advancement of Research in Education, 2003). Dye (2000, p.72) stated that “the graphic organizer has its roots in schema theory”. Therefore, when students learn new materials, they should be able to retain these materials for later use. The brain stores information in a scaffold hierarchy way of organizing information (Wills & Ellis, 2010). Slavin (1991) held that based on this hierarchy of organizing information, people encode, store and retrieve the learned information. So, when a piece of information has been absorbed into student’s schema, it will be more easily understood, learned and retained than information that does not. The teacher has a great responsibility to make sure that the students have the required prior knowledge which associates to the concept. As a result, it will be easy for the students to make connections between prior knowledge and new concepts with the help of the teacher.

According to this process, graphic organizers ease the route of linking new information to existing knowledge. They help the students to make the needed schema in order to understand new concepts (Guastello et al., 2000). So, activating the prior knowledge will enable the schema to provide a framework which participates in improving learning and comprehension.

2.4.5.2 Dual coding theory

The second type of theories that support the effectiveness of applying graphic organizers into the classroom is the Dual Coding Theory. Paivio (1986) assumed that the memory of dual coding, while processing information, consists of two separated but integrated systems. On one hand, the first system specialized in processing non-verbal imagery and on the other hand, the other one is specialized in dealing with language. Since each system can work alone, there are connections between the systems that allow for information dual coding. These systems are identified as visual and verbal systems. The visual system is responsible for storing and processing images, while the verbal system is responsible

for processing linguistic information (Pavio, 1986). According to Marzano et al. (2001), when students use both forms more and more, they will be able to be better in thinking about and recalling information.

The dual coding theoretical foundations have explicit implications on the use and value of graphic organizers as they “enhance the development of non-linguistic representations in students and therefore, enhance the development of that content” (Marzano et al., 2001, p.73). By attending to both formats (which is relatively easy to do through the use of graphic organizers), information is easier to retain and recall (Institute for the Advancement of Research in Education, 2003).

2.4.5.3 Cognitive load theory

Cognitive load theory is the third theory that relates to graphic organizers. According to Adcock (2000), cognitive load is the amount of mental resources that are necessary to process information. The cognitive load theory considers that the working memory can deal with only a limited amount of information. This information could be lost if it exceeds the memory’s capacity.

One way to reduce the cognitive load and allow more of the working memory to attend to learning new material is the use of visual learning such as graphic organizers (Adcock, 2000). It results in addressing more sophisticated and complex levels of content through the use of graphic organizers (Wills & Ellis, 2010). Graphic organizers, if used appropriately, can help reduce the cognitive load and, consequently, allow more resources (working memory) to be devoted to learning new material (Institute for the Advancement of Research in Education, 2003).

2.4.6 How are graphic organizers classified?

Graphic organizers can be classified according to their many different approaches to organizing information. For example, they can be identified according to their approach

for arranging information, either as cyclical, sequential or hierarchical (Bromley et al., 1995), since teaching these thinking and reasoning skills is critical to the achievement of the student (Futrell, 1987; National Science Board Commission on Precollege Education in Mathematics, 1983; National Education Goals Panel, 1991). However, to discover the best way of understanding how thinking and reasoning should be taught, Marzano and Pollack (2001) analysed a study by Kendall and Marzano (2000) looking at national standards across content areas to identify what skills were used in multiple standards. As a result, they identified the following thinking and reasoning skills: 1) Identification of similarities and differences; 2) Problem solving and troubleshooting; 3) Argumentation; 4) Decision making; 5) Hypothesis testing and scientific inquiry, and; 6) Use of logic and reasoning.

Therefore, in order to support the learners' critical thinking skills, graphic organizers are designed and associated with five verbs: assume, infer, analyse, prioritize, and judge. To encourage the learners' creative thinking skills, graphic organizers use four other verbs: brainstorm, connect, create and elaborate. These verbs are considered to be cognitive organizers, since they are responsible for directing the learners to think about the content they are writing about, both creatively and critically, as well as producing a piece of information in an organized way (Drapeau, 2009).

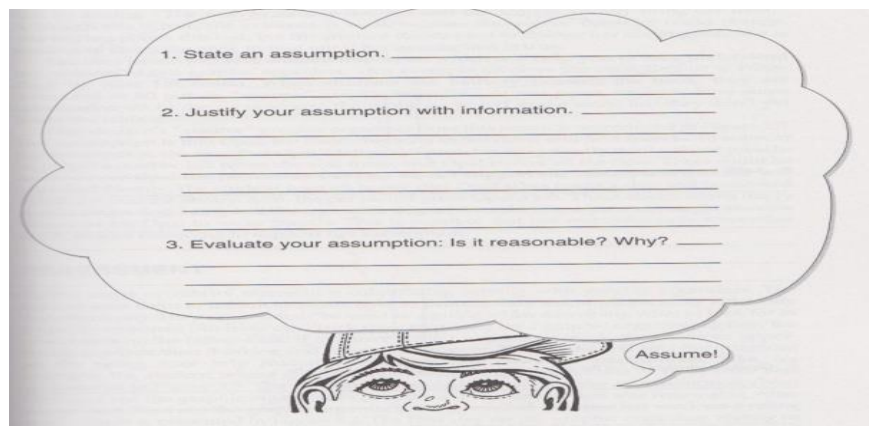
2.4.7 Types and examples of graphic organizers

Teachers have the choice of a variety of types of graphic organizers to suit their instructional needs and the needs of the students. They are categorized according to their purpose in learning (Gallavan & Kottler, 2007). Each organizer is related to a list of vocabulary associated with each type of organizer; therefore, identifying the appropriate vocabulary will facilitate finding the most suitable organizer to be applied and completed in the task. Drapeau (2009) used nine verbs that are linked to the thinking and reasoning skills which were identified by Kendall and Marzano (2000). These verbs include five

critical thinking skills and four creative thinking skills. The first group of verbs associated with critical thinking skills is Assume, Infer, Analyse, Prioritize and Judge.

For decision-making and argumentation, the “Assume” graphic organizer can help learners to sort out their viewpoints and perspectives. It also helps in identifying important decisions which to be made. The term ‘assumption’ was described by Paul and Elder (2001) as part of our belief system. We see the world from only one angle when we assume that our beliefs are true. When assumptions are identified in students’ thinking, they become aware that both conscious and unconscious assumptions influence their decision making and viewpoint.

Figure 2.8 illustrates one kind of graphic organizer, the “Thought Bubble”, which is appropriate for dealing with assumptions. First, students have to state their assumption when they list an assumption or what they believe as true. Then, they have to justify the assumption by verifying it with information or data. Finally, the evaluation process comes where conclusions are made regarding the assumption.



Source: Drapeau, 2009

Figure 2.8: Thought bubble graphic organizer (Assume)

Gallavan and Kottler (2010) made the use of the assumption organizer by relating this organizer to the lesson itself. The Coat of Arms Organizer, Figure 2.9, was applied to the history class where it enhanced the students’ understanding about a complicated issue. The purpose here is to show and write what the students know about the topic and what

they need to know. This Coat of Arms is divided vertically to facilitate and enable history students to visualize and understand the complex and complicated information in their lesson. They can record with their teacher what “information they know” in the left side, and “information they want to know” in the right side (Gallavan & Kottler, 2010). This is a clear example of using an organizer that matches the real environment and enables the learners to live in the same situation.

Coat of Arms: History Class	
Information we know	Information we want to know
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

Source: Adapted from Gallavan & Kottler, 2010

Figure 2.9: Assume and anticipate

Inference is the second skill that helps students to construct meaning since it is a type of conclusion based on facts or assumptions. The purpose of the inference process is to build students’ reasoning skills. It assists the students in gaining a greater understanding of the viewpoint and makes logical connections with strong comprehension skills. Figure 2.10 shows one kind of graphic organizer, “Paint Jars”, that is appropriate for dealing with inferring. First, students have to identify the facts. Then, they provide prior knowledge by adding what they know from the context. Finally, they make an inference by drawing possible conclusions or consequences.

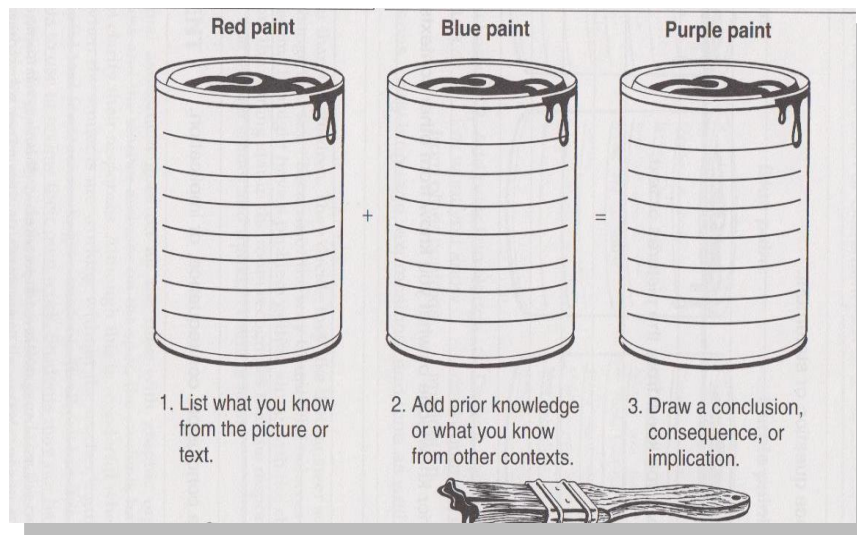
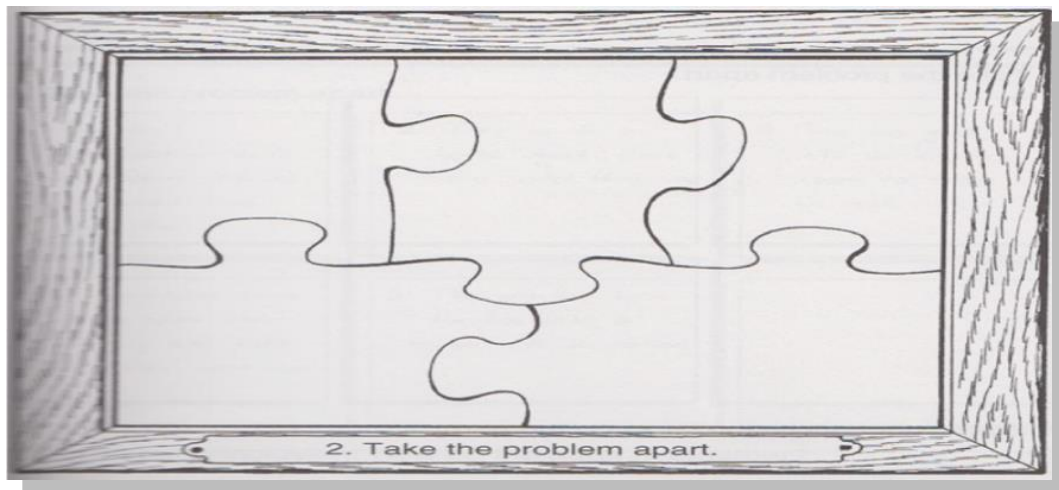


Figure 2.10: Paint jars organizer

Learners will benefit from the "Analyse" graphic organizer when they need to differentiate between parts of a problem. When students begin to analyse, they start looking for patterns and ‘chunks’ of information. Naturally, the brain tries to find meaning by forming patterns (Michalko, 1998). By knowing how to analyse the information, students can prioritize the details by its importance and therefore narrow down what they want to remember. Therefore, when they know that the parts of the text can be divided into many sections based on characteristics, actions, details, events, causes/effects and so forth, this helps them students grasp the potential of listing parts to form connections. Accordingly, logical conclusions will be created by the students.

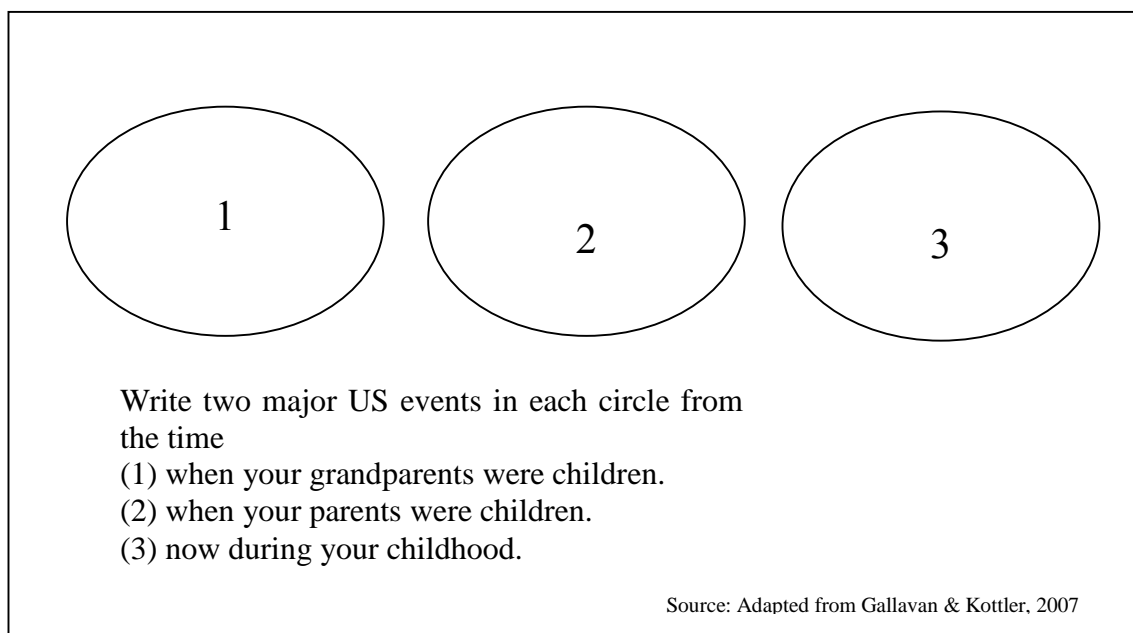
Figure 2.11 demonstrates one kind of graphic organizer, the “Frame Puzzle”, which is appropriate for dealing with the analysis process. First of all, students have to identify the problem, issue or concern. Then, they break the information into parts. After that, collecting the data and seeking the relationship. Finally, conclusions are drawn as to how the parts serve the overall problem, issue, or concern.



Source: Drapeau, 2009

Figure 2.11: Frame puzzle graphic organizer (Analyse)

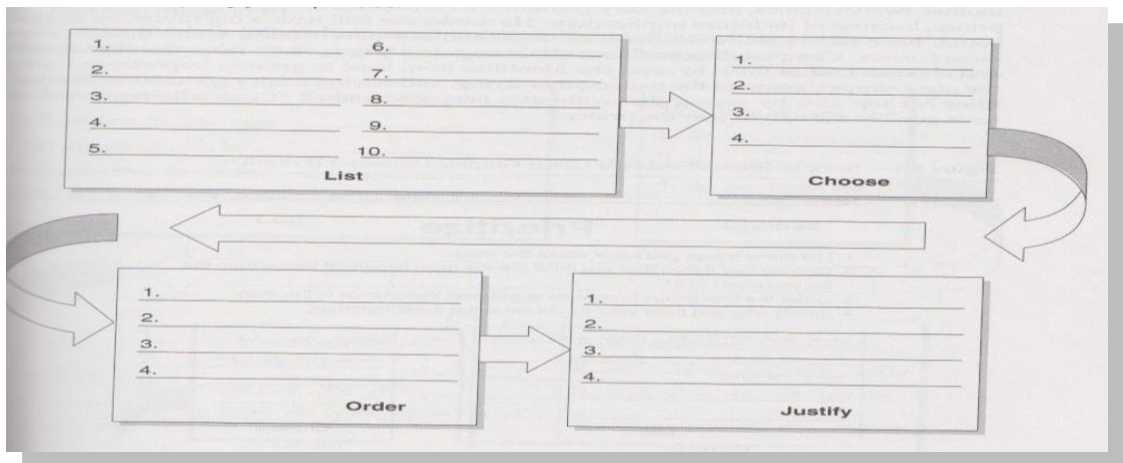
Some researchers have used the same concept with different terms. When there is a need to understand how an idea or item is associated with an overarching concept or purpose, the “Group and Organize” organizer is useful (Gallavan & Kottler, 2007). Figure 2.12 shows an example of this kind of organizer with its task.



Source: Adapted from Gallavan & Kottler, 2007

Figure 2.12: Group organizer (Group and Organize)

Prioritizing is applied when there is need to arrange events, items or ideas in relation to a factor of influence. It is a type of evaluative activity. It helps the students to sort through ideas, organize them and arrange them in order. When students think that everything is important and have difficulties in making decisions, graphic Prioritizing organizers can narrow down the field of ideas and make them to focus on key ones. Figure 2.13 illustrates one kind of graphic organizer appropriate to dealing with prioritizing. First, students have to brainstorm ideas or facts. Then, they eliminate these ideas or facts by narrowing down the list, and then they choose the top four preferences. After that, they sequence the ideas by ordering them from greatest to least. Finally, they justify their selections.



Source: Drapeau, 2009

Figure 2.13: Linear graphic organizer (Prioritize)

Similarly, the “Estimate and Evaluate” organizer was used by Gallavan and Kottler 2007. This type of organizer aims to explain and differentiate an idea or a different perspective related to both content and process. Figure 2.14 shows an analysis chart where students, for example, can describe four ways in how a town makes money.

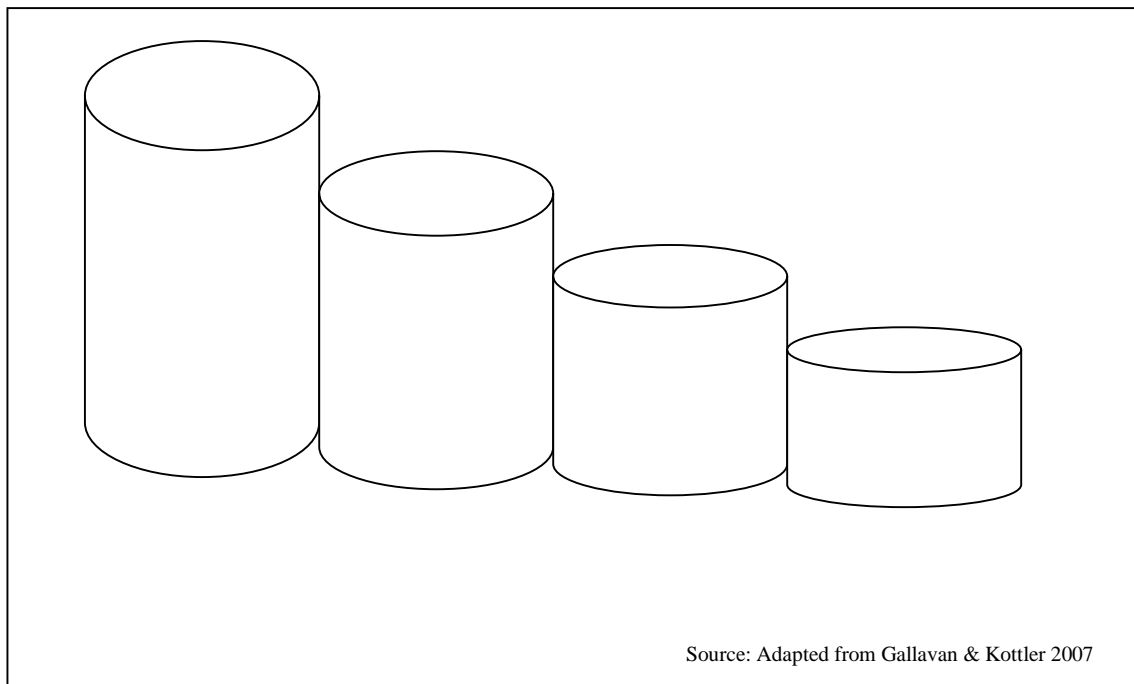


Figure 2.14: Estimate and evaluate graphic organizer

The "Judge" graphic organizer is helpful for the tasks that involve logic and reasoning. The aim here is to prevent students from becoming victims of faulty judgements based on insufficient or unconscious thought. Students have to make their judgments when they make decisions, solve problems, or analyse information. Applying graphic organizers enable the students to use a conscious structured process. This ensures the application of critical thinking when there is a judgment or justification by the students. When students practice making quality judgements, they become more effective evaluators. Figure 2.15 shows one kind of graphic organizer appropriate to dealing with judgment. First of all, students have to make a belief statement. Then, they list the reasons or evidence for the statement with their sources. After this, they summarize these reasons or that evidence. Finally, the belief statement is modified or verified.

I believe _____

Reasons:

--	--	--	--

Sources:

--	--	--	--

In summary, the reasons or evidence show _____

Therefore, I judge _____

Figure 2.15: Linear graphic organizer (Judge)

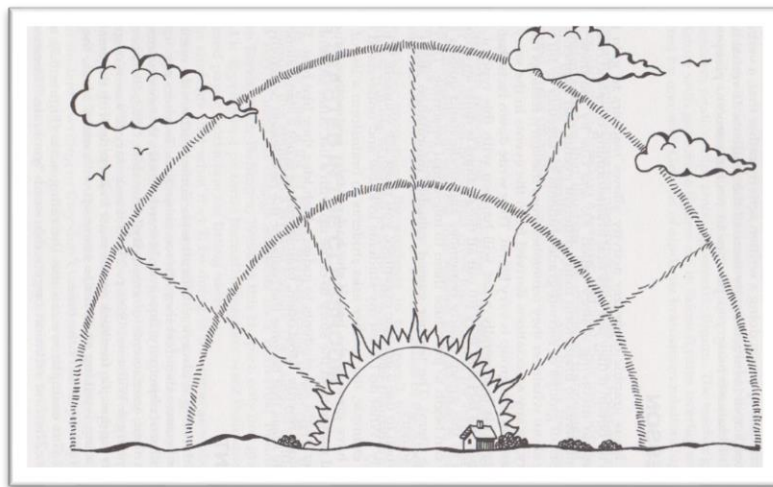
Source: Drapeau, 2009

The second group of verbs associated with creative thinking skills is Brainstorm, Connect, Create, and Elaborate.

When the focus is on problem solving and troubleshooting, teachers can make use of the "Brainstorm" graphic organizer, which helps the learners to generate their own ideas. The students are expected to call on content knowledge, generate more ideas related to the content, and extend these known ideas. Since this ability is contextual, generating ideas depends upon the context of the situation and the content information that is needed by students to produce responses. Brainstorming aims to enable the learners to see options and possibilities. It helps them to not feel limited by the first idea which comes to mind (Drapeau, 2009).

Figure 2.16 gives an idea about one kind of graphic organizer, the "Rainbow of Ideas", that is useful in dealing with brainstorming. First, students have to list their ideas in

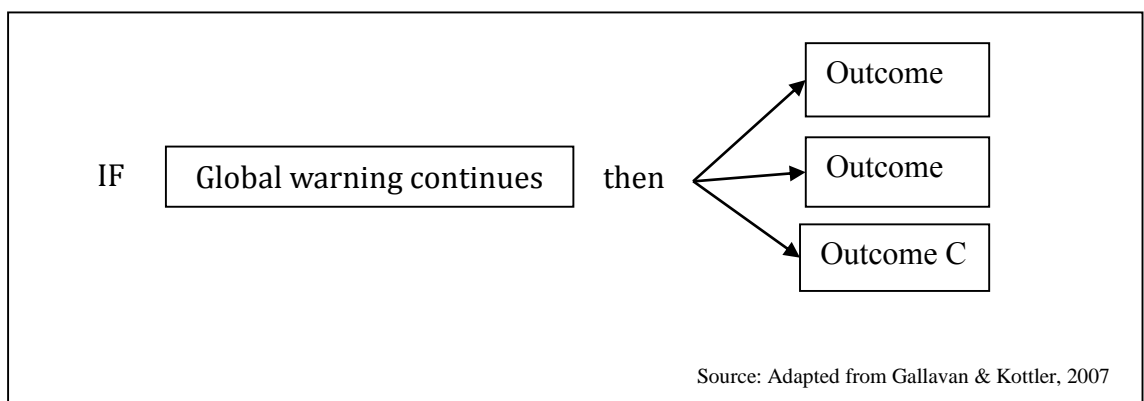
response to a specific prompt. They then begin to list more ideas by piggybacking on the responses of others. This process will continue until they have exhausted all possibilities.



Source: Drapeau, 2009

Figure 2.16: Rainbow of ideas graphic organizer (Brainstorm)

Gallavan and Kottler (2007) worked with similar graphics. They used these when the aim was to check and see how one idea was related to another in a particular order and to see how a particular pattern occurred and reoccurred in different applications or contexts. This type of organizer is a helpful way for both teachers and students to carry out these tasks. Figure 2.17 shows how a learner can visualize cause and effect by formatting a set of words in a time line or chain sequence.



Source: Adapted from Gallavan & Kottler, 2007

Figure 2.17: Position and pattern graphic organizer

In addition, the “Identify and Imagine” organizer motivates the students and sparks their creative thinking (Gallavan & Kottler, 2007). It is useful and helpful for students when they need to name, describe, brainstorm and extend their thinking about related parts of a larger idea. Figure 2.18 shows an example of an organizer which is ideal for recording data and expanding on concepts and skills.

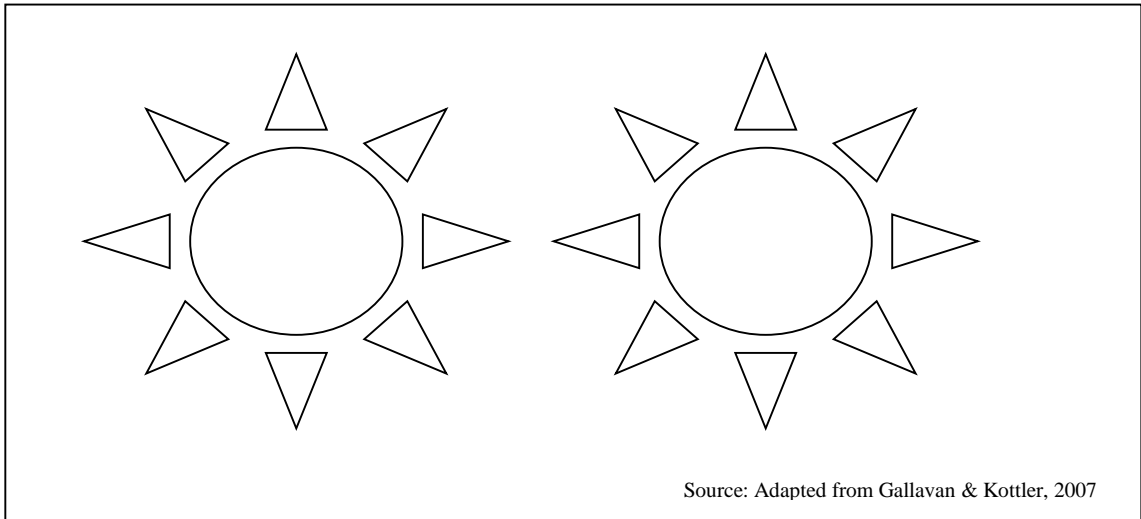


Figure 2.18: Identify and imagine graphic organizer

This illustrates how students get advantage of showing ways to describe and brainstorm. Students in this task are asked to label one sun with major events that have happened in their lives and to label their dreams and goals in the other one.

The "Connect" graphic organizer will be useful to identify similarities and differences. Paul Torrance (1987 cited in Drapeau, 2009) identified the second creative skill as flexibility. This skill allows the students to consider various types of information that affect and associate with given idea. According to Michalko (1998), students can connect anything when their teachers assist them in learning how to make associations between unrelated items.

Gallavan and Kotter (2007) discussed the same concept using different terms. They employed compare and contrast organizers. These are shapes which contain illustrations

of similarities or differences between one particular topic and another. Incorporating this kind of organizer into classroom activity can help the students to compare and contrast while they progress through the unit. They can also show multiple perspectives relevant to their topic. Figure 2.19 shows a diagram which is an example of a compare and contrast organizer.

Task: Describe a holiday in each box that is celebrated by people around the world. At the top and bottom of each box, list two unique ways the holiday is celebrated.

Source: Adapted from Gallavan & Kottler, 2007

Figure 2.19: Compare and contrast graphic organizer

This creative skill requires open minds where flexible thinkers are able to look at options, consider different points of view, and are willing to change their minds. Flexible thinking serves to make unlikely connections. For example, it will be an easy task to connect the idea of planets with the solar system. This connection does not involve in-depth knowledge. On the other hand, the creativity will emerge, for instance, when learners start to make connections between Mars and dog. This helps them to consider a range of ideas and understand different perspectives. According to Maxwell (2003, p.102): “Creative thinkers connect the unconnected, especially to seemingly unrelated ideas”.

Figure 2.20 demonstrates one kind of graphic organizer that suits dealing with connecting (flexibility). First of all, students have to state their problem or focus, idea or situation. Then, they start to make analogies between the variables they obtained. After this, they determine how these connections help them towards a better understanding of the given idea or situation, or help them to solve a problem.

In what way(s) is _____ like _____ ?
an animal

In what way(s) is _____ like _____ ?
a place

In what way(s) is _____ like _____ ?
an object

In what way(s) is _____ like _____ ?
you

Source: Drapeau, 2009

Figure 2.20: Linear graphic organizer (Connect)

The "Create" graphic organizer facilitates bringing the idea to a final result. To create means to produce something. According to Anderson and Krathwohl (2001, p.85):

in create, the student must draw upon elements from many sources and put them together into a novel structure or pattern relative to his or her own prior knowledge. Create results in a new product, that is, something that can be observed and that is more than the student's beginning materials.

According to this definition, creation takes into account many levels of thinking. Students need to involve many processes, such as brainstorming, analysing, evaluating, modifying and elaborating the ideas, before creating a product. This creative thinking skill is identified as originality (Torrance, 1987). The idea behind applying originality while

creating something is to encourage the students to push themselves to think beyond a regurgitated list of facts about content. Teachers can encourage their students to invent and construct their own graphic organizers if they realize that the students do not have the enthusiasm aimed for. It is an alternative choice when one type of organizer does not fit in their practical use in the classroom. This method of applying these kinds of organizer gives teachers and students freedom to express ideas through individualized approaches (Gallavan & Kottler, 2007). Figure 2.21 is an example of the creation of a new graphic.

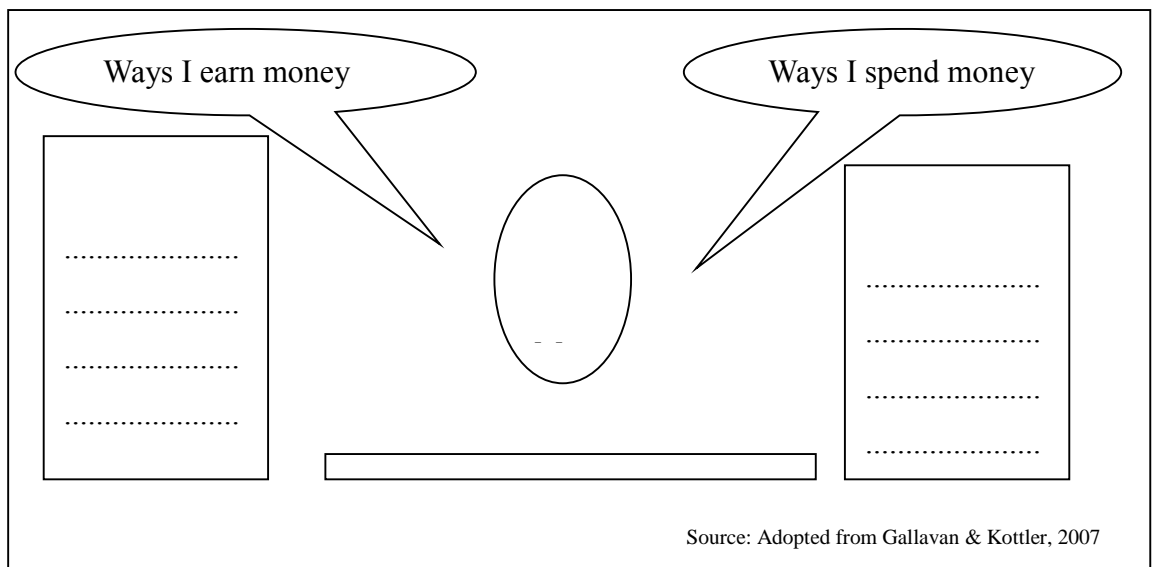


Figure 2.21: Combine and create graphic organizer

Figure 2.22 below illustrates one kind of graphic organizer appropriate for the creative process. This is the Idea Burst. First, students have to state the limiting conditions for their product. Then, they draw their ideas and can create more than one design. After this, they choose their favourite idea or design. Now they can construct their final product and review the construction or choice against their conditions.

1. List the conditions for your creation.

2. Brain-draw your ideas. 3. Checkmark your favorite idea in the star.

★	★	★
---	---	---

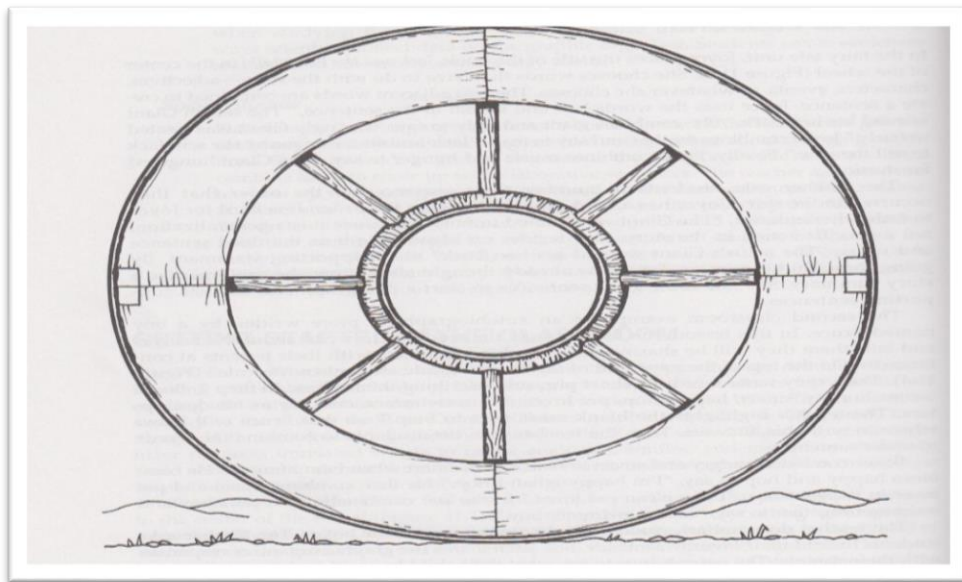
4. List the materials you will need.

Source: Drapeau, 2009

Figure 2.22: Idea burst graphic organizer (Create)

When learners want to develop their ideas, the "Elaboration" graphic organizer will be useful for them. It is helpful when attempting to describe something in detail. When students elaborate on a topic, they deliver further information that provides specificity. This specificity contributes to their depth of understanding. Elaborative thinking aims to extend ideas, embellish details, make more expressive conclusions, promote depth of understanding, and foster communication skills. Practicing elaboration allows the students to use and add more details when answering questions such as "explain why or what". They can elaborate their answer when asked about their opinion or for logical reasons (Drapeau, 2009).

Figure 2.23 demonstrates one kind of graphic organizer, the "Wheel of Words", that is appropriate for the elaboration process. First, students have to state their topic, situation or problem. Then they surround the idea with one-word or short phrase descriptors. After this, they combine two adjacent descriptions to create a sentence. Finally, they classify the resulting sentences.



Source: Drapeau, 2009

Figure 2.23: Wheel of words graphic organizer (Elaborate)

Gallavan and Kottler (2007) used a similar organizer, “Relate and Reason”. It is used when there is a need to make connections and discover more details about a topic, in which case a Relate and Reason organizer will be useful as it places information in a particular sequence. It aims to demonstrate the students’ understanding of inductive and deductive thinking patterns. Inductive thinking provides evidence that supports or promotes major ideas or significant concepts. On the other hand, deductive thinking provides evidence for underlying reasons and related rationale for an inference. Figure 2.24 shows an example of the application of this organizer in a classroom. For example, the students are asked to give the names of the four seasons and provide one example of a related weather event in each arrow.

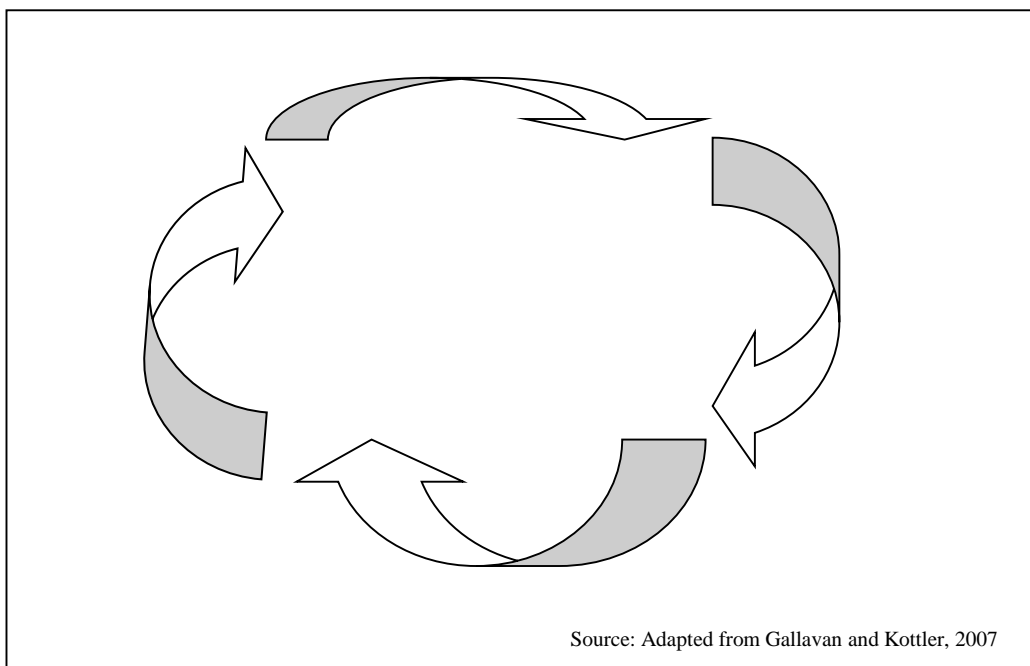


Figure 2.24: Relate and reason graphic organizer

By combining these critical and creative thinking together in a learning process, there will be more articulated, thoughtful and creative outcomes. In fact, making the students think outside the box will enhance their critical and creative thinking and lead to better products.

2.4.8 Previous studies in applying graphic organizers into writing

2.4.8.1 *What did these studies try to do?*

Researchers have examined the use of graphic organizers to improve students' writing in different situations. In the United States, Meyer (1995) aimed to discover whether there would be any significant difference in test scores between students instructed in the use of graphic organizers in their creative writing and those who had not been instructed in their use. Two third-grade classes were involved in this study. The study was carried out over 13 weeks.

Gallick-Jackson (1997) was looking for improving narrative writing skills, composition skills, and related attitudes by integrating word processing, graphic organizers into a process approach to writing. Eight second grade students from one of the schools in the United States participated in this study over 12 weeks. The researcher used writing tests and surveys as quantitative approach in collecting the data.

In Canada, Brennan (2006) examined the potential for mind mapping, concept mapping and graphical representation software, such as Inspiration™, for improving the writing skills of distance learners. Brennan assumed that the use of concept maps, mind maps and computer software could be an effective way to overcome some of the difficulties distance education students encounter when trying to improve their writing skills. Over a three-month period, the study aimed to answer one of his questions, "How can distance education teachers use mind-mapping, concept-mapping and graphic representation software such as Inspiration™ to improve student writing?"

A similar study was carried out in the United States in 2006 by Esmat to investigate how the teaching of an organizational checklist and graphic organizer affected struggling second grade students in their informational writing. For six weeks, the researcher focused on teaching the students how to organize their writing more effectively by using

the “Step Up to Writing” approach. This approach was applied in the school to help English language learners to improve their writing skills. The idea was to combine the effectiveness of checklists with a writing program, which helped the students to organize their writing.

Another study was conducted in the United States by Sharrock (2008) to study the effects of one kind of graphic organizer, a concept map, on students’ writing. Pre-post students’ samples were examined as a quantitative method. The study was conducted over a 6-week period. Twenty-one students in third grade participated in the study.

