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# THE EFFECT OF USING GRAPHIC ORGANIZERS ON IMPROVING by STUDENTS WRITING PERFORMANCE: INJIBARA SECONDARY AND PREPARATORY SCHOOL IN FOCUS

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## BAHIR DAR UNIVERSITY FACULTY OF HUMANITIES DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE

# THE EFFECT OF USING GRAPHIC ORGANIZERS ON IMPROVING STUDENTS' WRITING PERFORMANCE: INJIBARA SECONDARY AND PREPARATORY SCHOOL IN FOCUS

### BY DEREJE GETIE

AUGUST 2019 BAHIR DAR, ETHIOPIA

### THE EFFEC OF USING GRAPHIC ORGANIZERS AS PREWRITING STRATEGY ON STUDENTS' PARAGRAPH WRITING PERFORMANCE IN THE EFL CLASSROOM:

### INJIBARA SECONDARY AND PREPARATORY SCHOOL GRADE ELEVEN IN FOCUS

### BY DEREJE GETIE

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A Thesis Submitted to the Department of English Language and Literature in Partial fulfillment of the Requirements for Master of Education in Teaching English as a Foreign Language (TEFL)

Faculty of Humanities, Bahir Dar University

AUGUST 2019 BAHIR DAR, ETHIOPIA

### **Declaration, Confirmation and Approval and Evaluation**

Thesis Title: Investigating the	ne Effect Using Graphic O	rganizers on Students'					
paragraph Writing Performan	nce: The case of Injibara S	econdary and Preparator	У				
School: Grade 11 in Focus							
	DECLARATION						
I, the undersigned, declare that th	is is my own original work and	l has not been presented for a	a				
degree of master in any university	y. All sources of materials have	e been duly acknowledged.					
Researcher's Name:							
C	onfirmation and Approv	al					
This thesis has been submitted for	r Examination with my approv	al as a thesis advisor.					
Dawit Amogne (PHI	<u>)</u>						
Name	signature	Date					
Approved by Board of Examination							
Advisor	signature	Date					
External Examiner	signature	Date					
Internal Examiner	signature	 Date					

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### Abstract

Writing is one of the most challenging skill that high school EFL students often find difficult. Regardless of the effort teachers make to bring improvements in the teaching of writing, failures have been observed in students' writing performance. The study targeted to investigate the effect of using graphic organizers as a prewriting strategy on students' paragraph writing performance in Injibara Secondary and Preparatory School in the academic year 2018/2019. A group of grade eleven students (N=38) was involved in the experiment based on the use of graphic organizers in the study. To achieve the aims of the study and to find answers to questions of the study, the researcher used one group pretest – posttest or quasi experimental research design. Two tests, a pretest and a posttest, were employed to measure the effect of the intervention, i.e the use of graphic organizers in EFL writing lessons. A semi-structured interview was also conducted to substantiate the result of the tests. A paired sample T-test was employed to see the level of students' improvement in terms of paragraph writing performance as assessed through grammar, mechanics, organization, and coherence. A statistically significant difference between the pretest and posttest was observed which indicated that the use of graphic organizers helped students to improve their writing performance (p<0.05). Teachers of English Language should expose their students on the regular use of various teaching writing strategies and methods like Graphic Organizers to help them to go for and back in their writing tasks during the writing classes. And as the study proved that Graphic Organizers are effective in teaching writing, further research, however, needs to investigate the effectiveness of other strategies in teaching writing in particular and English Language in general.

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### **CHAPTER ONE: INTRODUCTION**

### 1.1 Background of the Study

The teaching of writing has passed many years through various stages. According to (Raimes, 1991, P.408) the first period (1966-1976) was the period when the focus was on the teaching of form. During this period, the audio-lingual was the main approach of teaching writing. Through the audio-lingual era, speaking was seen as the core element of language teaching while writing was not given prominence in language teaching-learning (Raimes, 1983).

Hyland (2009, P.10) explains that from the perspective of written texts, the learners' compositions are seen as a demonstration of the writer's knowledge of forms and his/ her awareness of the system of rules to create texts. The goal of writing instruction therefore becomes training in accuracy for many years. Writing was essentially an extension of grammar teaching informed by a behavioral; habit formation theory of teaching, guided composition and substitution exercises became the main teaching methods of EFL writing classes.

However, Foley and Thompson (2003), as indicated in Misrak (2007) emphasizes the importance of writing in L2 learning by arguing that second language learning is not only learning the oral language i.e. speaking and listening but it is important to consider how to learn to communicate through writing. The second period that run from (1976-1986) was the period during which the teaching of language focus on the writing (Raimes, 1991:409). What the writers do as they write was the main interest of language teaching. The third period that run from 1986 onwards was the time during which the focus was on content.

English, undoubtedly, is the most important language which is being employed for communication purposes across the globe. The role of English in the international level is a major factor that contributes to increase the importance of it in Ethiopia. It has been considered as a central issue to education for many years as a subject in schools as well as Language of Instruction (LoI) in colleges and universities. In line to this expression, Dawit (2013) states that the language is a medium of instruction in secondary and tertiary levels of education. It is quite possible that, today, more communication takes place in the written than in oral mode. He also indicates that, it is a dominant language in workplace communication areas such as business, science, technology in quite many government and non-government offices.

Nowadays, being an instrument for academic tasks, English receives great attention by students and teachers in both schools and universities. Students' success in their academic careers is likely realized if they are able to effectively communicate in English (Dawit, 2008). And writing skill is highly demanded in classroom tasks and examinations of any academic subjects. With the same argument, Bruning & Horn (2002) in Asfaw (2018) confirmed that it is an important component of thinking and learning in school context and writing tasks are crucial tools for intellectual and social development. Thus, it is important for students to achieve their academic goals and other concerns of life.

However, the practice of teaching and learning writing skill does not seem in line with what students are benefited from learning the skill and so is under question in our context, Ethiopia (Dawit, 2008). Evidences from a number of local studies Haregewein (2003) for example, on English performance of Ethiopian EFL students show that EFL learners have failed repeatedly in English examinations, which could potentially imply their incompetence on the skill. Such failure is related to factors such as lack of practice (Teshome, 2008), methodologies teachers follow (Dawit, 2013) students and teachers perception to writing skill, difficulty and complexity of writing in L2.

According to the researcher's experience of teaching English as a foreign language (EFL), what is accustomed to teach writing is adopting the traditional approaches that mainly focused on the product of writing. This approach of teaching writing leads students to restrict them in what they can write freely and independently. This technique of writing discourages them to draft and jot down what comes in students' mind. In relation to this idea, Babiker (2016) concluded that students rarely use effective writing techniques with little awareness of the strategy leads to ineffective academic writing.

The teaching of writing as a skill was not given much emphasis in the teaching learning process of English language in Ethiopia (Sintayehu, 2009). The teaching of writing skill still has been dominated by the traditional teaching writing approach- product approach. In line with this, Solomon (2001) describes writing in Ethiopia was considered as only copying grammar patterns and vocabulary up to sentence construction. This indicates that the approach used to writing instruction deprived students' freedom of expressing their own ideas and feelings. The writing tasks students engaged in required learners to imitate copying and transforming teacher supplied

models (Sintayehu, 2009). Therefore, learners were expected to produce error free written products. What it implies is that English teacher were the only audience of students' written work; the methods did not enable learners to think critically, practice on their writing style and exercise freely as they did not worry to make mistakes.

Prewriting strategies are the 'getting ready to write'. They are mainly used to help students to train the writing task. Especially, novice writer not only to know the process of writing and understand each required step, but also must complete the written work in a logical order. Writing requires employing a variety of strategies and activities. Hedge (2000) asserts that writing involves a number of activities such as setting goals, generating ideas, organizing information, selecting appropriate language, making a draft, reading and reviewing it, then revising and editing. It involves a complex process which is neither easy nor spontaneous for many EFL writers. In relation to this, Lee & Tan (2010) stated that writing is a demanding task because within the process there are many steps to complete. These include finding resources, formulating goals, planning writing, generating content, translating ideas into language then finally revising the work.

It is important that students of all ages are exposed to different kinds of prewriting strategy to use during the writing process so they produce higher quality work and have a better probability of performing the task well. Those students who have the knowledge of prewriting strategy and use them to plan their writing will have higher academic success over those who neither know nor use such strategy. Students who are not taught to use prewriting strategy struggle in different areas of writing. Especially, in the area of organization, creation of ideas and word choice (Servati, 2012).

Inadequate teaching techniques like interactive learning methods used by teachers affect the learning of EFL writing skills. In relation to this, Mulusew (2018) conducted an experimental research based on "exploring the practice of teachers' written feedback on students' writing." He confirmed from his study that EFL teachers did not provide regular writing activities which could help students have more practice in writing. Due to this, teachers' practice regarding the provision of feedback was not adequate. He also concluded that teachers more frequently exercise summative feedback than formative feedback and this didn't invite students to go through multiple drafts.

Graphic organizers are one of ways to promote effective comprehension instruction for the rhetorical organization in the text (Jiang and Grabe, 2009). Graphic organizers are instrument of representation, illustration and modelling of information in visuals or graphics form that use to achieve a meaningful learning. Graphic organizers are a set of learning strategies which involve translating words expressed in linear form into visual structures. When written material or difficult concepts are expressed graphically, the students can develop alternative structures for understanding concepts. It raises awareness of how the information in texts is organized. This awareness of text structure improves comprehension (Goldman and Rakestraw, 2000). The instruction with graphic organizers helps students build the text meaning coherent and organized with students perceiving main ideas and supporting ideas.

Graphic organizers as prewriting strategy are important for students' writing because they are the stage of the writing process in which they are able to get beginning ideas onto paper. During this stage, students are able to process new information with existing schema (Lorenz, et.al. 2009). For many students, the prewriting stage makes writing easier for them. They are able to get their ideas out of their heads and into an organized manner before they begin planning.

### 1.2 The Problem Statement

In Ethiopia, English is a medium of instruction from primary school to tertiary levels (MoE, 1994). English language is an important tool of communication in education, business, law, diplomacy, and so forth (Dawit, 2013). However, regardless of the fact that the skill is taught and practiced from primary to tertiary levels, the researcher has observed that many students in Injibara Secondary and Preparatory School often face difficulties in expressing their ideas, opinions and feelings appropriately in written form. That is because of many factors that negatively affect the teaching-learning process of writing skills. Apparently, one of these factors which stood out is the awareness of students they have had on the Prewriting Strategy. In relation to this idea, a study conducted by Ibrahim (2016) based on an analysis and evaluation of academic writing processes of third year students in the Sudanese secondary school. His findings concluded that third year secondary students in Sudan rarely use effective writing techniques with very little awareness of strategies.

Though writing competency is vital for learners, the majority of the students (in the researchers' school) are not proficient enough in English language especially in writing. Most of the students in the researchers' school have encountered problems in academic writing performance. Their assessment scores, classroom performance, and the researchers' experience of Teaching English as a Foreign Language (TEFL) revealed that students face writing difficulties in terms of form (e.g. grammar and mechanics) or on content (e.g. organization, coherence and amount of detail) or both form and content. In line with this idea, the most recent study conducted by Mengistu (2018) entitled "the effect of explicit grammar instruction on EFL students' paragraph writing." His findings confirm that teaching grammar explicitly gives students the opportunity to write and rewrite before producing the final text in a specified writing features. He also added that explicit grammar teaching enhances students' overall writing performance.