Darunee Dujsik (2008) conducted research in the United States about the effects of computer-based pre-writing strategy training on intermediate ESL students’ writing strategy use, writing quantity, and writing quality by training the participants to generate and organize ideas using Inspiration 6, an idea graphic organizer software program. Forty-one students from intermediate-level writing classes participated in the study. They were in an intensive English ESL programme at university. A sequential mixed methods design was adopted in the study as a quasi-experiment, with pre- and post-tests followed by semi-structured interviews. Over six weeks, the experimental groups were trained to use pre-writing strategies related to the purpose and audience for writing, generating ideas via brainstorming, and organizing ideas during the planning stage of writing. In addition, the experimental groups were also trained to use Inspiration 6 as an idea generating and organizing tool.

Powell (2009) conducted a two-week project to examine the implementation of a T-chart graphic organizer in students' thesis statement writing, in order to improve the structure and organization of the students' historical, persuasive essays. The purpose was to determine if explicitly teaching students how to write thesis statements and use a graphic organizer to structure their thoughts before they began writing would improve the

structure and organization of their historical essays. The study was based on pre- and post-tests as a method to measure the students' achievement level after applying the graphic organizers to their writing. Moreover, a series of observations and surveys were conducted at the same time for better triangulation of data, and the results of these supported the findings of the studies.

Another study was carried out by Alshehri 2010 to investigate the effectiveness of graphic organizers on improving the writing skills of college students of EFL. Over four consecutive weeks, 20 female students in an intensive course programme at Imam Muhammad Ibn Saud Islamic University participated in this study.

The following table provides a summary of information about each study.

Table 2.4: Summary of previous studies about graphic organizers

	Researcher	Year & place	Sample	Period	Method
1.	Meyer : Would be there any significant difference in test scores with and without the use of graphic organizers in students writing	1995 United Stated	?? Two - Third grade classes	13 weeks Each day after	Quantitative Pre-post tests
	Findings	Limitations		Recommendations	
	<ul style="list-style-type: none"> improvement in students' creative writing GO helped to make the students' writing in a sequence order 	<ul style="list-style-type: none"> Short term of the study 			

	Researcher	Year & place	Sample	Period	Method
2.	Gallick-Jackson: Improving Narrative writing skills, Composition skills, and Related Attitudes by integrating word processing, graphic organizers into a process approach to writing	1997 United States	8 second grade students	12 weeks	Quantitative Pre & post writing test Pre & post survey
	Findings	Limitations		Recommendations	
	<ul style="list-style-type: none"> • 75% of the students showed improvement in narrative writing skill by at least one proficiency level. • 25% of the students showed improvement in narrative writing skill by at least two proficiency level. • 50% of the students increased their writing composition by at least one proficiency level. • 50% of the students increased their writing composition by at least two proficiency level. Improvement in positive attitudes toward writing by 100%.	<ul style="list-style-type: none"> • Integrating GO into writing process approach increase time constraints. • Frequent interruptions, overloaded curricula 		<ul style="list-style-type: none"> • Combination of strategy instruction and a process approach maybe more effective than either approach in isolation. • Workshops for teachers to practicing the integration of GO into writing. • Teachers need to provide students with the time to write regularly. 	
	Researcher	Year & place	Sample	Period	Method
3.	Brennan: examined the potential for mind mapping, concept mapping and graphical representation software for improving the writing skills of distance learners	2006 Canada	7 students in grade 2 & 3	12 weeks	Qualitative Action research Pre & post surveys & writing samples

	Findings	Limitations		Recommendations	
	<ul style="list-style-type: none"> Improvement in students' writing GO affected their attitude positively 	<ul style="list-style-type: none"> Could not meet his students = no interview which could allow for deeper triangulation Short timeline available Small number of sample 		<ul style="list-style-type: none"> Applying the use of GO into students' writing among the school. Encouraging the teachers to utilizing GO. Teachers need training in how to use & apply GO 	
	Researcher	Year & place	Sample	Period	Method
4.	Esmat: investigated how the teaching of an graphic organizer affects struggling second grade students in their informational writing	2006 United States	4 cases in second grade class: one of them is a second language learner	6 weeks	<ul style="list-style-type: none"> Pre & post writing assignment Surveys observations
	Findings	Limitations		Recommendations	
	<ul style="list-style-type: none"> the use of GO increased the students writing scores students became more organized with their writing they can focus on the given topic 	<ul style="list-style-type: none"> time was a very big restriction a variety of graphic organizers could not be used 		<ul style="list-style-type: none"> Allowing adequate time Applying more than one kind of GO in future 	
	Researcher	Year & place	Sample	Period	Method
5.	Sharrock: the effects of one kind of graphic organizers on students' writing	2008 United States	21 Third grade	6 weeks	Quantitative Pre-post samples

	Findings	Limitations		Recommendations	
	<ul style="list-style-type: none"> improvement in students' creative writing students show more growth in writing 	<ul style="list-style-type: none"> interference with instructional time interruptions in the schedule 		<ul style="list-style-type: none"> change the variety of concept maps that I used during the lesson giving the students more time to explore with the maps implementing graphic organizers into writing class 	
	Researcher	Year & place	Sample	Period	Method
6.	Darunee Dujsik: The Effects of Pre-Writing Strategy Training Guided by Computer-Based Procedural Facilitation on ESL Students' Strategy Use, Writing Quantity, and Writing Quality	2008 United States	41 second language learners	6 weeks	Mixed method: <ul style="list-style-type: none"> quasi experiment pre-post test semi-structured interview
	Findings	Limitations		recommendations	
	<ul style="list-style-type: none"> a significant training impact on ESL students' pre-writing strategy use. a trend of improvement regarding the writing quality variables was detected among the strategy-trained students 	<ul style="list-style-type: none"> 19 student in the control group. 22 in the experimental group Different academic back ground. Different English learning period: from 3 years to 15 years. 		<ul style="list-style-type: none"> Reputation with using larger samples in order to detect a significant difference between groups. control for individual differences, such as gender, past writing experience 	
	Researcher	Year & place	Sample	Period	Method
7.	Powell: examined the implementation of a T-chart graphic organizer in students' thesis statement writing	2009 United States	28 students in tenth grade class among them 12 ELL	2 weeks	<ul style="list-style-type: none"> pre- and post-tests series of observations surveys

	Findings	Limitations			Recommendations
	<ul style="list-style-type: none"> no significant improvement regarding the structure and organization scores of students there was evidence of an improvement in students' attitude telling the students about their needs and the aim of the task raise their spirits 	<ul style="list-style-type: none"> not much time being spent on teaching the students about T-charts teaching T-chart and the curriculum at the same time there were no any previous experience about the topic for the post test 			<ul style="list-style-type: none"> spending more time on T-chart
	Researcher	Year & place	Sample	Period	Method
8.	Alshehri: investigated the effectiveness of graphic organizers on improving writing skills of English Foreign Language college students	2010 Saudi Arabia	20 female Second Language Learners	4 weeks	Quantitative statistical method Pre-post tests
	Findings	Limitations		Recommendations	
	<ul style="list-style-type: none"> graphic organizer method proved to be more effective in improving English as a foreign language (EFL) writing skills of the female students than the traditional methods improvements in generating ideas, brainstorming, and organizing ideas 	<ul style="list-style-type: none"> The time available to teach the new method to the experimental group was limited The number of the students was limited, as students were not attending the classes regularly 		<ul style="list-style-type: none"> writing teachers should shift their attention from teaching for and assessing products to teaching and assessing the processes that students employ in their writing. integrating more than one method/strategy is more effective than adopting one method/strategy in teaching writing subsequent studies will offer additional evidence for its effectiveness with different teachers and student populations 	

2.4.8.1.1 Findings

These studies revealed many factors that affect the writing skill. Students' attitude, their understanding and their coherence were affected positively by applying graphic organizers in their writing. Meyer (1995) found that by comparing the mean scores of

both the experimental and control samples, the experimental sample achieved higher scores than the control sample. Meyer stressed that there was an improvement in students' creative writing. Moreover, applying graphic organizers helped in making the students' writing in a sequence order.

In addition, Gallick-Jackson (1997) reported that of the second-grade students who utilized graphic organizers, 75% increased their writing skills by one proficiency level, and 25% increased by two levels. The results revealed from the pre and post tests showed that the students' organization, focus, development and response to task skills improved. The two graphic organizers which were presented to the targeted group successfully helped them in developing their thinking processes as well as their ability to organize ideas in a logical way within their topic. The graphic organizers helped in improving the quality and quantity of the students' writing and motivated them to learn.

Brennan (2006) confirmed that all students who participated in the study saw an improvement in their writing skills, as measured by the British Columbia Performance Standards for Writing. In fact, employing graphic organizers in the writing process appears to influence students' attitude toward their writing in positive ways. The students showed key qualities of meaning, style, form and conventions of writing for each grade level.

Furthermore, Esmat (2006) found that after comparing the results of pre- and post-tasks, which included applying the graphic organizers, there was an increase in students' marks in writing. At this point, an organized piece of written material could be produced by the students, and they were also able to focus on the topic. They were able accurately to transfer the details of the information from the graphic organizers into their writing.

Similarly, Sharrock (2008) showed that applying graphic organizers to students' writing was an effective way to raise their scores. It has a significant influence on their writing since there was an improvement in students' creative writing.

Dujcik (2008) confirmed that training impact on ESL students' pre-writing strategy use was significant. Even though there was a failure to detect the significant effects on the students' writing quantity and writing quality, however, a trend of improvement regarding the writing quality variables was detected among the strategy-trained students. Overall, the findings suggest the complex interplay among the factors influencing student writing development including writing strategy use, writing processes, writing tasks, task conditions, their past writing experience, and their language proficiency.

Alshehri (2010), who used a quantitative statistical method, was satisfied with the results and confirmed that using graphic organizers with the writing activity proved to be more effective in improving second language writing skills in their tests, as well as leading to improvement in generating and organizing ideas, and brainstorming.

On the other hand, while many researchers were satisfied with their findings on applying graphic organizers to writing, others were less satisfied. Powell (2009) found that there was no significant improvement between the baseline data and the post-intervention data regarding the students' scores for structure and organization. However, there was evidence of an improvement in students' attitude, as they felt the T-chart helped them as they commenced their writing. The students were enthusiastic and more likely to complete an assignment when they knew that the assignments had been created to address a specific need that was found in their class. This technique enhanced their motivation and attitude toward their writing. However, their scores still did not improve.

2.4.8.1.2 Limitations

Timing

Different studies revealed that spending more time in teaching graphic organizers to students is recommended. However, mixing the process of learning about graphic organizers with the curricula resulted in poorer outcomes, since it was time-consuming to teach the students about graphic organizers as well as their curricula at the same time. Gallick-Jackson (1997) confirmed that integrating graphic organizers into the writing process approach increased time constraints. Esmat (2006) found time was a very considerable restriction; there was not enough time to go in-depth with lessons. For the same reason, a variety of graphic organizers could not be used. As a consequence, it was difficult to change the graphic organizers or spend more time with students who found it difficult to understand. Sharrock (2008) reported that one of the limitations in his study was the interference with instructional time. It was difficult to spend a specific period of time on the research every day without such interruptions as fire drills, teachers' in-service days and so forth. Powell (2009) referred to the failure in achieving better marks to the fact that not much time was spent on teaching the students about T-charts.

Sample Size

The sample size was a key issue in some studies. One of the limitations in Brennan's study of 2006 was the sample size. He mentioned that some of the parents did not sign the consent for their child to participate in the study. Some students had also moved to another school. Dujsik (2008) obtained quite a good sample size. However, 19 students in a control group is considered as a low sample size in quantitative analysis. Alshehri (2010), with her 28 students who participated in a quantitative research, mentioned that one of the limitations in her study was the number of the students since they did not attend the classes regularly.

Type of sample

Dujcik (2008) conducted a study on second language learners in the United States. They were from different backgrounds. These differences could affect the results since different backgrounds means that the participants came from different contexts in which they were learning second language with different teaching methods. These participants also differed in their duration in learning the language, varying from three to 15 years in learning the language. Thus, their previous experience in learning English as a second language strongly affected their results.

Variety of graphic organizers

There was no kind of variety while dealing with graphic organizers in the classroom. Esmat (2006) referred to one of the limitations in his study in that he could not use a variety of graphic organizers with the participants. Powell (2009) was also working on one kind of graphic organizer, which was the T-chart.

2.5 Summary

The uses of graphic organizers have contributed to facilitating the learning process in general and, as outlined in this chapter, writing skills in particular. It affects students' attitude toward writing skills positively. Students became more motivated to practice writing skills than previously, since graphic organizers add more motivation and fun to the lesson. The students' creativity and imagination are also expanded. With their general overall understanding, they obtain what they seek as students, which is gaining higher marks.

Graphic organizers allow both the teacher and the student to summarize and evaluate the information and put it in visual figures. Graphic organizers are helpful in finding information easily and quickly and they also help students in recalling and recording information, identifying relationships and comprehending concepts. In fact, the use of these versatile organizational tools will not support only students' writing achievement. The teaching process will be more focused, targeted and explicit which in turn will support the student positively.

Despite the limitations that have been found in some studies, the overall results were positive. Furthermore, these limitations did not derive from the graphic organizer *per se*, but were attributable to several external factors, which could be avoided in the future. So, to overcome these limitations; firstly, the researcher will conduct a new study for five weeks on Saudi second language learners at King Saud University. During these five weeks, the researcher will not be determined by any kind of curricula. The participants will learn with their teachers in the class as a normal lesson. Then, the researcher will spend additional time with them to identify the concept of graphic organizers and to give them a piece of time in filling the questionnaire and doing their pre- and post-tests. Secondly, the sample will reach 100 participants to ensure better results and to overcome

any missing data. Finally, three kinds of graphic organizers will be used in the study to reach a wide understanding and achieve variety of these organizers.

The next chapter will discuss the methodology that was applied into this research. A mixed-method approach was taken to examine the usefulness of integrating graphic organizers into writing workshops in the Saudi context.

Chapter 3: Methodology

3.1 Abstract

This chapter illustrates the methodology that was applied to the present research. It shows the kinds of research philosophies utilized and how the present research related to them. In addition, it illustrates how each research question will be answered through a particular tool. Then, it explains the tools that have been used in the research and the reason for applying them in the study. Finally, it demonstrates the piloting procedure while conducting the research in practice.

3.2 Introduction

Each research study is based on a certain method of collecting data. These methods are derived from and associated with the research questions. Thus, the method is the tool for answering the research questions that will deliver the needed data. The use of a qualitative or quantitative method is determined by the research questions themselves. Each method has its strengths and weaknesses. Combining the strengths of both methods in one piece of research will reduce the weaknesses of each. According to Gorard and Taylor (2004), the appropriate combination of these two approaches will result in greater strength.

This chapter illustrates the methodological framework of the study. At the beginning, there is a justification for choosing this approach. Then, we will move to a brief description of the research philosophy. Finally, the research design will be outlined, together with its related aspects, such as method, data analysis and validity.

3.3 Research philosophy

Easterby-Smith et al. (2004) have identified three reasons why exploring research philosophy could be an important step in determining research methodology. First of all, the philosophy could help the researcher specify which research designs to use. It can demonstrate the type of evidence needing to be gathered, ways of interpreting the evidence, and how the evidence answers the research questions. Secondly, learning about research philosophy can also assist the researcher in evaluating different kinds of methodologies and methods. It allows the researcher to avoid unnecessary work by spotting the limitations of particular approaches at the beginning of the research process. Lastly, studying research philosophy may be helpful in enabling the researcher to be creative and innovative in either selecting or adapting methods outside his or her experience.

The research in any context is linked by a series of steps and philosophies. Moving from the research questions to the results, there is a hidden world of which the researcher should be aware. Hitchcock and Hughes (1995, cited in Cohen et al., 2011), suggested that the series of steps within a paradigm are connected and linked with each other where ontological assumptions give rise to epistemological assumptions. As a result, the epistemological assumptions give rise to methodological considerations, and the methodological considerations give rise to issues of instrumentation and data collection (Cohen et al., 2011). Thus, the researcher’s point of view in understanding and viewing the world is the key issue in making the research methods different from each other. Each view centres on a different research paradigm. Guba and Lincoln (1994, p.105) defined the term ‘paradigm’ as “the basic belief system or world view that guides the investigation”. Certain assumptions, such as ontology, epistemology and models of humanity, with their implications for researchers’ methodological concerns, will control and govern research methods (Cohen et al., 2007). These are the positivist and interpretivist paradigms. Each one contributes special features and aspects to the research process. The following table shows the differences between the two paradigms.

Table 3.1: Differences between positivism and interpretivism

Positivism	Interpretivism
Quantitative	Qualitative
Objective	Subjective
Scientific	Humanist
Traditionalist	Phenomenological

3.3.1 Research paradigms (traditionally)

Ontology

The root definition of ontology has been described as “the science or study of being, its claims about what exists, what it looks like, what units make it up and how these units interact with each other” (Blaikie, 1993, p.6). Audi (1999) identified ontology as a philosophy that investigates the reality of nature, constitution and structure. It describes the human view, whether it is based on claims or assumptions, of the nature of reality. Specifically, is it an objective reality that really exists, or is it a subjective reality created in the mind?

The first opinion in considering the research process from a certain point of view is that of the positivist, who considers the social sciences as natural sciences. When discovering natural and universal laws, the positivist’s concern is to regulate and determine individual and social behaviour. Burrell and Morgan (cited in Cohen et al., 2007, p.6) described the ontology related to the realist position, claiming that “objects have an independent existence and are not dependent for it on the knower”.

On the other hand, qualitative researchers do not believe that there is a single unitary reality apart from our perceptions (Krauss, 2005). The interpretivist view maintains that logic and authority are not considered to be decisive methods of proof, and have instead become sources of hypotheses about the world and its phenomena (Cohen et al., 2007). In other words, interpretivists believe in describing and explaining human behaviour, emphasizing how people differ from non-living objects, phenomena and from each other. In describing the ontology associated with interpretivism, Cohen et al. (2007, p.6) maintained that “the view holds that objects of thought are merely words and that there is no independently accessible thing constituting the meaning”.

Taking into consideration that there are different views regarding the meaning of reality, this leads us to ask: How is reality measured, and what constitutes knowledge of that reality? Thus, questions pertaining to epistemology are raised.

Epistemology

The term ‘epistemology’ comes from the Greek words *episteme* (knowledge) and *logos* (word/speech). Epistemology refers to the philosophy of knowledge; in other words, how we come to know (Trochim & Donnelly, 2007). Blaikie (1993, p.7) defined it as “the theory or science of the method or grounds of knowledge ... it presents a view and a justification for what can be regarded as knowledge”.

Its importance in relation to ontology and methodology is defined by the following points:

- 1) Since ontology involves the philosophy of reality, epistemology concentrates on how we come to realize this reality.
- 2) On the other hand, the methodology identifies the particular practices used to gain an understanding of reality (Krauss, 2005).

According to the positivist paradigm, knowledge is discovered by measuring or observing phenomena. That makes the object of the study independent. Adopting an alternative paradigm, naturalists believe that the researcher must engage with his or her subjects to gain data (Cousins, 2002).

The researcher maintains responsibility for choosing a methodology that fits his or her research goals, as opposed to trying to commit to a particular paradigm (Cavaye, 1996). Choosing a methodology must, therefore, be based on matching a particular phenomenon of interest, since different phenomena could require the use of different methodologies (Falconer & Mackay, 1999).

The most obvious difference between the positivist and interpretivist in terms of epistemology is that the positivist is essentially objective, which means that the observer can exteriorize the reality studied, remaining detached from it and uninvolved with it (Al-Zeera, 2001). On the other hand, the interpretivist argues that epistemologically, the inquirer and the inquired are joined in such a way that the results of an investigation are the literal creation of the inquiry process (Al-Zeera, 2001).

3.4 How does each method relate to the research question itself?

It is an essential step to choose the most effective method to gain an appropriate answer to questions. Yin (2009, p.11) stated: “Be sure to create the form of study question best matching the method”.

Research questions

- In what ways and to what extent do graphic organizers enhance Saudi second language students’ writing?
 1. What is the attitude of Saudi second language learners towards writing?
 2. Why do Saudi second language learners encounter mistakes related to the coherence level while writing?
 3. What are students’ reactions to the use of graphic organizers in a writing lesson?
 4. What evidence is there that graphic organizers improve students’ comprehension or not?

Questions 1, 2 and 3 will be tested by applying a focus group to help extract more raw details from the participants and to know their point of view regarding this issue.

Questions 3 and 4 will be answered by pre- and post-testing to get a clearer image and tangible evidence regarding the idea of using graphic organizers in students’ writing.

Furthermore, pre and post questionnaires will confirm the data gathered from the focus group and the pre and post tests.

3.5 The approach of the present study

According to Johnson and Christensen (2012), researchers started to advocate the pragmatic position by stressing the importance of both quantitative and qualitative research to be mixed in one single research. In order to answer the research questions, a mixed method approach will be applied in the present study. A mixed method approach eliminates the ‘Q words’ (quantitative and qualitative) in its process. It is an attempt to merge two kinds of paradigm in a study. Creswell and Plano Clark (2011, p.5) referred to their definition for mixed methods as follows:

Mixed methods research is a research design with philosophical assumptions as well as methods of inquiry. As a methodology, it involves philosophical assumptions that guide the direction of the collection and analysis and the mixture of qualitative and quantitative approaches in many phases of the research process. As a method, it focuses on collecting, analyzing, and mixing both quantitative and qualitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches, in combination, provides a better understanding of research problems than either approach alone.

Johnson and Christensen (2012) identified mixed methods where the researcher applies a combination of qualitative and quantitative methods, approaches or concepts in one study or in a group of related studies. This combination can be conducted either concurrently or sequentially. The first type means conducting both methods at the same time, while the former means starting gathering data using one method followed by the other.

The advantage of this usage is to make each method complement the other. Gorard and Taylor (2004) suggested that mixing quantitative and qualitative methods is more powerful than isolating them. Applying mixed methods into research enables the researcher to gain advantage from the strengths of both types of data collection (to gain both qualitative data and quantitative data) to answer the research questions (Cohen et al.,

2007; Johnson & Christensen, 2012). Moreover, gathering data using different methods and analysing them with different processes constructs internal validity for a piece of research. Thus, mixing enables the research to gain advantage from the triangulation route. Methodological triangulation includes applying both qualitative and quantitative methods and data in order to study the same phenomenon in the same study (Creswell & Plano Clark, 2011). There will, therefore, be greater accuracy in data which come from different points of view.

In such an approach, the researcher's point of view about the paradigms will justify the reason for the methodology related to the research itself. The methodology is also determined by the research question. Thus, the research question itself determines the researcher's view of the paradigm. According to Gorard and Taylor (2004), the researcher's personality, skills or ideology does not affect the choice of method. It is based on the research questions.

Through the few past years, the use of combining different approaches to undertaking research has been promoted by a number of researchers, such as Tashakkori and Teddlie (2003), Creswell and Plano Clark (2011) and Plowright (2011). A series of frameworks can be used to build our thinking about research (Plowright, 2011). Even though there are slight differences between these frameworks, their aim is to support the integration of different elements of the research process to ensure the effectiveness and success of the study. Thus, in order to optimize the data collection process and increase the width of data collection, the present research will include mixed methods to ensure accurate and optimal results, since obtaining data from two different methods will confirm and authenticate the results. Accordingly, the pre- and post-intervention questionnaire will show the difference in the participants' opinions before and after the intervention as a quantitative approach. Furthermore, the experiment will illustrate the participants' marks before and after the intervention. Finally, these quantitative findings will be justified and

explained by the focus group as a qualitative method. We can thus confirm, explain, verify and generate theory by combining methods at the same time (Tashakkori & Teddlie, 2003).

3.6 Merging the two paradigms

A pragmatic position has been adopted while conducting mixed methods research. According to Johnson and Christensen (2012), a pragmatic position allows using both quantitative and qualitative methods in the same study, since the most important consideration is what works in order to answer the research questions. This is based on an abductive connection of theory and data. It is located somewhere between inductivity and deductivity, where the approach moves back and forth between them. This movement is controlled by the research questions, whereby they adjust the load for each method to be used in a study. Thus, the pragmatic approach asserts that there is a real world and all individuals have their interpretations of that world (Mertens, 2010).

Mixed methods research can be applied by adopting two kinds of method. The first kind is to conduct research concurrently where both methods are carried out at the same time. The second kind involves conducting research sequentially, where one kind of method is carried out at the beginning then, based on its findings, the research continues by using the second method (Johnson & Christensen, 2012). Thus, two different paradigms will be applied in this research sequentially to address the research questions. A pre-focus group will be chosen at the beginning for two reasons. First, the results will affect the placement of the second method, such as in choosing the appropriate topic for the participants. The second reason is shaping the questionnaire and marking criteria in the quantitative parts which result from the explanatory element. The researcher can then compare the pre-intervention focus group with another round after applying the graphic organizers. In this case, the researcher will explain the data sequentially. According to Morgan (2007), evaluating the results of prior inductions through their ability to predict the workability of future lines of behaviour is considered one of the most common uses of abduction in

pragmatic reasoning. In other words, inductive results from the qualitative approach can serve as inputs to the deductive goals of a quantitative approach.

Another aspect of this paradigm is the researchers' relation to the research process. Instead of being subjective or objective, the relation here will be based on an inter-subjective approach. It is central to the pragmatic approach, where it represents this dimension in emphasizing the process of communication and shared meaning (Morgan, 2007).

Finally, the pragmatic approach with its *transferability* concept rejects the need to choose between specifying and generalizing the research results (Morgan, 2007). It involves manoeuvring between specific results and their more general implications. This manoeuvring involves ending the research with what has been discovered, followed by fuzzy generalization which shows how the discovery could be applied more widely (Bassey, 2010). This transferability of data provides the advantage of what we gain from one method in one specific setting and makes the most appropriate use of that knowledge in other circumstances (Morgan, 2007). The data triangulation from different sources is a key factor of applying a mixed method research. When three different sources as literature, quantitative and qualitative data confirm one result, as a return, it strengthens the study.

3.6.1 Research design

Research design is the framework under which any research method works. It includes “all the issues involved in planning and executing a research project - from identifying the problem through to reporting and publishing the results” (Punch, 2009, p.112). The present research is based on gathering quantitative and qualitative data to solve a particular problem. A multiple-baseline design as an experiment with a pre- and post-intervention questionnaire will gather quantitative data. On the other hand, a pre- and post-intervention focus group will gather qualitative data. At the beginning of the research, the qualitative method helps in structuring the main points to be covered in the

questionnaire as well as the marking criteria in the experiment. Then, the post-focus group will confirm (or not) the findings from the questionnaire and the experiment.

3.6.1.1 Experiment: Why choose an experiment?

The pre and post tests will measure the dependent variables and the effectiveness of the independent variable. Applying graphic organizers will be the independent variable which may or may not affect the scores of the participants – the dependent variable.

An experiment involves making a change in the value of one variable (independent variable - IV) then observing the effect of that change on another variable (dependent variable - DV). Experimental research can be confirmatory whether it seeks support for the null hypothesis or not. In contrast to the case study, an experimental design includes a higher level of control compared with the case study. Researchers can also intentionally manipulate and control the conditions that determine the events in which they are interested. Moreover, it is a good way to establish a cause and effect relationship. The experimental design will include:

- Confirming or rejecting the hypotheses: applying graphic organizers into students' writing has a positive effect on them.
- Dependent and independent variables: the independent variable in this research will be the graphic organizers and the dependent variable will be the students' scores.

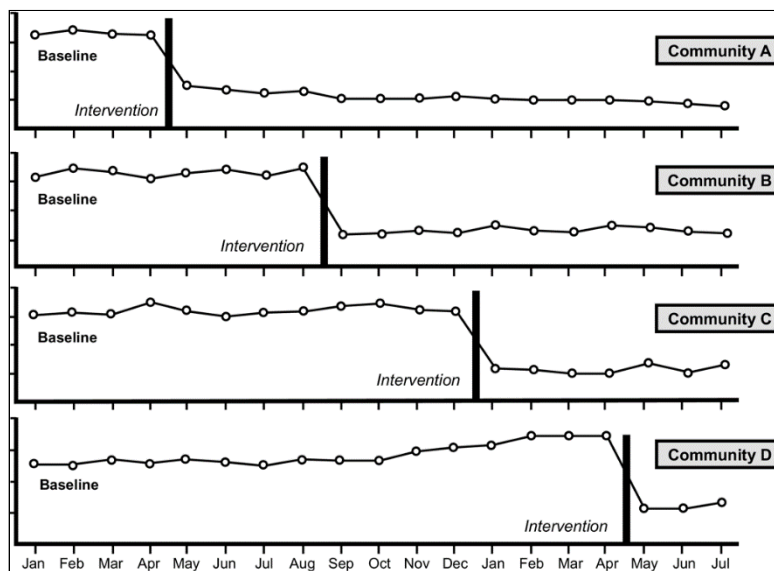
Students' marks derived from the experiment and a pre and post questionnaire will show if there is a significant improvement in students' coherence while writing or not. The focus group will then explain why and how this happened.

3.6.1.1.1 Multiple-baseline design

The multiple-baseline design will help in showing a clear indication of any improvement after applying the dependent variable through time. It demonstrates clearly whether there is any change after the intervention or not. It is known as "A strategy to increase confidence that the intervention was responsible for a change in outcome" (Hawkins et

al., 2007, p.163). This kind of strategy is conducted on multiple population units. Each of these units intentionally receives an intervention at a different time. Thus, three groups will be participating in this research. Applying graphic organizers is the intervention key which may or may not affect the results.

The multiple-baseline design should show the following: firstly, a change which has occurred in the outcomes. The change can be tested by comparing the means during baseline and post-intervention phases. Figure 3.1 shows an example of multiple-baseline design with intervention in four communities (Hawkins et al., 2007, p.164) .



Source: Hawkins et al., 2007

Figure 3.1: Hypothetical example of a multiple-baseline design used to assess behaviour change following an intervention in four communities

Secondly, this change is a result of an intervention. It could be noticed in two ways. The first is by the repeated measurement of a defined outcome variable which allows its trend to be determined. It adds strength to the conclusion that the change in the variable resulted from the intervention itself. This conclusion is confirmed when the baseline trend is neutral or in the opposite direction to the observed variable. The second way of confirming the change as a result of the intervention is by comparing two or more units with each other after one of them has had the intervention applied. Thus, when there is a

change in a variable following intervention in one unit, joined with the absence of change in other units yet to receive an intervention, we can confirm that the change resulted from the intervention.

The use of a multiple-baseline design will, therefore, illustrate clearly whether there is any distinction in the students' marks over time between the groups. Using this way of applying the independent variable (graphic organizer) at a different time for all groups also gives the researcher clear results and indications regarding the change that occurred after applying the graphic organizers. The researcher can compare the marks of the experimental group before and after the intervention. Furthermore, the results of the experimental group can also be compared with those of the control group. The aim of applying the multiple baseline design in the present study is to avoid the difficulties found in traditional pre/post-test experimental designs such as problems handling adequate sample size. Furthermore, repeated measurements through time to same and different groups give reliable outcomes. In addition, multiple baseline design eliminate the threat of internal validity which is history where other events could occur in addition to the intervention in time. The multiple baseline design in this case is much better than other simple experiment designs since it rules out this threat by applying the intervention at different stages through time across each one. According to Johnson and Christensen (2012), the multiple baseline design is a logical alternative of the single-case experimental design since it controls the history threat.

3.6.1.1.2 Questionnaire

The questionnaire is one of the data collection instruments that are widely used and useful for collecting survey information (Cohen et al., 2011). The questionnaire is one of the methods that enable researchers to obtain information from people by posing questions directly or indirectly (Gillham, 2007). It is "a self-report data-collection instrument that each research participant fills out as part of a research study" (Johnson & Christensen,

2012, p.162). A questionnaire can be used to collect qualitative, quantitative or mixed methods data. It is also a way of measuring different kinds of characteristics, such as the thoughts, feelings, attitudes, beliefs, values, perceptions, personalities and behaviour intentions of participants (Johnson & Christensen, 2012).

The questionnaire in the current research aimed to measure the use of pre-writing tools for Saudi second language learners. Basically, the questions were derived from a pre-intervention focus group to establish and measure the participants' perception towards the concept of graphic organizers and their effectiveness as a pre-writing tool. Thus, the questionnaire is based on two main elements. The first one is the questions or statements to be judged by the participants. Then comes the rating scale for each question or statement, which enables the participants to give their judgement regarding each question or statement. According to Johnson and Christensen (2012, p.172), a rating scale is identified as "a continuum of response choices that participants are told to use in indicating their responses".

The rating scale applied in the present research is based on a fully anchored rating scale in which the anchors in the scale are the same distance from each other. These anchors show the agreement of the participants regarding certain points related to the use of graphic organizers as a pre-writing tool. Degree of agreement is measured as follows: totally agree, agree, sometimes, disagree and totally disagree. This five-point rating scale gives the opportunity to all participants to show their opinions and judgement about something freely, whether they agree, disagree or are neutral (Johnson & Christensen, 2012). The present research applied this type of method to collect quantitative data through structured closed questions in which the answers are pre-determined.

According to Gillham (2007), there are many advantages and disadvantages to conducting research with a questionnaire. In practice, the researcher should endeavour to make use

of the advantages and avoid the disadvantages. The first advantage of applying a questionnaire is that it saves money and time during the data gathering period. It means that the researcher can distribute a large number of questionnaires in less time than it would take to interview the same number of respondents. The cost of commuting will also be reduced. Furthermore, a questionnaire is an effective tool for gaining information from a lot of participants quickly. Even though the planned time for receiving the responses might involve weeks, it is still more efficient than interviewing respondents during the same period. Moreover, the participants can complete the questionnaire at any time to suit themselves. A questionnaire also involves less pressure regarding providing an immediate response than an interview. In addition, a questionnaire can provide suggestive data for testing a hypothesis. Since the researcher has an idea to be tested, the significant difference is that a questionnaire raises questions regarding 'why' for developing a more in-depth investigation. This is one of the research method's objectives, whereby a pre-intervention focus group and questionnaire were applied before the experiment and then repeated after the experiment. The aim was to check the perceptions of Saudi second language learners towards their difficulties in writing a coherent text in English before and after applying the concept of graphic organizers.

On the other hand, there are negative features that need to be borne in mind while applying a questionnaire in a research. There could be a problem of data quality after receiving the questionnaire. First of all, incomplete questions could affect the results of the data analysis. Furthermore, questionnaires are often completed carelessly. The participants might complete the questionnaire without reading the questions closely, which might affect the results since the exercise is not simply a matter of filling in the questionnaire, as reflecting the real perception of the participant. Participants do not always regard the honesty of answering a questionnaire as a priority. Moreover, gathering data by the questionnaire method does not allow for any correction when there is a misunderstanding.

That is why the researcher needs to make sure that all questions are clear by peer reviewing and piloting them first.

In conclusion, each research method has its strengths and weaknesses. The present research makes use of both questionnaires and group interviews to benefit from their respective strengths. There is a need to avoid the negative features as much as possible when gathering raw data.

3.6.1.2 Case study: Why choose a case study?

To answer the question of ‘how and why’ Saudi second language learners experience problems in coherence and a low level of motivation in their essay/paragraph writing.

The researcher in a case study observes the characteristics of an individual unit. This unit could be a person, class or school. The case study aims in this research to explain and analyse in depth how and why Saudi second language learners experience problems such as low levels of coherence and motivation towards developing writing skills. This helps in establishing generalizations about the wider population to which that unit belongs (Cohen et al., 2007). An explanatory case study is a suitable kind of case study since it deals with ‘how’ and ‘why’ questions. According to Yin (2009), explanatory questions lead to the use of case studies as the preferred method.

Applying a case study to second language learners at King Saud University provides a unique example of real people in real situations. One of the strengths of this approach is its effectiveness in observing effects in real contexts. It also illustrates the participants’ thoughts and feelings about a situation. Moreover, it gives the participants the priority to speak for themselves.

However, a case study lacks a high level of control. In addition, according to Yin (2009), there could be biased views from the case study investigator that influence the direction of the findings and the conclusions. In addition, the results cannot be generalized, unless

other readers see the same in a previous work. However, according to Bassey (2010), the certainty of generalization in scientific research could be replaced with fuzzy generalization (uncertainty) statements which contain qualifiers such as: it is *sometimes* true ..., and It *may*..... In other words, fuzzy generalization shows in a tentative way that particular consequences may be led by particular events. The element of uncertainty is carried out by fuzzy generalization by reporting that when something happened in a certain situation, it may happen elsewhere.

3.6.1.2.1 Focus groups

According to Bryman (2012, p.501), a focus group is “a method of interviewing that involves more than one, usually at least four, interviewees”. The number size of the group is recommended to be from six to ten, although it depends on the participants and the subject of interest (Gibson, 2007). It is called a ‘focus’ group since the researcher who works as a moderator or facilitator encourages the participants to focus on the topic they are discussing (Johnson & Christensen, 2012). The aim is to reveal how the participants in the group view a particular issue. A focus group is similar to an interview but with a number of participants who are taking part in a focused topic at the same time. However, a focus group differs from an interview in the assumption that people in general develop their opinions and views in groups (Cary & Smith, 1994).

Both interviews and focus groups share some similarities in both advantages and disadvantages. According to Carey and Smith (1994), rich information can be delivered from the participants when they feel good about sharing their ideas. Conversely, participants could become upset and angry when their views are not respected, which affects the extraction process negatively. Participants in a focus group could also argue with each other regarding their views. Such a situation cannot be found in a one-to-one interview. However, the moderator should know when to draw the participants back to

the main question and how to end with a realistic understanding of what people think (Bryman, 2012).

The researcher should pay attention while conducting a focus group to non-verbal behaviour, such as nodding, applause and so on. Great attention should also be paid to linguistic and atmospheric elements, such as talking at the same time, heated discussion and talking loudly. Unlike an interview, during a focus group the level of stress regarding a particular issue could be raised according to the sequence of discussion (Gibson, 2007). Thus, the moderator has to bear this in mind and reduce it. A focus group can also provide rich material in a short time compared with an interview (Johnson & Christensen, 2012). Bryman (2012) stressed some limitations for the focus group that need to be taken into account. A focus group has less control than an individual interview. A huge amount of data can also be very quickly produced from the participants, which could make the material difficult to analyse. Furthermore, it is hard to organize and ask different people to show up at a particular time. In addition, it is difficult to make notes or transcribe the words of two participants who are talking at the same time.

The researcher needed to overcome these limitations when conducting a focus group with six participants from the College of Languages and Translation at King Saud University in Saudi Arabia. The researcher needed to start the session with an introduction to welcome and thank the participants for their participation. Then, the participants needed to know the aims and objectives of their participation in the research. After that, they needed to be aware of some conventions, such as taking turns while discussing. The participants were also informed of the confidentiality of the data.

3.6.2 Validity and trustworthiness

When research is invalid, it is considered worthless. Validity is an essential pillar of effective research (Cohen et al., 2011). Therefore, certain criteria should be applied for

both quantitative and qualitative research. There are many different types of validity, such as internal, external, cultural and content. This research focuses specifically on internal validity. Both quantitative and qualitative methods address this kind of validity.

Cohen et al. (2011, p.183) stated that internal validity “seeks to demonstrate that the explanation of a particular event, issue or set of data which a piece of research provides can actually be sustained by the data”. The phenomenon being researched must be described by the findings. Onwuegbuzie and Leech (2007, p.234) described internal validity as “the true value, applicability, consistency, neutrality, dependability, and/or credibility of interpretations and conclusions within the underlying setting or group”.

3.6.3 Internal validity in quantitative research

In quantitative research, different kinds of threat affect internal validity. For example, statistical regression should be considered when participants’ results from the pre test are higher than those from the post test. In addition, in educational research, events in between pre and post tests, other than intervention treatments, normally affect different treatments among participants (Cohen et al., 2011). Such threats—especially the latter, which are intervention treatments—will be closely considered in this research since the results of the pre and post tests for both controlled and experimental groups could be affected by the normal progress of the participants (second language learners) during the learning process. The researcher will also make sure that all groups are taught by the same instructor. Furthermore, the researcher will pay attention to the material that will be presented to the groups. All groups must study the same material during the week. Finally, the time to apply the experiment between the pre-test and post-test will play an important role because the participants will still be attending class and enrolled in the learning process. The researcher has to pay clear attention to the fact that over time there could be steady progress in all groups since they still learn English in other subjects during their week.

3.6.4 Validity in qualitative research

Similar to quantitative research, there are many kinds of threat that also affect qualitative research. For example, researchers often struggle with the authenticity of the data and their ability to report situations through participants' eyes. Another threat is the credibility of the data. According to Lincoln and Guba (1985), the credibility of naturalistic inquiry can be addressed in several ways, such as via triangulation by methods, sources or investigators. Another example is peer debriefing. It is useful when others double-check the work before implementing any kind of data collection method. This procedure will ensure that there are no problems with the readability and understanding level of the questions, for example, and that the data collection methods avoid ambiguity and leading questions. Peer checking is also a reliable way of correcting errors or adding further information. For example, adding comments after each question paraphrasing one's understanding of a peer's work ensures that the researcher portrays his or her intended ideas to research participants.

Trustworthiness and authenticity are measurement criteria used in evaluating and judging qualitative data. According to Bryman (2012), these measurements were introduced by Lincoln and Guba (1985) and Guba and Lincoln (1994), whereby they aimed to specify ways of assessing the quality of qualitative research which is equivalent to reliability and validity. Figure 3.2 offers an illustration of this criterion.

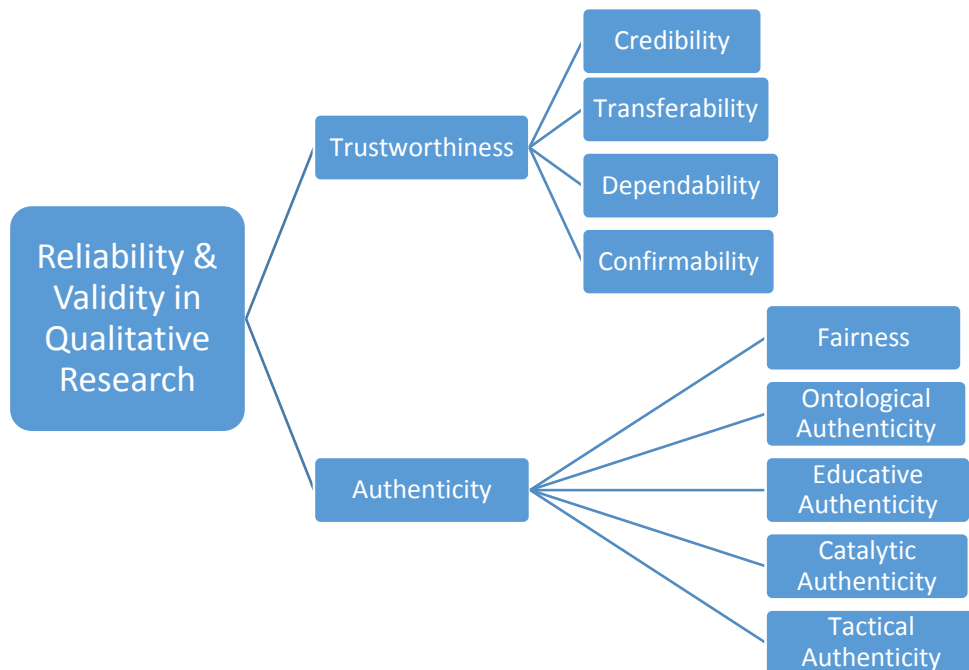


Figure 3.2: Trustworthiness and authenticity in qualitative research

Trustworthiness consists of four criteria that are equivalent in quantitative research.

1. Credibility

Similar to internal validity in quantitative research that seeks a good match between the theoretical ideas they develop and researchers' observations, credibility in qualitative research is the concept in which the research is acceptable as being feasible to others. According to Bryman (2012), credibility can be achieved by using two techniques. The first is respondent validation, in which the researcher provides the people who have taken part in the research with an account of the findings. This technique aims to seek corroboration of the account at which the researcher has arrived. It is a way to ensure that there is good correspondence between the findings and the perspectives and experiences of the research participants. The second technique for ensuring credibility in research is triangulation. Triangulation means using more than one source when collecting the data.

The process in applying more than one method results in a higher degree of confidence in the findings.

2. Transferability

The second criterion which engenders trustworthiness is transferability, which is similar to the external validity in quantitative research that refers to the generalization of the findings in a social setting. Lincoln and Guba (cited in Bryman, 2012) argued that a thick description of data provides others with a database that helps in presenting judgements about the possibility of transferring the findings to other settings.

3. Dependability

Equivalent to reliability in quantitative research, dependability, with its concept of an auditing approach, is recommended by Lincoln and Guba (cited in Bryman, 2012). This requirement ensures that complete records of all data collection stages - such as problem formulation, selecting the participants, any notes in the fieldwork, transcripts of the interview, etc. - are kept for review. During the research and certainly at the end as well, peers can act as auditors to establish how far proper procedures have been followed.

4. Confirmability

While complete objectivity is considered impossible in social research, confirmability is concerned with ensuring that the researcher clearly allows for personal values or theoretical tendencies that would obviously compromise the conduct of the research and the derived findings. As Lincoln and Guba (cited in Bryman, 2012) proposed, one of the objectives of auditors is confirmability.

The second criterion suggested by Lincoln and Guba is authenticity. It includes other sub-criteria. The first sub-criterion is fairness, whereby the research truly represents different members' viewpoints of a social setting. The second is ontological authenticity, where

research indeed helps members to improve their understanding of a social setting. The third is educative authenticity, whereby the research helps members to believe more fully in the appreciation of other members' perspectives of their social environment. The fourth sub-criterion is catalytic authenticity, where the research plays an essential role in motivating members to play a part in the action for the sake of changing their circumstances. The fifth and final tactic is authenticity, in which the research gives power to members to take initiatives for engaging in action.

3.6.5 Reliability

If research is to be considered reliable, it should demonstrate that similar results would be found if it were to be carried out with a similar group of respondents in a similar context (Cohen et al., 2011).

3.6.5.1 Reliability in quantitative research

Quantitative research involves several different kinds of reliability. Punch (2009) particularly mentioned consistency over time or stability. This type of reliability questions to what extent participants might obtain the same results using the same instruments under the same circumstances but at a different time. Cooper and Schindler (2001) stressed that when using test/re-test methods, much care should be taken. That is, the time period between the two tests should be convenient: not so long that situational factors may change and not so short that participants could remember the first test (Cooper & Schindler, 2001).

3.6.6 The sample

Samples in mixed methods research are divided according to their relationship to quantitative and qualitative methods. According to Johnson and Christensen (2012), four sample relationship criteria have been identified. The first sample relation is called identical relationship, where the same participants participate in both quantitative and qualitative methods. The second sample relation is the parallel relationship. The participants in this type of relation are derived from the same population but those who conduct the quantitative part are different from those who take part in the qualitative part. The third sampling relation is called the nested relationship and is based on selecting a sub-set of those participants who participated in one phase of the study to do the second phase. Finally, the fourth type of sampling relationship is the multilevel relation. It is based on choosing participants from different levels in the population to conduct the quantitative and qualitative phases of the study.

The present research will adopt a nested relation. This kind of relation suits the research objectives. Some participants will be involved in the focus group to deliver qualitative data. Then, all the participants, including those who participated in the focus group, will participate in the questionnaire and the experiment to extract quantitative data.

The population in this research will be second language learners at King Saud University in Riyadh in Saudi Arabia. Since the sample provided the researcher with the needed information (Plowright, 2011), the sampling unit comprised students at the Languages and Translation College, where three classes of male students were chosen randomly to be involved in the study. Around 90 participants divided into three groups participated in the study. These three groups were as follows: one control group, one experimental group and one semi-experimental group. By that means, there was a high level of control where the researcher could control and manipulate the variables.

According to the literature, second language students need to improve their attitude towards writing classes, as well as their problems in producing essays that lack coherency. This type of student is at a level where they need to practise their writing in order to improve as much as possible since they need it in their future career.

A simple random sample was used in this research through the following website: www.randomizer.org/form.htm. It was based on the number of classes at the college. This randomizing process generates a generalization of the findings to be applied on the population. It also eliminates any bias in choosing cases. Normally, the students are arranged randomly in their classes by the college. However, the researcher asked the administrator about their process in distributing the students in the classes.

Thus, if the students were arranged according to their marks, the researcher would have selected the students randomly from their classes and created new groups for the study.

3.6.7 Triangulation

According to Cohen et al. (2010, p.141), triangulation is defined as: “the use of two or more methods of data collection in the study of some aspect of human behavior”. This research investigated the reasons behind second language learners’ lack of coherence in their writing. It had the aim of interviewing some students at King Saud University in Saudi Arabia to examine the problems that prevent them delivering a fully coherent written text. It applied a focus group that involved six participants. The aim of the use of multiple methods was to discover more details about a single problem by using more than one tool. The approach also added more strength to the data gathered.

3.6.8 Data sources

The sources of the data in this research are *case study* and *experiment*. The case study was applied to collect in-depth detailed information from a small number of the participants. Semi-structured focus groups helped to examine the phenomenon in depth to see and understand it through the participants themselves. The pre and post interviews were intended to reveal some factors that affect students in relation to the problem of the research. Six participants were included in each focus group, where semi-structured questions were presented by the researcher. The researcher carefully chaired the discussion in case the participants strayed from the main issues.

In addition, pre and post tests were applied to obtain quantitative data. Standard deviation and means were used as examples to enable the researcher to make comparisons between the control and experimental groups since the participants' marks will be the judge in illustrating their improvement. These results were intended to confirm or reject the null hypothesis.

3.6.9 Ethical issues

At the beginning of the research process, the supervisor at the University of Hull approved the request to conduct this research (Appendix 1). Based on that approval, a letter was sent to King Saud University including the aims and objectives of the study and asking for permission to conduct the research in the university's classes (Appendices 2 and 3).

A sheet of paper including the purposes and aims of the research was distributed to the participants (Appendices 4 and 5). It also included brief details about the research, the researcher and the importance of participation since it could enhance the learning process. The researcher explained to the participants what the research involved, the type of questions it would include and the importance of providing honest answers. The researcher gave the participants full details about each part of the research process and

urged them to ask for any needed clarification. According to Plowright (2011), implementing such a procedure will not always result in avoiding unpredictable occurrences, but may help reduce the possibility that the researcher will be taken by surprise by the participants' reactions. The participants were informed that they could withdraw at any time without harmful consequence. In fact, there was no danger that could affect the participants during or after the experiment. They were also informed that their names, participation, and opinions would be completely confidential, whether written or oral. Finally, the use of multiple baseline design in the experiment allows all participants to have their go in practicing the use of graphic organizers. This way gives all participants the opportunity to involve in the experiment without any bias to experimental group or control group.

3.6.10 Piloting

The researcher conducted a pilot study at the beginning, with the aim of checking whether there could be some problems with the questions or with the test itself. The participants were at the same level as the real research, since they are Saudi second language learners who study in the United Kingdom.

First period: Pre focus group + pre questionnaire + pre-test

Second period: Applying graphic organizers

Third period: post focus group + post questionnaire + post-test

The results were checked with the supervisor as well as any difficulties that occurred at that time. In addition, the results were not included in the real research for a number of reasons. For example, the duration, participants' background and means of study should be closely considered.

3.6.10.1 Plan of main study

Table 3.2: Illustrates mainly what was to be applied in week 1

Type Group	Introduction Week 1	Connecting Week 2	Comparing Week 3	Analysing Week 4	Test Week 5	Week 6
Group 1 (30 St.)	Pre focus group + Pre questionnaire	Traditional writing	GO	GO	GO	post focus group & questionnaire
Group 2 (30 St.)	Pre focus group + Pre questionnaire	Traditional writing	Traditional writing	GO	GO	post focus group & questionnaire
Group 3 (30 St.)	Pre focus group + Pre questionnaire	Traditional writing	Traditional writing	Traditional writing	GO	post focus group & questionnaire

Week 1

The research was due to last for six weeks. At the beginning, the researcher met one of the instructors to illustrate for him the ethical issues and objectives of this research. Then, the classrooms were assigned randomly. Three classes were involved in this research with approximately 90 students who are considered second language learners at the Languages and Translation College at King Saud University in Riyadh.

The first meeting included a clarification of the ethics for each class (group). After that, a small number of participants in all groups were involved in a focus group. The researcher then also interviewed some of the participants from the same group. It was an important step to determine some aspects to bear in mind when conducting the experiment,

such as what constitutes an interesting topic for them as well as deciding which graphic associated with which topic was to be used with their essays.

In the focus group, the students discussed the following questions:

- Do you like writing essays?
- What kind of topics do you like to write about?
- How do you prepare to write?
- Do you explain the purpose of what you are going to write?
- When you write, do you use any pre-writing tool?

Week 2

All participants learned how to connect their ideas using the traditional process of writing. The participants handled written samples about a certain topic, the written material to be marked later. The advantage of this stage was that the researcher could ensure all participants received the same opportunities and any other confounding variable which could affect the study was eliminated; the same period, the same instructor, the same topic and, even more important, the same graphic. A comparison between students' marks in week 2 with their previous marks in their normal class was made. This procedure ensured the real level of the participants and eliminated any bias from the researcher towards any specific group.

At the end of each session, the participants submitted a sample of their writing to be marked. They wrote their details in a top corner of the paper. The paper was then folded and coded by the researcher. After that, the samples were marked blind and then the marks recorded on a sheet of paper.

The researcher sent these samples to another teacher to mark them blind and then compared the previous results with the new ones to establish if there was any difference between them. At the end of week 6, the samples were decoded for analysis.

Table 3.3: Illustrates mainly what was to be applied in week 2

Type Group	Introduction Week 1	Connecting Week 2	Comparing Week 3	Analysing Week 4	Test Week 5	Week 6
Group 1 (30 St.)	Pre focus group + Pre questionnaire	Traditional writing	GO	GO	GO	post focus group & questionnaire
Group 2 (30 St.)	Pre focus group + Pre questionnaire	Traditional writing	Traditional writing	GO	GO	post focus group & questionnaire
Group 3 (30 St.)	Pre focus group + Pre questionnaire	Traditional writing	Traditional writing	Traditional writing	GO	post focus group & questionnaire

Week 3

All three groups learned how to compare their essays. However, there was a slight change in the teaching process. The first group (experimental) learned how to apply the graphic organizer in the writing process, while the other two groups were taught to compare them using the traditional writing. After that, the students' writing was collected for marking at the end of the class.

Table 3.4: Illustrates mainly what was to be applied in week 3

Type Group	Introduction Week 1	Connecting Week 2	Comparing Week 3	Analysing Week 4	Test Week 5	Week 6
Group 1 (30 St.)	Pre focus group + Pre questionnaire	Traditional writing	GO	GO	GO	post focus group & questionnaire
Group 2 (30 St.)	Pre focus group + Pre questionnaire	Traditional writing	Traditional writing	GO	GO	post focus group & questionnaire
Group 3 (30 St.)	Pre focus group + Pre questionnaire	Traditional writing	Traditional writing	Traditional writing	GO	post focus group & questionnaire

Week 4

The groups then learnt how to analyse their ideas. However, group 1 and group 2 were using the new technique in their writing (graphic organizers), while the control group (group 3) was taught using traditional writing. At the end of the class, the students' writing samples were collected for marking.

Table 3.5: Illustrates mainly what was to be applied in week 4

Type Group	Introduction Week 1	Connecting Week 2	Comparing Week 3	Analysing Week 4	Test Week 5	Week 6
Group 1 (30 St.)	Pre focus group + Pre questionnaire	Traditional writing	GO	GO	GO	post focus group & questionnaire
Group 2 (30 St.)	Pre focus group + Pre questionnaire	Traditional writing	Traditional writing	GO	GO	post focus group & questionnaire
Group 3 (30 St.)	Pre focus group + Pre questionnaire	Traditional writing	Traditional writing	Traditional writing	GO	post focus group & questionnaire

Week 5

All groups performed a test in one of the topics they had already taken. This was a good opportunity to give the participants a kind of trust in using and deciding which graphic to use while writing. At this stage, group 3 was considered the control group, but an inversion was made to give them a chance to examine the new technique and compare their results with the previous weeks. As a multiple-baseline design was applied, there would also be a clear indication of whether there was any improvement in the students' writing.

Table 3.6: Illustrates mainly what was to be applied in week 5

Type Group	Introduction Week 1	Connecting Week 2	Comparing Week 3	Analysing Week 4	Test Week 5	Week 6
Group 1 (30 St.)	Pre focus group + Pre questionnaire	Traditional writing	GO	GO	GO	post focus group & questionnaire
Group 2 (30 St.)	Pre focus group + Pre questionnaire	Traditional writing	Traditional writing	GO	GO	post focus group & questionnaire
Group 3 (30 St.)	Pre focus group + Pre questionnaire	Traditional writing	Traditional writing	Traditional writing	GO	post focus group & questionnaire

Week 6

Finally, some participants from each group participated in another focus group. After that, the researcher interviewed some of them as well to gain further feedback from them after knowing and practising the integration of graphic organizers in their writing.

3.6.11 Analysing the data

The narrative data were analysed using the NVivo program, which interpreted the participants' feedback. It was a useful way of exploring the participants' level of motivation before and after applying the experiment. The numeric data were analysed using the SPSS program. Some measurement tools were also used, such as the T-test and bar charts to show, for example, the relationship between the two tests and the relationships between the variables. This was intended to clarify if there was a significant difference in the participants' tests scores and would, therefore, show whether or not there was any usefulness in integrating graphic organizers with writing workshops.

3.7 Research in practice

3.7.1 Piloting

Since applying an instrument straightaway in a main piece of research could be a risky action, piloting will reduce the risk and enlighten the researcher as to what to do and what not to do. “Do not take the risk. Pilot test first” (De Vaus, 2002, p.52). Baker (1994) stated that particular research instruments can be tried and pre-tested through piloting them. In order to achieve a good study design, a pilot study is a crucial element in achieving this goal. It increases the likelihood of the success of the main study. In fact, a pilot study might work as an AWACS system, by giving advance warning by showing any failing or problem which could happen in the real research. From this point of view, the researcher will conduct a pilot study where a small sample of people considered as Saudi second-language learners will participate in the research.

3.7.2 Sample

In order to gain the advantage of testing the research instruments, the researcher applied a pilot study to check the suitability of the pre- and post-tests as well as the interview questions. Four Saudi second language learners participated in the piloting session. They had finished secondary school and were preparing for their degree at university. The researcher started the session by introducing himself and the tasks required to be done by the participants. They were aware that it was a voluntary task and they could withdraw at any time without harm.

3.7.3 Instruments

The focus group questions were reviewed with the researcher’s supervisor and then an Arabic version of the questions was sent to a colleague who is specialized in TESOL (Teaching English as a Second Language). The aim was to check with him whether there was any ambiguity or misunderstanding with the questions or not.

The researcher divided the piloting into two sessions. In the first session, the participants were involved in a focus group where they were asked some questions regarding their motivation and any problems they experienced when they started writing their essays. After that, they started writing an essay about a general topic without the intervention of graphic organizers. In the second session, the participants learned during a short course how to apply the graphic organizers in their essays. Then, they participated again in another focus group so that the researcher could receive feedback from them after they knew how to apply the graphic organizers in their essays.

3.7.4 Method of marking the essays

The researcher encoded each participant. In the first round, the participants were given codes ranging from B1 to B4, where letter “B” refers to the essays that had been written without the use of graphic organizers. Then the same participants received the same code but from A1 until A4, where letter “A” refers to the essays that were written with the use of graphic organizers.

The same number was assigned to the same participant as follows:

Table 3.7: Codes for each participant

	Coding without GO	Coding with GO
First participant	B1	A1
Second participant	B2	A2
Third participant	B3	A3
Fourth participant	B4	A4

In order to avoid any bias in marking the essays, two steps were followed. First, the codes were covered. Then, the papers were sent to another teacher who blind marked them by using marking criteria.

3.7.5 Results and discussion

Analysing the participants' marks and their feedback from the focus group revealed some aspects to be considered while teaching writing as well as applying the new teaching method in the main research:

- 1. Flow of information:** "I cannot stop" was a reply from one of the participants who practiced applying graphic organizers in his writing. Another participant said, "I could not believe I will write that much". The participants agreed that they managed to find more and more information related to the main topic. It was obvious by comparing one sample before and after the use of graphic organizers that the amount of written information with graphic organizers was more than the written material without the use of graphic organizers. However, they need to know how to use the cohesive devices as well to increase the level of comprehension. In fact, the lack of cohesive devices compared with the high level of information in the essay affected the participants' marks. The following example, in Figure 3.3, shows an improvement in one sample before and after applying the graphic organizers. Appendices 6 and 7 shows a sample of how the participant provided flow of ideas related to the main topic.

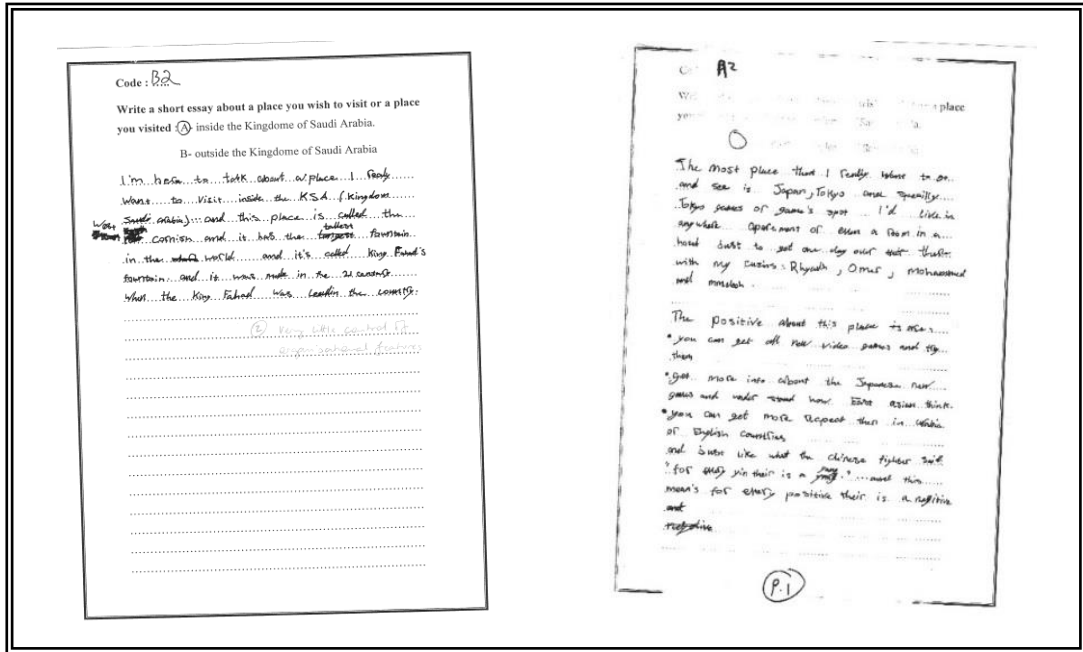


Figure 3.3: Written material from one sample: before and after graphic organizers

2. **Motivation:** when starting the first session of the focus group, the participants agreed that writing was the most difficult skill to learn. They were less enthusiastic towards writing. However, despite the short course they had taken in applying graphic organizers in their writing, the participants found it easier and more exciting to start writing with this tool. The excitement was shown in their faces when the researcher reached question 4: “Do you feel excited when starting to write your essay?” Most of them replied positively after they knew the concept behind graphic organizers and how to use them in their writing. Furthermore, graphic organizers enabled the participants to know how to define the purpose of a given topic. They knew how to compare or analyse their topics, which enhanced positively their motivation towards writing as well.
3. **Marks:** there was a slight improvement in the participants’ marks. This was a satisfactory improvement regarding the short course that they took before applying graphic organizers. The following chart, in Figure 3.4, shows the participants’ marks before and after applying graphic organizers:

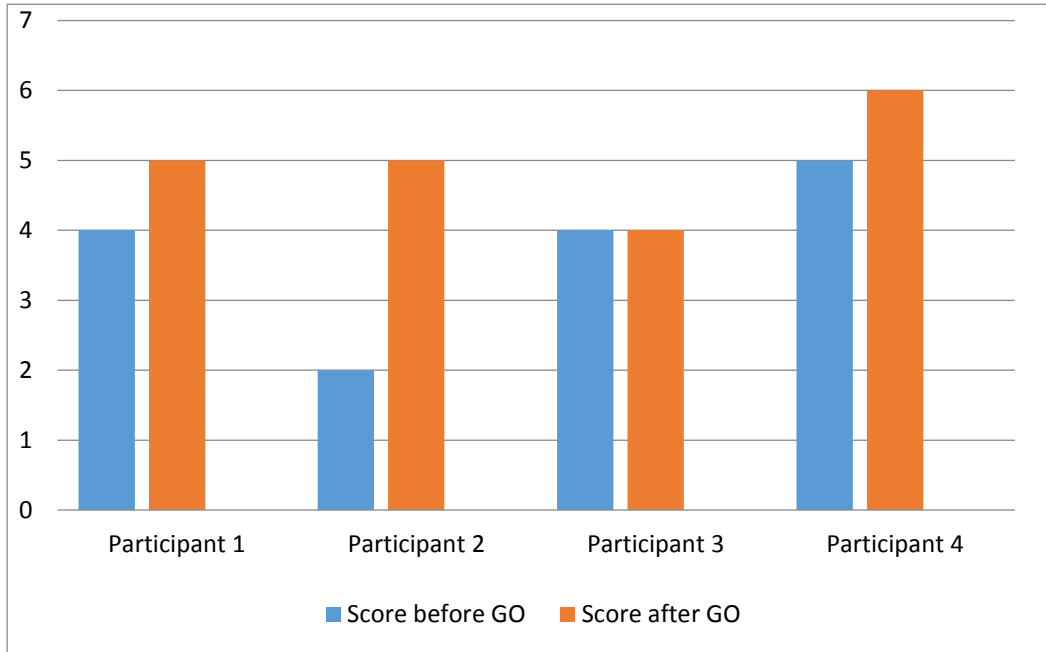


Figure 3.4: Scores before and after applying graphic organizers

The mean scores before and after applying graphic organizers, in Figure 3.5, clearly indicate a positive shift to the better in participants' marks.

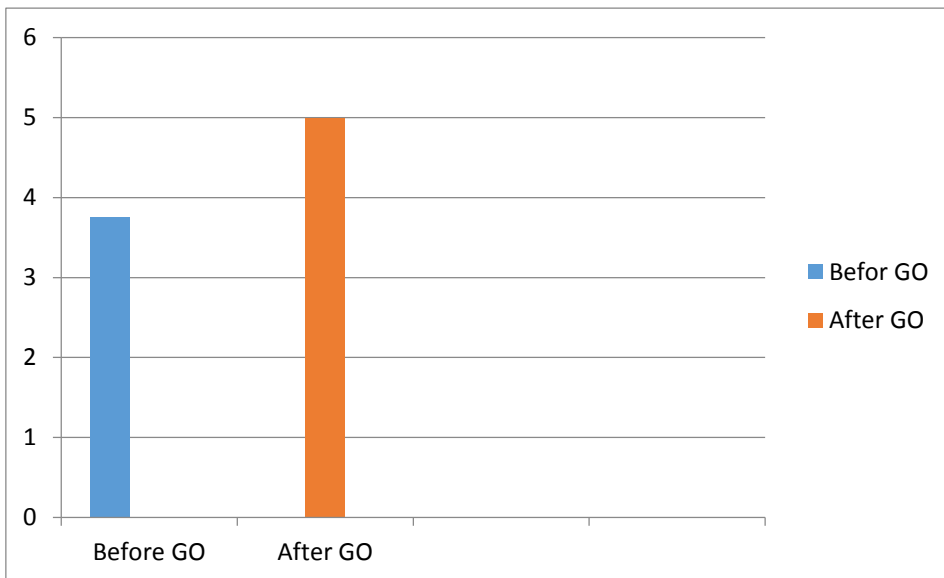


Figure 3.5: Mean score before and after applying graphic organizers

These scores were based on the comprehension writing criteria in IELTS. At this stage and according to the literature, graphic organizers can help teachers to find out and analyse a student's weak points and solve them. For example, there was no improvement in Participant 3's score. The lack of improvement could be related to the bad choice of graphic organizer itself or to a lack of knowledge in how to use it. Figures 3.6 and 3.7 show the marking criteria which were used for correcting the participants' writing. In fact, these marking criteria need to be modified to better suit the research objectives.



IELTS Task 1 Writing band descriptors (public version)

Band	Task Achievement	Coherence and Cohesion	Lexical Resource	Grammatical Range and Accuracy
9	<ul style="list-style-type: none"> fully satisfies all the requirements of the task clearly presents a fully developed response 	<ul style="list-style-type: none"> uses cohesion in such a way that it attracts no attention skillfully manages paragraphing 	<ul style="list-style-type: none"> uses a wide range of vocabulary with very natural and sophisticated control of lexical features; rare minor errors occur only as 'slips' 	<ul style="list-style-type: none"> uses a wide range of structures with full flexibility and accuracy; rare minor errors occur only as 'slips'
8	<ul style="list-style-type: none"> covers all requirements of the task sufficiently presents, highlights and illustrates key features / bullet points clearly and appropriately 	<ul style="list-style-type: none"> sequences information and ideas logically manages all aspects of cohesion well uses paragraphing sufficiently and appropriately 	<ul style="list-style-type: none"> uses a wide range of vocabulary fluently and flexibly to convey precise meanings skillfully uses uncommon lexical items but there may be occasional inaccuracies in word choice and collocation produces rare errors in spelling and/or word formation 	<ul style="list-style-type: none"> uses a wide range of structures the majority of sentences are error-free makes only very occasional errors or inappropriacies
7	<ul style="list-style-type: none"> covers the requirements of the task (Academic) presents a clear overview of main trends, differences or stages (General Training) presents a clear purpose, with the tone consistent and appropriate clearly presents and highlights key features / bullet points but could be more fully extended 	<ul style="list-style-type: none"> logically organises information and ideas; there is clear progression throughout uses a range of cohesive devices appropriately although there may be some under-/over-use 	<ul style="list-style-type: none"> uses a sufficient range of vocabulary to allow some flexibility and precision uses less common lexical items with some awareness of style and collocation may produce occasional errors in word choice, spelling and/or word formation 	<ul style="list-style-type: none"> uses a variety of complex structures produces frequent error-free sentences has good control of grammar and punctuation but may make a few errors
6	<ul style="list-style-type: none"> addresses the requirements of the task (Academic) presents an overview with information appropriately selected (General Training) presents a purpose that is generally clear; there may be inconsistencies in tone presents and adequately highlights key features / bullet points but details may be irrelevant, inappropriate or inaccurate 	<ul style="list-style-type: none"> arranges information and ideas coherently and there is a clear overall progression uses cohesive devices effectively, but cohesion within and/or between sentences may be faulty or mechanical may not always use referencing clearly or appropriately 	<ul style="list-style-type: none"> uses an adequate range of vocabulary for the task attempts to use less common vocabulary but with some inaccuracy makes some errors in spelling and/or word formation, but they do not impede communication 	<ul style="list-style-type: none"> uses a mix of simple and complex sentence forms makes some errors in grammar and punctuation but they rarely reduce communication

Figure 3.6: Marking criteria

5	<ul style="list-style-type: none"> generally addresses the task; the format may be inappropriate in places (Academic) recounts detail mechanically with no clear overview; there may be no data to support the description (General Training) may present a purpose for the letter that is unclear at times; the tone may be variable and sometimes inappropriate presents, but inadequately covers, key features / bullet points; there may be a tendency to focus on details 	<ul style="list-style-type: none"> presents information with some organisation but there may be a lack of overall progression makes inadequate, inaccurate or over-use of cohesive devices may be repetitive because of lack of referencing and substitution 	<ul style="list-style-type: none"> uses a limited range of vocabulary, but this is minimally adequate for the task may make noticeable errors in spelling and/or word formation that may cause some difficulty for the reader 	<ul style="list-style-type: none"> uses only a limited range of structures attempts complex sentences but these tend to be less accurate than simple sentences may make frequent grammatical errors and punctuation may be faulty; errors can cause some difficulty for the reader
4	<ul style="list-style-type: none"> attempts to address the task but does not cover all key features / bullet points; the format may be inappropriate (General Training) fails to clearly explain the purpose of the letter; the tone may be inappropriate may confuse key features / bullet points with detail; parts may be unclear, irrelevant, repetitive or inaccurate 	<ul style="list-style-type: none"> presents information and ideas but these are not arranged coherently and there is no clear progression in the response uses some basic cohesive devices but these may be inaccurate or repetitive 	<ul style="list-style-type: none"> uses only basic vocabulary which may be used repetitively or which may be inappropriate for the task has limited control of word formation and/or spelling; <ul style="list-style-type: none"> errors may cause strain for the reader 	<ul style="list-style-type: none"> uses only a very limited range of structures with only rare use of subordinate clauses some structures are accurate but errors predominate, and punctuation is often faulty
3	<ul style="list-style-type: none"> fails to address the task, which may have been completely misunderstood presents limited ideas which may be largely irrelevant/repetitive 	<ul style="list-style-type: none"> does not organise ideas logically may use a very limited range of cohesive devices, and those used may not indicate a logical relationship between ideas 	<ul style="list-style-type: none"> uses only a very limited range of words and expressions with very limited control of word formation and/or spelling errors may severely distort the message 	<ul style="list-style-type: none"> attempts sentence forms but errors in grammar and punctuation predominate and distort the meaning
2	<ul style="list-style-type: none"> answer is barely related to the task 	<ul style="list-style-type: none"> has very little control of organisational features 	<ul style="list-style-type: none"> uses an extremely limited range of vocabulary; essentially no control of word formation and/or spelling 	<ul style="list-style-type: none"> cannot use sentence forms except in memorised phrases
1	<ul style="list-style-type: none"> answer is completely unrelated to the task 	<ul style="list-style-type: none"> fails to communicate any message 	<ul style="list-style-type: none"> can only use a few isolated words 	<ul style="list-style-type: none"> cannot use sentence forms at all
0	<ul style="list-style-type: none"> does not attend does not attempt the task in any way writes a totally memorised response 			

Figure 3.7: Marking criteria

4. **Timing:** applying graphic organizers in the writing session required spending a lot of time in a brainstorming process and in arranging the ideas, since planning and then writing is a demanding task when considering the time involved. It was obvious that the participants spent between ten to fifteen minutes using the pre-writing tool. However, there was a good impression when they started their writing. All the participants agreed that they were worried when they had spent a lot of time on something which is not counted in the marking, i.e., “brainstorming”. Eventually, the participants found themselves focusing on the topic with a smooth sequence of information.

3.7.6 Recommendations

1. The researcher started the piloting with a focus group. However, it would be better if the pre-test were to precede the focus group, so as not to allow the participants to know about any single idea regarding the pre-writing tools. In fact, revealing any kind of information could affect the results of the pre-test.
2. Make sure every single paper is checked before handing them out to the participants. The researcher noticed that some papers were not clear as a result of poor printing quality.
3. The coding area regarding the pre-post tests should be designed in a better way to enable the researcher to fold and hide the student's number easily.
4. Expanding the focus group questions to include some "why" questions will be considered in the future. In fact, "why" questions will elicit more valuable information from the participants, which will indeed help in solving the current problem, e.g. Why do you think writing is difficult? Why is there a low level of motivation when you hold your pen to write?
5. It would be better to have a questionnaire with relatively similar questions for the focus group to receive feedback from all participants before and after. The aim is to show in diagrams the difference in many aspects regarding applying graphic organizers in writing, such as the following: motivation, excitement and the willingness to use graphic organizers in writing from the participants' point of view. Besides, the quantitative results will strongly support the qualitative results.

In conclusion, there was a relative improvement in the marks of the participants before and after applying graphic organizers in the writing session. Graphic organizers also managed to raise the participants' motivation towards writing to where they were satisfied with the amount of information they could develop and with their focus on the topic

without losing it. However, there should be more attention paid to cohesive devices while teaching. This also gives participants the opportunity to learn how to use multiple kinds of graphic organizer to be used in their writing.

3.8 Gathering real data

After receiving permission from the Department of Education at Hull University, the researcher then had to seek permission from King Saud University as well to conduct the study at the College of Languages and Translation in the university. Table 3.8 shows the weekly plan.

Table 3.8: Weekly plan during collecting the data

DATA COLLECTION		
15 th September	<ul style="list-style-type: none"> Meet the head of English Department 	
22 nd September	<ul style="list-style-type: none"> Meet the instructors 	
29 th September	<ul style="list-style-type: none"> Meet the students in their class. Introduction, the aim of the research 	
13 th October	<p>Pre-Questionnaire</p> <p>Pre-Focus group</p>	
17 th October to 2 nd November	Holiday	
3 rd November	pre test	
10 th November	Applying GO	comparing
17 th November		analyzing
24 th November		assuming
1 st December		connecting
8 th December	<p>Post-Questionnaire</p> <p>Post-Focus Group</p>	

3.8.1 15th September

The researcher went to meet the Head of the English Department. He was informed of the objectives of this research, how the data would be gathered and the samples participating in this research. At this point, the researcher was hoping for four classes. However, the Head of the department informed the researcher that there is only one class with around

80 students. In fact, it was the beginning of the semester where the number of students in class was unstable.

3.8.2 29th September

Two weeks later, the researcher contacted the coordinator of English Department. He told the researcher that they have now two classes with around forty students in each class. After that, the researcher was directed to two instructors who were teaching writing skill for the third grade at the college. Those students are considered as the first level but they started with third grade since they accomplished their preparation year before they joined their degree. The researcher illustrated the aim and the objectives of the research to the instructors. The researcher thanked them for giving him the opportunity to conduct the research in their class and described to them that there will not be any disruption for their timetable. Actually, they were told that they will deliver their lecture normally and at the end of the lecture, when the instructor gave his students an assessment, the researcher will ask the students to do the class work by using the concept of Graphic Organizers. They raised a big question whether graphic organizers are effective in large classes or not? In fact, this issue were recalculated the researcher plan and was inserted in the focus group to check the efficiency of graphic organizers verses large class size in teaching writing.

In the same week, the researcher had a look through the curriculum to match the best graphic for each lesson. Then, he met the students in their class. The instructors introduced the researcher and he described to them the significant and the importance of this research. After illustrating the aim and objectives to them, they were told, as well, that participating in this research is a voluntary task and they can withdraw at any time without any harm related to them. Finally, they were provided with a sheet of paper to fill in their email address just in case if they are interested to know about the research results.

Since the students' names were organized without any clear reference in the class, the researcher divided each class into two groups according to their registration number. The researcher wrote each group in a piece of paper then put them in one glass. Then he wrote the category for each group and put them in another glass. After that, each piece which was picked up from the first glass is associated with another piece from the second glass. The conclusion was as follow: the first class contains: group A as odd numbers and group B as even numbers. On the other hand, the second class contains: group C as odd numbers and group D as even numbers. Table 3.9 illustrates how each class divided and when the inversion of graphic organizers takes place.

Table 3.9: Time of intervention for each group

Class 1	Group A	intervention of GO in week2
	Group B	intervention of GO in week3
Class 2	Group C	intervention of GO in week4
	Group D	Pure controlled group then the intervention of GO at the end of the experiment

All the participants normally do their assignments in their first week. Then, in week 2 group A will learn how to apply GO for 3 weeks. After that, in week 3, group B will learn how to apply Go for 2 weeks. Also, group C in week 4 will learn how to apply GO for 1 week. Finally, group D will learn how to apply GO in their final assessment.

3.8.3 13th October

A questionnaire was handled to the participants to get feedback before applying the concept of graphic organizers into their writing. The questionnaire questions are illustrated in Table 3.10.

Table 3.10: Questionnaire questions

<p>Kindly, choose only one answer. There is no true or false answer. You are only showing your opinion.</p>					
1.	The following skill is considered as the hardest skill to learn:				
	Speaking	Listening	Writing	Reading	
2.	Arranging my ideas positively affected my motivation to write.				
	Totally agree	Agree	Sometimes	disagree	Totally disagree
3.	I like to write about topics that are interested to me.				
	Totally agree	Agree	Sometimes	disagree	Totally disagree
4.	I can arrange my ideas before starting my writing.				
	Totally agree	Agree	Sometimes	disagree	Totally disagree
5.	I like using prewriting tools before starting my writing.				
	Totally agree	Agree	Sometimes	disagree	Totally disagree
6.	I can connect other ideas that are related to the main scene.				
	Totally agree	Agree	Sometimes	disagree	Totally disagree

7.	I can produce more ideas related to the main scene while writing.				
	Totally agree	Agree	Sometimes	disagree	Totally disagree
8.	I found it difficult to determine the main points that related to the main idea.				
	Totally agree	Agree	Sometimes	disagree	Totally disagree

Each question aimed to reflect a certain answer before and after applying the concept of graphic organizers.