Moreover, there are reasons for writing to be the least acquired domain of learning English as a foreign Language (EFL). From the researcher's experience of teaching English as a foreign language, students receive writing feedback from their teachers after some delays with marks and with some comments. In relation to this idea Asfaw (2018) conducted an experimental research on "the effect of cooperative learning on developing EFL learners' writing skill. 'He concluded that cooperative learning enhances writing particularly EFL students' text accuracy and fluency. This

could be possible since cooperative learning enables students to give and receive immediate feedback to errors and support in generating new ideas which individual writing does not afford. On the other hand, Fathman & Whalley (1985) conducted an experimental study regarding 'teacher response on students' writing: focus on form versus content'. Their findings revealed that students significantly improved the content and wrote longer texts or compositions when they did revisions without any feedback, which suggests that rewriting is worthwhile and teacher intervention is not always necessary.

Emmanuel et.al (2017) conducted an experimental research on "a research based evidence of the effect of graphic organizers on the understanding of prose fiction in the ESL classroom." Their conclusion asserted that the study has left us with no better conclusion than to state that literature not only plays a significant role in language learning, but it also can be better taught and learned through the use of graphic organizers.

English Language Teachers (ELT) in Injibara Secondary and Preparatory School asserted that most EFL students are weak in writing skill. These weaknesses are consistently reflected on other school subjects that require assignments, examinations and reports written in English. The problem may happen either due to unawareness of the prewriting strategies such as using graphic organizers or inappropriate use of the writing processes such as thinking, planning, drafting and so on. In relation to these ideas, Ibrahim (2016) asserted students rarely use effective writing strategy with little awareness of the prewriting strategy leads to ineffective academic writing. The majority of the teachers in the researcher's school were not seen regularly exposing their students to the writing activities which enable them to practice the writing process (prewriting, drafting, checking and writing the final draft).

In line to this, Neumann and McDonough (2015) conducted descriptive research on "exploring students' instruction during collaborative prewriting discussions and its relationships to second language writing." They asserted that students whose texts received higher scores may simply be better at engaging in reflective prewriting discussions and discussing their writing, i.e. good writers are good at talking about writing. On the other hand, Servati (2012) conducted an action research on prewriting strategy and their effect on students' writing. Her findings affirmed that the use of prewriting strategy does in fact improve the quality of students' writing by supporting students

through the writing process. Her conclusions also asserted that writing as a social practice and how writing is a form of literacy learned through exposure to models and the process of trial and error.

In the same vein, Dawit (2013) concluded that the genre based approach to teaching of writing is worth considering. And students' failure in English and other subjects: as failure could be associated with lack of proficiency in the language is frequently pronounced. Similarly, Temesgen (2008) has tried to see on his research "the effect of peer feedback on the EFL students' writing performance and writing anxiety." His findings showed that who received peer feedback developed low writing anxiety and improved positive attitude towards peer feedback. The participants also showed improvements on some features of writing like linguistic skill (planning and drafting) and linguistic knowledge (knowledge of grammar, and text structure). In the same vein, Selamawit (2011) conducted an experimental research on "the impact of EFL reading text on the students' writing performance." Her findings demonstrated that learning writing through reading helped students to develop the students writing performance. In such a way that students can be exposed to new vocabularies, structures/ grammar, and organization continually and even they can develop confidence in writing and avoid fear for writing activities.

Though many researches were conducted on the enhancement of students' writing skills, those studies did not attempt to see the effect of using graphic organizers as prewriting strategy on students' paragraph writing performance. As far as the researcher's reading was concerned, he did not get many research works (particularly in local researches) which were conducted on the effect of graphic organizers as prewriting strategy in improving students' paragraph writing performance. Therefore, this study tried to investigate the effect of using graphic organizers as prewriting strategy in the improvement of students' paragraph writing skills with particular reference to grade eleven students in Injibara Secondary and Preparatory School in 2018/2019 academic year.

### 1.3 Research Questions

This study attempted to investigate the effect of using graphic organizers as prewriting strategy on improving EFL students' paragraph writing performance. For this general purpose, the following research questions were formulated:

1. To what extent do graphic organizers as prewriting strategy improve students' paragraph writing achievement?

2. What are the perceptions of students towards the use of graphic organizers as prewriting strategy in writing classes?

### 1.4 Objectives of the study

### 1.4.1 General Objective

The main objective of the study is to investigate the effects of using graphic organizers as prewriting strategy on students' paragraph writing performance in EFL classrooms.

### 1.4.2 Specific Objectives

- To examine the effects of graphic organizers as prewriting strategy on the students' paragraph writing performance in the EFL classroom.
- ❖ To see students' perception towards the use of graphic organizers as prewriting strategy in writing classes.

### 1.5 Hypothesis of the Study

Hypothesis is a tentative explanation of a phenomenon describing the relationship between variables selected for investigation. It is usually based on theoretical prediction of casual relationships between dependant and independent variables (Deribsa, 2018). Through the use of graphic organizers to learn writing, it is hypothesized that:

### 1.5.1 The Null Hypothesis (Ho)

Use of graphic organizers will not improve students' writing performance.

### 1.5.2 Alternative Hypothesis (H1)

Uses of graphic organizers improve students' writing performance.

### 1.6 Significance of the Study

The chosen topic of this research emanates from the implication of the writing skill in learning and the function it can play in learning English as a foreign language (EFL) in particular and to all school subjects in general which require written assessments, exam answers and report. The aim of this study is to investigate the effect of graphic organizers as prewriting strategy on students' paragraph writing performance. The results from this study might contribute the following points. The findings make students to be familiar and aware of the writing processes which enable them to build a base for academic writing knowledge for becoming confident and

independent writers in English. Moreover, the findings provide relevant knowledge (the way how students start to write) and information to them on the practice of writing skill in the EFL writing classes. It has also some contributions to enhance the students' paragraph writing achievement by implementing these organizers as prewriting strategy in the EFL classes. Eventually, the investigation suggests research gaps for further study and arouses researchers to conduct further studies on the different aspects of prewriting strategy in the writing skills in particular, and other language skills such as reading, speaking and listening in general.

### 1.7 Scope of the Study

The study was delimitated both geographically and thematically. Geographically, it was conducted in Amhara Regional State Awi Zone, in Injibara Town, at Injibara Secondary and Preparatory School of one section thirty-eight grade eleven students. Thematically, as far as the study is experimental, it is confined to analyze and evaluate students' academic writing processes as a part of writing skill in Injibara Secondary and Preparatory School students in 2018/2019.

### 1.8 Limitation of the Study

This study was conducted only in Injibara Secondary and Preparatory School in one section of grade 11<sup>th</sup> students. It is conducted during the period from February-August 2019. The findings of the study would have been more reliable if it encompassed or contained other sections of students/ schools and took extended period. In addition to this, the research design that the researcher used is quasi- experimental (pretest- posttest) in order to assess the changes made in terms of students' writing score by using graphic organizers as prewriting strategy. Thus, these reduce the broad-spectrum of the findings. In spite of all these limitations, it is hoped that the findings of this study would significantly contribute to the study of EFL writing.

### 1.9 Abbreviations, Acronyms and Definitions of Terms

### 1.9.1 Abbreviations

Gr. Stands for 'Grammar'

Mech. stands for 'mechanics

Org. stands for 'organization'

Coh. Stands for 'coherence'

### 1.9.2 Acronyms

ESL- English as Second Language

EFL- English as foreign Language

MoE- Ministry of Education

LLSs- Language Learning Strategies

TTC- Teacher Training College

ELT- English Language Teachers

SPSS- Statistical Package for Social Science

GOs- graphic Organizers

### 1.9.3 Definitions of Important Terms

Strategy-Refers to the technique employed by students to facilitate the process of learning paragraph writing skills.

Achievement- Successful accomplishment of a task in paragraph writing usually by reasons of skill, hard work and interest.

Performance-Refers to the ability or level of competence of a student in paragraph writing, measured by means of an achievement test.

Learning- A process of gaining knowledge/skill on English language paragraph/essay writing.

Paragraph- A text or piece of writing that students reactively compose either independently or with the help of teachers on response to a writing exercise or task.

Graphic organizers- are sets of learning strategies which involve translating words expressed in linear form into visual structures.

### CHAPTER TWO: REVIEW OF RELATED LITERATURE

What is required of a well-informed research study is the investigation of local and foreign previously researched information related to the title of the presented study. In the following literature review an examination of two distinct themes are presented after careful preparation. The first theme examines the effect of graphic organizers as prewriting strategy on the overall qualities of students' paragraph writing performance, and the second theme explores the students' perception towards graphic organizers as prewriting strategy on the ESL writing classes, and other related researches were thoroughly reviewed.

### 2.1 Graphic Organizers and Learning Writing

Graphic Organizers also known as cognitive maps or concept maps. They are visual and kinetic display of information designed for the benefit of all classes of learners. They are drawings that use geometric shapes to show the relationships between various pieces of information (Zwiers, 2004). There are various types of graphic organizers explained by many scholars. Some of them are: main idea and detail charts, cause and effect diagram, Venn diagram, flow diagram, sequence chart, concept map, and so forth (Merkley & Jeffries, 2000). Irrespective of the type of organizers, one chooses three basic factors need to be considered when constructing graphic organizers (Baxendell, 2003). These are summarized as follows:

**Coherence**- Every organizer should be designed in such a way that destructions are eliminated. The connections it explicates should be clearly labeled and the information covered should be minimal.

**Creativity**- Graphic organizers should be innovatively constructed to inspire learners' interest. They should also meet the aesthetic desires of the learners. Enough room for illustrations is to be created when constructing GOs.

**Consistency**- to achieve reliability and dependability, GOs should be standard and regularly introduced into the classroom. Standardization here means that they should be within the cognitive perception of the target learner.

The literature is enriched with many foreign studies that have focused on GOs and their effects on students learning writing skills in particular and in all language learning abilities in general. For

instance, Miranda (2011) examines the effects of GOs on the reading comprehensions one female with learning disability. Her finding indicates that GOs are effective reading comprehension intervention for the ELL with learning disability. In line to this, Gallavan & Kottler (2007) admitted that the use of graphic organizers enhances learners short term memory and long term achievement because they enable to manipulate ideas and help them summarizing concepts.

Another study conducted by Alshatti (2012) and Sam & Rajan (2013) described that for students to maximize benefit from literature lessons, lessons have to be organically composed and presented. One way of making literature interesting and engaging to students are by making it visually and tactically appealing to them. An interesting approach to achieve this goal, however, is through the use of graphic organizers.

According to Morgan et.al. (2007:115) prewriting strategy help students organize their work so that later when they are writing they don't lose track of what the goal is. They affirmed that if students know what they are shooting for, they may be able to produce the desire products. They also stated that using graphic organizers not only help to organize initial thoughts and ideas, but also help writers track their progress over time. In line to this, Lee and Tan (2010) conducted study based on "scaffolding writing using feedback in students' graphic organizers." Their findings confirmed that those novice writers in particular do better with the use of visuals and goals because they fulfill their cognitive needs by being able to view the relationships between their ideas and concepts.

Another study conducted by Cole & Fegn (2015) based on "effective strategies for improving writing skills of elementary English language learners." Their findings proved that the techniques implemented with the experimental group were, in fact, successful and effective because the students' writing skills did improve. Tayib (2015) conducted an action research entitled "the effect of using graphic organizers on writing: A case study of preparatory College students of Saudi Arabia."Her research concluded that graphic organizers are effective instruments to develop the students' writing ability. He also added that the use of such organizers with a group of preparatory students in Saudi Arabia did have a significant positive impact on students' writing as well as on their attitudes towards this skill.