Both classes participated in the questionnaire at the same time. After that, five students volunteered to participate in a focus group where the researcher chaired the session in asking them questions related to the research problem.

3.8.4 17th October to 2nd November

This period was a holiday. The researcher preferred to start the experiment without any disruption. In fact, students' exams and such holidays will disrupt the flow of the experiment.

3.8.5 3rd November

All groups in this week were considered as the controlled group. The participants were allocated according to their group in the class. They were asked to describe their college. At this stage, all the participants did not use any prewriting tool. All the participants were asked to submit their work after thirty minutes. However, the researcher noticed that there are a large number of absences in the second class which represented groups C and D. So, these two groups were mixed together to reform one group. The multiple-baseline design

will help in this way to check the key indicator that the researcher tries to find in the data. Whether there is a change correspondence to the time scale of the intervention or not. Table 3.11 shows how the intervention was applied each week for each group:

Table 3.11: Time of intervention with the new groups

	Group A	Group B	Group C
Week 1	Traditional writing	Traditional writing	Traditional writing
Week 2	Go	Traditional writing	Traditional writing
Week 3	Go	Go	Traditional writing
Week 4	Go	Go	Go

3.8.6 10th November

All groups were given the same question to write about. They were asked to describe their city. Appendices 8, 9 and 10 contain the types of graphics organizers used in the experiment. The aim was to compare the same procedure of *describing* with the first task last week. However, only group A were provided with additional helping aid which was a graphic to be filled in with their ideas before starting their writing. While both groups B and C started their writing straightaway. After ten minutes of brainstorming, group A was asked to start their writing. Finally, all groups were asked to submit their work after half an hour.

3.8.7 17th November

All groups were given the same question to write about. They were asked to write a paragraph *arguing* about taking a break after forty five minutes in a two hour lecture. At this time, both groups A and B were provided with additional helping aid which was a graphic to be filled with their ideas before starting their writing. On the other hand, group C started writing straight away. After ten minutes of brainstorming, both groups A and B

were asked to start their writing. Finally, all groups were asked to submit their work after half an hour.

3.8.8 24th November

All groups were given the same question to write about. They were asked to write a paragraph showing their opinion about their friend. All groups at this stage were given additional helping aid which was a graphic to be filled with their ideas before starting their writing. After ten minutes of brain storming, they were asked to start their writing. Finally, all groups were asked to submit their work after half an hour.

3.8.9 1st December

Both classes participated in a post questionnaire at the same time. It was based on the same questions they had before applying the concept of graphic organizers, but with little modifications. They were asked to give their opinion after applying the concept of graphic organizers into their writing. Table 3.12 is an example of a post questionnaire which is similar to the pre-intervention questionnaire:

Table 3.12: Questionnaire questions

<p>Kindly, choose only one answer. There is no true or false answer. You are only showing your opinion after using graphic organizers in your writing</p>					
1.	The following skill is considered as the hardest skill to learn:				
	Speaking	Listening	Writing	Reading	
2.	Arranging my ideas positively affected my motivation to write.				
	Totally agree	Agree	Sometimes	disagree	Totally disagree
3.	I like to write about topics that are interested to me.				
	Totally agree	Agree	Sometimes	disagree	Totally disagree
4.	I can arrange my ideas before starting my writing.				
	Totally agree	Agree	Sometimes	disagree	Totally disagree
5.	I like using prewriting tools before starting my writing.				
	Totally agree	Agree	Sometimes	disagree	Totally disagree
6.	I can connect other ideas that are related to the main scene.				
	Totally agree	Agree	Sometimes	disagree	Totally disagree

7.	I can produce more ideas related to the main scene while writing.				
	Totally agree	Agree	Sometimes	disagree	Totally disagree
8.	I found it difficult to determine the main points that related to the main idea.				
	Totally agree	Agree	Sometimes	disagree	Totally disagree

After that, five students volunteered to participate in a focus group where the researcher chaired the session in asking them questions related to the research problem after applying graphic organizers.

3.8.10 8th December

The researcher started by writing down the scripts for both focus groups to be used and analysed using the NVivo program. On the other hand, the questionnaire respondents were analysed by using SPSS program. After that, he began arranging the students' papers and covering their numbers. Then, they were sent to an English language teacher to mark the papers blindly without knowing any numbering or group categories. After that, another English language teacher was checking the marks and was asked to write down any comments if there was any difference in the mark. In fact, they were following a marking criterion which was developed from the focus group analysis to meet the needs of the participants' problems and to help in focusing on the main objectives of the research. The following is a table with the marking criteria:

Table 3.13: Modified marking criteria

Field	Mark	Description
Topic sentence	2	- Clear topic sentence that states the reader's opinion with relevant to the topic
	1	- There is a topic sentence - Opinion not shown.
	0	- Topic sentence is not relevant. - There is no topic sentence.
Main ideas	2	- Clear ideas - Ideas connected to the main topic
	1	- Some sentences may not connect to the main topic. - Some ideas are not clear.
	0	- Ideas do not support the topic sentence. - Order of ideas is unclear.
Supporting ideas	2	- More clear details supporting the main idea
	1	- Not clear sentences to support the main idea
	0	- No additional sentences to support the main idea. - Sentences do not support the main idea
Cohesive devices	2	- There is a clear and obvious use of variety of cohesive devices. - Arranged and fitted in their suitable location between the sentences.
	1	- Not using an adequate range of cohesive devices. - Repetition or not fitted properly in the suitable position between the sentences.
	0	- Not using any kind of cohesive devices.
Concluding sentence	2	- A clear conclusion that draws the findings from the main points.
	1	- Findings are not shown clearly.
	0	- No conclusion or the conclusion does not show at all.

3.9 Summary

Starting the practical research puts the researcher under a large amount of pressure. It is a normal feeling since time starts ticking. However, the researcher was living under additional pressure since there were unexpected obstacles raised at the beginning and in the middle of the experiment. Firstly, the researcher could not start the experiment from the beginning of his scheduled date. The reason was unexpected, as the department divided the class into two to minimize the student numbers. It was a good procedure with some delay for the researcher.

Secondly, there were noticeable absences in the second class which disrupted the balance of the numbers in the groups. Weekdays in Saudi Arabia go from Saturday to Wednesday. The second class was allocated on Wednesdays, where there were a great number of absences. It was disappointing to discover this small number. However, there was a quick reaction from the researcher following a recommendation from his supervisor. Instead of having four groups, the researcher considered the second class as one group. Hence, three groups were restructured from these two classes instead of four.

Thirdly, there was some confusion regarding the first marking criteria that were designed to measure the comprehension of students' outcomes. However, there was a debate between the two teachers who were correcting the paragraphs. The criteria were based on general points and the decision sometimes varied from one teacher to the other in correcting the same paper. Thus, new, more focused marking criteria were modified from the previous one to suit the needs of this research.

Chapter 4: Data analysis

4.1 Introduction

This chapter discusses the findings that were derived from different methods. This research applied three kinds of methods to answering its research question. As part of a qualitative approach, pre and post intervention focus groups were applied to explore the obstacles and difficulties facing second language writers in Saudi Arabia. This procedure also enabled the researcher to compare the pre focus group with the post one to double-check the participants' reactions and the influence of graphic organizers while writing. As part of a quantitative approach, on the other hand, two methods were employed. The first method was an experiment. The duration of this experiment was four weeks. The multiple baseline design played an important role whereby it showed valuable results through time. The second method was a pre and post intervention questionnaire. The questionnaire questions were based on the focus group, whereby the findings in the questionnaire and the experiment could confirm and support the findings in the focus group or otherwise.

This chapter is divided into four parts. The first part discusses the students' marks through four weeks. It starts with a general description of the marks. Then, an analysis was conducted into whether to accept or reject the null hypothesis by using different tests. The second part discusses the pre and post intervention questionnaires. There was a comparison between the participants' responses before and after applying the concept of graphic organizers. The third part discusses the pre and post intervention focus group. Fourthly, and finally, a triangulation discussion was derived from the qualitative and quantitative data to check the effectiveness of applying graphic organizers to writing.

4.2 Part one: Analysing the students' marks

4.2.1 Individual groups

The researcher divided the participants into four groups. The intervention was applied to each group at a different time. Table 4.1 below shows the number of participants in each group as follows: Group A = 19, Group B = 19, Group C = 24, and Group D = 25.

Table 4.1: Number of participants in the four groups

Week/group	A/19	B/19	C/24	D/25
Week 1	14	19	11	10
Week 2	16	15	-	-
Week 3	13	14	-	-
Week 4	14	13	-	-
Total = 87 student in all four groups				

However, there were a large number of absences in both Groups C and D. Thus, Groups C and D were combined as one group. Table 4.2 shows the new groups. The total number in each group as follows: Group A = 19, Group B = 19, and Group C = 49.

Table 4.2: Number of participants attending in the three groups

Week/group	A/19	B/19	C/49
Week 1	14	19	21
Week 2	16	15	38
Week 3	13	14	26
Week 4	14	13	35
Total = 87 students in all three groups			

The researcher found that there were some absences each week. The frequent absences affected the progress of the participants, so the participants' marks who were absent for two weeks or more were excluded. The aim of this exclusion was to prevent calculating any participants who may not gain advantage from the use of graphic organizers due to a number of absences. Table 4.3 below shows the final version of the participants who attended the whole period of the experiment or attended for at least three weeks. The total sample was 55 participants.

Table 4.3: Participants who attended for three weeks or more

Week/group	A/15	B/16	C/24
Week 1	14	16	17
Week 2	14	12	20
Week 3	12	14	19
Week 4	11	13	23
Total = 55 students in all three groups			

Tables 4.4, 4.5 and 4.6 below show the marks gained for each group in the four weeks. The grey marks shows when the intervention occurred through weeks. The intervention occurred in weeks 2, 3 and 4 in group A. It also occurred in weeks 3 and 4 in group B. Finally, it occurred in week 4 in group C. Each week the participants wrote a short essay about a topic they had learned in their normal class. They were assessed as follows:

2 marks for the topic sentence (TS).

2 marks for the main idea (M).

2 marks for the supporting ideas (S).

2 marks for the cohesive devices (CD).

2 marks for the concluding sentence (C).

10 marks as a total mark (T).

Table 4.4: Marks for Group A

Group	Week 1						Week 2						Week 3						Week 4					
	TS	M	S	CD	C	T	TS	M	S	CD	C	T	TS	M	S	CD	C	T	TS	M	S	CD	C	T
1	1	1	1	0	1	4	2	1	1	0	1	5	2	2	0	0	1	5	1	1	1	0	1	4
2	0	1	1	0	0	2	2	1	1	0	1	5	absent						2	2	1	1	2	8
3	2	1	1	1	0	5	2	1	1	1	1	6	2	2	1	0	2	7	absent					
4	0	1	1	2	1	5	1	1	1	1	1	5	absent						2	2	1	2	2	9
5	2	0	0	0	1	3	2	2	1	1	1	7	2	2	1	1	1	7	absent					
6	2	1	1	0	0	4	2	1	1	1	1	6	absent						1	2	2	2	2	9
7	2	2	1	0	0	5	2	2	1	1	1	7	2	2	1	1	2	8	absent					
8	2	2	2	1	0	7	2	1	1	1	1	6	2	2	1	0	2	7	2	2	2	2	2	10
9	1	1	0	0	0	2	0	1	1	0	1	3	0	2	1	0	1	4	1	2	1	2	1	7
10	1	2	1	0	1	5	1	2	1	2	2	8	1	2	2	0	2	7	1	1	2	2	2	8
11	0	2	1	1	0	4	2	1	1	1	1	6	2	2	2	1	2	9	absent					
12	0	1	1	1	1	4	2	1	1	1	1	6	2	2	1	1	2	8	1	2	1	0	1	5
13	absent						2	1	1	0	1	5	2	1	1	0	1	5	2	2	1	0	1	6
14	0	1	1	0	0	2	2	1	1	0	1	5	2	2	1	1	2	8	2	2	1	1	2	8
15	0	1	1	0	0	2	absent						2	2	1	1	1	7	1	2	1	1	2	7

Table 4.5: Marks for Group B

Group B	Week 1						Week 2						Week 3						Week 4					
	TS	M	S	CD	C	T	TS	M	S	CD	C	T	TS	M	S	CD	C	T	TS	M	S	CD	C	T
1	1	1	0	1	0	3	1	1	0	0	0	2	1	2	1	1	1	6	absent					
2	2	1	1	0	2	6	1	2	2	1	0	6	1	2	2	0	0	5	2	1	1	1	0	5
3	0	2	2	0	0	4	1	2	1	0	0	4	2	2	1	1	1	7	1	1	2	2	1	7
4	2	1	1	0	1	5	2	1	1	1	0	5	2	1	1	1	1	6	2	2	1	1	1	7
5	2	1	0	0	1	4	absent						2	2	1	0	2	7	2	2	1	2	2	9
6	2	2	2	0	1	7	1	1	1	0	0	3	2	2	1	1	1	7	absent					
7	2	2	2	0	1	7	2	2	2	1	1	8	2	2	1	1	2	8	2	2	1	1	1	7
8	1	2	1	0	0	4	1	1	2	0	0	4	2	2	1	0	0	5	2	2	2	1	2	9
9	2	1	1	0	0	4	0	1	1	0	1	3	1	2	1	0	0	4	2	2	1	1	1	7
10	1	2	2	1	0	6	absent						2	2	1	0	2	7	2	2	1	1	2	8
11	2	1	1	0	0	4	1	1	1	0	0	3	absent						1	1	1	0	2	5
12	1	1	1	1	0	4	absent						2	1	1	1	1	6	1	1	1	2	2	7
13	1	2	2	1	0	6	absent						2	2	1	1	2	8	2	2	2	1	2	9
14	1	2	2	0	0	5	1	2	1	0	0	4	2	2	2	1	1	8	absent					
15	1	2	1	0	0	4	1	1	1	0	0	3	2	2	1	1	2	8	1	2	2	2	2	9
16	0	1	1	1	0	3	1	2	1	0	0	3	absent						1	2	1	1	2	7

Table 4.6: Marks for Group C

Group C	Week 1						Week 2						Week 3						Week 4					
	TS	M	S	CD	C	T	TS	M	S	CD	C	T	TS	M	S	CD	C	T	TS	M	S	CD	C	T
1	absent						1	2	1	0	0	4	1	1	1	0	0	3	2	2	2	1	1	8
2	absent						1	1	1	1	0	4	0	2	2	1	0	6	2	2	2	2	2	10
3	absent						2	2	2	0	1	7	0	2	1	1	1	5	1	2	1	0	2	6
4	2	1	1	0	0	4	1	1	1	1	0	4	2	2	2	0	0	6	2	2	2	1	1	8
5	2	2	1	1	1	7	1	2	1	1	0	5	0	2	1	0	0	3	2	2	1	1	0	6
6	0	2	1	1	1	5	2	2	1	1	2	8	absent						2	1	1	1	1	6
7	absent						2	2	1	0	2	7	1	2	1	1	0	5	1	2	1	1	1	6
8	absent						1	1	1	1	0	4	1	2	1	0	0	4	1	1	1	1	1	5
9	0	2	2	2	1	7	2	2	1	0	2	7	absent						0	2	2	1	2	7
10	0	1	0	0	0	1	absent						0	1	1	0	0	2	2	2	1	1	1	7
11	2	1	1	1	0	5	2	1	1	0	1	5	1	2	1	0	0	4	2	2	1	1	1	7
12	1	1	1	0	1	4	2	1	1	0	0	3	1	2	1	0	0	4	1	2	1	0	0	4
13	0	2	1	2	1	6	2	1	1	2	2	8	1	2	1	2	0	6	absent					
14	0	1	1	1	0	3	1	1	1	0	1	4	absent						1	2	1	0	1	5
15	absent						2	1	1	0	1	5	0	1	1	0	0	2	2	2	1	1	0	6
16	0	1	2	0	1	4	2	1	1	1	1	6	1	1	1	1	1	5	0	2	1	1	2	6
17	1	1	1	0	0	3	absent						0	1	1	1	0	3	2	2	2	1	1	8
18	1	1	1	0	0	3	1	1	1	0	1	4	absent						2	2	2	1	1	8
19	1	1	1	1	1	5	2	2	1	1	1	5	0	1	2	0	0	3	2	2	1	1	0	6
20	1	2	1	1	1	6	absent						0	1	2	1	1	5	2	2	2	2	2	10
21	1	2	1	1	0	5	1	1	1	1	0	4	0	1	2	1	0	4	1	1	2	1	1	6
22	1	1	1	1	1	5	absent						0	2	1	0	0	3	1	2	2	1	2	8
23	0	1	1	1	0	3	0	2	1	0	0	3	absent						0	2	1	1	1	5
24	absent						1	2	2	0	0	5	0	2	1	0	0	3	1	2	1	1	2	7

Table 4.7 shows the total number of participants who attended for three weeks or more.

There were 54 participants.

Table 4.7: Total participants in all groups

N	Valid	54
	Missing	1

Table 4.8 shows the frequency and percentage for each group. Group A shows 15 participants, who represent 27.8% of the total number of participants. Group B shows 16 participants, who represent 29.6% of the total number of participants. Finally, Group C shows 23 participants, who represent 42.6% of the total number of participants.

Table 4.8: Frequency and percentage for each group

	Frequency	Percent	Valid percent	Cumulative percent
Valid Group A	15	27.8	27.8	27.8
Group B	16	29.6	29.6	57.4
Group C	23	42.6	42.6	100.0
Total	54	100.0	100.0	

The total mark was calculated upon five marking criteria. They are topic sentence, main idea, supporting ideas, cohesive devices, and concluding sentence. Each paper was coded with the same registry number then was blindly marked twice by two external English teachers.

4.2.1.1 Topic sentence

The first criterion is the topic sentence. Table 4.9 shows the mean score, which is out of 2, for each group in all four weeks. Firstly, Group A shows an improvement in their mean score, since they achieved 0.928, 1.71, 1.75 and 1.45. The intervention occurred in weeks 2, 3 and 4. Secondly, the mean scores for Group B in all four weeks are as follows: 1.3, 1.08, 1.78 and 1.61. The intervention was in weeks 3 and 4. Thirdly, Group C scored 0.68, 1.42, 0.44 and 1.36. The intervention came in week 4.

The highlighted scores show the time of the intervention. At the level of the topic sentence, there was an improvement in concentration on the topic sentence after applying the concept of graphic organizers. There was clear evidence that graphic organizers enhanced the participants' ability to write clearer topic sentences. Despite the unstable marks in each week for all groups, the mean score in the fourth week shows an improvement when comparing it with the first week for all groups.

Table 4.9: Mean scores for topic sentence

Groups			Topic sentence Week 1	Topic sentence Week 2	Topic sentence Week 3	Topic sentence Week 4
Group A	N	Valid	15	14	12	11
		Missing		1	3	4
	Mean		0.9286	1.7143	1.7500	1.4545
Group B	N	Valid	16	12	14	13
		Missing		4	2	3
	Mean		1.3125	1.0833	1.7857	1.6154
Group C	N	Valid	23	19	18	22
		Missing		4	5	1
	Mean		0.6875	1.4211	0.4444	1.3636

Figure 4.1 shows a line graph for the topic sentence mean score each week. All groups scored higher marks in the fourth week when compared with the first week.

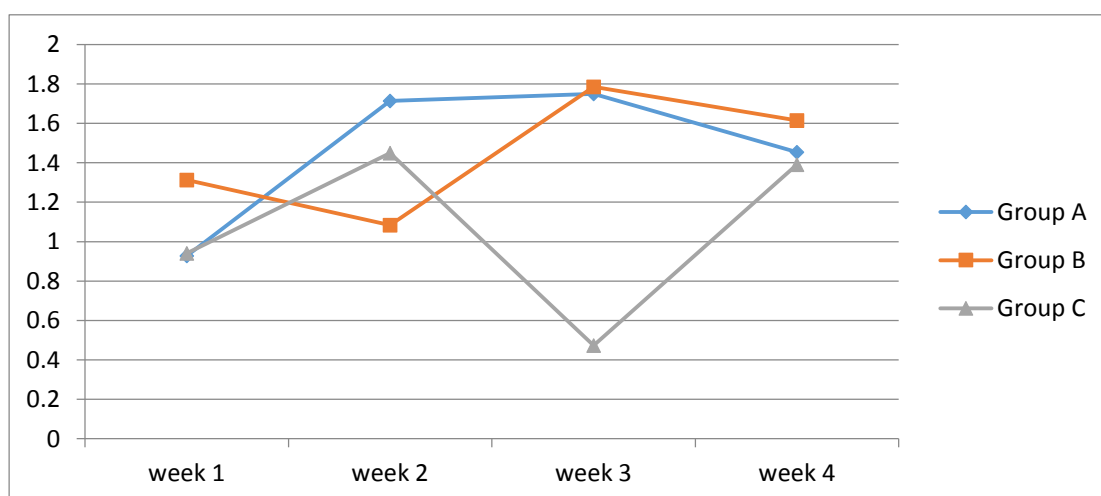


Figure 4.1: Line graph showing mean scores for topic sentence in Groups A, B and C

4.2.1.2 Main idea

Table 4.10 shows the second criterion, which is the main idea. Firstly, the mean scores for Group A in all weeks are as follows: 1.2, 1.2, 1.9 and 1.8 out of 2. The intervention for Group A happened in weeks 2, 3 and 4, where there was a steady improvement throughout the weeks. Secondly, Group B scored 1.5, 1.4, 1.85 and 1.69. The intervention came in weeks 3 and 4, where it showed a steady improvement through time. Thirdly, Group C scored 1.37, 1.47, 1.55 and 1.86. The intervention was in week 4, where there was an improvement in comparison with the other weeks. The highlighted scores show the time of the intervention. Graphic organizers contributed to enhancing concentration on the main idea. Even though the marks for each group in all weeks were unstable, the mean scores before and after the intervention show a great improvement. This shows that the participants managed to focus on the main idea in their writing.

Table 4.10: Mean score for main idea

Groups		Groups	Main idea Week 1	Main idea Week 2	Main idea Week 3	Main idea Week 4
Group A	N	Valid	15	14	14	12
		Missing		1	1	3
		Mean		1.2143	1.2143	1.9167
Group B	N	Valid	16	16	12	14
		Missing		0	4	2
		Mean		1.5000	1.4167	1.8571
Group C	N	Valid	23	16	19	18
		Missing		7	4	5
		Mean		1.3750	1.4737	1.5556

Figure 4.2 shows a line graph for the main idea mean score each week. All groups scored higher marks in the fourth week compared with the first week.

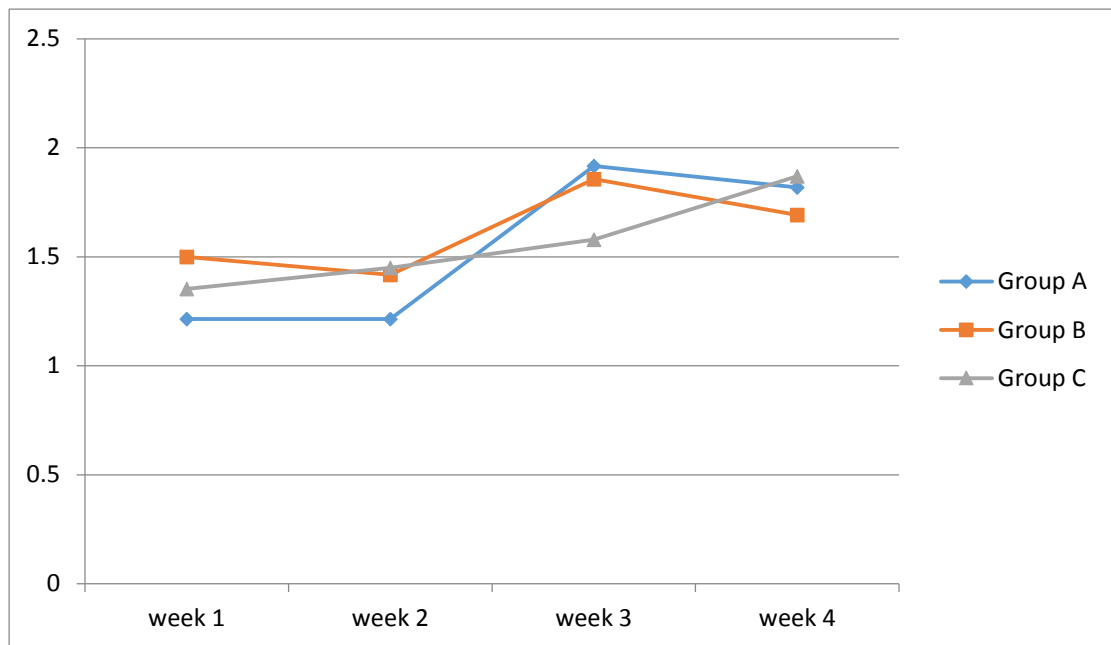


Figure 4.2: Line graph showing mean scores for main idea in Groups A, B and C

4.2.1.3 Supporting ideas

Table 4.11 illustrates the third criterion, which is supporting ideas. Firstly, Group A shows a mean score in all weeks as follows: 0.928, 1.00, 1.08 and 1.27. The intervention was in weeks 2, 3 and 4, where greater improvement was shown compared with week 1. Secondly, Group B achieved mean scores of 1.25, 1.16, 1.14 and 1.3. The intervention was in weeks 3 and 4, where the table illustrates a steady improvement when comparing the marks before and after the intervention. Thirdly, Group C scored 1.06, 1.1, 1.27 and 1.4. The intervention was in week 4, where it shows the highest score among the four weeks.

The highlighted scores show the time of intervention. The mean scores for the supporting ideas for all groups show an improvement through time. Despite the unstable marks for each group, the fourth week's mean score illustrates that the participants gained higher

marks and a better sense of supporting their ideas with more explanations and examples than in week 1.

Table 4.11: Mean score for supporting ideas

Groups		Groups	Supporting ideas Week 1	Supporting ideas Week 2	Supporting ideas Week 3	Supporting ideas Week 4
Group A N	Valid	15	14	14	12	11
	Missing		1	1	3	4
	Mean		0.9286	1.00	1.0833	1.2727
Group B N	Valid	16	16	12	14	13
	Missing		0	4	2	3
	Mean		1.2500	1.1667	1.1429	1.3077
Group C N	Valid	23	16	19	18	22
	Missing		7	4	5	1
	Mean		1.0625	1.1053	1.2778	1.4091

Figure 4.3 shows a line graph for the supporting ideas mean score in each week. All groups scored higher marks in week 4 when compared with week 1.

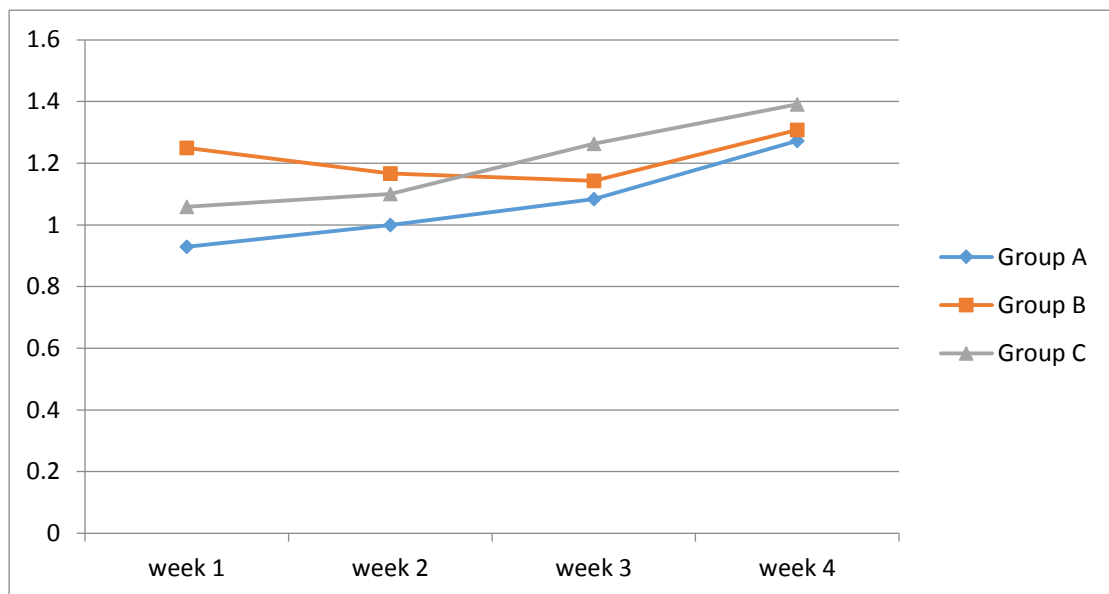


Figure 4.3: Line graph showing mean scores for supporting ideas in Groups A, B and C

4.2.1.4 Cohesive devices

Table 4.12 illustrates the participants' mean marks in all weeks in relation to focusing on the use of cohesive devices. Firstly, Group A achieved mean scores in all weeks as follows: 0.428, 0.7, 0.5 and 1.18. The intervention was in weeks 2, 3 and 4, where they show a higher mark than in the first week. Secondly, the mean scores for Group B in all four weeks were as follows: 0.3, 0.25, 0.64 and 1.2. There was a steady improvement in the third and fourth marks where the intervention was made in weeks 3 and 4. Thirdly, Group C achieved mean scores in all four weeks as follows: 0.75, 0.52, 0.5 and 0.95. The intervention was in week 4, where it gained the highest marks among all four weeks.

The highlighted scores show the time of intervention. Although there is an unstable level of marks through the weeks in all groups, it is noticeable that the mean score in week 4 for all groups was improved when comparing it with week 1. These two weeks can be considered as pre and post intervention for all groups.

Table 4.12: Mean scores for cohesive devices

Groups		Groups	Cohesive devices Week 1	Cohesive devices Week 2	Cohesive devices Week 3	Cohesive devices Week 4
Group A	N Valid	15	14	14	12	11
	Missing		1	1	3	4
	Mean		0.4286	0.7143	0.5000	1.1818
Group B	N Valid	16	16	12	14	13
	Missing		0	4	2	3
	Mean		0.3125	0.2500	0.6429	1.2308
Group C	N Valid	23	16	19	18	22
	Missing		7	4	5	1
	Mean		0.7500	0.5263	0.5000	0.9545

Figure 4.4 shows a line graph of the mean scores for cohesive devices each week. All groups scored higher marks in week 4 when compared with week 1.

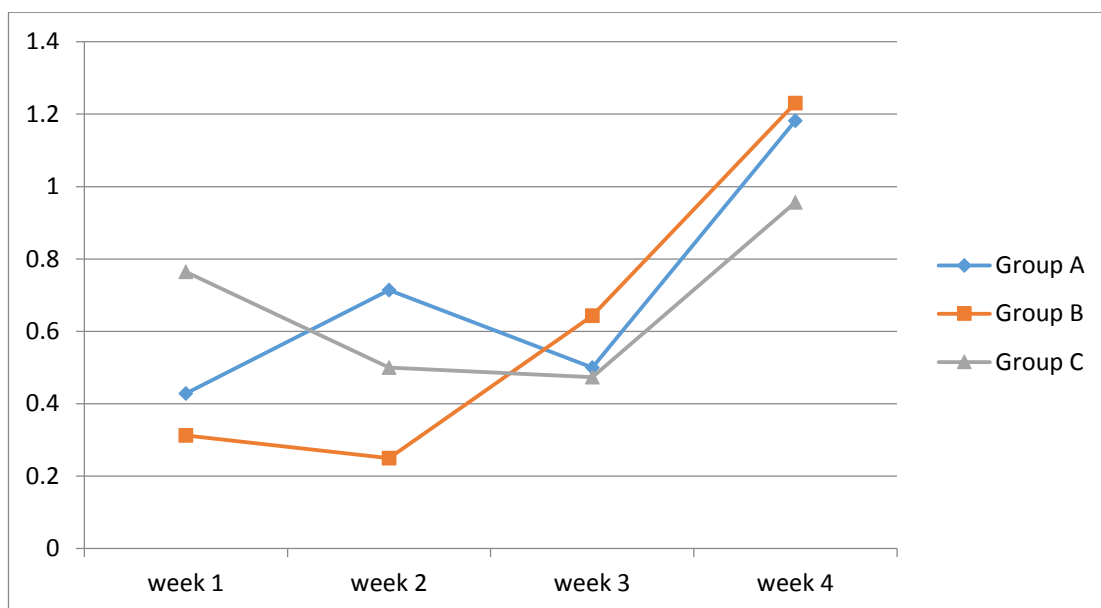


Figure 4.4: Line graph showing mean scores for cohesive devices in Groups A, B and C

4.2.1.5 Concluding sentence

Table 4.13 demonstrates the participants' mean marks in all weeks when focusing on the concluding sentence. Firstly, Group A received mean scores in all four weeks as follows: 0.357, 1.07, 1.58 and 1.63. The intervention was in weeks 2, 3 and 4, where they show better marks than the first week. Secondly, the mean scores for Group B were as follows: 0.375, 0.166, 1.14 and 1.53. The intervention was in weeks 3 and 4. The mean scores in weeks 3 and 4 were improved compared with weeks 1 and 2. Thirdly, Group C achieved mean scores in all four weeks as follows: 0.56, 0.736, 0.166 and 1.13. The intervention was in week 4, where it achieved the highest mark among all the weeks.

The highlighted scores show the time of intervention. The marks show an improvement in all groups through time while applying the concept of graphic organizers. This enhanced the focus and concentration at the level of the concluding sentence. There is

also a great improvement when comparing the mean score of the first week for all groups with that of the last week.

Table 4.13: Mean scores for concluding sentence

Groups		Groups	Concluding sentence Week 1	Concluding sentence Week 2	Concluding sentence Week 3	Concluding sentence Week 4
Group A N	Valid	15	14	14	12	11
	Missing		1	1	3	4
	Mean		0.3571	1.0714	1.5833	1.6364
Group B N	Valid	16	16	12	14	13
	Missing		0	4	2	3
	Mean		0.3750	0.1667	1.1429	1.5385
Group C N	Valid	23	16	19	18	22
	Missing		7	4	5	1
	Mean		0.5625	0.7368	0.1667	1.1364

Figure 4.5 shows a line graph for the concluding sentence mean score each week. All groups scored higher marks in week 4 when compared with week 1.

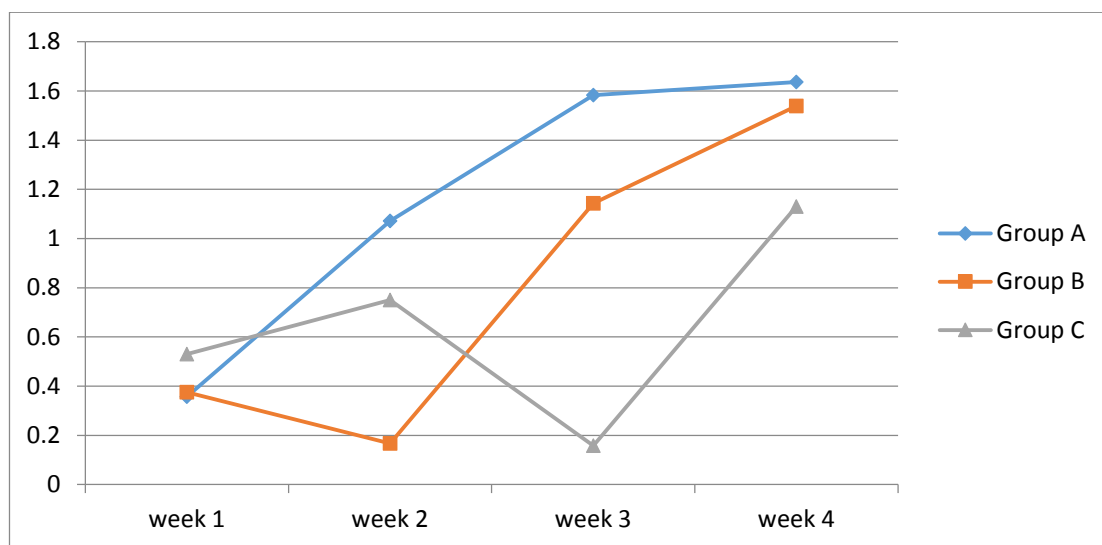


Figure 4.5: Line graph showing mean scores for concluding sentence in Groups A, B and C

4.2.1.6 Total mark

Table 4.14 demonstrates the participants' mean marks, which were out of 10 in all weeks when focusing on the total mark. Firstly, Group A achieved mean scores in all weeks as follows: 3.857, 5.71, 6.83 and 7.36. The intervention was in weeks 2, 3 and 4, where they show a higher mark than for the first week. Secondly, the mean scores of Group B were as follows: 4.75, 4, 6.57 and 7.38. The intervention was in weeks 3 and 4. The mean scores in weeks 3 and 4 were improved when compared with weeks 1 and 2. Thirdly, Group C achieved a mean score in all weeks as follows: 4.43, 5.1, 4 and 6.72. The intervention was in week 4, where it gained the highest mark among all four weeks.

The highlighted scores show the time of intervention. The marks show an improvement in all groups through time while applying the concept of graphic organizers. It enhanced focus and concentration at the level of the topic sentence, main idea, supporting ideas, cohesive devices and concluding sentence. There is also a great improvement shown by comparing the mean score of the first week for all groups with that of the last week.

Table 4.14: Mean scores for total mark

Groups			Total mark	Total mark	Total mark	Total mark	
Groups			Week 1	Week 2	Week 3	Week 4	
Group A	N	Valid	15	14	14	12	11
		Missing		1	1	3	4
		Mean		3.8571	5.7143	6.8333	7.3636
Group B	N	Valid	16	16	12	14	13
		Missing		0	4	2	3
		Mean		4.7500	4.0000	6.5714	7.3846
Group C	N	Valid	23	16	19	18	22
		Missing		7	4	5	1
		Mean		4.4375	5.1053	4.0000	6.7273

Figure 4.6 shows a line graph of the total mark mean score each week. All groups scored higher marks in week 4 when compared with week 1.

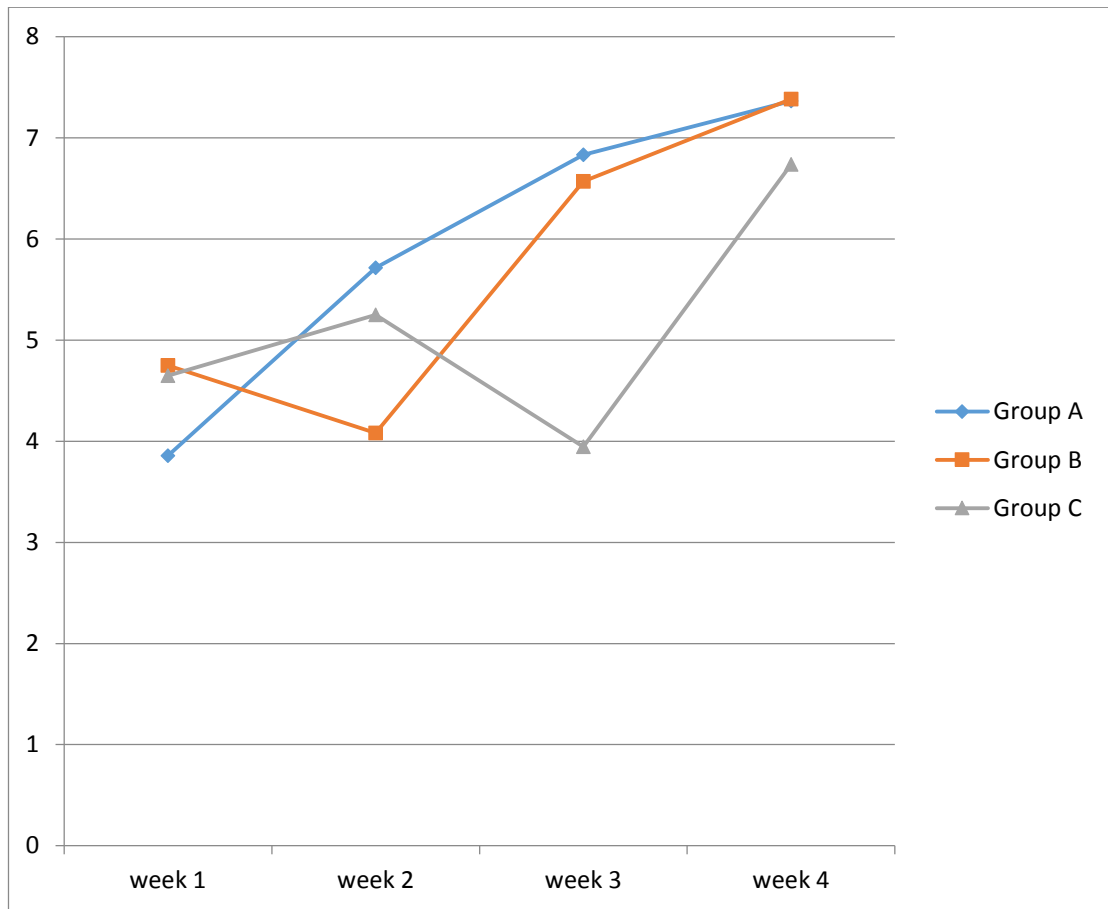


Figure 4.6: Line graph showing mean scores for total mark in Groups A, B and C

The multiple baseline design clearly illustrates the difference in mean scores of the total mark for each group after the intervention. The following line graph in Figure 4.7 shows the improvement through time in students' total mark mean score in each week. It shows when the intervention happened. Group A applied the use of graphic organizers in week 2, group B in week 3 and group C in week 4.

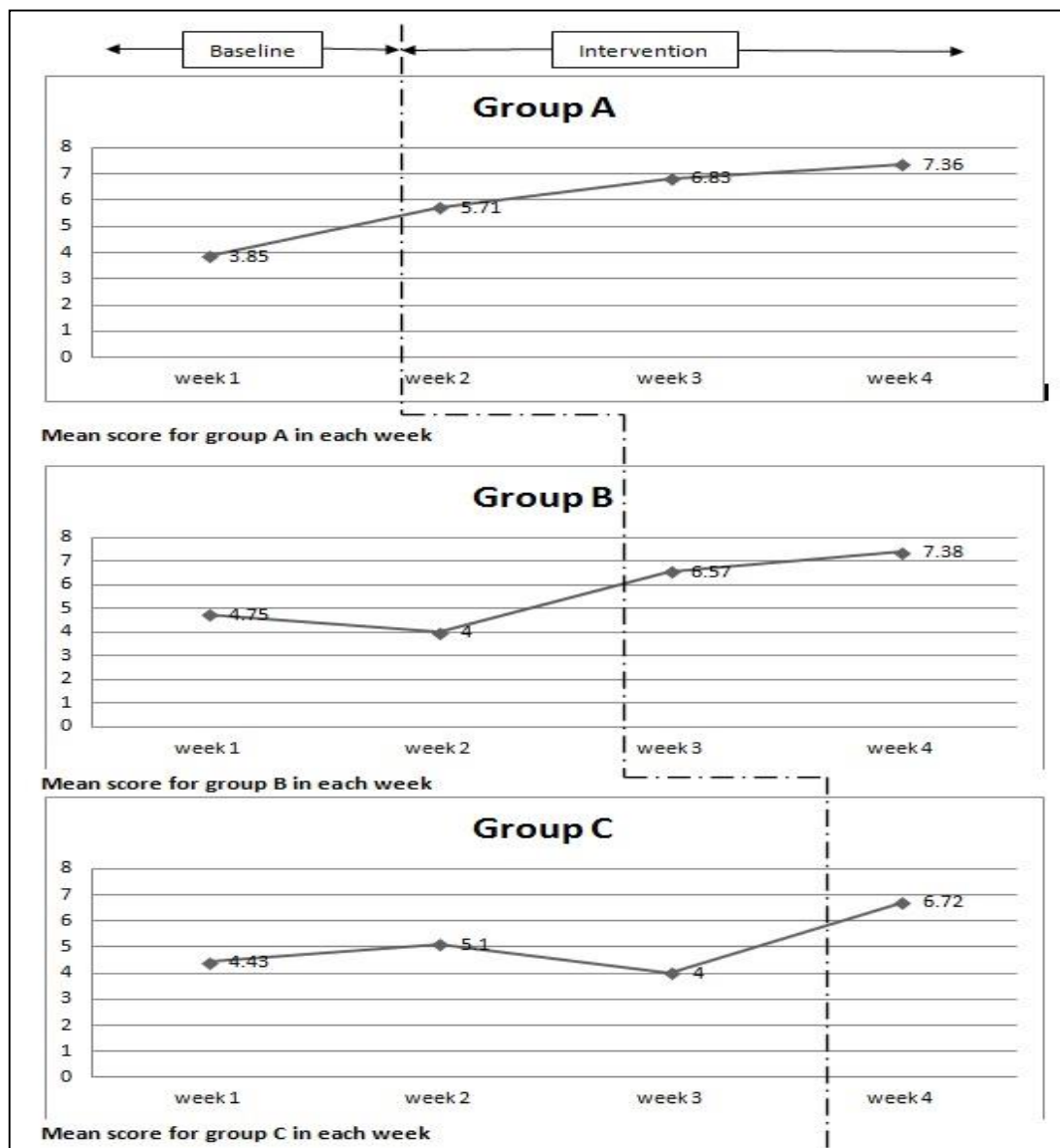


Figure 4.7: Total mark mean for each group before and after the intervention

4.2.2 All participants as one group before and after the intervention

Applying the multiple baseline design enabled the researcher to analyse the data in different ways. The previous part was a description of the data while they were divided into three groups. The discussion was based on analysing each group horizontally within the same group, which means comparing the same group before and after the intervention. On the other hand, it could be analysed vertically, where the comparison is drawn between the three groups in a particular time. This part will analyse the same data but as one group, before the intervention in week 1 and after the intervention in week 4.

A total of 46 participants were included in this analysis where they reflected their attendance in both weeks 1 and 4. Tables 4.15 and 4.16 below illustrate the differences in mean scores as well as the minimum and maximum scores achieved by the participants. All the criteria were marked out of 2, and the total mark was out of 10. The first criterion focused on the topic sentence. The mean score was 0.978 before the intervention. Then, the score was improved to 1.45 out of 2 after applying the concept of graphic organizers. Secondly, the mean score of the main idea in week 1 was 1.36. Then, the score improved to 1.8 in week 4. Thirdly, the mean score for supporting ideas was 1.08 in week 1. Then, it improved in week 4 to reach 1.34. Fourthly, the mean score for using cohesive devices in week 1 was 0.5. Then, this moved to 1.08 in week 4. Fifthly, the mean score for the concluding sentence was 0.43 in week 1, while it improved to 1.36 in week 4. Finally, the mean score for the total mark in week 1 was 4.34 out of 10 in week 1, while it became 7.06 out of 10 in week 4.

Table 4.15: Mean, minimum and maximum scores for all participants as one group in week 1

	N	Minimum	Maximum	Mean
Topic sentence week 1	46	0.00	2.00	0.9783
Main idea week 1	46	0.00	2.00	1.3696
Supporting ideas week 1	46	0.00	2.00	1.0870
Cohesive devices week 1	46	0.00	2.00	0.5000
Concluding sentence week 1	46	0.00	2.00	0.4348
Total mark week 1	46	1.00	7.00	4.3696
Valid N (listwise)	46			

Table 4.16: Mean, minimum and maximum scores for all participants as one group in week 4

	N	Minimum	Maximum	Mean
Topic sentence week 4	46	0.00	2.00	1.4565
Main idea week 4	46	1.00	2.00	1.8043
Supporting ideas week 4	46	1.00	2.00	1.3478
Cohesive devices week 4	46	0.00	2.00	1.0870
Concluding sentence week 4	46	0.00	2.00	1.3696
Total mark week 4	46	4.00	10.00	7.0652
Valid N (listwise)	46			

Furthermore, the minimum and maximum scores were affected positively after the intervention. The minimum total mark in week 1 was 1 out of 10, while it was 4 out of 10 in week 4. In addition, the maximum total mark in week 1 was 7 out of 10, while it was 10 out of 10 in week 4.

In general, the use of graphic organizers contributed to enhancing the level of coherence and enabled the participants to produce a well-cohered piece of written material. Whilst for each individual component, in some cases the improvement was not large, the cumulative effect shown by the “total mark” was noteworthy. The overall mark also covers this lack in one criterion and increases the level of text coherence. Figure 4.8 shows the differences in mean scores for all criteria before and after the intervention.

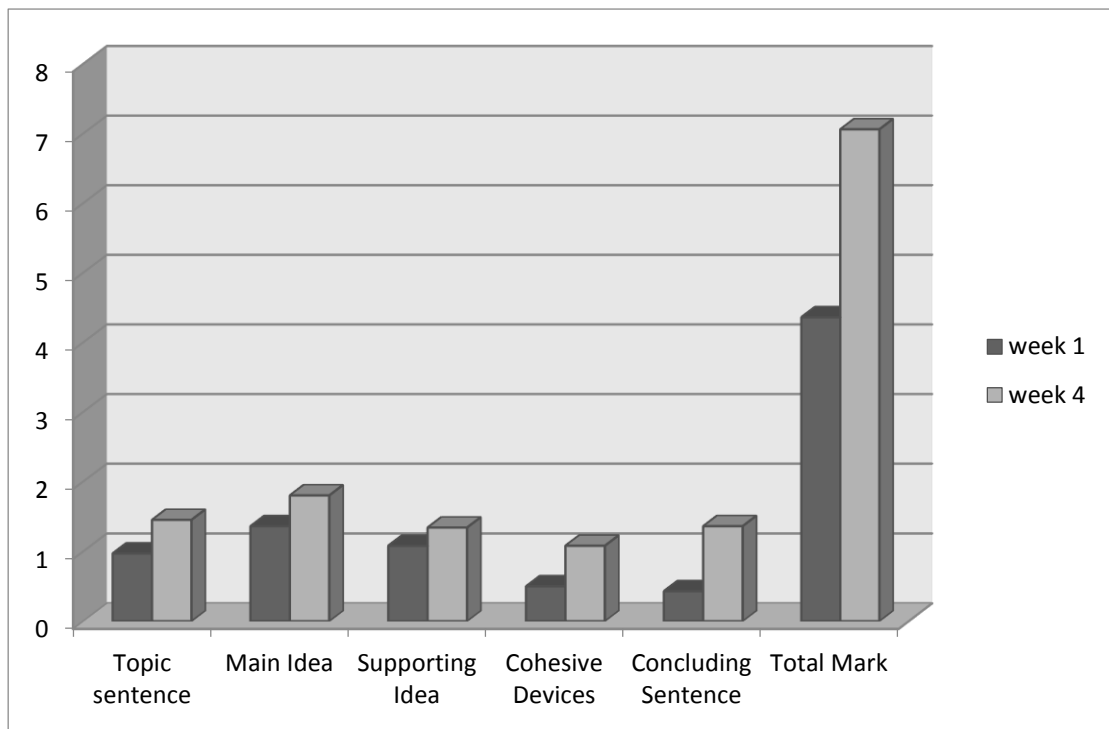


Figure 4.8: Mean scores for all criteria before and after the intervention

The next two tables illustrates the frequency of participants who scored a particular mark before and after the intervention, particularly in weeks 1 and 4. Table 4.17 shows the frequency of the number of participants who gained a specific mark before adopting the use of graphic organizers as in week 1. It shows 36 participants situated between 5 marks and 1. They represent 78.2 %. On the other hand, 10 participants scored from 6 to 7 out of 10. They represent 21.8%.

Table 4.17: Number of participants who scored a particular mark in week 1

Marks	Frequency	Percent	Valid percent	Cumulative percent
Valid 1.00	1	1.9	2.2	2.2
2.00	4	7.4	8.7	10.9
3.00	7	13.0	15.2	26.1
4.00	14	25.9	30.4	56.5
5.00	10	18.5	21.7	78.3
6.00	5	9.3	10.9	89.1
7.00	5	9.3	10.9	100.0
Total	46	85.2	100.0	
Missing System	8	14.8		
Total	54	100.0		

Table 4.18 illustrates the frequency of the number of participants who received a particular mark in week 4. There was an increase in the percentages of students who gained higher marks. There were 38 participants who received more than 5 marks out of 10. They represent 82.6 %. On the other hand, eight participants were allocated between just 4 and 5. They represent 17.4%. In addition, 18 participants were allocated a mark of between 8 and 10. They represent 39.1% of those who did not achieve these marks in week 1.

Table 4.18: Number of participants who scored a particular mark in week 4

Marks		Frequency	Percent	Valid percent	Cumulative percent
Valid	4.00	2	3.7	4.3	4.3
	5.00	6	11.1	13.0	17.4
	6.00	9	16.7	19.6	37.0
	7.00	11	20.4	23.9	60.9
	8.00	9	16.7	19.6	80.4
	9.00	6	11.1	13.0	93.5
	10.00	3	5.6	6.5	100.0
	Total	46	85.2	100.0	
Missing	System	8	14.8		
Total		54	100.0		

Figure 4.9 shows a histogram with the distribution of marks for week 1. The participants' scores range from 1 to 7. The curve shows a normal distribution, where the majority of the students are allocated around the mean.

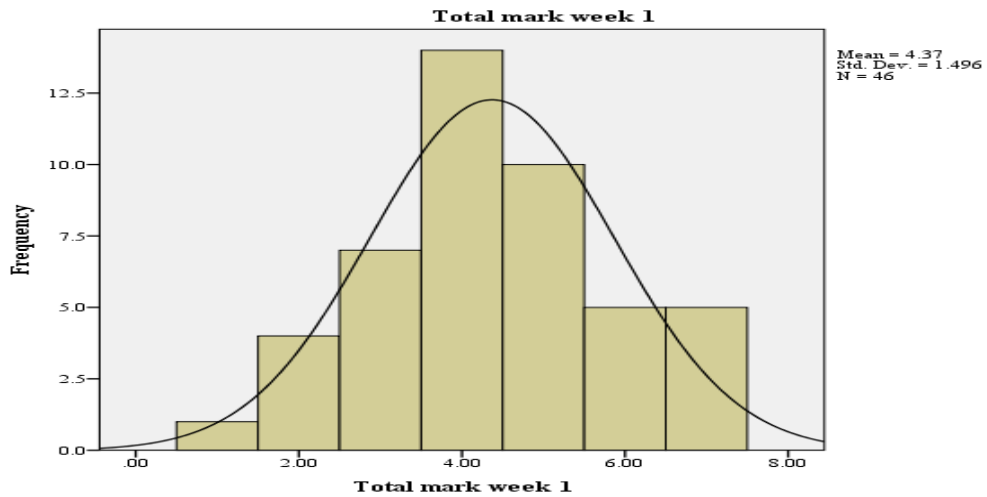


Figure 4.9: Histogram of total marks for week 1

Similarly, Figure 4.10 shows a histogram with the distribution of marks for week 4. The curve shows a normal distribution, where the majority of the students are allocated around the centre. However, they differ from the first week since the marks allocated were between 4 and 10.

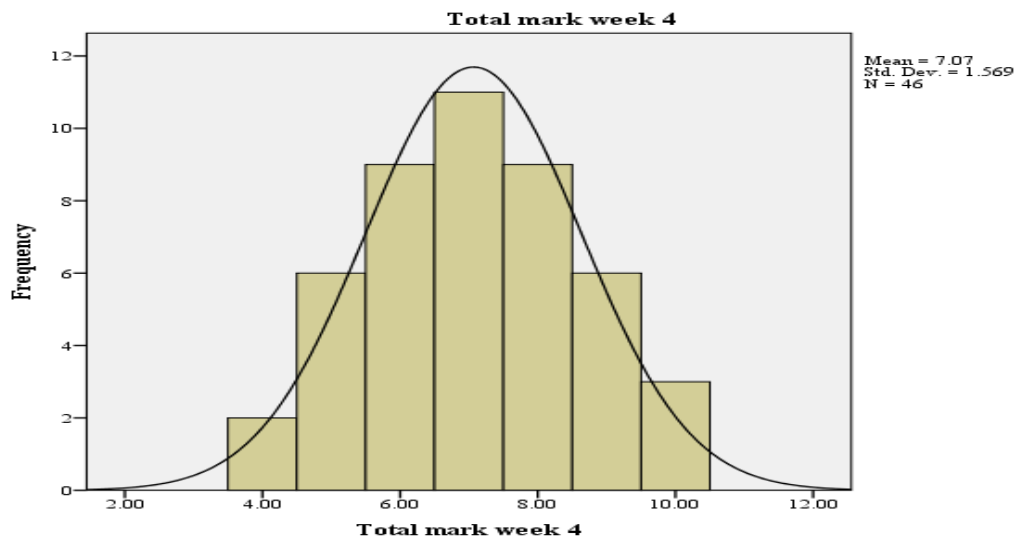


Figure 4.10: Histogram of total marks for week 4

4.3 Testing the hypotheses

The multiple baseline design enabled the researcher to consider the data in different ways. The data will be discussed according to the significance of each mean score horizontally and vertically. This means examining the significance of the mean score before and after the intervention for the same group on the one hand. On the other hand, the change in marks can be compared between the three groups each week. A third way of analysing the data is by combining the three groups as one group in week 1, then comparing the significance of the mean score with the same new group in week 4. All groups in week 1 will be combined as one group. They will also be combined in week 4. The significance of the mean score will then show whether the difference is caused by the intervention of graphic organizers or not.

The intervention occurred in weeks 2, 3 and 4 in group A. Also, it occurred in weeks 3 and 4 in group B. Finally, it occurred in week 4 in group C.

The analysis will be divided into three parts:

Part 1: Analysis of each group individually through time.

Part 2: Analysis of all groups each week.

Part 3: Analysis of all groups in week 1 as one group with all groups in week 4 as one group.

4.3.1 Section 1: Analysis of each group individually through time

4.3.1.1 Wilcoxon paired test: Group A - weeks 1 and 2

This part illustrates Group A's scores in weeks 1 and 2. The intervention of graphic organizers was in week 2 and this group consisted of 14 participants. Table 4.19 below shows that there is an improvement in the mean scores. The mean score in week 1 was 3.86, then jumped to 5.71 in week 2. There was also an increase in the minimum score,

which was 2 out of 10 in the first week, and then became 3 out of 10 in the second week. Similarly, there was an increase in the maximum score from 7 in the first week to 8 in the second week.

Table 4.19: Comparing the mean, min and max score for group A in weeks 1 and 2

	N	Mean	Minimum	Maximum	Percentiles		
					25th	50th (median)	75th
Total mark week 1	14	3.86	2.00	7.00	2.0000	4.0000	5.0000
Total mark week 2	14	5.71	3.00	8.00	5.0000	6.0000	6.2500

There was an increase in the students' marks when comparing week 1 with week 2. Table 4.19 shows the minimum score in week 1 was 2 out of 10. This was gained by four participants, who reflect 28.6% of the total group. The maximum score in week 1 was 7 out of 10. This was gained by only one participant, who reflects 7.1% of the total number of participants. In general, 64.3% of the participants received lower than half marks. This means that nine participants gained less than 5 marks out of 10 in their total mark in week 1. Furthermore, 7.1% of the participants received more than half marks. This means that only one participant achieved 7 out of 10 which is more than 5 out of 10 in his total mark in week 1.

In contrast, the minimum score in week 2 was 3 out of 10. This was gained by only one participant, who reflects 7.1% of the total group. The maximum score in week 2 was 8 out of 10. This was gained by only one participant, who reflects 7.1%. In general, 7.1% of the participants received lower than half marks. This means that one participant gained less than 5 marks out of 10 in his total mark in week 2. Furthermore, 57.1% of the participants achieved more than the half mark. This means that eight participants received more than 5 out of 10 for their total mark in week 2.

By comparing the scores in both weeks, there was a slight increase in the minimum score from 2 to 3. There was also a slight increase in the maximum score from 7 to 8. In general, the population of the group was moved from receiving lower marks in week 1 to higher marks in week 2. In other words, the number of students who gained a mark of above 5 out of 10 was higher in week 2 than week 1, since it jumped from one participant in week 1 to eight participants in week 2 as shown in Table 4.20 below:

Table 4.20: Frequency for total mark weeks 1 and 2: Group A

Weeks	marks		Frequency	Percent	Valid percent	Cumulative percent
Week 1	Valid	2.00	4	26.7	28.6	28.6
		3.00	1	6.7	7.1	35.7
		4.00	4	26.7	28.6	64.3
		5.00	4	26.7	28.6	92.9
		7.00	1	6.7	7.1	100.0
		Total	14	93.3	100.0	
	Missing	System	1	6.7		
	Total	15	100.0			
Week 2	Valid	3.00	1	6.7	7.1	7.1
		5.00	5	33.3	35.7	42.9
		6.00	5	33.3	35.7	78.6
		7.00	2	13.3	14.3	92.9
		8.00	1	6.7	7.1	100.0
	Total	14	93.3	100.0		
	Total	15	100.0			

Table 4.21 shows a comparison between weeks 1 and 2 for Group A. It shows the number of participants who improved or did not improve at that particular time. There were 13 participants involved in this comparison since the absent participants were excluded.

There was one participant who received a lower mark in week 2 than week 1. On the other hand, there were 11 participants who received more positive marks in week 2 than week 1. There was only one participant who achieved the same mark before and after the intervention.

Table 4.21: Number of participants who improved or not in weeks 1 and 2: Group A

	N	Mean rank	Sum of ranks
Total mark week 2 - Total mark week 1			
Negative ranks	1a	2.50	2.50
Positive ranks	11b	6.86	75.50
Ties	1c		
Total	13		

a. Total mark week 2 < Total mark week 1

b. Total mark week 2 > Total mark week 1

c. Total mark week 2 = Total mark week 1

The Wilcoxon test confirmed whether there was significance in the mean scores between the marks in weeks 1 and 2 or not. The hypotheses for this test are:

H0: There is no significant improvement in students' coherence marks.

H1: There is a significant improvement in students' coherence marks.

Table 4.22 shows that the difference between the two scores is statistically significant, since it is 0.004 and is less than the P value (0.05). Thus, the null hypothesis is rejected, which states: There is no significant improvement in students' coherence marks. The alternative hypothesis is accepted, where it can be confirmed that: There is a significant improvement in students' coherence marks.

Table 4.22: Test statistics for Group A, weeks 1 and 2

	Total mark week 2 - Total mark week 1
Z	-2.890a
Asymp. sig. (2-tailed)	0.004

a. Based on negative ranks

b. Wilcoxon signed-rank test

4.3.1.2 Wilcoxon paired test: Group A - weeks 1 and 4

This part illustrates Group A's scores in weeks 1 and 4. The aim of this comparison is to double-check and confirm or reject the effectiveness of applying graphic organizers in writing. There were 14 participants in week 1 and 11 participants in week 4. The intervention of graphic organizers was in week 2 and continued to week 4. Table 4.23 shows that there was an improvement in the mean scores. These jumped from 3.85 in week 1 to 7.36 in week 4. There was also an increase in the minimum score, which was 2 marks out of 10 in week 1 and 4 marks out of 10 in week 4. Similarly, there was an increase in the maximum score from 7 out of 10 in week 1 to 10 out of 10 in week 4.

Table 4.23: Group A scores in weeks 1 and 4

	N	Mean	Minimum	Maximum	Percentiles		
					25th	50th (median)	75th
Total mark week 1	14	3.8571	2.00	7.00	2.0000	4.0000	5.0000
Total mark week 4	11	7.3636	4.00	10.00	6.0000	8.0000	9.0000

There was an increase in students' marks when comparing week 1 with week 4. Table 4.23 illustrates the minimum score in week 1 as 2 out of 10. As shown in table 4.24, this

score was gained by four participants who reflect 28.6% of the total group. The maximum score in week 1 was 7 out of 10. This was gained by only one participant, who reflects 7.1% of the total group. In general, 64.3% of the participants received lower than the half mark. This means that nine participants gained less than 5 out of 10 in their total mark in week 1. Furthermore, 7.1% of the participants achieved more than the half mark. This means that only one participant gained more than 5 out of 10 in his total mark in week 1.

In contrast, the minimum score in week 4 was 4 out of 10. This was gained by only one participant, who reflects 9.1% of the total group. On the other hand, the maximum score in week 4 was 10 out of 10. This was gained by only one participant, who reflects 9.1%. In general, 9.1% of the participants received lower than the half mark. This means that one participant gained less than 5 out of 10 in his total mark in week 4. Furthermore, 81.8% of the participants achieved more than half of the full mark. This means that nine participants received more than 5 out of 10 in their total mark in week 4.

By comparing the scores in both weeks, the minimum score shifted from 2 to 4. The maximum score also improved, from 7 to 10. In general, the population of the group transferred from receiving lower marks in week 1 to higher marks in week 4, since this jumped from one participant in week 1 to nine participants in week 4.

Table 4.24: Marks frequency for total mark in weeks 1 and 4: Group A

Weeks	marks	Frequency	Percent	Valid percent	Cumulative percent	
Week 1	Valid	2.00	4	26.7	28.6	28.6
		3.00	1	6.7	7.1	35.7
		4.00	4	26.7	28.6	64.3
		5.00	4	26.7	28.6	92.9
		7.00	1	6.7	7.1	100.0
		Total	14	93.3	100.0	
		System	1	6.7		
	Missing	Total	15	100.0		
Week 4	Valid	4.00	1	6.7	9.1	9.1
		5.00	1	6.7	9.1	18.2
		6.00	1	6.7	9.1	27.3
		7.00	2	13.3	18.2	45.5
		8.00	3	20.0	27.3	72.7
		9.00	2	13.3	18.2	90.9
		10.00	1	6.7	9.1	100.0
		Total	11	73.3	100.0	
	Total		15	100.0		

Table 4.25 below shows the number of participants who improved or did not improve. There were 10 participants involved in this comparison since the absent participants were excluded. There was not a single decrease in the marks in week 4, which was the time of the intervention, compared with week 1. On the other hand, there were nine participants who received more positive marks in week 4 than week 1. There was only one participant who gained the same mark before and after the intervention.

Table 4.25: Number of participants who improved or not in weeks 1 and 4: Group A

	N	Mean rank	Sum of ranks
Total mark week 4 - Total mark week 1	0a	0.00	0.00
Negative ranks			
Positive ranks	9b	5.00	45.00
Ties	1c		
Total	10		

a. Total mark week 4 < Total mark week 1

b. Total mark week 4 > Total mark week 1

c. Total mark week 4 = Total mark week 1

Wilcoxon test confirmed whether or not there was any significance in the mean scores between the marks in weeks 1 and 4. The hypotheses for this test are:

H0: There is no significant improvement in students' coherence marks.

H1: There is a significant improvement in students' coherence marks.

Table 4.26 shows that the difference between the two scores is statistically significant, since it is 0.007 and is less than the P value (0.05). Thus, the null hypothesis is rejected, which states: There is no significant improvement in students' coherence marks. The alternative hypothesis is accepted, where it can be confirmed that: There is a significant improvement in students' coherence marks.

Table 4.26: Test statistics for total mark in weeks 1 and 4: Group A

	Total mark week 4 - Total mark week 1
Z	-2.680a
Asymp. sig. (2-tailed)	0.007

a. Based on negative ranks

b. Wilcoxon signed-ranks test

4.3.1.3 Wilcoxon paired test: Group B - weeks 2 and 3

This part illustrates Group B's scores in weeks 2 and 3. They were 12 participants in week 2 and 14 participants in week 3. The intervention of graphic organizers was in week 3 and continued to week 4. Table 4.27 shows that there was an improvement in the mean scores, which jumped from 4 in week 2 to 6.57 in week 3. However, the maximum mark in both weeks was the same, which was 8 marks out of 10. The positive aspect is that the number of participants who achieved this mark in week 3 was higher than the number of participants who achieved the same mark in week 2, as shown in table 4.28. Only one participant scored a mark of 8 in week 2, while four participants scored 8 in week 3. Similarly, there was an increase in the minimum score, which was 2 marks out of 10 in week 2 and 4 marks out of 10 in week 3.

Table 4.27: Group B scores in weeks 2 and 3

	N	Mean	Minimum	Maximum	Percentiles		
					25th	50th (median)	75th
Total mark week 2	12	4.0000	2.00	8.00	3.000	3.5000	4.75
Total mark week 3	14	6.5714	4.00	8.00	5.750	7.0000	8.00

Table 4.27 shows that there was an increase in students' marks when comparing week 2 with week 3. The minimum score in week 2 was 2 out of 10. This was gained by one participant, who reflects 8.3% of the total group as shown in table 4.28. In addition, five participants scored 3 out of 10 (41.7% of the total group). On the other hand, the maximum score in week 1 was 8 out of 10. This was gained by only one participant, who reflects 8.3% of the total group. In general, 75% of the participants received less than the half mark. This means that 9 participants gained less than 5 out of 10 in their total mark in week 2. Furthermore, 16.6% of the participants received more than the half mark. This

means that only 2 participants achieved more than 5 out of 10 in their total mark in week 2.

In contrast, the minimum score in week 3 was 4 out of 10. This was gained by only one participant, who reflects 7.1% of the total group. On the other hand, the maximum score in week 3 was 8 out of 10. This was gained by four participants, who reflect 28.6%. In general, 7.1% of the participants received less than the half mark. This means that one participant gained less than 5 out of 10 in his total mark in week 3. Furthermore, 78.6% of the participants achieved more than the half mark. This means that 11 participants received more than 5 out of 10 in their total mark in week 3.

By comparing the scores in both weeks, there was an increase in the minimum score from 2 to 4. On the other hand, the maximum score was achieved in both weeks, since this was the same high mark in weeks 2 and 3. However, the number of participants who scored 8 out of 10 in week 3 was higher than those who scored the same mark in week 2. Four participants achieved 8 out of 10 in week 3, while only one participant received the same mark in week 2. In general, the population of the group was transformed from receiving lower marks in week 2 to higher marks in week 3. In other words, the number of students who received a mark of above 5 out of 10 was higher in week 3 than week 2, since this jumped from two participants in week 2 to 11 participants in week 3.

Table 4.28: Marks frequency of total mark in weeks 2 and 3: Group B

Weeks	marks	Frequency	Percent	Valid percent	Cumulative percent	
Week 2	Valid	2.00	1	6.3	8.3	8.3
		3.00	5	31.3	41.7	50.0
		4.00	3	18.8	25.0	75.0
		5.00	1	6.3	8.3	83.3
		6.00	1	6.3	8.3	91.7
		8.00	1	6.3	8.3	100.0
		Total	12	75.0	100.0	
	Total	16	100.0			
Week 3	Valid	4.00	1	6.3	7.1	7.1
		5.00	2	12.5	14.3	21.4
		6.00	3	18.8	21.4	42.9
		7.00	4	25.0	28.6	71.4
		8.00	4	25.0	28.6	100.0
		Total	14	87.5	100.0	
	Total	16	100.0			

Table 4.29 below shows the number of participants who improved or did not improve at a particular time. There were 10 participants involved in this comparison since the absent participants were excluded. There was one participant who received a lower mark in week 3 than week 2. On the other hand, there were eight participants who gained more positive marks in week 3 than week 2. There was only one participant who received the same mark before and after the intervention.

Table 4.29: Number of participants who improved or not in weeks 2 and 3: Group B

	N	Mean rank	Sum of ranks
Total mark week 3 - Total mark week 2	10	2.50	2.50
Negative ranks	1a		
Positive ranks	8b	5.31	42.50
Ties	1c		
Total	10		

a. Total mark week 3 < Total mark week 2

b. Total mark week 3 > Total mark week 2

c. Total mark week 3 = Total mark week 2

The Wilcoxon test confirmed whether there was significance in the mean scores between the marks in weeks 2 and 3 or not. The hypotheses for this test are:

H0: There is no significant improvement in students' coherence marks.

H1: There is a significant improvement in students' coherence marks.

Table 4.30 shows that the difference between the two scores is statistically significant, since it is 0.016 and less than the P value (0.05). Thus, the null hypothesis is rejected, which states: There is no significant improvement in students' coherence marks. On the other hand, the alternative hypothesis is accepted, where it can be confirmed that: There is a significant improvement in students' coherence marks.

Table 4.30: Test statistics for total mark in weeks 2 and 3: Group B

	Total mark week 3 - Total mark week 2
Z	-2.399a
Asymp. sig. (2-tailed)	0.016

a. Based on negative ranks

b. Wilcoxon signed-rank test

4.3.1.4 Wilcoxon paired test: Group C - weeks 3 and 4

This part illustrates Group C's scores in weeks 3 and 4. The intervention of graphic organizers was in week 4 and this group consisted of 24 participants. Table 4.31 shows that there is an improvement in the mean scores for the total mark. The mean score in week 1 was 4 out of 10, then rose to 6.73 in week 4. There was also an increase in the minimum score, which was 2 out of 10 in the third week, and then became 4 out of 10 in the fourth week. Similarly, there was an increase in the maximum score, from 6 in the third week to 10 out of 10 in the fourth week.

Table 4.31: Group C scores in weeks 3 and 4

	N	Mean	Minimum	Maximum	Percentiles		
					25th	50th (median)	75th
Total mark week 3	18	4.00	2.00	6.00	3.00	4.0000	5.00
Total mark week 4	22	6.73	4.00	10.00	6.00	6.0000	8.00

There was an increase in students' marks when comparing week 3 with week 4. Table 4.31 illustrates the minimum score in week 3, which was 2 out of 10. This was gained by two participants, who reflect 11.1% of the total group as shown in table 4.32. On the other hand, the maximum score in week 3 was 6 out of 10. This was received by three participants, who reflect 16.7%. In general, 61.1% of the participants gained less than the half mark. This means that 11 participants received less than 5 out of 10 in their total mark in week 3. Furthermore, 16.7% of the participants achieved more than the half mark. This means that three participants received more than 5 out of 10 in their total mark in week 3. In contrast, the minimum score in week 4 was 4 out of 10. This was gained by only one participant, who reflects 4.5% of the total group. On the other hand, the maximum score in week 4 was 10 out of 10. This was received by only two participants, who reflect 9.1%.

In general, 4.5% of the participants gained less than the half mark. This means that one participant achieved less than 5 out of 10 in his total mark in week 4. Furthermore, 81.8% of the participants gained more than the half mark. This means that 18 participants received more than 5 out of 10 in their total mark in week 4.

By comparing the scores in both weeks, there was an increase in the minimum score from 2 to 4. There was also an increase in the maximum score from 6 to 10. In general, the population of the group moved from receiving lower marks in week 3 to higher marks in week 4. In other words, the number of students who achieved a mark above 5 out of 10 was higher in week 4 than week 3, since this jumped from three participants in week 3 to 18 participants in week 4.

Table 4.32: Marks frequency of total mark in weeks 3 and 4: Group C

Weeks	marks	Frequency	Percent	Valid percent	Cumulative percent	
Week 3	Valid	2.00	2	8.7	11.1	11.1
		3.00	6	26.1	33.3	44.4
		4.00	3	13.0	16.7	61.1
		5.00	4	17.4	22.2	83.3
		6.00	3	13.0	16.7	100.0
		Total	18	78.3	100.0	
	Total		23	100.0		
Week 4	Valid	4.00	1	4.3	4.5	4.5
		5.00	3	13.0	13.6	18.2
		6.00	8	34.8	36.4	54.5
		7.00	3	13.0	13.6	68.2
		8.00	5	21.7	22.7	90.9
		10.00	2	8.7	9.1	100.0
		Total	22	95.7	100.0	
Total		23	100.0			

Table 4.33 below shows a comparison between weeks 3 and 4 for Group C for the total mark. This shows the number of participants who improved or did not improve. There were 24 participants involved in this comparison since the absent participants were excluded. There was no participant who received fewer marks in week 4 than week 3. On the other hand, there were 16 participants who gained more positive marks in week 4 than week 3. There was only one participant who received the same mark before and after the intervention.

Table 4.33: Number of participants who improved or not in weeks 3 and 4: Group C

	N	Mean rank	Sum of ranks
Total mark week 4 - Total mark week 3	0a	0.00	0.00
Positive ranks	16b	8.50	136.00
Ties	1c		
Total	17		

a. Total mark week 4 < Total mark week 3

b. Total mark week 4 > Total mark week 3

c. Total mark week 4 = Total mark week 3

The Wilcoxon test confirmed whether there was significance in the mean scores between the marks in weeks 3 and 4 or not. The hypotheses for this test are:

H0: There is no significant improvement in students' coherence marks.

H1: There is a significant improvement in students' coherence marks.

Table 4.34 shows that the difference between the two scores is statistically significant, since it is 0.00 and is less than the P value (0.05). Thus, the null hypothesis is rejected, which states: There is no significant improvement in students' coherence marks. The

alternative hypothesis is accepted, where it confirmed that: There is a significant improvement in students' coherence marks.

Table 4.34: Test statistics for total mark in weeks 3 and 4: Group C

	Total mark week 4 - Total mark week 3
Z	-3.538a
Asymp. sig. (2-tailed)	0.000

a. Based on negative ranks

b. Wilcoxon signed-rank test

4.3.1.5 Wilcoxon paired test: Group C - weeks 1 and 2

The intervention in group C was occurred in week 4. This part illustrates Group C's scores in weeks 1 and 2 and check whether there is any significant differences in the marks or not. The lesson was conducted using the traditional method of teaching writing. Table 4.35 shows that there is an improvement in the mean scores. The mean score in week 1 was 4.43, then increased to 5.1 in week 2. There was also an increase in the minimum score, which was 1 out of 10 in the first week, and then became 3 out of 10 in the second week. Similarly, there was an increase in the maximum score, from 7 in the first week to 8 in the second week.

Table 4.35: Group C scores in weeks 1 and 2

	N	Mean	Minimum	Maximum	Percentiles		
					25th	50th (median)	75th
Total mark week 1	16	4.43	1.00	7.00	3.0000	4.5000	5.7500
Total mark week 2	19	5.1	3.00	8.00	4.0000	5.0000	7.0000

Wilcoxon test confirmed whether there was significance in the mean scores between the marks in weeks 1 and 2 or not. The hypotheses for this test are:

H0: There is no significant improvement in students' coherence marks.

H1: There is a significant improvement in students' coherence marks.

Table 4.36 shows that the difference between the two scores does not show significance since it is 0.319 and is more than the P value (0.05). Thus, the null hypothesis is not rejected, which states: There is no significant improvement in students' comprehension marks. That means there is no significant difference between the students' marks in weeks 1 and 2. In fact, there was no intervention at this stage.

Table 4.36: Test statistics for total mark in weeks 1 and 2: Group C

	Total mark week 2 - Total mark week 1
Z	-0.997a
Asymp. sig. (2-tailed)	0.319

a. Based on negative ranks

b. Wilcoxon signed-rank test

4.3.2 Section 2: Analysis of all groups for each week

The use of the multiple baseline design enabled the researcher to view the data in another way. This part discusses the participants' marks as groups in each week. It analyses vertically all the groups in a certain week. Each week, one of the groups was affected by the intervention of graphic organizers. Group A's intervention started from week 2, Group B started from week 3, and Group C started from week 4.

4.3.2.1 Groups A, B and C in week 1

Group A consisted of 14 participants, Group B comprised 16 participants, and Group C contained 17 participants. All groups carried out the assessment using the traditional method of writing.

The Kruskal-Wallis test confirmed whether there is significance in the mean scores between the groups in week 1 or not. The hypotheses for this test are:

H0: There is no difference in the marks between the groups.

H1: There is a difference in the marks between the groups.

Table 4.37 shows that the difference between the groups is not significant, since it is 0.295 and is larger than the P value (0.05). Thus, the null hypothesis is not rejected, which states: There is no difference in the marks between the groups. All the groups were treated in the same way, since they were taught using the traditional method.

Table 4.37: Test statistics for total mark in week 1: Groups A, B and C

	Total mark week 1
Chi-square	2.443
df	2
Asymp. sig.	0.295

a. Kruskal-Wallis test

b. Grouping variable: Groups

4.3.2.2 Groups A, B and C in week 2

Group A was the only group treated with graphic organizers in week 2, while the other two groups were still conducting their assessment using the traditional method. Group A consisted of 14 participants, Group B contained 12 participants, and Group C comprised 20 participants.