Graphic organizers also named as visual maps, enable the use of skill areas of the brain entirely, help overcoming the information and resources to be collected in one place. Besides, they increase creativity providing flexibility in thinking and help the individuals perceive the information entirely. Moreover, they clarify the thoughts by means of relationships and organization; help the individuals solve problems, make decisions and go in to action and also they develop memory and comprehension (Krasnic, 2011).

Several studies have indicated that face book is an activity in which the students may work individually, in pairs or in groups of two or more students. It is a useful and an interesting technique because it gives every student an opportunity to write. Although the next two studies had a different research design, their finding showed similar result with the present study. Salehi (2012) conducted a study based on "The effectiveness FB group on teaching and improving writing." The result indicates that face book is an effective tool in improving the students' writing skills, especially in the brainstorming of ideas before the actual writing. Similarly, Youlia (2018) conducted a study entitled "Students' perception on Teaching Writing in the EFL class." The findings revealed that the use of face book group made them interesting in following the lesson in the classroom and doing the task out of the classroom, and even though the use of face book group in teaching EFL writing is new learning technique for them but they claimed that learning by using FB group can help them to learn English easily especially in writing aspects.

### 2.2 Types of Graphic Organizers

There are so many types of graphic organizers. Some of them, but are not limited are: concept map, cause and effect map, venn diagram, , mind map, flow chart, listing, conceptual net work and so forth ( Hughes,2004); (Newman, 2007). Some of these organizers which the present study focused on were explained as follow.

Concept map is one of these graphic organizers that describe concepts and ideas by arranging them hieratically from more general and large concepts to the more specific (Novak & Gowin, 1984). Mind map- on the other hand is a visual learning material used to improve note taking, enriching creativity, organizing thinking and developing concepts or ideas (Buzan & Buzan, 1996). Mind map is a technique in which the relationships between ideas are visually represented in a nonlinear way. Its main purpose is to creative relationships between ideas. In this sense, it is named as relationship map too (Davies, 2010).

Compare and contrast or Venn diagram is used to identify the similarities and difference between two or more concepts. They are the most commonly used organizer. This instructional tool is found in text books, standardized tests, and teacher resource materials.

These graphic organizers provide a specific link and structure in organization of the information in a sensible and meaningful way. Moreover, they help the individuals to customize the information as they understand in accordance with their interests (Krasnic, 2011).

### 2.3 Beliefs of Writing as a Skill

Langan (2005) described that:

A sure way to destroy your chances of learning how to write competently is to believe that writing is a 'natural gift' rather than a learned skill." People with such an attitude think that they are the only ones for whom writing is terribly difficult. They feel that everyone else finds writing easy or at least tolerable. Such people typically say, 'I am not any good at writing' or 'English was not one of my good subjects.' They imply that they simply do not have a talent for writing while others do. The result of this attitude is that people try to avoid writing, and when they do write, they do not try their best. Their attitude becomes a self-fulfilling prediction: their writing fails chiefly because they have brainwashed themselves into thinking that they don't have the 'natural talent' needed to write. Unless their attitude changes, they probably will not learn how to write effectively. He also added that a realistic attitude about writing must build on the idea that writing is a skill. It is a skill like driving, typing, or cooking; and, like any skill, it can be learned.

### 2.4 Definitions of Paragraph

Different writers give their own definition to the term paragraph thematically. Some of them are the following:

According to Needleman (1968) paragraph is defined as "a group of related sentences expressing and developing a basic idea, or a series of related sentences so arranged as to elucidate single topic, dominant idea or particular phase of thoughts."

In the same vein, Ploeger (2000) define paragraph as "it is a group of sentences related to one main idea, which is expressed in the topic sentence, usually the first sentence of the paragraph.

The topic sentence is a summary sentence, informing the reader of a paragraph's topic, of main idea. All other sentences in the paragraph most help, show, prove, or explain that topic sentence."

A paragraph is a unit of writing which develops one major or main idea. All the details in a paragraph are related to the major (main) idea that could be stated or implied in the topic sentence of that paragraph (Andualem et.al, 2015). They also added that in academic writing a paragraph is often between five and ten sentences long, but it can be longer or shorter.

A paragraph is usually defined as a group of sentences that deal with the same subject or topic. One of the sentences of some kind about the topic. This statement is called the topic sentence. The other sentences in the paragraph give additional information about the idea stated in the topic sentence. These other sentences are called supporting sentences. Once a writer can recognize both types of sentences, it will be easier for him/ her to use them to build paragraphs (Lewis and Edwin, 1984).

According to Solomon G/Giorgis (1991) a paragraph is defined as "it is a group of sentences that form a distinct developing one major idea. It usually begins with an indentation, and its length varies according to the complexity of the main idea to be developed. Atypical paragraph quite often has about one hundred words and seven to ten sentences in which every point in the paragraph having a useful role to play in fulfilling the purpose of the paragraph."

We can understand from these definitions that the difference between them is simply that of wording. The central theme for all the definitions are a paragraph is a group of sentence, all the sentences together talks about one idea, and one of these carries the main idea of the paragraph.

### 2.5 Definition of Perception

Perception is a vital part in the learning process. Students' perception affects the student's response and attitude in the learning process. Many scholars defined perception in various ways. For example, Kreitner and Kinicki (1992:126) defined perception as "a mental and cognitive process that enables people to interpret and understand the surrounding." They describe perception as "the way stimuli are selected and grouped so they can be meaningfully interpreted." Furthermore, Mozkowitz and Orgel (1996:126) argued that "perception is a global response to a stimuli or a set of stimuli." From these definitions, perception is viewed as the response to stimulus or to surroundings.

Mahmud (1990:41) described perception as "the act of interpreting information which has been kept in human brain." In this study, the researcher used the interview questions in order to consolidate the participants written tests (pre- and post test) in which the students' stimulus brought to the respondents' according to the question they were requested. Then, the receptors will bring the stimulus to the brain to be processed in shaping perception.

By viewing the definitions above, it can be deduced that perception is a process of someone's understanding and comprehension of the environment situation. Some experts believe that there are some factors that affect individual's perception. During perception, knowledge about the world combines with the perceiver's constructive abilities, psychologies and experience. Moreover, Depdikbud (1988:126) divided factors that affect one's perception into two:

- 1. Internal factors that comes from students themselves, such as thoughts, feelings, willingness, sex, needs, motivation and
- 2. External factors that come from outside of the students' themselves, such as educational background, experience, environment, culture and belief.

Furthermore, Levin et.al (1978:154) described the person's perception depends upon the following three issues:

- 1. The function of sense organs and physical condition of the body in transmitting information to the nervous system
- 2. Subjectivity in individual needs, desire and motivation
- 3. The experience of learning

### 2.6 Approaches of Teaching Writing Skills

### 2.6.1 The Process Approach

The process approach of teaching writing skill focuses on how a text is written instead of the final outcome or what is written. In line with this expression (Hyland, 2002) notes that the process approach has a major influence on understanding the nature of writing and the way writing is taught. Therefore, the process approach emphasizes on the importance of certain procedures such as pre-writing, drafting, evaluating and revising. He also points out that the process approach involves introducing techniques that help students identify and engage in a topic. Students are

required to produce multiple drafts of a work. The process approach, as it is called when writers present multiple pieces prior to final writing, is beneficial because it is learner centered and exposes the learners to pools of ideas while teachers can act as facilitators (Kolade, 2012).

Hyland (2002) also indicated that the process approach focuses on how a text is written instead of a final outcome. He added that the process approach has a major influence on understanding the nature of writing and the way writing is thought. Therefore, the process approach emphasizes on the impotence of certain procedures such as pre-writing, drafting, evaluating, and revising. He points out that the process approach involves introducing techniques that help the students identify and engage in a topic. Students are required to produce multiple drafts of a work. After a discussion and feedback from evaluators, the students would revise the drafts. Rewriting, revision and editing are essentials parts to writing in this approach. In similar vein, Jorgan (1997) stets that process writing enables the students to make clear decisions about the direction of their writing by certain procedures such as discussion, drafting, feedback and revision choices.

The process approach of writing focuses on the composing process of writing instead of on the written final products. Encouraging students to have a sense of purpose and audience, while writing about a certain topic, is the major task of teachers who teach in line with the process approach. Hedge (1988:9) states that good writers appear to go through certain processes which lead to successful pieces of written work. Writing is an extremely complex understanding with a number of operations such as generating ideas, planning and outlining, drafting, revising, etc. At anytime a line can be erased, a page through away, and even sometimes everything that has been written can be changed, added to, deleted from and put into a completely different order. Writing is, thus, viewed as a series of overlapping and interacting process.

At the process approach students also revise their first drafts and give them to other student for pre-reviewing and commenting on. The final stage is editing the written text by the writer himself and herself to eliminate any language errors. Boughy (1997), points out that process approach is one of the best methods for teachers to use in teaching L2 writing skills. He notes that students are able to improve their writing abilities step by step since teachers will guide them through the whole process of their writing tasks by giving them feedback.

Although there are many benefits of using this method in teaching writing skills, the process-based approach has been criticized on various grounds. Badger and White (2000) argue that learners have to spend quite a long time to complete one particular piece of writing in the classroom. They also point out that this may decrease students' learning motivation and hinder them from learning other type of writing. In critiquing the process approach to teaching writing, Freeman and Freeman (2004) argue that it is time consuming when dealing with large classes. This is so because teachers may not have enough time to schedule individual writing conferences in large classes.

### 2.6.2 Product Approach

The product approach of writing focuses on the final products of written work rather than the process. Nunan (1989) describes that the product approach to teaching writing focuses on the end result of the act of composition that is letters, essays, stories and so on. The teacher who uses the product approach of teaching writing will be concerned to see that the end product is readable grammatically correct, and obeys discourse conventions relating to the main point, supporting details to the main points, supporting details and so forth. According to Getnet (1994:91) the product approach is an orientation whose primary focus is the end result of what students produce. Formal accuracy and correctness in grammar, spelling use of vocabulary, convention of lay out etc are given the utmost priority. According to Byrne (1988:21), the product approach of writing is an accuracy oriented approach that focuses on the control of mistakes in order to eliminate them from written works. Raimes (1983:6) says " in the control approach of teaching writing students are given sentences to copy and manipulate grammatically and correctly with limited opportunities of making mistakes. " Hedge (1988:8) suggests some points which students should include in the product approach of teaching writing. These include:

- ✓ Getting the grammar right
- ✓ Having a range of vocabularies
- ✓ Punctuating meaningfully
- ✓ Spelling accuracy
- ✓ Linking ideas and information across sentences to develop a topic etc.

According to Silva (1990) put Hedge's idea more directly as the product approach to teaching writing skills highlights form and syntax (sentence structure) and it emphasizes rhetorical/symbolic drill. The product approach mainly focuses on the written product rather than the process

the learners should undergo to produce a good written text. In this approach, writing concerns the knowledge about the structure of a language, and writing development is a result of the imitation of input, in the form of texts provided by the teacher (Badger and White, 2000). Similarly, Myles (2002) confirms that if students are not exposed to written model texts, their errors in writing are more likely to persist or continue. In addition, Jordan (1997) indicates that the students are required to focus on a model, form, and duplication. In other words, the students study model texts and attempt various exercises that enable them to draw attention to relevant features of a text, and then rewrite them in their own writing.