The Kruskal-Wallis test confirmed whether there is significance in the mean scores between the groups in week 2 or not. The hypotheses for this test are:

H0: There is no difference in the marks between the groups.

H1: There is a difference in the marks between the groups.

Table 4.38 shows that the difference between the groups is statistically significant, since it is 0.013 and is less than the P value (0.05). Thus, the null hypothesis is rejected, which states: There is no difference in the marks between the groups. The alternative hypothesis is accepted, where it can be confirmed that: There is a difference in the marks between the groups. Group A did the assessment with the use of graphic organizers, while the other two groups completed their assessment using the traditional method of writing.

Table 4.38: Test statistics for total mark in week 2: Groups A, B and C

	Total mark week 2
Chi-square	8.693
df	2
Asymp. sig.	0.013

a. Kruskal-Wallis test

b. Grouping variable: Groups

4.3.2.3 Groups A, B and C in week 3

Groups A and B were treated with graphic organizers in week 3, while those in Group C were still doing their assessment using the traditional method. Group A consisted of 12 participants, Group B comprised 14 participants, and Group C contained 19 participants.

The Kruskal-Wallis test confirmed whether there is significance in the mean scores between the groups in week 3 or not. The hypotheses for this test are:

H0: There is no difference in the marks between the groups.

H1: There is a difference in the marks between the groups.

Table 4.39 shows that the difference between the groups is statistically significant, since it is 0.00 and is less than the P value (0.05). Thus, the null hypothesis is rejected, which states: There is no difference in the marks between the groups. The alternative hypothesis is accepted, where it can be confirmed that: There is a difference in the marks between the groups. Both Groups A and B did the assessment with the use of graphic organizers, while Group C completed their assessment using the traditional method of writing.

Table 4.39: Test statistics for total mark in week 3: Groups A, B and C

	Total mark week 3
Chi-square	23.546
df	2
Asymp. sig.	0.000

a. Kruskal-Wallis test

b. Grouping variable: Groups

4.3.2.4 Groups A, B and C in week 4

All three groups were treated with graphic organizers in week 4. Group A consisted of 11 participants, Group B comprised 13 participants, and Group C contained 23 participants.

The Kruskal-Wallis test confirmed whether there is significance in the mean scores between the groups in week 4. The hypotheses for this test are:

H0: There is no difference in the marks between the groups.

H1: There is a difference in the marks between the groups.

Table 4.40 shows that the difference between the groups is not significant, since it is 0.29 and is greater than the P value (0.05). Thus, the null hypothesis is not rejected, which

states: There is no difference in the marks between the groups. Therefore, all three groups in week 4 were affected by the intervention of graphic organizers.

Table 4.40: Test statistics for total mark in week 4: Groups A, B and C

	Total mark week 4
Chi-square	2.569
df	2
Asymp. sig.	0.29

a. Kruskal-Wallis test

b. Grouping variable: Groups

This leads us to a third way of analysing the data. Since there is no difference between the groups for weeks 1 and 4, it is possible to consider and treat the three groups in both weeks 1 and 4 as one group. The following analysis will compare the three groups in weeks 1 and 4 as one group.

4.3.3 Section 3: Analysis of all groups in weeks 1 and 4 as one group

There was a total of 46 participants following the combination of the three groups, as shown in Table 4.41. They were included according to their attendance in both weeks 1 and 4. The number of participants was reduced to 38, since eight participants were absent one of the weeks or they did not submit their essays for correction. The first week will be evaluated as a pre intervention test, where the participants completed their essays using the traditional method. Then, they completed their essays with the use of graphic organizers in the fourth week as a post intervention test.

Table 4.41: Mean, min and max score in weeks 1 and 4

		Total mark Week 1	Total mark Week 4
N	Valid	46	46
	Missing	8	8
Mean		4.37	7.07
Minimum		1.00	4.00
Maximum		7.00	10.00

Table 4.41 shows the mean score for the total mark in weeks 1 and 4. The mean score for week 1 was 4.37 out of 10. The minimum score was 1 out of 10 and the maximum score was 7 out of 10. In week 4, the mean score was 7.07 out of 10. The minimum score was 4 and the maximum was 10 out of 10.

There was an improvement in the mean score after applying the concept of graphic organizers. The minimum mark also increased from 1 to 4. Furthermore, graphic organizers affected the maximum mark positively, since there was a rise from 7 to 10.

Table 4.42 shows the frequency of the number of participants who gained a specific mark before adopting the use of graphic organizers. This shows that 36 participants received 5 marks or below, which is the half mark. They represent 78.3 %. On the other hand, 10 participants scored more than 5 marks. They represent 21.7%.

Table 4.42: Frequency table of marks in week 1

		Frequency	Percent	Valid percent	Cumulative percent
Valid	1.00	1	1.9	2.2	2.2
	2.00	4	7.4	8.7	10.9
	3.00	7	13.0	15.2	26.1
	4.00	14	25.9	30.4	56.5
	5.00	10	18.5	21.7	78.3
	6.00	5	9.3	10.9	89.1
	7.00	5	9.3	10.9	100.0
	Total	46	85.2	100.0	
Missing	System	8	14.8		
Total		54	100.0		

Table 4.43 illustrates the frequency of the number of participants who received a particular mark in week 4. There was an increase in the percentage of students who gained higher marks. Only eight participants were allocated marks of between 5 and 4. They represent 17.4% of the participants. On the other hand, there were 38 participants who received more than 5 marks out of 10. They represent 82.6 %. In addition, 18 participants were allocated marks between 8 and 10. They represent 33.4% of those who did not achieve these marks in week 1, since the highest mark in week 1 was 7 out of 10.

Table 4.43: Frequency table of marks in week 4

		Frequency	Percent	Valid percent	Cumulative percent
Valid	4.00	2	3.7	4.3	4.3
	5.00	6	11.1	13.0	17.4
	6.00	9	16.7	19.6	37.0
	7.00	11	20.4	23.9	60.9
	8.00	9	16.7	19.6	80.4
	9.00	6	11.1	13.0	93.5
	10.00	3	5.6	6.5	100.0
	Total	46	85.2	100.0	
Missing	System	8	14.8		
Total		54	100.0		

Both Tables 4.42 and 4.43 above demonstrate that the use of graphic organizers did not affect the increase of the mean, minimum and maximum score alone. It also increased the number of participants who received higher marks after applying the concept of graphic organizers. The majority of the participants who gained less than 5 marks were reduced from 78.3% in week 1 to 17.4% in week 4. Accordingly, the majority of the participants who received more than 5 marks were increased from 21.7% in week 1 to 82.6% in week 4.

The difference in mean scores indicates clearly the appropriateness of applying graphic organizers in writing workshops. Table 4.44 below shows that there is an increase in students' mean score marks after applying graphic organizers.

Table 4.44: Paired samples statistics

	Mean	N	Std. deviation	Std. error mean
Pair 1 Total mark week 1	4.29	38	1.52294	0.24705
Total mark week 4	7.13	38	1.57979	0.25628

Thus, does this result answer the following research question?

Do graphic organizers enhance the coherent level of second-language learners' writing?

According to the data in Table 4.44 above, the coherence level was increased but did this change occur by chance or was the intervention the main variable that affected these marks?

In this case, a t-test was conducted to check whether the P value enabled us to accept or reject the null hypothesis. According to Connolly (2007), a related sample t-test should be used when dealing with two scales that represent the same measure taken at two different points in time. Thus, a t-test was conducted to check the significance between these two groups of marks. The research hypotheses are as follows:

H0: Graphic organizers do not affect the cohesion of students' paragraph.

H1: Graphic organizers affect the cohesion of students' paragraph.

Table 4.44 shows the mean score in week 1, which is 4.29 for the 38 participants. It also shows the mean score in week 4, which is 7.13. There is an improvement in the students' marks, but is this change significant or not?

Table 4.45 illustrates the correlation between the marks. This is 0.13, which reflects a weak positive relation. However, the t-test in table 4.46 shows a significance of 0.000,

which is $< P$ value 0.05. We can now reject the null hypothesis and accept the alternative hypothesis, by stating that graphic organizers affect the coherence of the essays.

Table 4.45: Paired samples correlations for weeks 1 and 4

	N	Correlation	Sig.
Pair 1 Total mark week 1 and total mark week 4	38	0.130	0.437

Table 4.46: Paired samples test

	Paired differences					t	df	Sig. (2-tailed)
	Mean	Std. deviation	Std. error mean	95% confidence interval of the difference				
				Lower	Upper			
Pair 1 Total mark week 1 - Total mark week 4	-2.84211	2.04710	0.33208	-3.51497	-2.16924	-8.558	37	0.000

In conclusion, the results derived from both the pre and post tests show that the use of graphic organizers improved the comprehension of the students' writing. Comparing the mean scores of both tests showed a positive increase in the marks. The implementation of the t-test showed the significance of this increase and proved that this increase did not happen by chance. This increase was a result of the intervention of graphic organizers, since the P value in the t-test was less than 0.05, which was significant.

4.4 Part Two: The pre and post intervention questionnaire

A questionnaire was distributed to the participants before and after applying the concept of graphic organizers. There were 73 participants for the pre questionnaire and 67 participants in the post questionnaire. The participants answered the same questions before and after the intervention. The aim was to check whether there was a difference in their answers after applying the concept of graphic organizers in their writing.

The participants showed their views regarding eight points. These points focused on the use of pre-writing tools, measuring the ability to arrange ideas together under one topic, and measuring the ability to connect other ideas that related to the main idea.

4.4.1 Point One: “The following skill is considered the hardest skill to learn”

Table 4.47 shows the frequency and the percentage of the participants who gave a certain answer before and after the intervention questionnaire. For the pre-intervention questionnaire, there were 73 participants out of the 87 students who volunteered to participate in the study. The first question was an attempt to identify what they considered the hardest skill to learn. Speaking was considered a hard skill to learn for seven participants, who reflect 6.9%. Listening was considered hard for six participants (8.2%). Writing was considered hard for 52 participants (71.2%). Reading was considered hard for eight participants (11%). Second-language learners still face some difficulties during writing lessons as this is considered the hardest skill to learn.

Table 4.47: Percentage of the hardest skill before and after the intervention

	Q1. The following skill is considered the hardest skill to learn:				Total
	Speaking	Listening	Writing	Reading	
Group Before Count	7	6	52	8	73
% within group	9.6%	8.2%	71.2%	11.0%	100.0%
After Count	9	9	41	8	67
% within group	13.4%	13.4%	61.2%	11.9%	100.0%

In the post-intervention questionnaire 67 participants also volunteered to participate. Speaking was considered a hard skill to learn by nine participants, who reflect 13.4%. Listening was considered hard by nine participants (13.4%). Writing was considered hard by 41 participants (61.2%). Reading was considered hard by eight participants (11%).

Writing skill received the highest number of responses in terms of being the most difficult skill to learn. The percentage for writing as the hardest skill to learn dropped from 71.2% to 61.2% after applying the concept of graphic organizers. A number of problems affect learners while learning the writing skill: grammar, spelling and coherent writing are some examples of these problems. However, this 10% reduction in the percentage was due to overcoming one of these problems, which was the cohesion of the writing. So, since the findings showed that writing skill is the most difficult skill with high percentage, further studies should be undertaken to understand the reasons for these difficulties and solve them.

The following seven questions were intended to clarify whether the use of graphic organizers affected the students' comprehension or not.

4.4.2 Point Two: “Arranging my ideas positively affected my motivation to write”

Table 4.48 shows the responses to the second question, which was aimed at knowing whether arranging the ideas before writing affected the students’ motivation or not. In the pre intervention questionnaire, 15 participants (who reflect 20.5%) totally agreed that knowing how to arrange their ideas before writing positively affected their motivation. There were also 25 participants (34.2%) who agreed and 27 participants (37%) who chose the answer “sometimes”. Finally, six participants (8.2%) disagreed with this question.

After applying graphic organizers, 20 participants (who reflect 29.9%) totally agreed that knowing how to arrange their ideas before writing positively affected their motivation. In addition, 34 participants (50.7%) agreed and 12 participants (17.9%) chose the “sometimes” answer. Finally, one participant (1.5%) disagreed with this question.

Table 4.48: Responses about the ability in arranging the ideas before and after the intervention

		Q2. Arranging my ideas positively affected my motivation to write.				Total
		Totally agree	Agree	Sometimes	Disagree	
Group Before	Count	15	25	27	6	73
	% within group	20.5%	34.2%	37.0%	8.2%	100.0%
After	Count	20	34	12	1	67
	% within group	29.9%	50.7%	17.9%	1.5%	100.0%

The majority of the participants in the pre-intervention questionnaire believed that arranging the ideas positively affected their willingness to learn writing. On the other

hand, the number was higher after applying the concept of graphic organizers. The percentage of those who agreed and totally agreed rose from 40 participants (who reflect 54.4%) in the pre-intervention questionnaire to 54 participants (80.6%) in the post intervention questionnaire.

Accordingly, the number of participants who chose “sometimes” was reduced from 27 (37%) to 12 (17.9%) in the post-intervention questionnaire. Finally, the number of participants who disagreed that arranging the ideas positively affected their motivation towards writing was reduced from six (8.2%) to one (1.5%).

Table 4.49 shows the mean score before and after applying the concept of graphic organizers. The mean score in the pre intervention questionnaire was 2.33, which was located between “agree” and “sometimes”. The mean score after applying the concept of graphic organizers was 1.91, which was located between “totally agree” and “agree”. There was a shift in the participants’ attitude towards greater agreement that arranging their ideas positively affected their attitude in relation to writing. Graphic organizers succeeded in raising their motivation to write since they overcame this problem.

Table 4.49: Mean score before and after the intervention

Group		Q2. Arranging my ideas positively affected my motivation to write.
Before	Mean	2.33
	N	73
After	Mean	1.91
	N	67

A paired-samples t-test was conducted to evaluate the significant of the intervention of the use of graphic organizers on the participants' attitude towards writing in question 2.

The hypotheses were:

H0: Arranging ideas by using graphic organizers does not affect the attitude.

H1: Arranging ideas by using graphic organizers affected the attitude.

There was a statistically significant shift in the responses from the pre intervention questionnaire (M = 2.33, SD = 0.914) to the post intervention questionnaire (M = 1.91, SD = 0.733), $P < 0.007$ (two-tailed) as shown in table 4.50. That means the null hypothesis is rejected and the alternative hypothesis is accepted where arranging ideas by using graphic organizers affected the attitude.

Table 4.50: Paired samples t-test question 2

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Q2 Arranging my ideas affect positively my motivation to write - Q2 Arranging my ideas affect positively my motivation to write	.43284	1.28185	.15660	.12017	.74550	2.764	66	.007

4.4.3 Point Three: “I like to write about topics that interest me”

Table 4.51 shows the results from the third question, which was aimed at establishing whether the use of graphic organizers affected the interest in writing about any topic. In the pre questionnaire, 13 participants (17.8%) totally agreed that they like to write about topics that interest them. In addition, 21 participants (28.8%) agreed and 32 participants

(43.8%) chose “sometimes”. Furthermore, five participants (6.8%) disagreed. Finally, two participants (2.7%) disagreed with this question.

After applying graphic organizers, three participants (4.5%) totally agreed that they like to write about topics that interest them. In addition, six participants (9%) agreed and 21 participants (31.1%) chose “sometimes”. Furthermore, 26 participants (38.8%) disagreed. Finally, 11 participants (16.4%) disagreed with this question.

Table 4.51: Q3. I like to write about topics that interest me: Cross-tabulation

	Q3. I like to write about topics that interest me.					Total
	Totally agree	Agree	Sometimes	Disagree	Totally disagree	
Group Before Count	13	21	32	5	2	73
% within group	17.8%	28.8%	43.8%	6.8%	2.7%	100.0%
After Count	3	6	21	26	11	67
% within group	4.5%	9.0%	31.3%	38.8%	16.4%	100.0%

There was a noticeable change in the participants’ opinion regarding this question after applying the concept of graphic organizers in their writing. The percentage of those who totally agreed and agreed that they liked to write about topics that interested them dropped from 34 participants (46.6%) in the pre questionnaire to nine (13.4%) in the post questionnaire.

Accordingly, the number of participants who chose “sometimes” was reduced from 32 (43.8%) to 21 (31.3%) in the post questionnaire. Finally, the number of participants who disagreed and totally disagreed increased from seven participants (9.5%) to 37 (55.2%).

Table 4.52 shows the mean score before and after applying the concept of graphic organizers. The mean score in the pre intervention questionnaire was 2.48, which is located between “agree” and “sometimes”. The mean score after applying the concept of graphic organizers was 3.54, which is located between “sometimes” and “disagree”. There was a shift in the participants’ attitude, whereby they disagreed more about writing about certain topics that interest them. Graphic organizers succeeded in raising the participants’ motivation to write about any topic, whether it was a subject they liked or not.

Table 4.52: Mean score before and after the intervention

Group		Q3. I like to write about topics that interest me.
Before	Mean	2.48
	N	73
After	Mean	3.54
	N	67

A paired-samples t-test was conducted to evaluate the significant of the intervention on the pre-post questionnaire in question 3. The hypotheses are as follow:

H0: Graphic organizers does not affect the choice of topic

H1: Graphic organizers affect the choice of topic

There was a statistically significant shift in the responses from the pre intervention questionnaire (M = 2.48, SD = 0.92) to the post intervention questionnaire (M = 3.54, SD

= 1), $P < 0.000$ (two-tailed) as shown in Table 4.53. It means that the null hypothesis is rejected and the alternative hypothesis is accepted where graphic organizers affect the choice of topic.

Table 4.53: Paired samples t-test question 3

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Q3 I like to write about topics that are interested to me - Q3 I like to write about topics that are interested to me	-0.95522	1.39732	.17071	-1.29606	-.61439	-5.596	66	0.000

4.4.4 Point Four: “I can arrange my ideas before starting my writing”

Table 4.54 shows the results for the fourth question, which was intended to establish whether the use of graphic organizers affects the organizing process of the ideas while writing. In the pre questionnaire, five participants (6.8%) totally agreed that they can arrange their ideas before starting their writing. In addition, nine participants (12.3%) agreed and 22 (30.1%) chose “sometimes”. Furthermore, 27 participants (37%) disagreed. Finally, 10 participants (13.7%) totally disagreed with this question.

After applying graphic organizers, eight participants (11.9%) totally agreed that they can arrange their ideas before starting their writing. In addition, 29 participants (43.3%) agreed, and 27 (40.3%) chose “sometimes”. Finally, three participants (4.5%) disagreed.

Table 4.54: Q4. I can arrange my ideas before starting my writing: Cross-tabulation

		Q4. I can arrange my ideas before starting my writing.					Total
		Totally agree	Agree	Sometimes	Disagree	Totally disagree	
Group Before	Count	5	9	22	27	10	73
	% within group	6.8%	12.3%	30.1%	37.0%	13.7%	100.0%
After	Count	8	29	27	3	0	67
	% within group	11.9%	43.3%	40.3%	4.5%	.0%	100.0%

There was a noticeable change in the participants' opinion regarding this question after applying the concept of graphic organizers in their writing. The percentage of those who totally agreed and agreed that they can arrange their ideas before starting their writing increased from 14 participants (19.1%) in the pre questionnaire to 37 (55.2%) in the post questionnaire.

Accordingly, the number of participants who chose "sometimes" increased from 22 (30.1%) to 27 (40.3%) in the post questionnaire. Finally, the number of participants who disagreed and totally disagreed reduced from 37 (50.7%) to three (4.5%).

Table 4.55 shows the mean score before and after applying the concept of graphic organizers in the aspect of the ability in arranging the ideas before starting writing. The mean score in the pre intervention questionnaire was 3.38, which is located between "sometimes" and "disagree". The mean score after applying the concept of graphic organizers was 2.37, which is located between "agree" and "sometimes". There was a

shift in the participants' confidence, whereby they agreed more that they had the ability to arrange their ideas before starting writing. Graphic organizers managed to allow the participants to arrange their ideas logically according to the main topic.

Table 4.55: Mean score before and after the intervention

Group		Q4. I can arrange my ideas before starting my writing.
Before	Mean	3.38
	N	73
After	Mean	2.37
	N	67

A paired-samples t-test was conducted to evaluate the significant of the intervention on the pre-post questionnaire in question 4. The hypotheses were as follow:

H0: Graphic organizers have no effect on arranging the ideas before starting writing.

H1: Graphic organizers have an effect on arranging the ideas before starting writing.

There was a statistically significant shift in the responses from the pre intervention questionnaire (M = 3.38, SD = 1.07) to the post-intervention questionnaire (M = 2.37, SD = 0.75), $P < 0.000$ (two-tailed) as shown in table 4.56. It means that the null hypothesis is rejected and the alternative hypothesis is accepted where graphic organizers has an effect on arranging the ideas before starting writing.

Table 4.56: Paired samples t-test question 4

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Q4 I can arrange my ideas before starting my writing - Q4 I can arrange my ideas before starting my writing	1.07463	1.28291	.15673	.76170	1.38755	6.856	66	.000

4.4.5 Point Five: “I like using pre-writing tools before starting my writing”

Table 4.57 shows the results for the fifth question, which had the aim of identifying whether the use of graphic organizers affected the usage of pre-writing tools before starting the actual writing. In the pre questionnaire, five participants (6.8%) totally agreed that they like using pre-writing tools before starting their writing. In addition, 12 participants (16.4%) agreed and 17 (23.3%) chose “sometimes”. Furthermore, 28 participants (38.4%) disagreed. Finally, 11 participants (15.1%) totally disagreed with this question.

After applying graphic organizers, 25 participants (37.3%) totally agreed that they like using pre-writing tools before starting their writing. In addition, 28 participants (41.8%) agreed, and seven (10.4%) chose “sometimes”. Furthermore, five participants (7.5%) disagreed. Finally, two participants (3%) totally disagreed.

Table 4.57: Q5. I like using pre-writing tools before starting my writing: Cross-tabulation

		Q5. I like using pre-writing tools before starting my writing.					Total
		Totally agree	Agree	Sometimes	Disagree	Totally disagree	
Group Before	Count	5	12	17	28	11	73
	% within group	6.8%	16.4%	23.3%	38.4%	15.1%	100.0%
After	Count	25	28	7	5	2	67
	% within group	37.3%	41.8%	10.4%	7.5%	3.0%	100.0%

There was a noticeable change in the participants' opinion regarding this question after applying the concept of graphic organizers in their writing. The percentage of those who totally agreed and agreed that they like using pre-writing tools before starting their writing increased from 17 participants (23.2%) in the pre questionnaire to 53 (79.1%) in the post intervention questionnaire.

Accordingly, the number of participants who chose "sometimes" decreased from 17 (23.3%) to seven (10.4%) in the post intervention questionnaire. Finally, the number of participants who disagreed and totally disagreed reduced from 39 (53.5%) to seven participants (10.5%).

Table 4.58 shows the mean score before and after applying the concept of graphic organizers. The mean score in the pre intervention questionnaire was 3.38, which is located between "sometimes" and "disagree". The mean score after applying the concept of graphic organizers was 1.97, which is located between "totally agree" and "agree".

There was a shift in the participants' attitude, where they agreed more regarding using graphic organizers as a pre-writing tool.

Table 4.58: Mean score before and after the intervention

Group		Q5. I like using pre-writing tools before starting my writing.
Before	Mean	3.38
	N	73
After	Mean	1.97
	N	67

A paired-samples t-test was conducted to evaluate the significant of the intervention on the pre-post questionnaire in question 5. The hypotheses are as follow:

H0: Graphic organizers did not affect the participants' opinion as a pre-writing tool.

H1: Graphic organizers affected the participants' opinion as a pre-writing tool.

There was a statistically significant shift in the responses from the pre-intervention questionnaire (M = 3.38, SD = 1.1) to the post-intervention questionnaire (M = 1.97, SD = 1), $P < 0.000$ (two-tailed) as shown in Table 4.59. This means that the null hypothesis is rejected and the alternative hypothesis is accepted, where graphic organizers affected the participants' opinion as a pre-writing tool.

Table 4.59: Paired samples t-test question 5

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Q5 I like using prewriting tools before starting my writing - Q5 I like using prewriting tools before starting my writing	1.41791	1.55845	.19039	1.03777	1.79805	7.447	66	0.000

4.4.6 Point Six: “I can connect other ideas that are related to the main scene”

Table 4.60 shows the results for the sixth question, which was intended to establish whether or not the use of graphic organizers affected the ability to connect other ideas that are related to the main scene. In the pre-intervention questionnaire, two participants (2.7%) totally agreed that they can connect other ideas that are related to the main scene. In addition, eight participants (11%) agreed and 31 (42.5%) chose “sometimes”. Furthermore, 21 participants (28.8%) disagreed. Finally, 11 participants (15.1%) totally disagreed with this question.

After applying graphic organizers, 11 participants (16.4%) totally agreed that they can connect other ideas that are related to the main scene. In addition, 31 participants (46.3%) agreed and 22 (32.8%) chose “sometimes”. Furthermore, three participants (4.5%) chose “disagree”. Finally, no one totally disagreed with this question after applying the concept of graphic organizers.

Table 4.60: Q6. I can connect other ideas that are related to the main scene: Cross-tabulation

		Q6. I can connect other ideas that are related to the main scene.					Total	
		Totally agree	Agree	Sometimes	Disagree	Totally disagree		
Group	Before	Count	2	8	31	21	11	73
	% within group		2.7%	11.0%	42.5%	28.8%	15.1%	100.0%
	After	Count	11	31	22	3	0	67
	% within group		16.4%	46.3%	32.8%	4.5%	.0%	100.0%

There was a noticeable change in the participants' opinion regarding this question after applying the concept of graphic organizers in their writing. The percentage of those who totally agreed and agreed that they can connect other ideas that are related to the main scene increased from 11 participants (13.7%) in the pre-intervention questionnaire to 42 (62.7%) in the post-intervention questionnaire.

Accordingly, the number of participants who chose "sometimes" decreased from 31 (42.5%) to 22 (32.84%) in the post intervention questionnaire. Finally, the number of participants who disagreed decreased from 32 (43.9%) to three (4.5%).

Table 4.61 shows the mean score before and after applying the concept of graphic organizers. The mean score in the pre-intervention questionnaire was 3.42, which is located between "sometimes" and "disagree". The mean score after applying the concept of graphic organizers was 2.25, which is located between "agree" and "sometimes". There was a shift in the participants' confidence, whereby they had the ability to connect other

ideas that are related to the main scene. Graphic organizers succeeded in raising the participants' ability to organize and connect ideas.

Table 4.61: Mean score before and after the intervention

Group		Q6. I can connect other ideas that are related to the main scene.
Before	Mean	3.42
	N	73
After	Mean	2.25
	N	67

A paired-samples t-test was conducted to evaluate the significant of the intervention on the pre-post questionnaire in question 6. The hypotheses are as follows:

H0: Graphic organizers did not affect the connection of ideas.

H1: Graphic organizers affected the connection of ideas.

There was a statistically significant shift in the responses from the pre-intervention questionnaire (M = 3.42, SD = 0.956) to the post intervention questionnaire (M = 2.25, SD = 0.785), $P < 0.000$ (two-tailed) as shown in Table 4.62. This means that the null hypothesis is rejected and the alternative hypothesis is accepted, where graphic organizers affected the connection of ideas.

Table 4.62: Paired samples t-test question 6

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Q6 I can connect other ideas that are related to the main scene - Q6 I can connect other ideas that are related to the main scene	1.16418	1.29798	.15857	.84758	1.48078	7.342	66	0.000

4.4.7 Point Seven: “I can produce more ideas related to the main scene while writing”

Table 4.63 shows the responses to the seventh question, which was aimed at knowing whether the use of graphic organizers affected the ability to produce more ideas related to the main scene. In the pre-intervention questionnaire, six participants (8.2%) totally agreed that they can produce more ideas related to the main scene. In addition, nine participants (12.3%) agreed and 20 (27.4%) chose “sometimes”. Furthermore, 29 participants (39.7%) disagreed. Finally, nine participants (12.3%) totally disagreed with this question.

After applying graphic organizers, 10 participants (14.9%) totally agreed that they can produce more ideas related to the main scene. In addition, 38 participants (56.7%) agreed and 15 (22.4%) chose “sometimes”. Furthermore, four participants (6%) chose “disagree”. Finally, no one totally disagreed with this question after applying the concept of graphic organizers.

**Table 4.63: Q7. I can produce more ideas related to the main scene while writing:
Cross-tabulation**

	Q7. I can produce more ideas related to the main scene while writing.					Total
	Totally agree	Agree	Sometimes	Disagree	Totally disagree	
Group Before Count	6	9	20	29	9	73
% within group	8.2%	12.3%	27.4%	39.7%	12.3%	100.0%
After Count	10	38	15	4	0	67
% within group	14.9%	56.7%	22.4%	6.0%	.0%	100.0%

There was a noticeable change in the participants' opinion regarding this question after applying the concept of graphic organizers in their writing. The percentage of those who totally agreed and agreed that they can produce more ideas related to the main scene increased from 15 participants (20.5%) in the pre-intervention questionnaire to 48 (71.6%) in the post intervention questionnaire.

Accordingly, the number of participants who chose "sometimes" reduced from 20 (27.4%) to 15 (22.4%) in the post questionnaire. Finally, the number of participants who disagreed decreased from 38 (52%) to four (6%).

Table 4.64 shows the mean score before and after applying the concept of graphic organizers. The mean score in the pre intervention questionnaire was 3.36, which is located between "sometimes" and "disagree". The mean score after applying the concept of graphic organizers was 2.19, which is located between "agree" and "sometimes". There was a shift in the participants' ability whereby they can support their main idea with more related information. Graphic organizers managed to enable the participants to produce more logical ideas related to the main scene.

Table 4.64: Mean score before and after the intervention

Group		Q7. I can produce more ideas related to the main scene while writing.
Before	Mean	3.36
	N	73
After	Mean	2.19
	N	67

A paired-samples t-test was conducted to evaluate the significant of the intervention on the pre-post questionnaire in question 7. The hypotheses are as follow:

H0: Graphic organizers did not affect the ability of producing more ideas to the main scene.

H1: Graphic organizers affected the ability of producing more ideas to the main scene.

There was a statistically significant shift in the responses from the pre-intervention questionnaire (M = 3.36, SD = 1.14) to the post-intervention questionnaire (M = 2.19, SD = 0.763), $P < 0.000$ (two-tailed) as shown in Table 4.65. This means that the null hypothesis is rejected and the alternative hypothesis is accepted, where there is a difference in the ability of producing more ideas to the main scene.

Table 4.65: Paired samples t-test question 7

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Q7 I can produce more ideas related to the main scene while writing - Q7 I can produce more ideas related to the main scene while writing	1.14925	1.31718	.16092	.82797	1.47054	7.142	66	.000

4.4.8 Point Eight: “I found it difficult to determine the main points that related to the main idea”

Table 4.66 shows the results for the eighth question, which was aimed at knowing whether the use of graphic organizers affected the difficulty in determining the main points that relate to the main idea. In the pre intervention questionnaire, 21 participants (28.8%) totally agreed that they found it difficult to determine the main points that related to the main idea. In addition, 27 participants (37%) agreed and 17 (23.3%) chose “sometimes”. Furthermore, six participants (8.2%) disagreed. Finally, two participants (2.7%) totally disagreed with this question.

After applying graphic organizers, four participants (6%) totally agreed that they found it difficult to determine the main points that related to the main idea. In addition, seven participants (10.4%) agreed and 35 (52.2%) chose “sometimes”. Furthermore, 21 participants (31.3%) chose “disagree”. Finally, no one totally disagreed with this question after applying the concept of graphic organizers.

Table 4.66: Q8. I found it difficult to determine the main points that related to the main idea: Cross-tabulation

		Q8. I found it difficult to determine the main points that related to the main idea.					Total
		Totally agree	Agree	Sometimes	Disagree	Totally disagree	
Group	Before	21	27	17	6	2	73
	% within group	28.8%	37.0%	23.3%	8.2%	2.7%	100.0%
	After	4	7	35	21	0	67
	% within group	6.0%	10.4%	52.2%	31.3%	.0%	100.0%

There was a noticeable change in the participants' opinion regarding this question after applying the concept of graphic organizers in their writing. The percentage of those who totally agreed and agreed that they found it difficult to determine the main points that related to the main idea reduced from 48 participants (65.8%) in the pre-intervention questionnaire to 11 (16.4%) in the post-intervention questionnaire.

Accordingly, the number of participants who chose "sometimes" increased from 17 (23.3%) to 35 (52.2%) in the post-intervention questionnaire. Finally, the number of participants who disagreed and totally disagreed in the pre-intervention questionnaire increased from eight (10.9%) to 21, with only 31.3% who disagreed.

Table 4.67 shows the mean score before and after applying the concept of graphic organizers. The mean score in the pre intervention questionnaire was 2.19, which is located between "agree" and "sometimes". The mean score after applying the concept of graphic organizers was 3.09, which is located near "sometimes". There was a slight

change, for the better, in the participants’ opinion, since they flowed between “agree” and “sometimes”. However, the use of graphic organizers facilitated the process of determining the main points for the participants better than before.

Table 4.67: Mean score before and after the intervention

Group		Q8. I found it difficult to determine the main points that related to the main idea.
Before	Mean	2.19
	N	73
After	Mean	3.09
	N	67

A paired-samples t-test was conducted to evaluate the significant of the intervention on the pre-post questionnaire in question 8. The hypotheses are as follows:

H0: Graphic organizers did not affect the difficulty level to determine the main points.

H1: Graphic organizers affected the difficulty level to determine the main point.

There was a statistically significant shift in the responses from the pre-intervention questionnaire (M = 2.19, SD = 1) to the post-intervention questionnaire (M = 3.09, SD = 0.81), $P < 0.000$ (two-tailed) as shown in Table 4.68. This means that the null hypothesis is rejected and the alternative hypothesis is accepted, where there is a difference in the difficulty level to determine the main point.

Table 4.68: Paired samples t-test question 8

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Q8 I found it difficult to determine the main points that related to the main idea - Q8 I found it difficult to determine the main points that related to the main idea	-0.89552	1.26891	.15502	-1.20503	-.58601	-5.777	66	0.000

In conclusion, there was a significant improvement after applying the concept of graphic organizers as a pre-writing tool. First of all, arranging ideas by using graphic organizers affected the attitude. Furthermore, graphic organizers affect reactions to the choice of topic. Moreover, graphic organizers has an effect on arranging the ideas before starting writing. In addition, graphic organizers positively affected the participants’ opinion as a pre-writing tool. Also, graphic organizers positively affected the connection of ideas. Additionally, graphic organizers affected the ability of producing more ideas to the main scene. Lastly, graphic organizers positively affected the difficulty level to determine the main point.

4.5 Part Three: Focus group analysis

The researcher explained the purpose of the discussion, the reason for recording, their rights as participants, and the confidentiality of their comments. There were two focus groups: pre and post intervention. The participants in both focus groups were asked the same main questions to compare their responses before and after the experiment. The

researcher moved clockwise around the group to gain feedback from the participants and to urge them to participate and not lose any of their responses. They were six participants in both sessions. Each participant was coded with a number reflecting his order while sitting. The first participant on the right side of the researcher was allocated with number P1. The second one was P2 to P6. Then, the researcher wrote down each number according to the participations' existence after asking the question. A brief summary was recorded after each session, including the date and time, the number of participants, the nature of the group as pre or post, and any problems that occurred.

Both transcripts were translated from Arabic into English. After that, the transcripts were given to a colleague in the Education department to double-check the meaning in both languages. He was a PhD student who used to be a supervisor in the Ministry of Education in Saudi Arabia.

The main questions in the focus group were as follows:

Table 4.69: Questions and their aims in the pre and post intervention focus groups

	Question	Aim
1.	What is the most difficult skill to learn? Why?	To stand behind the reasons for these difficulties and to open a new area for exploration.
2.	Do you like to write about any topic? Why?	To check if there is any reason for this and whether the use of graphic organizers affect this behaviour.
3.	Do you use any pre-writing tools? If yes, how? If no, why?	To check their understanding about this procedure and how graphic organizers affect them.
4.	Do you arrange your ideas before starting writing? If yes, how?	To check how the students arrange their ideas and whether the use of graphic

	If no, why?	organizers helped them to do so.
5.	Can you deliver other logical ideas related to the main idea? If yes, how? If no, why?	To check if the students are able to produce more ideas and how the use of graphic organizers affect this.
6.	Do you concentrate on the main idea while writing? If yes, how? If no, why?	To check how and why the students stick to the main idea and how graphic organizers affect this.

The aim of this method was an exploratory action to establish whether there is any reason behind each idea or not. Similar themes were raised in both the pre and post intervention focus groups.

This part will discuss the themes which arose from both focus groups. They are as follows:

Difficulties in writing.

Preparing before starting.

Keenness to write about any topic.

Ability to arrange the ideas.

Ability to connect the ideas to the main topic.

The use of cohesive devices.

Class size.

Time pressure.

These themes were derived from semi-structured questions. The questions were based on the limitations that second language learners struggle with from the literature. Furthermore, the participants' feedback was allocated to certain themes and was a helpful tool in modifying the marking criteria for the experiment.

The themes were coded by using NVivo qualitative data analysis program. Figure 4.11 shows how the themes were arranged in the program.

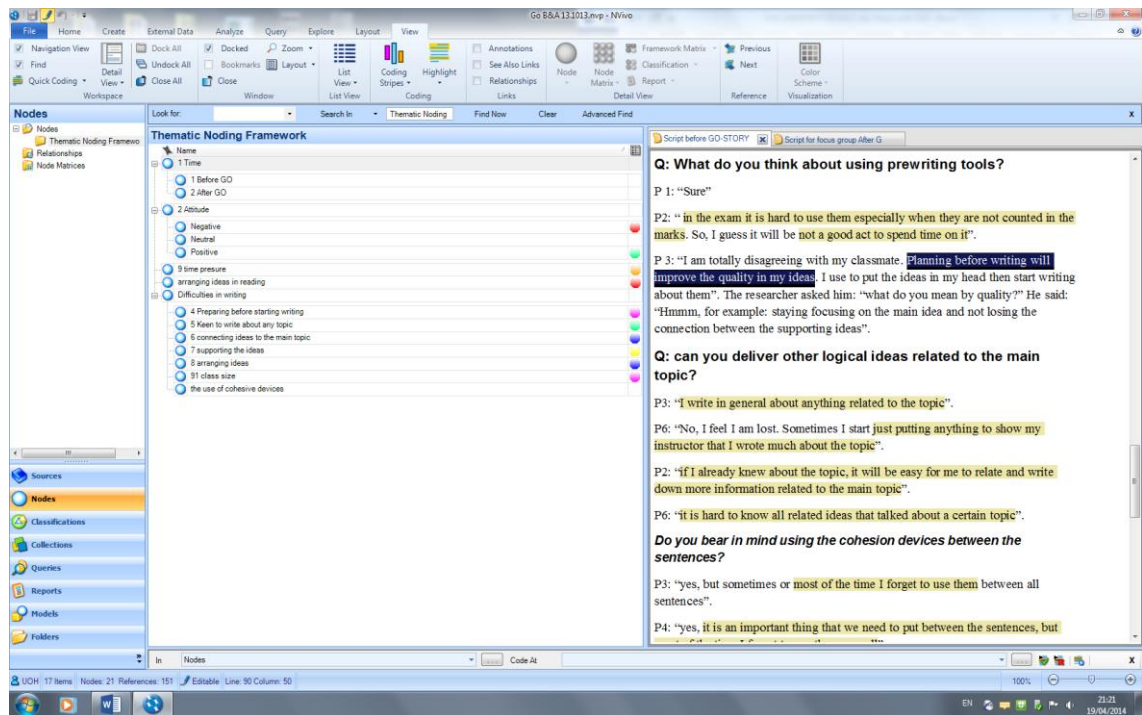


Figure 4.11: arranging the themes in NVivo program

This program enables the user to node (code) the script and to come out with certain themes based on these nodes. Each of these themes will be discussed individually below:

4.5.1 Difficulties in writing

The participants agreed that writing is the most difficult skill to learn. Different obstacles were facing the learners and caused these difficulties. Grammar and syntax were one area of difficulty in which students suffer with regard to sentence building and verb formation:

“Sentence building.” (P1)

“Could not remember the verbs in their different forms.” (P2)

The participants also raised another issue in mixing up the spelling where they had too many words to memorize:

“Memorizing too many words makes me mix them up.” (P2)

4.5.2 Preparing before starting

In the pre focus group, some participants did not agree in relation to using any pre-writing tools, while others used their own technique in preparing for their writing. One of the participants did not use any kind of pre-writing tool because he did not know about it. As he stated:

"I do not know about what you call pre-writing tools." (P6)

The participants were in the position in which they did not feel confident with their written production. One of the participants commented:

"...what makes me afraid is my written outcome where I feel my written material is like rubbish or scratches." (P5)

This feeling was developed when the participants did not pay much attention to the pre-writing tools where they believed they generate a lot of pressure:

"...especially at the exam since part of your mind will look at the time and it will be hard to concentrate." (P1)

They did not recognize the aim of using this procedure since they kept saying it was a waste of time:

"There is no time for that." (P6)

"In the exam it is hard to use them especially when they are not counted in the marks." (P2)

On the other hand, there were some participants who believed in the importance of using pre-writing tools:

"Planning before writing will improve the quality in my ideas." (P3)

They differed from each other in applying this concept in their writing. One of the participants was used to arranging the ideas in his head:

"I arrange them in my head before starting." (P3)

Similarly, some of the participants wrote some words at the side of the paper to remind them of the main points they are writing about:

"...writing down some related words at the back of the paper to remind me about the topic." (P1)

"I write down all the words then try to write." (P2)

They considered this procedure a pre-writing tool, but it was a poor and low quality activity. Besides which, there was the participants' attitude, in which they did not like or even believe in preparing before starting to write.