However, there are also weakness associate with the use of product —based writing. Badger and White (2000) point out that this approach gives little attention to audience and the writing purpose since learners and instructors tend to overemphasize on the importance of grammar, syntax and mechanics. Process skills such as pre-writing, drafting, evaluating and revising are given relatively minimal role, and the knowledge and skills that learners bring to the classroom are underestimated or undervalued. Thus, students may lack motivation in learning and have high pressure in creating their writing tasks, as their instructors mostly focus on the accuracy of the language structures.

### 2.6.3 The Genre Approach

According to Badger and White (2000), the genre or eclectic approach is considered as the most effective and successive in the teaching if writing skill. The genre approach combines process theories with genre knowledge and also emphasizes on the social context which writing is produced. In other words, this approach provides the learner with opportunities for developing individual creativity as well as helping them fully understand the features of the target genre. In addition, Tangpermpoon (2008) in Benadr (2014) explains that the focus of writing in this approach aims to integrate the knowledge of a particular genre and its communicative purpose. Therefore, helping learners to produce their written products to communicate of others in the same discourse community successfully.

Hyland (2004) suggests that teaching genres is the best way for students to learn the rules of English grammar, enabling them to examine grammatical structures in context rather than in isolated classroom exercises. Hyland further suggests that in examining genre prototypes or examples, students can identify and compare structures and apply that knowledge in organizing their own writing logically.

Nunan (1999) noted that the genre approach to writing emphasizes the need for studying different types of texts. This is so as he explains that different genres of writing are typified by a particular structure and by grammatical forms that reflect the communicative purpose of the genre. Another scholar Matsuda (2003) indicated the learning of specific genre construction as a way of helping learners to come up with appropriate writing in their real life outside the classroom. It also increases students' awareness of such writing conventions as organization, arrangement, form, and genre. Thus, the aim of the genre approach in writing is to help students master the convention of a particular form of genre that is relevant to their specific situation (Flowerdew, 2000).

However, the genre approach has also been criticized for some reasons. Badger and White (2000) point out that, the genre approach undervalues the writing skills which learners need, to produce a written product and ignores the writing abilities learners have in other areas. Another reason is that learners may not have enough knowledge of appropriate language or vocabulary to express what they intend to communicate to a specific audience.

From the foregoing, it is realized that teaching writing skills to L2 students is a challenging task. In addition, using a single teaching approach may not achieve the desired learning outcomes since the weaknesses of each approach tend to hinder students' writing development. Therefore, teachers need to incorporate the insights of the three approaches: product, process and genre approaches into the teaching of writing skills in order to develop students' writing competence.

### 2.7 Types of Writing Activities

### 2.7.1 Control Writing

In control writing the writer is given a lot of help with the actual writing or wording and has to make very few decisions about how to put his or her ideas into words or how to organize the text. In the same vein, Andualem, et.al (2015) also added that, Control writing is the most common working type emphasized in most English classes because there is little room for making errors, and because it is easy to be controlled by the teacher. Control writing activities are fundamental to teaching literacy to students. Unlike other techniques of writing activities, control writing focuses on establishing grammatical pattern, sentence structure, punctuation and word order. Control writing exercises can help students learn how to express themselves effectively in proper English. Learners are not free to express their ideas

### 2.7.2 Guided Writing

Guided writing is an essential tool in a balanced writing curriculum, providing an additional supported step towards independent writing. Through guided writing, students are supported during the different stages of the writing process. The aim is to provide support that is going to help students to improve their writing and to work with increasing independent. In line to this, Tyner(2004), Holdich & Chung ( 2005), as cited in Hung-Ju Hus,et.al (2011), indicated that guided writing offers a greater opportunities for young writers to make valuable connections between texts, sentences, and word level decisions and help learners shape and redraft texts with a particular criteria in mind. In line to this, Andualem, et.al (2015), guided writing represents the other type of writing in which the focus is mainly on language accuracy or grammar.

### 2.7.3 Free/ Independent Writing

Free writing as the name suggests the writer is expected to use his or her own ideas without worrying the errors and put his/ her ideas into words. The writer is expected to use their own decision about content and organization. This is supported by Peter (1992), Free or independent writing is prewriting technique in which a student writes continuously for a set period of time without regard to spelling, grammar, or topic. It produces raw, often unusable materials, but helps writers overcome blocks of apathy/lack of interest and self criticism. Free writing is used mainly by prose writers and writing teachers. Some writers use the technique to collect initial thoughts and ideas on a topic, often as a preliminary to formal writing. Free writing is recording bits and pieces ideas as they come to the writers mind. The idea is to keep pace with the writer's thoughts, getting them on paper before they disappear (Andualem, et.al. (2015). Free writing is not the same as automatic writing. Unlike brainstorming where ideas are simply listed, in free writing one writer's sentences to form a paragraph about whatever comes to mind. He also added, free writing is one of the better techniques that writers can use early on in the process. If you have an idea for a topic but are not sure whether it will work or not, one way to find out is free writing. Additionally, if you know what your topic is and perhaps even have a working thesis, you can come up with additional ideas and/or content essay through free writing.

### John (2005) stated that:

Free writing is jotting down in rough sentences or phrases everything that comes to mind about a possible topic. See if you can write nonstop for ten minutes or more! Do not worry about spelling or punctuation correctly, about erasing mistakes, about organizing materials, or about finding exact words. Instead, explore an idea by putting down whatever pops into your head. If you get stuck for words, repeat yourself until more words come. There is no need to feel inhibited, since mistakes do not count and you do not have to hand in your free writing.

### 2.8 Definition and Techniques of Writing Skill

### 2.8.1 Criteria of Good Writing Skill

Good writing skills are essential for effective communication. The better you write, the more easily readers will understand you. Learning to write well takes time and practice. It has been agreed that writing is a means of communication made possible through graphics, symbols, arranged according to certain conventions to form words which in turn are arranged to form sentences. The sentences are logically and grammatically connected to form a piece of writing.

Developing writing skill has a vital importance in EFL classroom. According to Nunan, (1999) and Burkart & Sheppard (2004) success in learning to a language is measured in terms of the ability to carry out a communication in the target language. Besides, writing is a skill which deserves attention more than other language skills (speaking, reading and listening). Writing like listening involves a writer (producer) and a reader (receiver). Writing involves interaction between the writer (encoder) and reader (decoder). Communicative writing means the use of orthographic in order to construct grammatically correct sentences which communicate a meaning to the reader. Orthographic + lexis + grammar + meaning = communicative writing

### 2.8.2 Techniques of Writing Skill

Smith suggested that both writers and readers must respect the writing conventions in order for communication to take place. Writing has its conventions for spelling, for punctuation, for grammar, for capitalization. There are more than one convention for arranging words grammatically and meaningfully into sentences and convention about how sentences themselves are interrelated. Thus, effective pieces of writing request a number of things including the graphic system of the language. For a natural piece of writing coherence and cohesion are also extremely important features. Coherence is the thread or the theme of the writing that keeps the text together,

cohesion is part of the system of the language, expressed partly in grammar and partly through vocabulary. Cohesion is also expressed in other features such as punctuation and intonation.

### 2.9 Problems in Writing

According to smith, "For some people writing often come easily, for the rest of us it is a continued struggle. Some people find writing a strain, others a release. Students very often find it hard to compose a piece of writing since they do not know the right words, they do not know the right grammar, or they are not good at composing and organizing. Sometimes they cannot even think of anything to write. These result in dry, flat, mechanical pros full of grammatical errors and empty of life and contents."Some of the factors, according to Smith, contributing for the writing difficulties are:

### 2.9.1 Psychological Problem

Psychological problems are the problems related with the writer's sense of segregation while writing because of the absence of any physical presence and feedback from the teacher. Byrne (1988:4) states that writing a solitary or private activity and the fact that we require to write on our own without interaction or the benefit of feedback, in itself makes the act of writing difficult. Cumming (1986) in Molla (2009) says that in contrast in speaking, writing is produced and received in a context which is devoid of or completely without support for communicating in meaning. The result is that, in writing, meaning must be explicit.

### 2.9.2 Linguistic Problems

Writing is a real test of one's linguist abilities where as in speaking a speaker can take help from paralinguistic devices. Similarly, a non native person will not have the same range of lexical and syntactic choices available and may find it difficult to write as compared to a native person. Hedge (1988:5) states that so as the writer to compensate the absence of the prosodic feature in writing, he/she has to write with high degree of organization, Mechanics, careful choice of vocabulary and using complex grammatical devices. Mechanical problems (grammatical problems), sentence structure problems and problems of diction are linguistic problems that hinder students' effective in writing in English.

### 2.9.3 Cognitive Problems

Writing involves knowledge of the writer and its purpose. Lack of knowledge will make is difficult to write well. Cognitive problems that students encounter include problems of mechanics (punctuation and capitalization), content and organization.

### 2.9.3.1 Mechanical Problems (Capitalization and Punctuation)

According to Byrne (1988:16), the fact that punctuation has never been standard to the extent as spelling makes it problematic. Similarly, capitalization are useful for sentence initials, the beginning of important words, in topics, headings etc (Kroll, 1991). However, students have problems in using capitalization properly. There are reasons for students' problem in using capitalization as well as punctuation. The rules for capitalization and punctuation are not universal and classifying nouns as proper and common nouns are difficult for students (Gowere et.al, 1995) in Molla (2009).

### 2.9.3.2 Organization Problems

According to Kharma (1986) students have the problem of structuring the paragraph, topic development of a paragraph, structuring in the whole discourse and a theme in a discourse. The most common students' problems in paragraph writing are either the paragraph is not limited to a single topic or a single topic is not developed or exemplified adequately (West, 1996) as indicated in (Molla, 2009). Raimes (1983) says that the other problem of organization in students' writing is the difficulty of differentiating a topic and supporting details or generalizations and specific details.

### 2.9.3.3 Content Problems

In writing, learners face problems of exploring idea and thoughts to communicate with others (Clifford, 1987). According to Leki (1991), this could be because of the traditional methods teachers use to teach writing for mechanics (Capitalization and punctuation), content and organization. Clifford suggests that teachers should encourage students to focus on message, ideas or thoughts they need to convey rather than grammar, spelling, punctuation and other language elements.

### 2.10 Process Writing

The writing process as a private activity may be broadly seen as comprising four main stages: planning, drafting, revising, and editing. The stages are neither sequential nor orderly. Krashen (1984:17) described that 'many good writers employ a recursive, non-linear approach – writing of a draft may be interrupted by more planning, and revision may lead to reformulation, with a great deal of recycling to earlier stages.' Writing is an extremely complex understanding with a number of operations such as generating ideas, planning and outlining, drafting, revising e.t.c. At anytime a line can be erased, a page through away, and even sometimes everything that has been written can be changed, added to, deleted from and put into a completely different order. Writing is, thus, viewed as a series of overlapping and interacting process.

Prewriting is any activity in the classroom that encourages students to write. It stimulates thoughts for getting started (Richards and Renandya, 2002). In fact, it moves students away from having to face a blank page towards generating tentative ideas and gathering information for writing.

- ➤ While writing- Is the real act of putting ideas to pen, translating images into meanings. It is the process of discovering and exploring ideas and putting these on paper.
- ➤ Post writing- Is written, it needs reading, reviewing and editing to be modified and polished.

### 2.11 Research on Using Graphic organizers

Graphic Organizers are getting popular in recent years. They are tools which enable students build the text meaning coherent and organized in perceiving main ideas and supporting details. There are various studies conducted on the different aspects of Graphic Organizers in improving students writing performance in the foreign studies. Even though a few or no studies were conducted in relation to the use of Graphic Organizers in local studies, the researcher has tries to mention related studies to the field.

### 2.11.1 Foreign Research

Emmanuel et.al (2017) conducted an experimental research based on "a research based evidence of the effect of graphic organizers on the understanding of prose fiction in the ESL classroom." Their conclusion asserted that the study has left us with no better conclusion than to state that

literature not only plays a significant role in language learning, but it also can be better taught and learned through the use of graphic organizers. Graphic organizers as prewriting strategy are important for students' writing because they are the stage of the writing process in which they are able to get beginning ideas onto paper. During this stage, students are able to process new information with existing schema (Lorenz, et.al. 2009). Prewriting is any activity in the classroom that encourages students to write. It stimulates thoughts for getting started (Richards and Renandya, 2002). Morgan et.al. (2007:115) prewriting strategy help students organize their work so that later when they are writing they don't lose track of what the goal is. They affirmed that if students know what they are shooting for, they may be able to produce the desire products. They also stated that using graphic organizers not only help to organize initial thoughts and ideas, but also help writers track their progress over time.

### 2.11.2 Local Research

When the researcher tried to assess the local related studies, the following studies were conducted. For example, a research conducted by Abiy and Mohammed (2011) based on "the effect of Mother tongue on the EFL students' writing Performance." The findings confirmed that students who used well planned mother tongue developed low writing anxiety and develop positive attitude towards writing. Another study conducted by Temesgen (2008) has tried to see on his research "the effect of peer feedback on the EFL students' writing performance and writing anxiety." His findings showed that who received peer feedback developed low writing anxiety and improved positive attitude towards peer feedback. The participants also showed improvements on some feature of writing like linguistic skill (planning and drafting) and linguistic knowledge (knowledge of grammar, and text structure). Ibrahim (2016) asserted students rarely use effective writing strategy with little awareness of the prewriting strategy leads to ineffective academic writing. The majority of the teachers in the researcher's school were not seen regularly exposing their students to the writing activities which enable them to practice the writing process (prewriting, drafting, checking and writing the final draft).

So far, to the knowledge of the researcher, there is no local study conducted on the use of Graphic Organizers as prewriting strategy on the improvement of students' writing performance. Aware of the shortage of research and empirical evidences about the use of Graphic Organizers as prewriting strategy and to what extent graphic organizers scaffold students' writing activities, this

study aims at investigating the effect of graphic Organizers as prewriting strategy on students' paragraph writing performance based on awareness training intervention as a means to improving students' writing performance in Injibara Secondary and Preparatory School.

#### CHAPTER THREE: RESEARCH METHODOLOGY

This chapter presents an overview of the research methodology. A methodology is a set of techniques and procedures employed by the researcher to construct a systematic plan to achieve a pre determined research objectives. The methodology describes the research design, the research participants, sampling and sampling techniques, methods and procedures of data collection and methods of data analysis.

#### 3.1 Design of the Study

The study investigates the effect of graphic organizers as prewriting strategy on students' paragraph writing performance in the EFL classroom. The consequence of graphic organizers as prewriting strategy on students' paragraph writing achievement is identified through experimental study. The research choice the present study is the quasi-experimental (pretest-posttest) design to assess the change by looking at the test scores in the students' written work a result of graphic organizers as prewriting strategy training in longitudinal treatment. The quasi-experimental design involves selecting groups, upon which a variable is tested, without any random pre-selection assignments (Ary et al., 2010; Creswell, et.al 2009). The study involves a mixed method approach in which qualitative and quantitively research data, techniques and methods serve to support and validate each other and to have comprehensive view and practice of students' use of graphic organizers as a prewriting strategy in their writing.

#### 3.2 Participants of the Study and Sampling Technique

In order to determine the participant of the study, the researcher used purposive sampling technique. Because the researcher was assigned to TEFL in this grade. In line to this idea, Yin (2011, P.88) described that in qualitative research the sample is likely to be chosen in a deliberate manner known as purposive sampling. Therefore, the sample of the present study consisted of one section of grade eleven students in Injibara secondary and preparatory school in 2018/2019.

Even though two secondary and preparatory schools are found in Injibara town, the researcher selected Injibara Secondary and Preparatory School by purposive sampling method. This is due to the fact that, the researcher was assigned to teach English as a foreign in this grade level. Injibara Secondary and Preparatory School comprises from grade nine to twelve. From these grade levels, the researcher used purposive sampling technique in order to select the target population. The main

reasons that the researcher chose grade eleven as participant of the study than other grade levels are: (1) Grade ten and twelve students will have taken national exams at the end of this academic year. Thus, they were not willing to give due attention for the study. (2) Similarly, Grade nine students were new to secondary education and English as a medium of instruction has just begun. So they may not expect to use in good language proficiency. (3) Grade eleven students, on the other hand, joined preparatory grade by fulfilling the requirements based on the previous national examination. Therefore, they were considered to be the participants of the study. In order to identify the participants from natural and social classes, the researcher used a lottery method. Such that, the researcher folded up two pieces of paper so as to select the target grade level from these categories. The social class was selected from the two categories. This class was further classified into three classes (section A, B, C), section B was selected as a target group as the same way above. Forty- two students were enrolled in this section (M=22 F= 20 T= 42. Though the participants of the study were (42) students at the beginning of the academic year, four students terminated from the school due to different reasons. From those terminated students two boys and a girl have gone to TTC (Teacher Training College) in Injibara Teacher Training College, and the other boy terminated due to unknown reason. Therefore, the researcher involved all the 38 students in this research.

#### 3.3 Data Gathering Tools

To evaluate the effectiveness of graphic organizers as prewriting strategy on students' paragraph writing performance, two achievement tests (a pretest and a posttest) were employed in order to collect data that address the purpose of the study. A pretest was used to assess the students' level at the beginning of the study, and to indicate that any significant difference at the end of the study in favor of adopting graphic organizers as prewriting strategy (see appendix 'A'). At the end, a post test was given after involving the participants in the instruction for six weeks in order to see the effect of graphic organizers as prewriting strategy on students overall paragraph writing achievement. Alike the pretest, two raters marked the posttest exam using the criteria of writing achievement. Each writing aspects on which the participants written production was evaluated has five marks. Using this scale, each student's written production was marked out of twenty. To see the reliability of the two raters, Pearson's correlation coefficient was used (see table 2). Moreover, the researcher analyzed the writing scores of the pre- and posttest in accordance with a writing

rubric containing the following domains of evaluation: accuracy of grammar, mechanics (capitalization and punctuation marks), organization and coherence (internal logic or relation of ideas in a paragraph). In addition, a semi-structured interview was used to substantiate the data obtained from the two tests.

#### 3.4 Procedures of Data Collection and Analysis

Data gathering procedures refer to the collection of information to serve and/or prove some facts (Kombo & Tromp, 2006). It involves the real process of going to the study in order to get the required information from the target population.

**Step1**- The researcher wrote a letter requesting permission to collect data to the school administration. This enables him to obtain a research permit from the school principal. The researcher explained to the participants the purpose for the research emphasizing that the information they gave would be used for the research purpose only and treated confidentiality as their identity would not be revealed.

Step 2- The study consisting of four phases which took six weeks. Namely; (1) the pre-treatment (2) the pre-test (3) the prewriting strategy instruction (using graphic organizers), and (4) the post-test. The procedure consisted of a pre-treatment instruction for two sessions for about an hour and half for each session at the weekends; one session for the pre-test which took two hours; the prewriting instructional training took four sessions from February 14- March 26/2019. It took one and half an hour for each session. At the end, one session for the post-test tasks. Each session took at the weekends specifically on Saturday. The main reason for the researcher to choose the weekend is that the availability of time for discussion is longer than the time that we have taken in the normal classroom time. Therefore, the preferred time was conducive to hold the intervention.

In the following sessions, the researcher told the participants of the study to write a paragraph based on the suggested topic. The topic that was provided to write a paragraph was taken from their actual students' textbook on page 264 (why education is the key to development). The researcher collected the written paragraphs by the students and administered by the help of the two raters. Marking was done in terms of all the writing aspects (i.e. Grammar, mechanics (capitalization and punctuation), organization or unity, and coherence were checked by the two independent raters.

**Finally,** the post-test was given to the participants to write a paragraph based on the provided topic which was similar to the pretest paragraph writing topic from their textbook on page 246 (*Why education is the key to development*). Then the participants' paragraph was given for the raters in order to mark out of twenty percent based on the writing aspects as they did on the pre test.

#### **3.4.1 Pretest**

A pretest was held before involving the participants in the training or the prewriting strategy instruction. **First**, the researcher listed out all the writing activities found in the students' textbook on the chalkboard. Therefore, the participants were given a chance to select the topic which is conducive for them to jot down a serious of sentences or ideas. The selected topic is found on their textbook on page 264 "why education is the key to development." After they had selected a common topic, the researcher told the participants to write paragraph as possible as they can. The researcher did not give any justification based on the title. **Second**, before giving the collected sheet to the two raters, the researcher created awareness to the raters to make sure that they would give comparable ratings to the participants writing achievement according to the scoring criteria. **Finally**, the two teachers/ raters marked separately using the criteria of writing aspects (see appendix 'A'). The average of the two raters' scores was used for analysis using Paired Sample T-test to compare the writing scores with the help of SPSS version 20.

#### 3.4.2 Training Participants in Using Graphic Organizers as Prewriting Strategy

In order to make graphic organizers as prewriting strategy brought a positive effect on the students writing performance, there are some preconditions which are required to the trainee. One of them is that using graphic organizers as prewriting strategy training. They are given the training appropriately by the researcher about the uses of graphic organizers and overall processes before involving the participants in the writing process. In line to this, Berg's (1999) asserted that training students before involving in the writing processes improve the quality of the written products. It is when students develop awareness about the use of graphic organizers that take part in the teaching and learning of writing skills. Thus, the researcher gave the participants training from February 14- March 26/2019 based on the reasons for using graphic organizers and the different types of them as shown in (appendix 'F'). The researcher took four weeks for the training among six weeks. The rest two weeks were used to provide a pretest and a posttest. Totally, the research

took six weeks each of which took two session lasted an hour and half. The pretest session and the posttest training session took 18 hours in total.

Among the various types of graphic organizers as illustrated appendix 'F', main idea and detail charts shows the hierarchical relationships between major concepts and their subordinate elements (see appendix 'F' no, 3). This organizer is extremely beneficial in helping students distinguish central ideas and their corresponding details from less important information. When using this type of graphic organizers, clearly label the main idea and the details as such (Bromely, et.al, 2007). The following figure illustrates the use of graphic organizers in different shape or area for the main idea and the details.

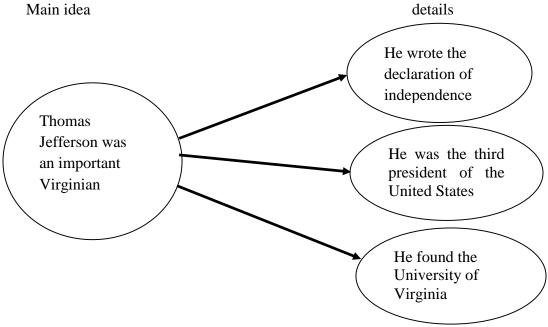


Figure 1: Shows Main Idea and Details

#### 3.4.3 The Posttest

After training the participants about the use of graphic organizers as prewriting strategy, the topic was given which was similar to the pretest writing topic from the students' textbook on page 264 "why education is the key to development". This is because participants retain the information during the pretest and then correct their drawbacks while they were writing during the posttest processes. Under data gathering method the written tasks which were produced by the participants were analyzed using the scoring criteria. The participants' written productions were analyzed using the criteria set by (Raphael & Barton, 2015). The scoring criteria have four aspects as the pretest

writing rubrics (accuracy of grammar, mechanics (punctuation and capitalization), organization and coherence). In the end, the participants were given the posttest after they were trained six weeks having twelve sessions. Two raters marked the posttest which were produced by the participants using the criteria of writing scores (see appendix 'B'). Each writing aspect has five marks on which the written work was evaluated. Using this scale, each participant's written work was marked out of twenty percent.