The post focus group showed a large shift in the participants' attitude and in their beliefs regarding using graphic organizers as a pre-writing tool. Different themes emerged, as follows.

4.5.3 The ease of using graphic organizers

The participants found that applying graphic organizers in writing as a pre-writing tool was described as an easy procedure:

"Filling the blanks with simple words is much easier than starting with complete sentences." (P5)

"It helped me in the brainstorm process easily." (P4)

"Instead of writing more than one draft with many corrections and deletions, graphic organizers ease the process and enabled me to put down the ideas easily on paper." (P1)

4.5.4 Convinced of the need to prepare

Positive feedback was received where the participants started to know the concept of graphic organizers and their importance while applying them in writing. Some of the participants commented:

"Yes, I found it an important step to use a pre-writing tool." (P3)

"Graphic organizers assist me with the key words, which enabled me to start with a clear image about the topic." (P1)

"I consider my ideas as organized but when I used graphic organizers they were more organized." (P4)

"I thought doing this was a waste of time, especially filling in some words in the blanks, but I noticed that it is a nice process to help improve my writing." (P6)

"Yes, it helped a lot in arranging the ideas, which was something I used to suffer from." (P4)

4.5.5 Positive attitude

When the participants practiced the use of graphic organizers in their writing, it positively affected their attitude towards the writing skill. They became more confident with their writing:

"Knowing new techniques motivates me more to learn; especially when I found it clear that my problems have been solved." (P2)

"I was disappointed when I tried graphic organizers the first time. I did not know how to fill it in properly. Then, I found it easier than before to concentrate on my idea, which made me more enthusiastic towards writing." (P3)

However, knowing how to use graphic organizers is demanding at the beginning. Therefore, knowing a suitable graphic for each type of writing is an essential role in the pre-writing step. One of the participants mentioned that drawing a suitable graphic for the topic was a hard task:

"I like to use graphic organizers, but it is hard to draw a suitable graph for the topic." (P5)

At this stage for beginners, the instructor should provide the writers with suitable graphics with which to practice. Then, they can depend on themselves gradually to create their own graphics if they need to.

In conclusion, the participants knew why they have to prepare before starting their writing. The focus group showed that applying graphic organizers in writing was an important pre-writing step. The participants were satisfied when they applied graphic organizers in their writing. They knew the importance of using them as a pre-writing tool. They also discovered the ease of using them when they had learnt how to use the tool. Finally, graphic organizers enhanced the participants' confidence while they write.

4.5.6 Keeness to write about any topic

The participants in the pre focus group agreed that the topic that they will write about is considered the first barrier that prevents them from writing. They became less interested when they did not like the topic. Thus, they did not write much about it. Most of the participants agreed with the fact that knowing the topic controls their keeness to write. Two of the participants remarked:

"If I already know about the topic, it will be easy for me to relate and write down more information related to the main topic." (P2)

"The topic itself attracts me." (P3)

Knowing about the topic also plays an important role in adding more details about a certain subject. Thus, the writer does not have the desire to add more details about an unknown topic:

"If the topic is not interesting to me, I will not be keen on adding more details." (P5)

On the other hand, in the post focus group, graphic organizers succeeded in changing the participants' view regarding their keeness to write about any topic. Firstly, when they received a new topic, they did not know how to facilitate the topic to cover more than one

aspect. However, they knew how to facilitate the topic after applying the concept of graphic organizers, and acquired the ability to write about different aspects of the topic as well:

“Applying graphic organizers in my writing facilitates the topic even though I am not interested in the topic.” (P1)

Secondly, the ability to arrange the ideas convinced the participants that using graphic organizers is effective when writing and arranging the ideas regarding any given topic. It worked as a hint to build up a clear picture about the topic:

“It enhanced arranging the ideas in the new topic.” (P4)

“Graphic organizers assist me with the key words, which enabled me to start with a clear image about the topic.” (P1)

In conclusion, applying graphic organizers in writing managed to give the writers a clear picture about the topic, even if they did not know about it. Graphic organizers can act as a pre-writing tool to put the writer in the position of gathering more details about a topic, even if the subject is unknown or not in his or her priority list.

4.5.7 Ability to arrange ideas

The participants in the pre focus group were suffering from a lack of ability to arrange their ideas while writing. Being confused about how to start writing is one of the obstacles that prevent the writer from arranging ideas:

“I do not know from where I should start and what to write.” (P6)

“The problem is how to start.” (P3)

“I am moving in a circle.” (P2)

The participants at this level cannot fathom the relation between the ideas and whether they are connected to each other or not:

"I have difficulties in writing and finding the ideas and arranging them." (P2)

"I feel confused since the ideas are not perfectly related and connected to each other." (P3)

In addition, the sequence and flow of related ideas are missing. Therefore, they cannot arrange their ideas easily:

"When I write there is no sequence in my writing." (P4)

"I will write about anything just to fill the paper without any concentration." (P6)

Sometimes the writer has the ideas in his or her head but cannot illustrate them coherently on paper:

"The ideas and vocabulary are in my head but I do not know how to arrange them." (P4)

On the other hand, the participants in the post focus group found it much easier to arrange their ideas with the use of graphic organizers. Furthermore, they found it easier to start with simple words as brief ideas and then build up their sentences:

"Filling the blanks with simple words is much easier than starting with complete sentences." (P5)

"It helped me to produce the basic important words to start with." (P2)

The participants managed to reach an advanced level where they could determine the main points and even evaluate which point was more important and relevant than the others:

"I found myself having many ideas and starting to evaluate which is important to put down." (P4)

"I found it so useful in determining the main points." (P6)

Additionally, applying graphic organizers in writing made it easier for the writers to find a relation between the ideas while writing:

"I found a clear link and joint between the ideas." (P4)

"It was easier to talk about the advantages and disadvantages clearly." (P2)

4.5.8 Ability to connect the ideas to the main topic

The participants in the pre focus group showed a low level in their ability to connect and relate their ideas to the main topic. They suffered from loss of concentration and an inability to stay close to their topic:

"I do not know from where I should start and what to write." (P6)

"I used to add some information unconsciously that was not related to the topic." (P5)

As a result, adding any sentences with no relevant connection to the main topic was one of the solutions to accomplishing a paragraph:

"Just putting anything to show my instructor that I wrote a lot about the topic." (P6)

"I feel that I am lost and start to just add any words to reach the word limit." (P1)

The repetition of ideas was one of the problems that were raised by the participants. It is a great risk that the writers fall into without knowing. One of the participants remarked that he used to repeat the idea more than once:

"I start repeating the same idea more than once." (P2)

On the other hand, graphic organizers were made as a pre-writing tool to enable the participants to connect their ideas to the main topic. Instead of writing any sentences to reach the word limit or repeating the same idea without delivering further information

and ideas to the main topic, the participants managed to solve such problems. Graphic organizers succeeded in linking the ideas to the main topic:

“It solved a big problem for me, which is bringing logically connected ideas.” (P1)

“Graphic organizers helped me in starting with simple words then building sentences from these words that are related to the main idea.” (P5)

The graphic organizers were found to be a useful tool for keeping the ideas close to the topic. Furthermore, they enhanced the participants’ writing with more examples and ideas related to the main topic:

“I used to write then I found myself far away from the topic then I return to think again, but with a graphic organizer it is much easier not to go far from the topic.” (P4)

“Graphic organizers helped me in producing more examples and ideas related to the main idea.” (P1)

“Putting down the words in this design enabled me to remember more words in a form of ideas that related to the main topic.” (P4)

In conclusion, the participants used to suffer from loss of concentration in their writing and an inability to stay within the range of the topic. They used to suffer from the repetition of ideas as well. At this level of the pre intervention focus group, the marking criteria was modified to meet the needs of marking. Focusing on the topic sentence, supporting ideas and concluding sentence were all key factors that enable the learners to avoid repetition while writing and to stay focus within the topic. In fact, applying graphic organizers as a pre-writing tool eliminated these problems. It enabled the participants to focus on their topic and produce ideas related to the main topic.

4.5.9 The use of cohesive devices

Cohesive devices are important tools for supporting the level of comprehension in writing. However, the participants keep forgetting them when they started writing. One of the participants stated:

“Most of the time I forgot to use them.” (P3)

Another participant confirmed the importance of these cohesive devices. However, he used to forget to use them as well:

“It is an important thing that we need to put between the sentences, but most of the time I forget to use them as well.” (P4)

Thus, the participants knew about and believed in the significance of using cohesive devices in their writing. They knew how much value these devices add to their writing, but they still forgot them while writing.

4.5.10 Class size

Class size was one of the greatest issues that contribute to affecting the learning process. Students suffer from the large size of their class, especially in writing lessons. When a large class size is combined with insufficient time for checking the students' work, this affects the students' progress, especially in writing. The instructor does not have time to check all the students' work in the class. Therefore, the students could not receive advice from their instructor from the beginning:

“The teacher cannot check all our work in class especially with a large number of students.” (P3)

“The instructor does not have the time to check all the work from the students in the class.” (P1)

The students not only spend time waiting for their turn for correction, they also spend time in writing without knowing whether they are on the right track:

"I spent time on writing rubbish things and more time waiting my turn for correction." (P1)

Even though the instructor tries to check the students' work, he cannot attend to more than 30 students in only a few minutes. Besides, the students do not have time to ask about anything either:

"...the rest of the students cannot check their work with him." (P2)

"There is no time to ask him about anything." (P5)

However, applying graphic organizers in a writing class contributed to solving this problem. Graphic organizers succeeded in enabling a large number of students to be checked in a convenient amount of time:

"The instructor can guide me by just looking at the first graph." (P4)

"With a quick look, the teacher can check my topic sentence, main ideas and concluding sentence easily." (P1)

"It will be easier for him to know what my essay covers before reading it." (P5)

In conclusion, the intervention of graphic organizers in writing as a pre-writing tool was a useful procedure to overcome the class size problem. The students can easily build up their main points under a short amount of supervision from their instructor. It saves their time from the beginning of the class, where their instructor is able to know what they will write about using simple words. This activity enables a large number of students to be checked by their instructor in a short time.

4.5.11 Time pressure

The idea of using any pre-writing tool was rejected by the participants. One of the reasons for rejecting applying any pre-writing tool was time pressure, especially during examinations. Students become frustrated during examinations:

“Time is pressing and it is hard to arrange the ideas before starting.” (P1)

“It is time consuming and I need to finish in a certain time in the exam.” (P4)

However, the participants recognized the importance of applying graphic organizers as a pre-writing tool. They agreed that improving their writing quality by applying graphic organizers was more important than the quantity that they used to seek in examinations:

“I thought doing this is a waste of time, especially filling in some words in the blanks, but I noticed that it is a nice process to help improve my writing.” (P6)

“It is good to use pre-writing tools, but I have to arrange it with the time.” (P1)

“It was time consuming but it is worth it.” (P2)

In conclusion, applying graphic organizers in writing is time consuming. This is considered as a disadvantage, especially in the examination period. Yet, the participants gained the most important advantage when they managed to produce more comprehensive paragraphs. So, the researcher recommended dividing the examination period into two parts:

First part: the first 15 minutes could be considered as brainstorming using graphic organizers. This is not counted in the exam mark, or at least with 5 marks for the main ideas.

Second part: transferring the main points in the brainstorming part into a complete written essay.

This method should reduce the pressure and enable the students to gain advantage from applying graphic organizers in their writing effectively.

4.5.12 Summary

The participants in both the pre and post focus groups raised some important issues regarding their difficulties while learning writing as well as graphic organizers as a pre-

writing tool. The use of graphic organizers succeeded in convincing the participants to change their views towards the use of pre-writing tools. In fact, graphic organizers revealed many advantages while applying them in writing as a pre-writing tool.

Firstly, the participants found it more important to use graphic organizers as a pre-writing tool in their writing. They noticed that they managed to focus on the topic and deliver more ideas related to the main topic. Secondly, the participants managed to write about any topic, even if they were not interested in it. Thirdly, they were able to arrange the ideas under one topic easily. Fourthly, graphic organizers were a useful tool to be applied with large classes.

On the other hand, graphic organizers were considered as a time-consuming tool, especially in examinations. They require more time for brainstorming and actual writing than the traditional writing approach. However, this problem can be solved by assigning a certain period of time for the brainstorming process before starting writing.

The next chapter discussed the results from the three different methods to double-check the findings. These three results were: the focus group as qualitative data, the students' marks with the questionnaire as quantitative data, and will also confirm whether the intervention of graphic organizers was effective to be applied in writing lessons.

Chapter 5: Discussion

5.1 Abstract

This part illustrates the similarities and differences between the current research and previous studies. These differences will be discussed according to sampling, types of graphic organizers, period of implementing graphic organizers, and methodology. This discussion is critical of the limitations in the previous studies and shows how the present study has overcome them.

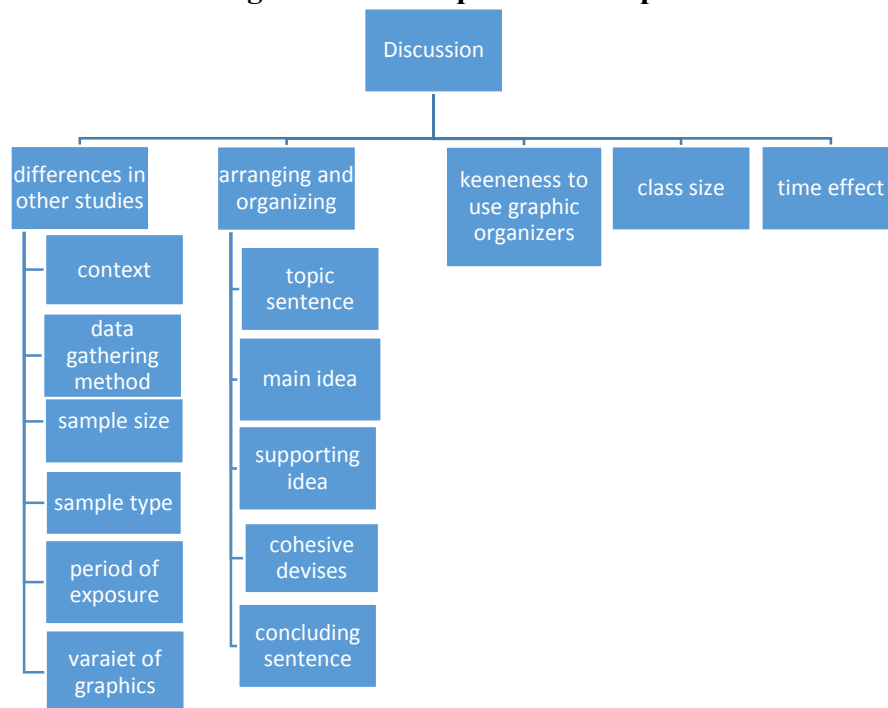
In addition, this section discusses the findings which were gathered using different methods. The aim is to confirm whether or not there are significant results after applying the concept of graphic organizers in writing and to compare them with the literature. Three different methods were used in this research. As a quantitative approach, the researcher conducted an experiment to check students' marks through time and pre- and post-intervention questionnaires to gain feedback regarding applying graphic organizers in writing. Furthermore, as a qualitative approach, the researcher conducted pre- and post-intervention focus groups to stand behind the participants' problems in their cohesion level and to check whether or not the use of graphic organizers did indeed solve these difficulties.

The analysis in this part will check the participants' opinions in their focus group and questionnaires before applying the concept of graphic organizers in writing. Then, there will be an illustration of their opinions after applying graphic organizers. In both discussions, the students' marks are presented to support the findings, whether there are increases in their marks or not.

Figure 5.1 illustrates the sequence of the main points in this chapter. Firstly, it shows the differences and similarities in other studies in terms of context, research design, sample size, type of sample, period of exposure, variety of graphic organizers used in the study

and the data gathering method. Secondly, this research discusses the ability to arrange and organize ideas in terms of topic sentence, main idea, supporting idea and concluding sentence. Thirdly, it shows the attitude of the participants through their keenness to use graphic organizers in their writing. Fourthly, this chapter highlights the effectiveness of graphic organizers in writing lessons with large classes. Finally, it emphasizes the role of time effect, where the longer the participants are exposed to the new technique, the more benefit they gain from it.

Figure 5.1: Main points in Chapter 5



5.2 Differences and similarities in other studies

Different studies, in different contexts, aimed to solve the lack of coherence by applying the concept of graphic organizers into students' writing. Meyer (1995), Gallick-Jackson (1997), Brennan (2006), Esmat (2006), Sharrock (2008), Dujsik (2008), Powell (2009) and, most importantly, Alshehri (2010) tried to enable their students to produce a well-cohered and organized written text by using different types of graphic organizers. The current research is based on overcoming the limitations in the previous studies and improving them to suit the objectives of the present research in order to enhance second language learners' writing coherence. The trend of these studies was to improve the students' coherence. In fact, all studies, including the present research, aimed to reach the same goal. Accordingly, they share similar results in showing the effectiveness of applying the concept of graphic organizers into writing. However, they differ in terms of their contexts, sample size, type of sample, period of intervention, types of graphics used in the experiment and data gathering method in their methodology and research design. These differences are explained as follow:

5.2.1 Context

The first difference is the context of applying the research. Different studies applied the concept of graphic organizers in different contexts. Each context of these studies used different kinds of teaching methods. Therefore, each teaching method suits different audiences, and that is why these differences could contribute to different results. Meyer (1995), Gallick-Jackson (1997), Esmat (2006), Sharrock (2008), Powell (2009) tried to enhance their students' writing by using the concept of graphic organizers in the United States. These studies addressed first language learners. Thus, it uses different teaching methods that suit first language learners. Similarly, Brennan (2006) conducted a similar study in Canada. Brennan's study addressed different learners. They were distance learners who demanded different teaching methods as well. Furthermore, Dujsik (2008)

did research on second language learners in the United States. Also, Alshehri (2010) conducted another study in Saudi Arabia. Alshehri's study was done on second language learners who followed different teaching methods. Also, it was conducted on female second language learners. The present research is similar to Alshehri's since both of them were conducted in the same context. Both of them share the same context with a similarity in second language teaching method. Even though the present research differs from these previous studies in terms of context, it holds the same main objective in applying graphic organizers into writing to enhance the coherence level of written texts.

5.2.2 Data gathering method

The second difference was the method of gathering data. Previous studies differed from the present study in terms of data collection methods. They were based on either qualitative or quantitative approaches to gather data such as pre-post intervention tests as quantitative method. Meyer (1995), Gallick-Jackson (1997), Sharrock (2008) and Alshehri (2010) applied pre post intervention tests in their research to evaluate the effectiveness of applying graphic organizers into writing. A second type of research used different methods to evaluate the same object. Surveys and observations were some kinds of qualitative approach which were applied in other studies such as Brennan (2006), Esmat (2006) and Powell (2009). The third type of research is Dujsik's in 2008. Dujsik applied a mixed method design as pre post intervention test followed by semi-structural interviews.

Even though the findings from these previous studies suggested the effectiveness of applying the concept of graphic organizers into writing, the present study mixed these two approaches in one study with great attention to the limitations that occurred in the previous studies. The aim was to gather data by using quantitative approach and to confirm the findings with the qualitative approach. This confirmation influence and

enhance the effectiveness of applying graphic organizers into writing from two different perspectives.

In fact, the present research applied a pre-post intervention focus group, pre-post intervention questionnaire and pre-post intervention tests. The use of multiple-baseline design clearly distinguishes the present study from the others as well. Besides, this kind of experiments adds great value to the research from different perspectives. Firstly, it enables equity among all participants to be involved in the experiment. One advantage of the multiple-baseline design is to illustrate the impact of the intervention through time among different groups. Thus, all groups will be exposed to the potential for advantage during the experiment. Secondly, the multiple-baseline design is a tool that confirms the results from more than one group at different times. It adds more reliability to the results since different groups relatively show the same data. Also, it rules the threat of history where it considers as an internal validity to the previous experiment. Thirdly, this technique allows the researcher to read the data from different perspectives. The data can be read by comparing the same group longitudinally through time, or by comparing different groups as a cross section at a specific time.

5.2.3 Sample size

The third difference was the sample size. Most of the studies which applied a quantitative method on their research suffered from the low number of sample size. It could be the reason that the number of people is low at a particular organization, or the number of absentees during the research was out of the researcher's control. For example, Gallick-Jackson (1997) conducted a pre-post intervention writing test with just eight participants. Moreover, Sharrock (2008) had only 21 participants to participate in a pre-post intervention test. Dujsik (2008) got 19 participants in the control group and 22 in the experimental group, although there were some absentees in both groups which made the sample size lower than expected. Also, Alshehri's (2010) study included 20 participants;

however, her study suffered from absences which made her sample size lower than expected. In fact, the sample size in a quantitative approach plays an important role in the results. Thus, to overcome this dilemma the present research included 87 participants as second language learners. However, there were some absentees as well, but the number of participants was still high. The sample size in the present study was sufficiently high to enable the researcher to conduct certain statistical tests without violating the assumptions of the tests.

5.2.4 Sample type

The fourth difference was the type of sample. Different studies applied the concept of graphic organizers into writing with different kinds of samples. These studies applied their intervention to mixed genders, males and females, in their public schools in which among some of them are second language learners similar to Powell's study (2009). They were in their 10th grade. Similarly, Meyer (1995), Gallick-Jackson (1997), Brennan (2006), Esmat (2006), Sharrock (2008) conducted their studies on a range of 2nd and 10th grade students in schools. Additionally, Dujsik (2008) conducted a research on second language learners in the United States. They were from different countries and backgrounds. Alshehi's study was the most relevant to the present research since it was applied within the same context, that is, Saudi Arabia. This context showed similarities in teaching methods and students' backgrounds as well. Most importantly, graphic organizers were applied to second language learners at university level which is similar to the present study. However, there was one main difference regarding the nature of the sample. Alshehri's study was conducted on female university students, while the present study was conducted on male university students at King Saud University. This difference is related to cultural policies implemented by the Ministry of Higher Education since the learning system in Saudi Arabia has two separate sectors for male and female students.

5.2.5 Period of exposure

The fifth difference was the period of applying graphic organizers while running the experiment. The period of applying graphic organizers into writing was an essential factor to show the understanding and advantage of this technique. It reflects the participants' understanding to produce a well-cohered written text. In fact, some studies showed sufficient time in applying graphic organizers during their experiments. Mayer (1995), Gallick-Jackson (1997), Brennan (2006), Esmat (2006), Sharrock (2008) and Dujsik (2008) spent from 6 to 13 weeks in practising with graphic organizers with the participants. On the other hand, some studies, such as Powell's (2009) spent only two weeks, while Alshehri (2010) spent four weeks. These studies suffered from time pressure, where they confirmed that there was not enough time to teach the new method of applying graphic organizers to the experimental group. This pressure was a result of interference with institutional time and interruption in the schedule (Sharrock, 2008). Moreover, the fact of teaching graphic organizers and the main curriculum at the same time put some limitations in terms of focusing on graphic organizers (Powell, 2009).

Esmat (2006), Sharrock (2008) and Powell (2009) recommended spending more time in teaching graphic organizers. Thus, due to the problems in previous studies and taking the recommendations by previous studies into consideration, the present research applied graphic organizers twice a week for four weeks at the end of each lesson of the normal lecture. By doing so, this study overcame the interference between applying graphic organizers and the main lesson since the instructor delivered his lecture as usual, and then the participants learnt how to apply the concept of graphic organizers for their homework at the end of the lecture. In addition, the use of multiple baseline design facilitated the task since three groups were involved at the same time, and it was easy to analyse the data from different perspectives in a short period. This was found clearly by comparing just two weeks with two different samples. The first sample can be compared

longitudinally with itself. On the other hand, the second sample can be compared cross sectionally as three groups.

5.2.6 Variety of graphic organizers

The sixth difference was the variety of graphics used in the present research. Studies such as those by Esmat (2006), Sharrock (2008) and Powell (2009) used only one kind of graphic. They recommended applying more than one kind of graphic as a pre-writing tool. In fact, different types of writing need different kinds of graphics. Dujsik (2008) used Inspiration 6 as an idea-generating and organizing tool. Inspiration 6 is a software program installed on computers to generate ideas and organize them. Thus, the present research used different graphics each week to suit each kind of topics. Arguing, judging, comparing and contrasting were the main graphics used in the present study to suit different topics each week. This variety of topics with their related graphics reflected how the participants understood the technique of focusing on the main topic, as well as delivering related ideas which led them to produce better cohered written texts.

In conclusion, there were some problems and differences related to the previous studies. Accordingly, these limitations were avoided in the present research. There was great attention paid to the sample size. In fact, previous studies suffered from the issue of absences in their experiments, which affected their total number of samples. Furthermore, one of the differences which makes the present study different from other studies is the type of sample. This is the first research conducted on male Saudi second language learners. In addition, the present research differs from other researches with regards to the period of practising the concept of graphic organizers. Furthermore, the present research applied a variety of graphics which has been used in the present study. Lastly, the use of multiple-baseline design distinguishes the present study from previous ones. Its way of analysing the data gives great advantage in validating the results. Furthermore, it ensures fairness to all participants involved in the experiment at the end.

5.3 Arranging and organizing ideas

The second part of this chapter is concerned with how the participants react regarding the use of graphic organizers as a prewriting tool and the extent to which this reaction matches or contradicts the literature. The lack of ability to reach the coherence level in writing is affected by some factors such as: the inability of producing a clear topic sentence, supporting it with relative ideas, concluding the idea with a concluding sentence and paying attention to the cohesive devices as well. Consequently, a low level of creativity in the texts will be produced. Therefore, visualizing the ideas is one of the important techniques to enable the writer to overcome these obstacles. It adds a great value to the text where there is concentration on the main idea together with its relevant supporting sentences. Furthermore, it eliminates the repetition of ideas and excludes unrelated information.

Alhumaidi (2008) emphasized the role of knowledge-planning strategies in developing Saudi learners' second language writing. In fact, the current study shows that at the stage of pre-intervention focus group and questionnaire, most Saudi second language learners in this study do not pay any serious attention to any kinds of pre-planning strategies. Furthermore, this situation is confirmed by student marks. Some of them tried to apply simple prewriting tools on their own efforts. However, their attempts were not that satisfactory. Thus, applying graphic organizers as a prewriting tool was one of the solutions to reach an effective strategy that enables students to produce a well-cohered text. The findings in the current research will be discussed through qualitative and quantitative approaches, and I will relate these findings to what was reported in the literature.

The participants' contributions to the present research illustrate that they suffer from some obstacles in writing. These obstacles have been identified by using more than one research method. Firstly, the pre-intervention focus group showed that the participants encountered

problems in producing a well-cohered written paragraph. Arranging of ideas, repetition of ideas and staying focused on the topic were some of the major obstacles that caused them to suffer while writing. They felt confused and did not know where and how to start their writing with organized ideas:

“Starting any topic is difficult.” (P1)

“I do not know from where I should start and what to write.” (P6)

They also admitted that they used to repeat ideas in their writing:

“I am moving in a circle.” (P2)

“I start repeating the same idea more than once.” (P1)

Secondly, the responses in the pre-intervention questionnaire supported this view as well. Table 5.1 shows 37 participants (50.7% of the total participants) who *totally disagreed* and *disagreed* regarding their ability to arrange their ideas before starting writing. In addition, only 14 participants (19.1%) *totally agreed* and *agreed* about their ability to arrange their ideas before starting writing.

Table 5.1: Participants’ ability to arrange their ideas before starting writing

			Q4. I can arrange my ideas before starting my writing.					Total
			Totally agree	Agree	Sometimes	Disagree	Totally disagree	
Group	Before	Count	5	9	22	27	10	73
		% within group	6.8%	12.3%	30.1%	37.0%	13.7%	100.0%
	After	Count	8	29	27	3	0	67
		% within group	11.9%	43.3%	40.3%	4.5%	0%	100.0%

Thirdly, the students’ marks before applying the concept of graphic organizers showed a low level of cohesion in their writing. Table 5.2 below shows that 36 out of 46 participants

scored 5 and lower (representing 78.3%). On the other hand, only 10 participants scored 6 and 7 out of 10 (representing 21.7%). In this respect, the minimum mark was 1 out of 10, and the maximum was 7 out of 10.

Table 5.2: Total marks before the intervention

Marks	Total marks										
	0	1	2	3	4	5	6	7	8	9	10
Number of participants before the intervention	0	1	4	7	14	10	5	5	0	0	0

Moreover, the mean score in the total mark, as shown in table 5.3 below, is 4.37 out of 10. This indicates that the participants still suffer from a low level of cohered texts.

Table 5.3: The mean score for total mark in week 1

		Total mark Week 1
N	Valid	46
	Missing	8
	Mean	4.37
	Minimum	1.00
	Maximum	7.00

In fact, these results confirm that second language learners suffer from difficulties with writing skills. Many obstacles affect their learning progress. According to McMullen (2009), a unique challenge in terms of learning the writing skills faces Saudi learners of English, such as the coherence level in their writing. The data in the present research confirm this problem in the literature. The pre-intervention test showed that the second

language learners produced a low level of coherence in written texts. Their marks in the pre-intervention test highlighted the problems that prevented them from producing a well-cohered written text.

On the other hand, applying graphic organizers in writing as a pre-writing tool facilitates the process of dealing with these obstacles and enables the participants to focus on the topic, avoid repetition of ideas and deliver logical ideas that are connected to the main topic. Firstly, the post-focus group showed that the participants managed to deal with these obstacles positively. They knew how and what to include in their main points. The repetition of ideas was also minimized by applying graphic organizers in their writing since they were controlled by the graphics:

"I found it so useful in determining the main points." (P6)

"Graphic organizers helped me in starting with simple words then building sentences from these words that are related to the main idea." (P5)

"I found a clear link and connection between the ideas." (P4)

Fountas and Pinnell (2001) confirmed the same idea where graphic organizers offered solid representations for structuring abstract ideas and helped learners to notice the hierarchy or sequence of ideas. Graphic organizers help learners to make 'chunks' of information by prioritizing, sequencing, evaluating, and building on new information. Similarly, the present research confirms the idea of prioritizing and evaluation. The participants managed to avoid repetition by determining the main points and choosing the most relevant and important information to the main point.

Secondly, these findings from the focus group were confirmed by the post-intervention questionnaire. It illustrated that there was a high positive shift where the participants totally agreed and agreed regarding their ability to arrange ideas. Eight participants totally

agreed and 29 agreed; both represented 55.2% of the total participants. On the other hand, those who chose “sometimes” increased from 22 participants (30.1%) to 27 (40.3%). These percentages show that the participants were more confident about their writing and knew whether or not they were writing the right thing.

Thirdly, the students’ marks after applying the concept of graphic organizers showed a high level of comprehension in their writing. Table 5.4 below showed that six participants scored 5, and two participants received 4. They represented 17.3% of the 46 participants. On the other hand, 38 participants scored from 6 to 10 out of 10 (representing 82.6% of the 46 participants).

Furthermore, there were improvements in the minimum mark from 1 mark in week 1 to 4 out of 10 in week 4. There was also an improvement in the maximum mark from 7 to 10 out of 10. The number of students who received the best marks in week 1 increased from five participants to 11. Furthermore, another 18 participants achieved marks of 8, 9 or 10. Their marks showed that they managed to combine the ideas correctly and relate logical ideas to the main topic while writing.

Table 5.4: Total mark before and after the intervention

Intervention	Total marks										
	0	1	2	3	4	5	6	7	8	9	10
Before	0	1	4	7	14	10	5	5	0	0	0
After	0	0	0	0	2	6	9	11	9	6	3

In addition, the mean score of these marks in week 4 was increased from 4.37 to 7.07 out of 10. Table 5.5 below showed the differences between the mean scores in weeks 1 and 4 as well as the minimum and maximum scores.

Table 5.5: Mean score for total mark before and after the intervention

	Total mark Week 1	Total mark Week 4
N Valid	46	46
Missing	8	8
Mean	4.37	7.07
Minimum	1.00	4.00
Maximum	7.00	10.00

The total mark, before and after the intervention, was evaluated according to five marking criteria: topic sentence, main idea, supporting ideas, cohesive devices and concluding sentence. All of them together contributed to form a cohered organized text using a sequential order by following certain graphics. They are analysed as follow.

5.3.1 Topic sentence

Second language learners' writing lacked clarity in terms of writing their topic sentences. The students struggled to start with their first sentences. In fact, most of them did not write the first sentence as a topic sentence. They started writing flow of information without paying attention to the paragraph writing process, such as starting with a topic sentence then supporting it with relative ideas.

The participants showed great improvement after applying the concept of graphic organizers as a prewriting tool. Graphic organizers have another function as a tick check since it keeps reminding the participants with the topic sentence. The mean score throughout the weeks of the experiment clearly illustrate that graphic organizers enhance the participants' ability to focus and produce clearer topic sentences than the ones produced before the intervention. Table 5.6 displays the mean scores of the topic

sentences before and after the intervention. The maximum score was out of 2, and the highlighted weeks indicated the intervention period.

Table 5.6: Mean score for topic sentence before and after the intervention

Groups			Groups	Topic sentence Week 1	Topic sentence Week 2	Topic sentence Week 3	Topic sentence Week 4
Group A	N	Valid	15	14	14	12	11
		Missing		1	1	3	4
Mean				0.9286	1.7143	1.7500	1.4545
Group B	N	Valid	16	16	12	14	13
		Missing		0	4	2	3
Mean				1.3125	1.0833	1.7857	1.6154
Group C	N	Valid	23	16	19	18	22
		Missing		7	4	5	1
Mean				0.6875	1.4211	0.4444	1.3636

5.3.2 Main idea

The participants at this level showed an acceptance score since it demonstrated their ability in focusing on their main ideas before the intervention. However, their marks after the intervention improved to a great extent. Table 5.7 illustrates that the mean score before the intervention increased among the groups from the minimum score 1.21 to 1.91 out of 2. Even though the improvement through the time of intervention was not stable, it is still much better than the pre-intervention mean scores.

Table 5.7: Mean score for main idea before and after the intervention

Groups			Groups	Main idea Week 1	Main idea Week 2	Main idea Week 3	Main idea Week 4
Group A	N	Valid	15	14	14	12	11
		Missing		1	1	3	4
Mean				1.2143	1.2143	1.9167	1.8182
Group B	N	Valid	16	16	12	14	13
		Missing		0	4	2	3
Mean				1.5000	1.4167	1.8571	1.6923
Group C	N	Valid	23	16	19	18	22
		Missing		7	4	5	1
Mean				1.3750	1.4737	1.5556	1.8636

5.3.3 Supporting idea

Another problem that affected the coherence level in students' writing is the lack of ideas that support and enhance the main idea. Table 5.8 shows that students' texts still need more improvement at the level of supporting the main idea. Even though there has been a good progress after the intervention, the participants need more effort and time to achieve better marks. However, the combination of the five marking criteria overcomes this issue. Thus, the total score clearly shows the significance of the post-intervention tool.

Table 5.8: Mean score for supporting idea before and after the intervention

Groups			Groups	Supporting ideas Week 1	Supporting ideas Week 2	Supporting ideas Week 3	Supporting ideas Week 4
Group A	N	Valid	15	14	14	12	11
		Missing		1	1	3	4
	Mean		0.9286	1.00	1.0833	1.2727	
Group B	N	Valid	16	16	12	14	13
		Missing		0	4	2	3
	Mean		1.2500	1.1667	1.1429	1.3077	
Group C	N	Valid	23	16	19	18	22
		Missing		7	4	5	1
	Mean		1.0625	1.1053	1.2778	1.4091	

5.3.4 Cohesive devices

The use of cohesive devices is one of the key elements that supports the text to reach a coherence level. The participants showed a low rate of applying these devices in their texts. The pre-intervention mean scores clearly illustrated this dilemma. On the other hand, the post-intervention mean scores proved that graphic organizers kept reminding the participants to apply the cohesive devices in their texts. Accordingly, they affected their marks positively. Table 5.9 shows the improvement in the groups' mean scores at the level of using cohesive devices before and after the intervention. The highlighted weeks indicate the post-intervention tests.

Table 5.9: Mean score for the use of cohesive devices before and after the intervention

Groups			Groups	Cohesive devices Week 1	Cohesive devices Week 2	Cohesive devices Week 3	Cohesive devices Week 4
Group A	N	Valid	15	14	14	12	11
		Missing		1	1	3	4
Mean				0.4286	0.7143	0.5000	1.1818
Group B	N	Valid	16	16	12	14	13
		Missing		0	4	2	3
Mean				0.3125	0.2500	0.6429	1.2308
Group C	N	Valid	23	16	19	18	22
		Missing		7	4	5	1
Mean				0.7500	0.5263	0.5000	0.9545

5.3.5 Concluding sentence

The pre-intervention test clearly illustrated that the participants had great difficulty providing a concluding sentence to wrap up their argument. All groups lacked the knowledge to provide a suitable concluding sentence. However, the use of graphic organizers enabled them to overcome this problem. Their mean scores in the post-intervention test show better improvement. Table 5.10 shows the improvement in groups' mean scores at the level of concluding sentence before and after the intervention. The highlighted weeks indicate the post-intervention tests.

Table 5.10: Mean scores for the concluding sentence before and after the intervention

Groups			Groups	Concluding sentence Week 1	Concluding sentence Week 2	Concluding sentence Week 3	Concluding sentence Week 4
Group A	N	Valid	15	14	14	12	11
		Missing		1	1	3	4
Mean				0.3571	1.0714	1.5833	1.6364
Group B	N	Valid	16	16	12	14	13
		Missing		0	4	2	3
Mean				0.3750	0.1667	1.1429	1.5385
Group C	N	Valid	23	16	19	18	22
		Missing		7	4	5	1
Mean				0.5625	0.7368	0.1667	1.1364

In conclusion, graphic organizers managed to enable the participants to get better marks after the intervention. In fact, mixing all these five criteria and arranging them in a logical

way produced a well-cohered written text. Graphic organizers worked as a tick list to remind the writer with all these five criteria. Furthermore, it arranged them in a way to suit the aim of the task whether it is, for instance, an argumentative text or a comparative text.

5.4 Keeness to use pre-writing tools

The pre-intervention focus group revealed that most of the participants did not know about the concept of graphic organizers. They did not trust their work since they did not plan and structure their ideas before starting writing. One of the participants stated:

"... I feel my written material is like rubbish or scratches." (P5)

They did not know the significance and advantages of using such a method as a pre-writing tool. They thought it was a waste of time, since they stated:

"Not a good act to spend time on." (P2)

"There is no time for that." (P6)

These views were supported by the pre-intervention questionnaire, where only 17 participants (23.2% of the total participants) stated they agreed on using pre-writing tools. On the other hand, 39 participants (53.5%) disagreed on using any pre-writing tools.

Different studies illustrate the same problem where second language learners do not use pre-writing tools effectively. Alhumaidi (2008) found that the self-regulating processes of writing, including planning, were not being applied by Saudi EFL learners in their writing sessions. In addition, Al-Hazmi and Scholfield (2007) stressed that Saudi second language learners had problems and weaknesses in planning strategy while writing.

However, the students' marks after applying the concept of graphic organizers showed a noticeable improvement in the level of coherence. These positive marks affected the participants' responses in both the pre-focus group and the questionnaire. The participants

in the experiment found that they managed to produce better and more coherent sentences with connected ideas.

Thus, the number of participants in the post-intervention questionnaire who disagreed on using pre-writing tools was reduced from 39 (53.5%) to 7 (10.5%). Accordingly, the percentage of those who agreed on using pre-writing tools before starting their writing increased from 17 participants (23.2%) in the pre-intervention questionnaire to 53 (79.1%) in the post-intervention questionnaire. These statistics indicated that the participants recognized the importance of using pre-writing tools and how they affected their marks positively.

The participants' responses demonstrated the shift in the questionnaire when they were content regarding the preparation tool in writing. They knew that it was important to use a pre-writing tool since it helped them in organizing their ideas and importing relevant supporting ideas to the main theme:

"I consider my ideas as organized but when I used graphic organizers they were more organized." (P4)

"I thought doing this is a waste of time, especially filling in some words in the blanks, but I noticed that it is a nice process to help improve my writing." (P6)

When the participants knew the significance and importance of using such a pre-writing tool, they were satisfied to use it in their writing class. Powell (2009) confirmed this situation in his study. Powell stated that the students became more enthusiastic when they knew that the assignment had been created to address a specific need that was found in their class.

In conclusion, the participants did not use to pay any attention to pre-writing tools. Most participants did not know about them as a procedure, while others thought it was a waste of time. However, their marks after applying the concept of graphic organizers were

improved, and the participants were convinced about the importance of using pre-writing tools.

5.5 What has been achieved beyond the literature?

Two important issues have been developed in the present research. In addition to the positive attitude and the ability to arrange and organize the ideas, the present research highlights two new additional issues. The first issue is the period of applying graphic organizers, and the second is the relationship between class size and the concept of graphic organizers in writing classes.

The present research reveals that the more time the participants are exposed to the practice of using graphic organizers, the more understanding they acquire; which, in turn, leads to more organized and coherent texts. Furthermore, the present research demonstrates that applying graphic organizers into writing class solves a major problem regarding the large class size. Figure 5.2 illustrates how both the literature and the present study have reached similar outcomes, and how the present study has added new outcomes.

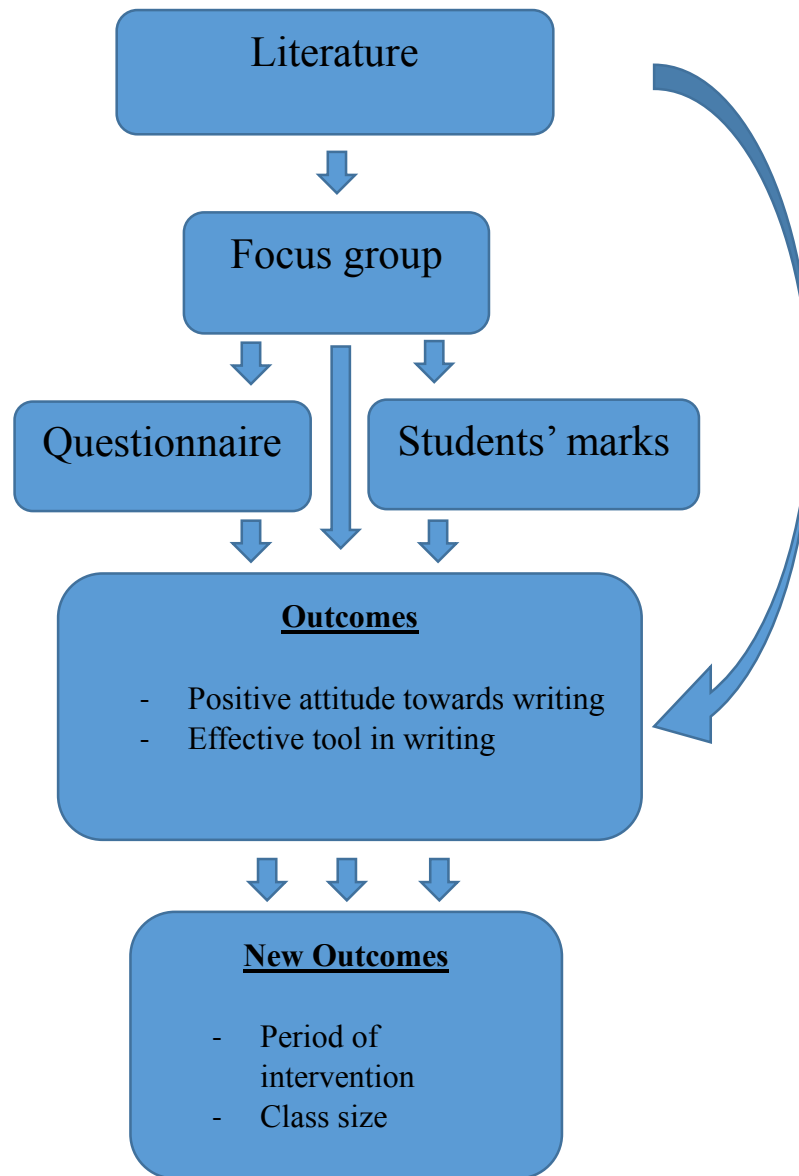


Figure 5.2: Outcomes similar to the literature and beyond

5.6 Time effect

The following table shows the mean score for the total mark. It clearly illustrates that the more time given to the participants to apply graphic organizers into their writing, the better the marks they can gain by time. The repetition of the new technique enabled the participants to get better understanding, focusing and linking relevant ideas to the main topic. Table 5.11 shows the improvement of scores by time. For example, group A significantly got better marks after applying graphic organizers in week 2. Moreover, they

kept getting better marks each week after they practised the new technique. Similarly, group B significantly received better marks in week 3 after applying the concept of graphic organizers. Furthermore, group B kept getting better marks in the following week as well.

Table 5.11: Improvement of scores by time

Groups			Groups	Total mark Week 1	Total mark Week 2	Total mark Week 3	Total mark Week 4
Group A	N	Valid	15	14	14	12	11
		Missing		1	1	3	4
	Mean	3.8571		5.7143	6.8333	7.3636	
Group B	N	Valid	16	16	12	14	13
		Missing		0	4	2	3
	Mean	4.7500		4.0000	6.5714	7.3846	
Group C	N	Valid	23	16	19	18	22
		Missing		7	4	5	1
	Mean	4.4375		5.1053	4.0000	6.7273	

5.7 Class size

Firstly, when the participants raised the issue of the large number of students in writing classes, they insisted that they could not get enough time to be checked by their instructor in class. The instructor cannot correct and follow more than 30 students' paragraphs as part of the lecture. In fact, the students not only spend time in waiting for their turns for correction, but they also spend time writing without knowing whether they are on the right track. The pre-focus group stated:

"The teacher cannot check all our work in class, especially with a large number of students." (P3)

"I spend time in writing rubbish things and more time waiting my turn for correction." (P1)

However, the post-focus group showed that applying graphic organizers to a large number of students in a writing class facilitated the learning of the writing skill. The participants

confirmed that it was much easier for the instructor to check their work with a quick look at their papers. It works as a brief report before they start their actual writing:

“The instructor can guide me by just looking to the first graph.” (P4)

“With a quick view, the teacher can check my topic sentence, main ideas and concluding sentence easily.” (P1)

Teachers suffer from time constraints, which place limits on the amount of individual instruction that can be given (Witherell & McMackin, 2005). Through the use of graphic organizers, these instructional tools enable teachers to identify when and where learners need their assistance (Drapeau, 2009). According to Beaudry and Wilson (2010), teachers can detect any misconceptions efficiently and precisely with a quick look to the students' work. At this point, the teacher can act fast to solve the problem of: where information needs more clarification regarding the topic itself, changing the layout of the graphic organizer to another mode, or discussing with the learner how to express the answer using limited words.

The experiment, which involved 46 participants, confirmed that this larger number of participants received higher marks after applying the concept of graphic organizers in a writing class. Graphic organizers proved their effectiveness in a sample of 46 participants, who managed to check their ideas and received essential direction from the instructor before starting writing. In addition, and most importantly, it was an easier task for the instructor to follow and check the students' work within a short period of time.

In conclusion, a large class size is considered a nightmare for both instructors and students. The instructor cannot check all the students' paragraphs as part of the class lesson. The students spend time writing something about which they are still not sure. However, applying graphic organizers in a writing lesson with a large class makes it easier for the

instructor to follow the students and see in advance what they are trying to write. Then, the students can receive directions and guidance in a short time.

5.8 Conclusion

Students used to suffer from the inability to arrange their ideas and connect them to the main topic. They commit a number of mistakes that relate to the cohesion level, where they fall into the trap of repeating ideas and adding irrelevant material to the main topic. In addition to the unstructured writing technique that the students used to adopt while writing, the large number of students in the class prevented them from checking their paragraphs with the instructor as well.

The pre-intervention focus group showed that the students suffered from a lack of cohesion in their writing. They made mistakes such as the lack of connecting their ideas and falling into the trap of repetition. In addition, the pre-intervention questionnaire showed that the participants did not trust their ability to arrange their ideas. Furthermore, the low marks in all their pre-intervention tests confirmed the situation, which demonstrated their low quality in presenting a coherent written text.

However, graphic organizers succeeded in overcoming these obstacles, whereby the participants in the post-intervention focus group stated that their understanding of how to connect their ideas and avoid repetition was improved. The post-intervention questionnaire also confirmed the participants' thoughtfulness in their abilities to arrange their ideas. Finally, this perspective was supported by their marks since the students achieved a higher level of coherence by the use of graphic organizers in their writing.

Graphic organizers were an effective tool in solving such problems. They enabled the students to produce well-organized and coherent paragraphs. The students managed to focus on the topic and to provide many ideas pertinent to the main topic. They also succeeded in avoiding the repetition of ideas in their writing. Furthermore, the

participants were convinced about applying pre-writing tools in their writing. Thus, the objectives of applying graphic organizers in writing can be described as follows in Figure 5.3:

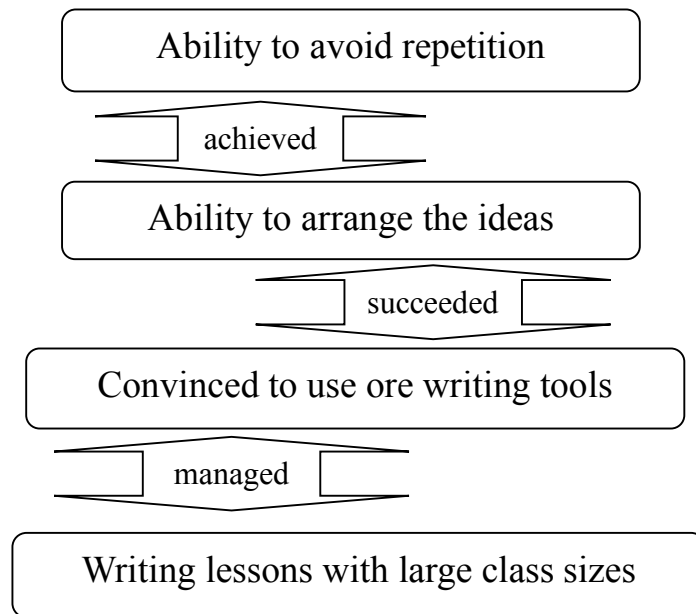


Figure 5.3: Objectives of applying graphic organizers

Different studies suggested similar results to the present research in different situations. Meyer (1995), Gallick-Jackson (1997), Esmat (2006), Brennan (2006), Sharrock (2008) and Alshehri (2010) confirmed that graphic organizers were considered as an effective tool in the pre-writing stage. It helped in arranging the ideas and kept the writers focused on the topic. Moreover, graphic organizers were an effective tool that enabled students to write in a sequential order. According to Alshehri (2010), graphic organizers led to an improvement of students' writing skills in terms of generating and organizing ideas. Esmat (2006) confirmed that applying graphic organizers enabled students to produce an organized piece of written material and allowed them to focus on the topic. On the other hand, some researches were not totally satisfied with the results. Dujsik (2008) failed to detect significant effects on students' writing quantity and quality. However, the study had a significant training impact on ESL students' prewriting strategy. There was a trend

of improvement regarding the writing quality variables among strategy-trained students. Similarly, Powell (2009) was not satisfied with the results. There was no significant improvement regarding students' scores at the organization level. However, the attitude of the participants in Powell's study was improved after applying the concept of graphic organizers.

Thus, to go back to the research question: "Does the use of graphic organizers affect the coherence level of Saudi second language learners?", the data from the present research significantly confirm that applying the concept of graphic organizers as a pre-writing tool positively affects the coherence level of Saudi second language learners. It enables them to produce better organized and well-arranged texts. In addition, the technique of graphic organizers affects the attitude of second language learners toward writing. Writing classes turned out to be fun and attractive for them since filling the graphs was an enjoyable task. Furthermore, graphic organizers are an effective tool to be used in large classes. They facilitate and help the instructor, in a short period of time, to know whether or not his/her students are on the right track before they start writing their tasks.

The next chapter is the conclusion of the present research. It concluded the empirical findings of the research. Moreover, it clarifies the recommendations that emerged from the research. In addition, it explains the reflection of some points that are recommended to be focused on in further studies.

Chapter 6: Conclusion

The present study focused on one of the problems facing second language learners, especially at the level of writing skill. Writing is one of the important skills that second language learners should acquire. However, writing is considered the most difficult skill for second language learners. Many teaching methods have paid great attention to writing skill, but second language learners still experience difficulties and make many mistakes while writing. One of these mistakes is the lack of coherence in students' written texts. Second language learners fall into the trap of idea repetition, unable to focus on the main idea. They also cannot deliver ideas related to the main theme. Furthermore, they are unable to focus on the topic sentence, cohesive devices and the concluding sentence. All of these contributed to producing a text with a low level of coherence while writing.

Since the ability to organize ideas is the main important factor in reaching a coherently written text, different studies have tried to overcome this problem by applying the concept of graphic organizers to writing workshops in different contexts and ways. Chapter 2.4.8 in page 80 : Literature review/Graphic Organizers/previous studies, shows some attempts to solve this problem.

Accordingly, the present research explored the effectiveness of applying the concept of graphic organizers as a pre-writing tool for second language learners at the Department of English at King Saud University in Saudi Arabia. The study aimed to enable second language learners to produce well-organized written texts. The present study answered the following questions:

- In what ways and to what extent do graphic organizers enhance Saudi second language students' writing?

Four sub-questions were developed in order to answer the previous main question.

These questions are:

- Why do second language learners suffer from a lack of cohesion in their writing?
- What is the attitude of Saudi second language learners towards writing?
- What are students' reactions to the use of graphic organizers in writing lessons?
- What evidence is there that graphic organizers improve students' coherence?

The present study was different from all previous studies in different respects. The research design, using a multiple baseline, the data gathering method, context, time of exposure, sample size and type were the main aspects that made the present study different from the others. Chapter 5: Discussion, page 236, demonstrated how the present study differs from others.

6.1 Empirical findings

Second language learners found it useful to adopt the concept of graphic organizers into their writing. Graphic organizers as a pre-writing tool were effective in solving the coherence aspect in written texts. This section will synthesize these findings to answer the research questions. The first sub-question was:

- Why do second language learners suffer from a lack of cohesion in their writing?

The focus group interview showed that second language learners in Saudi Arabia encounter mistakes that prevent them from reaching and producing a coherently written text. They fall into the trap of idea repetition where they would repeat the idea more than once. This repetition is a result of the lack of ability to focus on the main idea. Furthermore, they could not add more details supporting their main idea. Thus, the present research adopted applying the concept of graphic organizers to check the effectiveness of

this technique in solving such problems. In fact, graphic organizers managed to help in visualizing the ideas from the students' heads into their papers. This kind of pre-writing tool assisted second language writers in organizing their ideas and producing them in a coherently written text. Chapter 4.4: Data Analysis in page 198 showed deeper illustration of such problems facing second language learners.

The second sub-question was:

- What is the attitude of Saudi second language learners towards writing?

The pre-intervention focus group, as shown in Chapter 4.5: Data Analysis/ Focus group in page 220, found that Saudi second language learners express a low level of desire towards achieving writing skill. In fact, it is similar to other studies' findings, which confirmed that learners showed low levels of enthusiasm towards writing since it is the most difficult skill to learn. One of the difficulties is the lack of cohesion which affects second language writing. The use of graphic organizers influenced Saudi second language learners' attitudes positively. As demonstrated in chapter 4: Data Analysis, section 4.5.5 on page 226, the post-intervention focus group showed how the participants were more enthusiastic and keen towards writing skill. Their ability to focus on the main idea, to join related ideas to the main theme and avoid repetition were some of the aspects that allowed them to produce a coherent text. Therefore, their attitude was positively affected, since they had overcome such problems in their writing.

So, what were the students' reactions to the use of graphic organizers in their writing lessons? This was the third question which was answered by the present research. The participants had not shown any interest in using such a pre-writing tool before the intervention. The pre- intervention focus group demonstrated their low level of interest in using graphic organizers as a pre-writing tool. Some of their claims were a lack of ability in using them or considering the use of graphic organizers as a waste of time. Chapter 4:

Data Analysis in page 221 illustrated more details about the participants' opinion regarding the use of graphic organizers.

Despite the disadvantage of the time consumed while applying graphic organizers into writing, the participants found it convenient to use such a pre-writing tool. They knew that starting to write straight away without any pre-writing tool is incorrect and risky. They could fall into making mistakes, such as the repetition of ideas or providing ideas irrelevant to the main theme. Chapter 4: Data Analysis, section 4.5.4 in page 225, shows how the participants responded to the post-intervention focus group, which shows their responses regarding using graphic organizers as a pre-writing tool.

The last question that the present research tried to answer was: "What evidence is there that graphic organizers improve students' coherence?" The use of the multi-baseline design clearly illustrated the differences between the groups' marks before and after the intervention. Figure 4.7 in page 165 at section 4.2.1 in chapter 4: Data Analysis displays a chart showing the timeline stream of the intervention. All the groups received better marks after applying the concept of graphic organizers into the participants' writing. Moreover, the difference in their marks before and after the intervention was significant in all the groups, whether analysing the marks within the same group longitudinally or among the groups as a cross section. A detailed analysis of the students' marks is located on page 172 under section 4.3: Testing the Hypothesis.

Graphic organizers participated in addressing a dilemma that the participants in the present research used to experience. The large size of the classes in the writing lessons did not enable the instructors to check progress with the students while they were writing. However, graphic organizers made it easier to know the main points that the students were trying to write about in sufficient time. At this stage, a student can start writing and rely on a solid base after showing his instructor the main points of the topic. The focus group

analysis on page 225 under section 4.5.3: The ease of using graphic organizers, shows the reaction of the participants when they tried applying graphic organizers in their class. In addition, the frequent practice of the concept of graphic organizers in writing increased the participants' confidence in writing and positively reflected on their marks. Table 4.14 on page 163 under chapter 4: Data Analysis shows the progression of the participants through the weeks after the intervention.

In conclusion, the use of graphic organizers as a pre-writing tool is an effective technique while teaching writing. Applying graphic organizers before starting writing has many advantages. It enables the writers to focus on the main topic and not become distracted. It also works as a piece of evaluating equipment, where the students can assess their ideas after visualizing them by using graphics. Furthermore, this technique enables writers to avoid the repetition of ideas and produce a flow of other related ideas. In addition, graphic organizers are useful in large classes while teaching writing. It enables the instructor to know what his students are trying to write and how they organize their ideas before starting writing.

6.2 Recommendations

Applying the concept of graphic organizers into writing was an effective tool to solve the lack of coherence in second language learners' writing. It enabled the writers to avoid the repetition of ideas, kept them focused on the main idea and, most importantly, the learners were able to organize their ideas. Thus, in the light of these findings, the present research has a number of recommendations which will add more value to the curricula to enable second language writers to achieve more coherently written texts.

6.2.1 Curriculum designers

Applying graphic organizers as a pre-writing tool is an effective way of organizing ideas. A warming-up exercise needs to be designed before each writing lesson. This exercise

needs to employ the concept of graphic organizers as a pre-writing tool. Moreover, an introductory chapter about the advantages of using graphic organizers is recommended to convince the students in relation to using this technique before starting writing. Furthermore, the introductory chapter should include some examples of the types of graphic organizers and their usage. Applying graphic organizers as a pre-writing tool in curricula suits all teaching methods, since it does not violate the principles and procedures of teaching.

6.2.2 Teachers

Teachers have a great responsibility in teaching their students the new technique. Teachers need to know how to use graphic organizers before applying them with their students. Thus, a brief introduction in the teachers' handbook will instruct them in how to use graphic organizers. In addition, teachers need to allocate some time at the beginning of a writing session to be spent on brainstorming by using one kind of graphic organizer that suits the same purpose of writing. Since GO is time consuming, it is recommended to allocate some time before examinations as well to enable the students to spend some time in visualizing their ideas by using the technique of graphic organizers as a pre-writing tool. Then, they should be asked by the instructor to start their writing. Furthermore, allocating some marks to brainstorming and graphs will urge the students to use graphic organizers and, as a result, this will positively affect their writing at the paragraph level.

6.2.3 Students

Students need to practise how to use graphic organizers as a pre-writing tool every time they write. They need to spend some time learning different concepts and types of graphic organizers. This process will facilitate the writing task for them and enable them to organize their ideas clearly and reach a creative thinking level. Hence, they will reach a successful level in a coherently written text.

6.2.4 Further studies

Since second language learners still consider writing skill as the most difficult skill to learn, more research should be done to understand the reasons of the difficulties solve them.

6.3 Reflections

The present research reflects some points that are recommended to be focused on in further studies. Firstly, applying the concept of graphic organizers in other teaching methods could reveal other factors that prevent second language learners achieving the coherent level properly. Accordingly, it is recommended to duplicate similar studies on various samples from different parts of the Kingdom. Thirdly, it could be a good idea to conduct a case study to involve participants in a pre-intervention interview and then check their marks, and, finally, examine their feedback in post-intervention interviews. Fourthly, involving instructors in pre- and post-intervention interviews could deliver more raw information about students' struggles from their instructors' perspectives. These points could reflect more understanding of the use of graphic organizers in writing classes as a pre-writing tool. These points are explained as follows.

6.3.1 Different teaching methods

The present research applied the concept of graphic organizers as a pre-writing tool while teaching English as a second language using the direct method. The researcher recommends further studies to be applied on different kinds of second language teaching methods using the same concept. Different contexts use different kinds of teaching methods. Thus, applying graphic organizers as a pre-writing tool in different teaching methods could light the way for different perspectives and views regarding teaching writing skills to second language learners.

6.3.2 Samples

Including different samples from various educational backgrounds could enrich a wider understanding of the lack of coherence for second language learners. The Kingdom of Saudi Arabia is a large country. Thus, students from different regions and educational backgrounds could show similar or different results on which to focus.

6.3.3 Methodology

Since the use of both pre- and post-intervention focus groups and the multiple-baseline design clearly showed differences in the participants' marks, it could be more useful to code the marks and then match the same code with the participants in the focus group or interviews. This attempt could explain the participants' point of view before and after the intervention and could be clearly supported by their marks. It could confirm the effectiveness of graphic organizers for use as a pre-writing tool by using another method of research.

6.3.4 Instructors' views

Including instructors' views could reveal some unidentified key issues regarding the cohesion of students' writing. Instructors are valuable sources of information since they know their students and their needs better than anyone else. Thus, in-depth interviews with the instructors to check their points of view before and after the intervention could be a useful procedure as a data gathering method.

6.3.5 Statistical claims

The multiple base-line design in the experiment included three groups. It provided the opportunity for an in depth statistical treatment. Thus, many statistical tests were applied to show whether or not there are significant differences in participants' marks. Because the sizes of the different groups varied, e g. group (A) $n= 15$, group (B) $n = 16$, group (C) $n = 24$, and the overall comparisons of the whole groups marks at the start and the

end of the intervention was larger, different statistical tests were employed. With groups of 30 or more t-test were used, but where sample group sizes were smaller, then the equivalent non-parametric tests Wilcoxon and Kruskal-Wallis tests were used where P values were $P < 0.01$. This indicates that the statistical differences were relatively large.

In conclusion, the present research succeeded in answering the research questions. It was demonstrated that the use of graphic organizers as a pre-writing tool was effective in being applied with second language learners in Saudi Arabia. This technique managed to overcome some of the problems regarding the coherence level in students' writing. It enabled them to prevent the repetition of ideas. Graphic organizers also enabled the students to focus on the main idea and relate other ideas that are in the same context without losing track. Furthermore, graphic organizers increased positively their attitude towards writing lessons, since it added a kind of enjoyment to the lessons by completing the graphs which, in turn, participated in their understanding of how to build their paragraphs correctly.

Curriculum designers are recommended to include an introductory chapter for the uses and types of graphic organizers in their writing books. This chapter could facilitate the students' ability to know more about the aim of this technique and how to use it by reading the examples given. In addition, the teachers have a great task in knowing the types of these graphics and how to use them. If teachers acquire this knowledge, they can more easily explain it to their students. Furthermore, students need to practice using graphic organizers more and more to acquire the skill of organizing their ideas.

The research recommends conducting similar studies with different teaching methods. Different teaching methods could reveal other factors that enable the assessment of the cohesion level of second language learners. In addition, different methods could lead us to different samples and contexts that receive different views regarding learners' problems

with writing. Furthermore, mixing the focus group and students' marks analyses strengthened the research results. However, analyzing the focus group and comparing it with the same score for the interviewee will reflect higher results and provide confirmation of these results.

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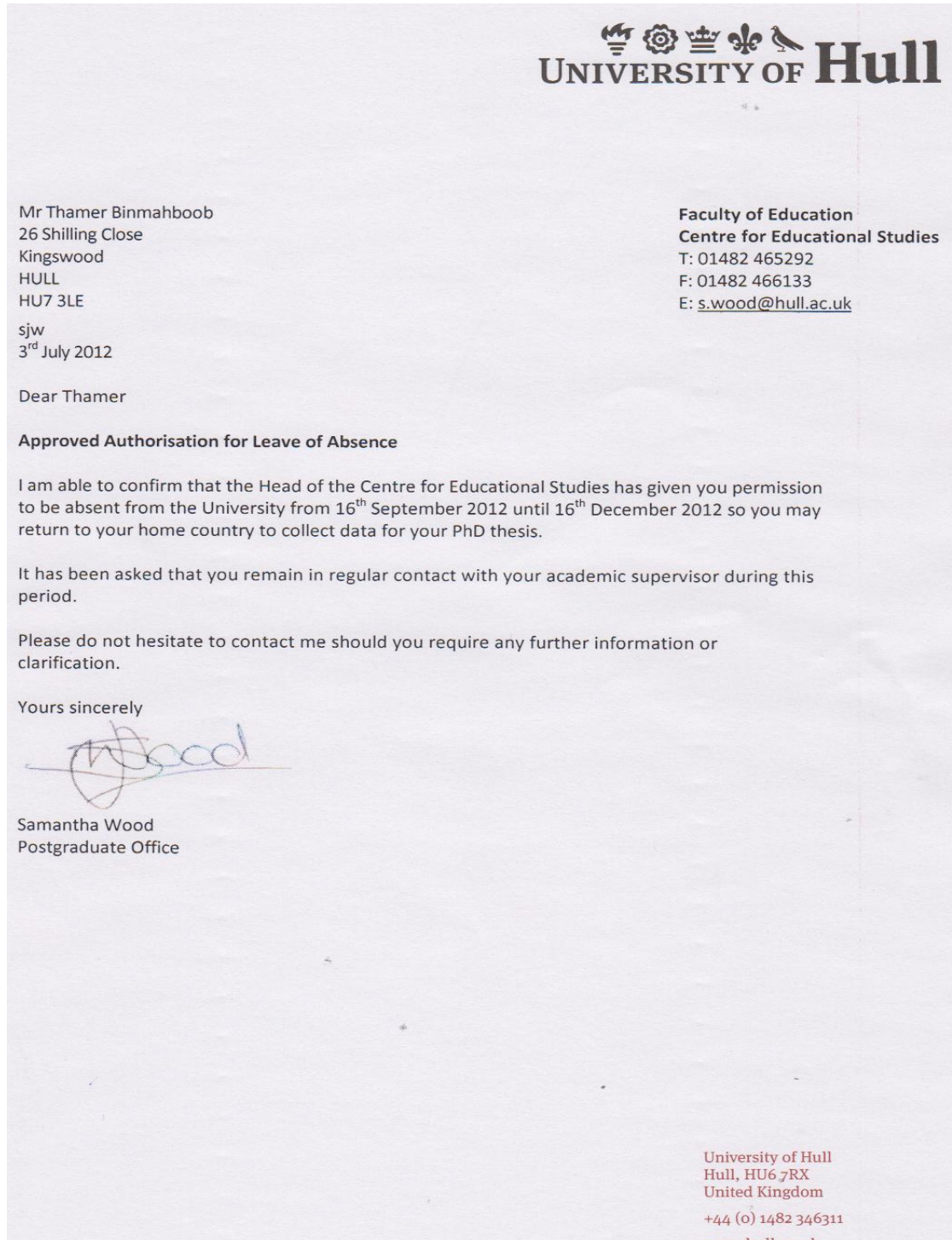
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Appendices

Appendix 1. Data collection approval



Appendix 3: Approval from King Saud University: translated to English

Kingdom of Saudi Arabia
Ministry of Higher Education
King Saud University
Office of the Deputy of
Academic Affairs

Commander of King Abdulaziz Military Academy

In reference to your letter No. 3/9/A/3510 dated 8/6/1433 H (Hegira calendar), which includes asking for permission to allow your lecturer Thamer Binmahboob to conduct research at the College of Languages and Translation.

We hereby include the approval of the Deputy of Scientific Research and Higher Education at the College of Languages and Translation.

With warm regards,
Deputy Dean of Academic Affairs
Professor :Abdullah Abdulrahman Alabduljabbar

Appendix 4: Participating cover sheet for the questionnaire in Arabic

بسم الله الرحمن الرحيم

دمج مفهوم الرسومات التوضيحية لمادة الكتابة ومدى فاعليتها لدى متعلمي اللغة الثانية في المملكة العربية السعودية

أخي الكريم

السلام عليكم ورحمة الله

بين يديك استبانة تهدف للتعرف على مدى دافعية الطالب تجاه مادة الكتابة كلغة ثانية وكذلك مدى فاعلية دمج الرسومات التوضيحية لتعزيز القدرة على انتاج نص متجانس ومترايط الافكار.

هذه الاستبانة هي اختيارية ولا يُتطلب منك ادراج اسمك او رقمك الجامعي، فمشاركتك لها الأثر الكبير في تحقيق الدراسة لأهدافها، علماً بأن المعلومات التي ستقدمها سوف تستخدم لأغراض البحث العلمي فقط.

ملاحظة: في حالة الرغبة في الحصول على ملخص لنتائج هذه الدراسة فأمل تزويدي ببريدك الإلكتروني وذلك بإدراجه في النموذج المرفق.

مع فائق شكري وتقديري لوقتك الكريم ،،

الباحث

ثامر عبدالمحسن المحبوب
th22th@yahoo.com

جامعة هل – بريطانيا

 UNIVERSITY OF Hull

Appendix 5: Participating cover sheet for the questionnaire in English

The Integration of Graphic Organizers into Writing Workshops: Perceptions of
Saudi Second Language Learners

Dear

This questionnaire aims to clarify the attitude towards writing as a second language. It also aims to show whether or not integrating the concept of graphic organizers into writing could produce a well-cohered text.

You do not have to provide your name or student number since your participation is not compulsory. All the information will be used for the sake of scientific research.

Please note, if you need a summary of the findings, you can provide me with your email on the sheet provided.

With warm regards,

Researcher

Thamer Binmahboob

th22th@yahoo.com

Hull University – United Kingdom

Appendix 6: sample of a participant's writing before applying graphic organizers

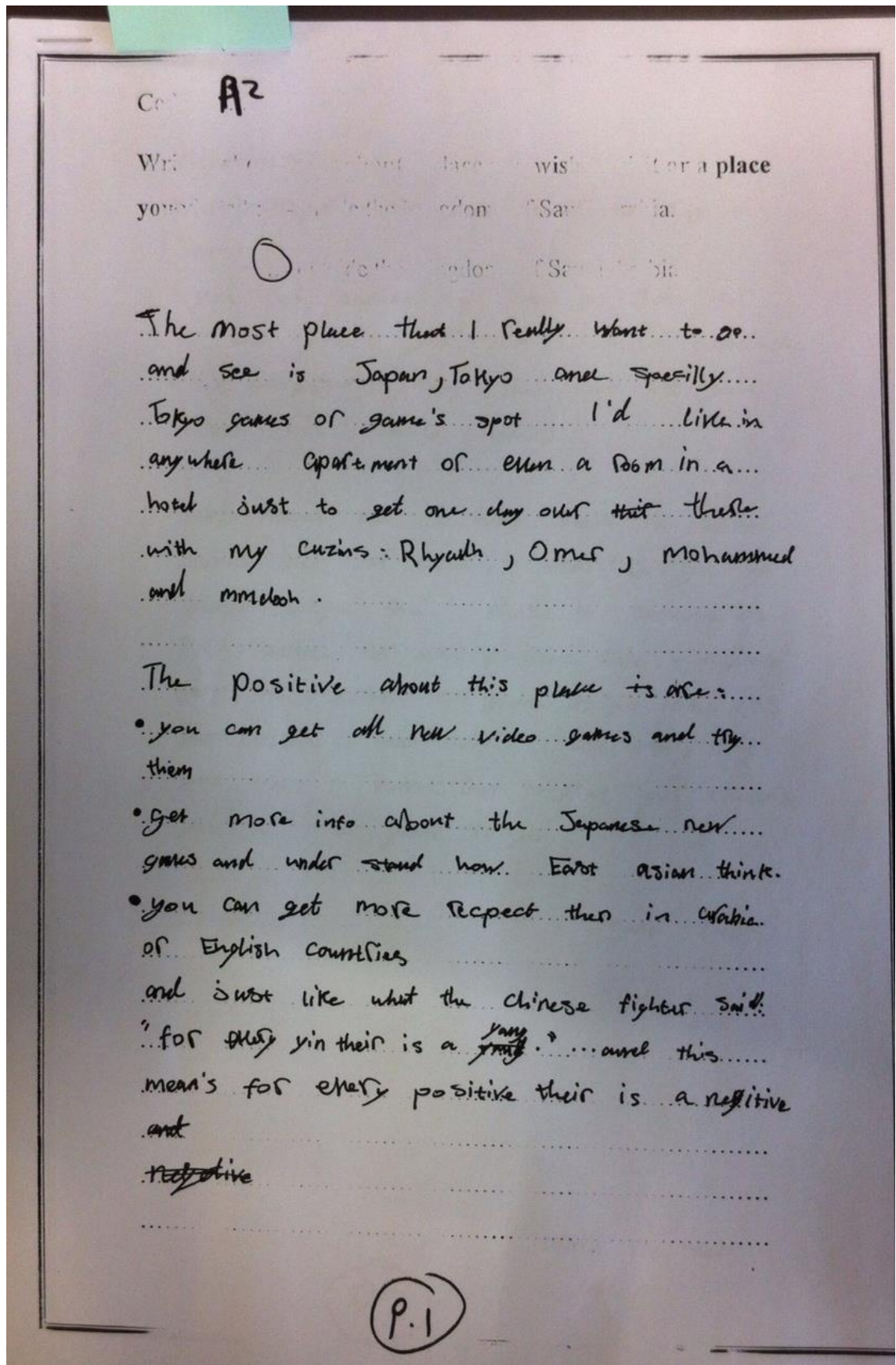
Code : B2

Write a short essay about a place you wish to visit or a place you visited : (A) inside the Kingdom of Saudi Arabia.

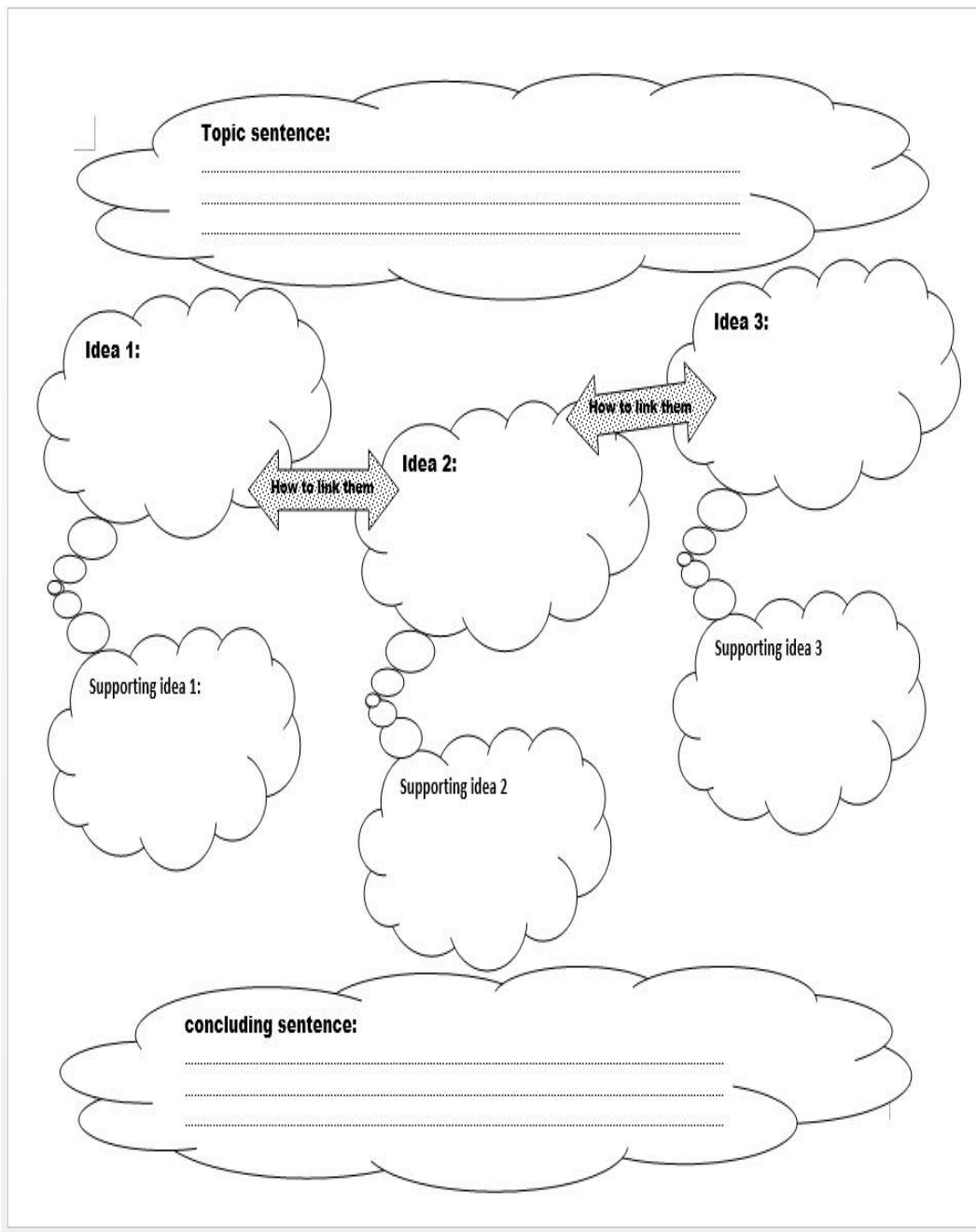
B- outside the Kingdom of Saudi Arabia

I'm here to talk about a place I really
want to visit inside the K.S.A. (Kingdom
of Saudi Arabia) and this place is called the
Cornish and it has the tallest fountain
in the world and it's called King Fahad's
fountain and it was made in the 21 century
when the King Fahad was leading the country.

Appendix 7: sample of a participant's writing after applying graphic organizers



Appendix 8: Clouds of ideas as graphic organizers



Appendix 9: T-chart

Q 1: Write a paragraph showing your opinion about your friend.

My friend in general:

.....

.....

.....

-
-
-
-

-
-
-
-

Conclusion

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.....

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Appendix 10: Blocks of ideas as graphic organizers