The scoring criteria which are aiming to see the students' written performance was evaluated by two raters in the light of the rating scale which gave detailed instruction to the raters and thus helped to ensure reliability. The rubric of the rating scale were adopted in the view of the writing aspects identified in the current study and the grade eleven English syllabus from the most recent international EFL writing tests which were suggested by (Raphael & Barton,2015). The rubrics of the rating scale covered all the identified written components. The descriptors used in the scale were brief and understandable.

For each writing aspect, five levels were recognized. Level (5) represented by excellent writing performance, level (4) represented by very good writing performance, level (3) represented by good writing performance, level (2) represented by fair performance and level (0-1) stood by poor writing performance. Each level included a set of indicators or descriptors for the performance of each writing component. Therefore, each level descriptor made a quantitative grade score for ranking and scoring students' writing performance from one to five in which five is excellent writing performance and one is poor writing performance. Thus, the tests were scored out of 20 percent.

Therefore, the researcher adopted all the scoring rubrics from grade eleven English syllabus writing tests for this study based on some considerations, i.e. (1) the explanation of scoring system is appropriate to the level of preparatory school students because the criteria are related to the competence of each writing topic from the grade eleven English text book; (2) the aspects of writing, which are indicators of good writing skill, were included in the scoring system.

#### 3.4.4 Interview

A semi-structured interview was used in the study so as to obtain a greater depth of information concerning the participants' feelings and attitudes. The interview was designed to substantiate the

data obtained from the two tests (pre- and posttest). For this interview, five students were selected by drawing lots. The interview had five questions dealing with the participants' understanding towards graphic organizers as prewriting strategy that they had been given in the study during the intervention through six weeks (see appendix 'C'). The collected data were coded as  $S_1, S_2...S_5$  and analyzed qualitatively. The five interview items were adapted from the materials that the researcher prepared for the sake of instruction /intervention and also previously researched works. Some of the interviewee was presented in the following way:

(S1) was one of the five interviewee who had interviewed based on the use of graphic organizers as prewriting strategy after the intervention. He described his idea that:

I actually did not dare to write before I involved in the used of graphic organizers as prewriting strategy. My experience before this training discouraged me to practice writing based on a topic. I also encountered problems in terms of arranging my ideas in a logical order. Fortunately, I am so excited to be the participant of the training which helped me a lot of things that encouraged me to write. To me this situation is a pioneer to me in order to strive and improve my writing abilities.

(S2) was the second interviewee among the five students who held the interview. He also added his perception as follow: He explained that:

I thought writing is a talent but I thoroughly understand that it is a matter of writing strategies. The prewriting strategy is critical for me and for all the students when we want to write paragraph(s). I/We had little or no awareness about these techniques or strategies that had happened before doing the writing tasks .Graphic organizers as prewriting strategy provide the foundation to the writing tasks. Without creating awareness about the different kinds of graphic organizers and other techniques, many students including me are not able to be effective in writing skills particularly organizing the main ideas with their details.

(S3) was the third interviewee among the five students who held the interview. He also added his perception about the training based on graphic organizers as follow: He described that:

I actually hate and frustrate the writing classes. I often absent from the classes. I always quarrel with my teacher in this class. This is because of the experience that I do have on the writing skill and the knowledge of the prewriting strategy. Before attaining this grade level, I did nothing about writing. Writing was the neglected skills from the other major skills. My knowledge and attitudes towards the writing skill is radically changed positively. I feel happy when I think about the writing skill. The training that was provided by the researcher (teacher) was very motivated and made my perception easier towards the writing skill.

The researcher interprets the three interviewee statement that all of them benefit from the use of graphic organizers as prewriting strategy because this strategy support them to organize their ideas. The rest interviewee described their perception towards the use of graphic organizers as prewriting strategy (see appendix 'C').

#### 3.4.5 Interview data Analysis

For data collection, the researcher used two major tools: a writing rubric and attitudinal survey. The writing rubrics are based on the prescribed English language syllabus by the Ministry of Education (MoE,1994) was used to assess the students' writing samples before and after the intervention based on graphic organizers. These criteria assessed the participants' writing in four areas: grammar, mechanics (capitalization and punctuation marks), organization and coherence. Two independent raters evaluated the students' written paragraph. Based on the rubrics above, the two raters evaluated the participants' written paragraph. Their inter-rater reliability was reached at 0.746 or 75%. In each area a student could receive a five for excellent performance, a four for very good performance, a three for good performance, and a two and a one for poor performance. The total score of each participant was from 20 percent. The data composed of the participants' writing scores before and after the intervention were explained below.

The data set were analyzed both qualitatively and quantitatively. In this case the mean scores of writing with graphic organizers (posttest) were compared to that of the writing without graphic organizers (pretest) to see if there was significant differences in the students mean scores using paired sample T-tests.

The results of these tests were used to confirm or reject the first hypothesis of the study which stated that "the use of graphic organizers will not improve students' paragraph writing performance." This same result could also be used to answer the first questions of the study. "What is the effect of using graphic organizers as prewriting strategies on students' paragraph writing performance?" The second hypothesis of the study, "the use of graphic organizers will positively impact the students' attitude towards writing" was checked using information from the attitudinal survey that was administered before and after the intervention based on graphic organizers. Participants' responses to the survey were compared to see if there was any change in the samples perception or feelings towards the writing skill. The same result could also be used to answer the second questions of the study.

#### 3.5 Validity and Reliability of the Instruments

The validity and reliability of the instruments of this research were checked before collecting data for the study. The validity of the test given to the participants to write a paragraph and the interview items were reviewed and assessed primarily by my colleagues and then by my advisor. The drafts of the instruments were adapted from Patri's (2002) research. Due to this, the tests that the participants are expected to write paragraph and the interview items were given to two experienced teachers having MA in TEFL in Injibara Secondary and Preparatory School to evaluate the clarity of the writing rubrics suggested and the interview items, and then more importantly my advisor evaluated them thoroughly. Five interview items were also used in this study in order to fulfill the goal of triangulation.

Before the participants start to write paragraph based on the given topic, pilot study tests were carried out to assess the clarity and content of test that the participants intend to write paragraph and its reliability. These pilot tests were given twice in the interval of a weeks' time. For this reason, the test was piloted on ten students from another school to write paragraph based on the (why education is the key to development). The written paragraphs by those students were collected, marked and analyzed by Cronbanch's alpha to determine the reliability of the test as shown in the following table.

Table 1: Test reliability statistics.

Cronbanch's alpha	Cronbanch's alpha based on standardized items	No of items
0.914	0.913	4

The internal reliability of the tests were calculated using Cronbanch's alpha, and the reliability coefficient of the written paragraph was 0.914 which is equivalent to 91% that indicates high internal consistency of the two test, and its error mean measurement is 0.09, as a result the test is reliable.

Similarly, the correlation of the designed written tests scores were measured by calculating the Pearson correlation coefficient as shown below.

**Table 2. Illustrates Pearson correlation** 

	Test <sub>1</sub>	Test <sub>2</sub>
Test <sub>1</sub> Pearson correlation	1	0.746
Sig.(2-tailed)		0.013
N	10	10
Test <sub>2</sub> Pearson correlation	0.746	1
Sig.(2-tailed)	0.013	
N	10	10

The degree of test-retest reliability was established by correlating the scores of the two pilot tests. In order to see the correlation of the two tests, Pearson's correlation test was used. As a result, the correlation of the two tests in the pilot test written achievement was 0.75 or 75% at 0.013 level of significance as shown in table two. This shows that it is highly correlated and the test scores have greater correlation in both pilot tests.

The validity of the tests (pretest and post test) were reviewed and assessed by two teachers in Injibara Secondary and Preparatory School both of them are having MA in TEFL. They evaluated the clarity of the test items if all the items valued to measure the objective of the study. Two experienced teacher raters marked the participants' written achievement based on the scoring rubrics for the reliability of the scores. More importantly, the researcher showed all the writing

rubrics and all the five interview questions to the advisor in order to evaluate the validity of the tests.

Eventually, the researcher showed the scoring rubrics to the advisor pretending to receive feedback on the use of graphic organizers as prewriting strategies instruction and format of the criteria. This is because according to Madsen (1983) the holistic scoring needs more than one scorer, and any significant differences in scoring should be discussed and a joint score is highly negotiated. Finally, the average of the two raters was used for analysis using paired samples T-test in SPSS version 20.

#### 3.6 Ethical Considerations

Ethical issues have become increasingly important in research involving human beings. As it is stated in Roach (1991), the researcher should explain the steps prior to the research to inform the participants about the data collection activities and the proposed use of findings. The researcher should describe the steps to be taken to respect the rights of participants, get their permission, gain consents from the research site and ensure confidentiality of participants' information. During the research, the following points were taken into account: keeping the participants' identities anonymous and their views confidential, the participants' about the overall purpose of the research and its main features and informing the participants that the information from them will be used solely when there is a full consent.

#### CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION

As mentioned in the previous chapters, the objective of this experimental study is to examine the effects of using graphic organizers as prewriting strategies on EFL students' paragraph writing performance. To this end, this section, therefore, attempts to answer research questions which the researcher formulated under the last section of chapter one. The data from the pre- and posttest, participants interview were analyzed both qualitatively and quantitatively.

#### 4.1 Data Analysis

To evaluate the effectiveness of using graphic organizers as pre-writing strategy in supporting the teaching of writing, the researcher developed an achievement test (pre-test) to assess students' level at the beginning of the study, and to indicate that any significances at the end of the study in favor of the post-test. Moreover, the researcher analyzed the two writing scores of (pre- and post-test) of the participants in accordance with the writing rubrics containing the following domains of evaluation: accuracy of grammar, mechanics (punctuation and capitalization), organization, and coherence. In order to achieve the objectives of the research, the participants of the study sat for pre-test to ensure equivalence between the two tests. The result of the pre-test of each of the rubrics is presented in appendix 'A'.

## 4.2 Analysis of Students' Overall Writing Achievement before and after the Intervention

Under this section the writing achievements (i.e. the writing aspects altogether) of the students before and after the intervention are presented. The mean scores of the participants before and after the treatment were compared to test the predetermined research objectives formulated at the beginning. That is, to examine the effects of prewriting strategy on the students' writing performance in the EFL classroom.

In order to achieve the above research objective, the basic thought is easy. In other words, if the treatment had no significant effect, the mean difference between the measurements of the two tests is equal to zero. On the other hand, if the treatment brought a significant effect, the mean difference is not equal to zero. The average scores of the focused group before and after the treatment were analyzed using paired samples T-test in SPSS (statistical package for social science) version 20 in the following table.

**Table 3:** Paired samples T-test on the overall writing performance of students

						Sig.(2-	Mean
Test scores	N	Mean	Std.	T	Df	tailed	difference
			Deviation				
Pre-test score	38	9.5921	2.05944				
Post-test	38	11.6184	2.20084	-7.966	37	0.000	-2.02
score							

At 0.05 level of significance

The result of the Paired samples T-test from the above table shows that there are differences between the mean score of the pre-test and the post-test. This is to mean that the writing score of the students before the treatment was 9.59% but after the treatment the writing mean score rises to 11.62. The mean difference between the two score is -2.02, which is different from zero. We can understand that the mean difference tells us using graphic organizer as pre-writing strategy helped the students to improve their overall writing performance.

This table shows that there are significant differences in the pre-test and the post-test total scores in paragraph writing achievement after the treatment. This shows that the more experienced to the prewriting strategy leads to an effective employment of paragraph writing performance.

In addition, based on the above table degree of freedom =t-value=significant level. Therefore, t (37) = -7.966 and sig. (0.000). Since the significant is 0.000, which is less than 0.05 (p<0.05). The mean difference between the pre-test and the post-test is statically significant at 0.05 level of significance. Due to the means of the two writing performance and the direction of the t-value, one can easily understand from the above table that there was a statistically significant improvement in the overall writing achievement following the pre-writing session. As a result, the result of the analysis assured that pre-writing strategy helped the participants to improve their overall writing performance. This is because the students' writing achievement means score after the intervention is higher than the mean score before the intervention. This result goes parallel with the findings of the study conducted by (Hyland, 2002:78) who stated the a synchronous approach to teaching writing made the mission of writing easier to accomplish as the flexibility of the blended learning

environment and the teachers continuous instructional material given in-class or online made the process of practicing writing easier and better.

#### 4.3 Analysis of the Aspects of Writing before and after the Intervention

The aspects of writing determine the overall writing performance of the learners of which is proposed by many experts. Many aspects become the consideration of good writing skill. The four aspects or components of writing which were mentioned as indicators of good writing skill covers or comprises several sub skills. Among the many sub-skills the researcher used the following aspects of writing. Those are grammar, mechanics, organization, and coherence. To find out how the participants performed on the four aspects of writing, the participants' writing scores under each aspect of writing before and after the treatment were analyzed using paired samples T-test to compare the means and to see the improvement the use of graphic organizers as pre-writing strategy training as shown in the table below.

**Table 4**: Paired samples T-test on the aspects of paragraph writing improved after the treatment.

Writing aspects		Mean	N	SD	Т	DF	Sig. (2-	Mean
							tailed)	Difference
	Pre-test (Gr.1)	2.7237	38	.67481				
Grammar	Post-test	3.0395	38	.77444	-2.382	37	.022	-0.3159
	(Gr.2)							
	Pre-test	2.5395	38	.81690				
Mechanics	(Mch.1)							
	Post-test	3.0395	38	.77444	-3.002	37	.005	5000
	(Mch.2)							
	Pre-test	2.1711	38	.82426				
Organization	(Org1.)							
	Post-test	2.8421	38	.8559	-9.766	37	.000	-0.671
	(Org2.)							
	Pre-test	2.1842	38	.6516				
Coherence	(Coh.1)				-7.269	37	.000	-0.8158
	Post-test	3.0000	38	.5927				
	(Coh.2)							

The paired sample T-test from the above table illustrates the aspects of writing before and after the treatment. The result from the above table shows that, the mean of writing score of the participants on the aspect of Grammar before and after the treatment. That is pre-test grammar achievement is (2.72) where as the post-test of grammar achievement is (3.03) and the mean difference is (-0.32) which is different from zero. The result implies that the mean score of the participants on their grammatical accuracy was significant. The participants' paragraph writing achievement improved after the treatment. Similarly, the mean of paragraph writing score of the participants on the aspect of mechanics which comprises capitalization and punctuation, the result of the mean score before the treatment was (2.54) and their mean score after the intervention is (3.04), the mean difference of the two score is (-0.5) which is less than the alpha level (0.05). The result also indicates that, there is an improvement on their paragraph writing by involving them on the pre-writing strategy trainings particularly on using graphic organizes.

When we look at grammar, t (37) = -2.382 and sig. (.022). Since the significance is 0.022, which is less than the alpha level (P<0.05) for grammar, one can easily understand that there is a difference between the two means (G1 and G2). This result indicates that there is a significant improvement on the participants' grammatical accuracy.

On the other hand, when we look at another writing aspect which is organization from the above table, t (37) =-9.766, and sig. (0.000). Since the significance is 0.000, which is less than the alpha level (P<0.05); we can see that there is a difference between the two means (Org.1 and Org.2). This implies that the participants' showed significant improvement on their organization of thoughts or ideas after the treatment. When we consider the above table in terms of coherence, t (37) =-7.269, and the significant level (0.000). This significance is less than 0.05 (P<0.05). This result shows that there is also an improvement after the intervention.

Finally, when we consider the all the writing aspects from the above table, organization and coherence brought more significant improvement on the participants' paragraph writing performance as stated on the above paragraph. In other words, the significant level of the two aspects of writing (organization and coherence) as shown in the above table is (sig. 0.000 and 0.017) respectively. When we compare this significant level from the above two aspects (accuracy of grammar and mechanics), their significance level is (0.022 and 0.005) respectively. From this

difference, one can easily deduce that participants' paragraph writing performance in terms of organization and coherence is more improved than grammar and mechanics after the treatment.

# 4.4 Students' Perception towards Using Graphic Organizers and their Interview Analysis

Perception is a crucial part in any learning process. Students' perception affects the students' attitude in the learning progression. It is when students develop awareness about the use of prewriting strategy particularly using graphic organizers that they practice or apply in the learning of writing skill and their writing performance. Due to this fact, the data concerning the perception of participants were gathered after involving participants that they were systematically selected for the interview.

An interview was held with twelve students among the participants of the study to substantiate the data obtained from the two tests. In the analysis the students' responses were categorized: whether the students perceived that pre-writing strategy (using graphic organizers) improved their paragraph writing performance; whether or not the students liked the pre-writing technique particularly using graphic organizers in their paragraph writing achievement; whether the features or aspects of paragraph writing are improved by the use of using graphic organizers; whether the students' perception or attitude towards the use of graphic organizers to organize their paragraph changed; the advantages students get in the view of using graphic organizers in order to write their paragraphs.

Concerning the students' perception on the use of graphic organizers in improving their paragraph writing achievement; as all the interviewee explained their idea, since pre-writing strategies particularly using graphic organizers were given by the researcher, the students' paragraph writing performance was significantly improved. For example, (S1) stated that "it is the best method that enabled me to express my thought based on the suggested topic; as a result my writing skill is improved."

Similarly, (S1) describes regarding to the second interview question; whether or not the students liked the techniques they were used to write a paragraph; all the respondents expresses their views that they like the strategy (using graphic organizers). As the researcher understood from the respondents, it can be generalized that the interviewee perceived the use of graphic organizers as

best technique to categorize their feelings and ideas to write an organized paragraph. For instance, (S1) explained his idea as "I like more the technique that the researcher explained the way how we express and organize our thoughts on using graphic organizers and the methods under this strategy. That is "I very much astonished the sub- titles under graphic organizer i.e. main idea and the detail charts. In relation to this (S2) added his idea " to me writing a paragraph even a writing sentence did not feel confidence because I was not trust the words that I used to communicate with someone what I want to say. (S3) also added his idea on this point that, "Yes, I like it best. Because my experience writing a paragraph is somewhat vague that is too general. But after this training my feeling towards writing a paragraph is dramatically changed. Generally, I found the method of writing a paragraph more interesting and all of the respondents were encouraged and motivated by the writing techniques.

Similarly, regarding the aspects of writing (accuracy of grammar, mechanics, organization and coherence) S1 and S4 mainly mentioned that even though all the aspects were improved, organization and coherence were relatively more improved.

Concerning the advantages of using graphic organizers, almost all students have got important techniques that they had little or no awareness before involving this prewriting strategies training. When the researcher summarizes their ideas "we have had difficulties in terms of organizing our feelings and ideas to create a coherent paragraph." Particularly S<sub>3</sub> and S5 stated their ideas in terms of this point; their attitudes and feelings towards writing were very advanced. Our tolerance they said, in terms of drafting their idea and rewriting the final writing is simplified and got easier than before.

In general, the students' overall attitudes towards using graphic organizers as pre-writing strategies were very motivating. All the respondents stated that generally the pre-writing strategy specifically using graphic organizers brings a remarkable improvement in writing paragraphs as a whole. In their response, they also explained that using graphic organizers create good opportunity so as to improve their writing skills. From the responses of the interviewee, it is certain to conclude that the students develop positive attitude towards using graphic organizers as pre-writing strategies in order to express their feelings and thoughts and thus communicate with other people in written form.

#### 4.5 Discussion

The center of attention of this study was to investigate the effect of graphic organizers as prewriting strategy on students' paragraph writing performance. As described earlier, though many scholars claim that graphic organizers or mind map have invaluable contributions in developing students' awareness of writing strategies, these techniques of prewriting strategy were not practiced in the teaching of writing skill in the researcher's school.

Under this part, the data that had been gathered and analyzed were discussed under two themes, related to the objectives which were formulated underneath the research questions of the study. These are:

- ✓ To examine the effects of using graphic organizers as prewriting strategy on the students' paragraph writing performance.
- ✓ To see students' perception of the use of pre-writing strategy in writing classes.

Here, the findings and results were discussed based on the predetermined research objectives at the beginning. The researcher triangulated all the data which were collected using pre-test and post-test, and interview in order to achieve the specific objectives which were formulated at the opening.

The first research objective was aimed to examine the extent in which graphic organizers as prewriting strategies play great role on students' overall paragraph writing performance. The finding of the data obtained from the pre- and post-tests were analyzed using paired samples T-test as it was stated in table 1. This mean difference was the result of the different writing achievements of the participants before and after the treatment. The negative of the mean difference indicates that the post- test score is greater than that of the pre-test score since mean difference was calculated by subtracting post test mean from pre-test mean. This is verified by the finding from the students' interview. From the interviewee, it is possible to deduce that the students' general perception towards the effect of using graphic organizers on their writing achievement was very motivating. All the five interviewee stated that using graphic organizers as a prewriting strategy were very important and constructive in terms of improving their overall writing achievement and to know the quality of good written texts .The findings of this study goes along with the findings of the study conducted by Servati (2012) conducted an action research based on pre-writing strategies and their effect on students' writing. Her findings affirmed that the use of pre-writing strategies do in fact improve the quality of students' writing by supporting students through the writing process. The findings of this research is similar to the findings Emmanuel et.al (2017) on "a research based evidence of the effect of graphic organizers on understanding of prose fiction in the ESL classroom." Their conclusion asserted that the study has left us with no better conclusion than to state that literature not only plays a significant role in language learning, but also can be better taught and learned through the use of graphic organizers.

The second research objective was aimed at assessing the students' perception towards the use of graphic organizers as prewriting strategies in the writing classes. At the beginning of this study, most of the students in the researcher's school were not interested on participating or involving in the writing classes. So motivating them is not an essay job. But after the researcher explained the purpose of graphic organizers as prewriting strategies and created awareness about the usefulness of them (organizers), their perceptions were changed radically. However, Youlia (2018) had a different research design but the findings showed similar result in the present study. The study focused on "students' perception on teaching writing through face book group in EFL class. The result shows that the students gave signs about application of face book groups in teaching and learning writing because the majority of the students' answers indicated positive responses and perceptions. Such as students were like to practice writing by using face book group because it was motivating them to learn English. The students also claimed that, even though the use of face book group of teaching EFL writing is new learning technique for them but they claimed that learning by using face book group can help them to learn English easily especially in writing aspect.

Moreover, the finding of the present study goes along with Tayib (2015) research findings, who stated the participants' perception towards writing have changed dramatically. The students started to view writing as easy, exciting and interesting after they had completed their graphic organizers training.

#### CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION

#### **5.1 Summary**

The main objective of this study was investigating the effect of pre-writing strategies on students' paragraph writing performance and their perception with a particular reference to Injibara Secondary and Preparatory School of one section Grade eleven students. The product approach of teaching writing was the commencement/initiation of doing this research. To put this more directly, this study was targeted to check to what extent students use graphic organizers as prewriting strategies when they were exercising writing skill in the EFL classroom.

An attempt was made to investigate if there was a significant difference in the students' overall writing performance before and after the treatment by comparing the means of the two writing tests (pre- and post-test). In addition, the aspects of writing improved as a result of using graphic organizers as pre-writing strategies and students' perceptions towards using graphic organizers as pre-writing strategies during their writing expressions were assessed.

One section of grade 11 students which is primarily existing group of 38 students in grade eleven section 'B' was taken as a participant of the study. The data required to achieve the above mentioned pre-determined research objectives were collected using pre- test and posttest, and interview as subsidizing the collected data in the two tests. The pre-test was used to find out the level of students before the treatment was provided; and the post-test was administered to see the effect of using graphic organizers as pre-writing strategies have on the students' paragraph writing achievement and the characteristic features of writing. Both the pre-test and the post-test were marked by the two raters for reliability using the rating scale criteria of writing score, and the average of the two raters were used for the analysis. The raw data obtained from the above data gathering instruments (pre- and post-test), and interview were organized and summarized systematically as shown in appendix 'A' and 'B'.

In line to the two data collecting instruments, paired samples T-test was used using SPSS to analyze the collected data. The interview was employed in order to collect data from the students about their perception towards the effect of using graphic organizers as pre-writing strategies after the intervention. Eventually, semi-structured interview was conducted to five students selected by simple random sampling or lottery method by folding five pieces of paper with number in it out of

thirty-eighty students. This interview items are used to substantiate for the data collected from the two tests. In doing so, from the analysis of data obtained from the pre-test and post-test and interview, the major findings of the study were presented in the following paragraphs.

The findings of the data collected from pre- and post-tests indicated that there were statistically significant differences in the overall paragraph writing achievement of the students after involving the participants in using graphic organizers as prewriting strategy than their achievement before the intervention. In addition, using graphic organizers as prewriting strategy were found to improve the writing aspects such as accuracy of grammar, mechanics (capitalization and punctuation marks), organization and coherence significantly. Although all the aspects of paragraph writing performance were improved, organization and coherence were relatively shown significant improvement as indicated in table 3.

The interview analysis inferred that all of the interviewee developed remarkable positive perception (understanding) towards the use of graphic organizers as prewriting strategy and they liked most to continue when they want writing. Moreover, students are well aware of the benefits of using graphic organizers in order to organize their ideas, relationship of ideas in their written texts and their perceptions and attitude towards the writing skill.

#### **5.2 Conclusion**

The present study was intended to investigate the effects of graphic organizers as prewriting strategy on students' paragraph writing achievement at Injibara Secondary and Preparatory school: with a particular reference to grade eleven students. To achieve this general objective, the researcher formed three types of data gathering instruments, which include pre- and posttest and interview. After data analysis, the following conclusions were drawn:

The main objective of this research is to investigate the effect of using graphic organizers as prewriting strategy on students' paragraph writing performance. It has been proven through the data collected that the use of graphic organizers as prewriting strategy improves the quality of students' paragraph writing performance. The results of this study coincide with the study conducted by Breetvelt et.al (1994) conducted study relayed on," relations between writing process and text quality." They confirmed that using even a simplistic outline during the prewriting stage increases the quality of the written work.

- ❖ There are relationships between paragraph writing techniques and the improvement of the writing aspects (accuracy of grammar, mechanics, organization and coherence). Using constructive pre-writing instructions based on graphic organizers results in the overall improvement of students' paragraph writing performance. The result of the current study goes in line with Adas & Baki (2013). They confirmed that students improved significantly their writing using topic sentences; improve their spelling and grammar, mechanics, and coherent paragraph better than in the pretest.
- ❖ Using graphic organizers as prewriting strategy is found to be supportive mainly for organizing ideas and relationships of thoughts as shown in appendix 'A' and 'B'. These results were also confirmed by the responses of the students. The respondents also stated that "this strategy not only improves our writing performance but also they help us to develop our confidence towards writing and our perception on the way of writing." The conclusion of the present study is in consonance with the findings of Tayib (2015). He conducted an action research entitle on "the effect of graphic organizers on writing." His findings concluded that graphic organizers are effective instruments to develop the students' writing ability. He also added that the use of such organizers with a group of preparatory students in Saudi Arabia did have a significant positive impact on students' writing as well as on their attitudes towards this skill.
- ❖ The participants show significant improvements in their overall writing achievement. Regardless of the scope of the prewriting strategy instruction which were given by the researcher, no one denies the importance of pre-writing strategies specifically using graphic organizers but the extent in which English language learners use this strategy so as to get better in writing and also graphic organizers made paragraph writing easier for learners.
- According to the second research objective," what is the students 'perception toward the use of graphic organizers as prewriting strategy?" The students' perception towards the use of graphic organizers as prewriting strategy in learning EFL writing shows positive impact. All of the respondents answer indicated that using graphic organizers as prewriting strategy brought positive perceptions towards writing. The participants were interested to continue practicing writing by using graphic organizers. They also enjoyed writing in favor of graphic organizers. The conclusion of the current study is consonance with the conclusion

reached by Youlia (2018) conducted a case study entitled on" students' perception on teaching writing through face book group in EFL class." The findings revealed that the use of face book group made them interesting in following the lesson in the classroom and doing the task out of the classroom

❖ The researcher also confirms from the interviewee that all of the respondents developed a positive attitude towards prewriting strategy particularly using graphic organizers and they wanted to continue throughout their career or learning.

#### **5.3 Recommendations**

The researcher found it necessary to make some recommendations following the summary and findings of the present research and the conclusion made. These recommendations could be used to enhance the teaching-learning processes of L2 paragraph writing skills in secondary and other school levels. Based on the findings of the study, the following recommendations were forwarded:

- ❖ This study could be considered a preliminary investigation on the issue of paragraph writing strategies in Injibara Secondary and Preparatory school students, it insights further researchers to looked out the effectiveness of other techniques in other aspects of writing in order to improve students' writing skill in general and paragraph writing performance in particular.
- ❖ English language teachers should give emphasis on enhancing or encouraging communicative competence in writing skills among students and other people around them. This could be done through exposing students to use prewriting strategy; such as using graphic organizers, brainstorming, drafting, editing e.t.c before writing their actual written work.
- ❖ Teachers of English language should expose students on the regular use of various teaching strategies and methods like the processes approach to help them to go for and back in their writing tasks during their writings.
- ❖ This study has dealt with a sample of grade eleven students and proved that graphic organizers are effective in teaching writing to these students. Further research, however, needs to investigate the effectiveness of such techniques in teaching writing to other grade levels.

- ❖ Students should give due attention to the different types of graphic organizers as prewriting strategy to improve their writing skills.
- ❖ Finally, another study needs to be conducted to check if graphic organizers could be equally effective as strategies for teaching other language skills such as reading comprehension, listening and speaking.

#### REFERENCES

- Abiy Yigzaw & Mohammed Bashir (2011). Frequency, Purpose and Application of using Amharic and its effect on the EFL students' writing Performance. *Journal of Education and science*, vol.6 (2).
- Adas, D., & Bakir, A. (2013). Writing difficulties and new solutions: Blended Learning as an approach to improve writing abilities. *International Journal of humanities and social science.Vol.3* (9)
- Andualem, T., Assefa, K., & Zewudie, G. (2015). Basic writing skills. College of Teachers' Education module. Amhara National Regional state Education Bureau.
- Alshatti,S.A. (2012). Embedding Graphic Organizers in the teaching and learning of family and Consumer sciences in Kuwait. *Retrieved from http://eprints.qut.edu.au*.
- Ary, D., Jacobs, L. Ch., Razavieh, A. & Sorensen, Ch., K. (2010). Introduction to Research in Education (8th ed). Canada: Nelson Education.
- Asfaw sendeku (2018). The effect of cooperative learning on developing learners' writing skill.

  Department of English Language and Literature. Bahir Dar University. Bahir Dar.
- Badger, R. & White, G. (2000). A process genre approach to teaching writing. *EFL Journal*, Vol.54: 153-160.
- Benard, N.N. (2014). Challenges students' face learning essay writing skills In English language.

  A district Nyamira country, Kenya.
- Boughey, C. (1997). Learning to writing by writing. ELT Journal, vol.51 (2), 126-134.
- Breetvelt, I., Van den Bergh., & Rijlaarsdam, G. (1994). Relatins between writing process and text quality. The reading teacher.65 (5), 313-323.
- Bromely, K., DeVitis, L.I., & Moldlo, M. (1995). Graphic organizer: Visual strategy for active Learning. New York. Scholastic professional Books. Retrieved from https://www.edb.gov.hk
- Brown, H. (2007). Principles of Language learning and teaching (5<sup>th</sup> Ed.). United States of America: Pearson Education, Inc.
- Chamot, A. (2005).Language learning strategy instruction: current issues and research. Annual review of applied Linguistics, Vol.25, 112-130
- Cohen, A. (2003). Strategy training for second language learners. New York: New bury House.

- Cole, J. & Feng, J. (2015). Effective Strategy for Improving Writing Skills of Elementary English Language Learners. Chinese American Educational Research and Development Association Annual Conference.
- Creswell, J. W. & Plano Clark. V. L. (2009). *Designing and conducting mixed methods research*. Thousand Oaks. CA: Sage.
- Dawit, A. (2013). Enhancing students' writing skill through the genre approach: *Journal of English Language and Literature*. Vol.4 (5), 242-248.
- Deribsa Abate (2018). Research Methodology. A handbook for Research students and Practitioners. Mega Printing press.
- Emmanuel, U., Emmanuel, A.O., Edwin, D. & Eugenia, A.E. (2017). A Research-based Evidence of the Effect of graphic Organizers on the Understanding of prose Fiction in the ESL Classroom. *Retrieved from http://journals.sagepub.com/*.
- Fathman, A. and Whalley, E. (1985). Teacher treatment of error and student writing accuracy.

  Paper Presented at the 9<sup>th</sup> annual TESOL convention. New York.
- Flowers, L., & Hayes. R. (1980). The dynamics of composing: Making plans and juggling Constraints. Hillsdale, NJ: Erlbaum.
- \_\_\_\_\_ (2002). Methodology in language teaching: An anthology of current practice. Cambridge: Cambridge University press. New York.
- Freeman, R. & Lewis, R. (1998). Planning and implementing Assessment. London: Kogan Page.
- Gallavan, N.P. & Kottler, E. (2007). Eight types of graphic organizers for empowering social studies studies students and teachers. *Journal of Social studies Vol* (98), 117-123.
- Glatthrom, A. (1998). Writing the winning dissertation: A step by step guide. Thousand Oaks, CA: Crowing Press.
- Goldman, S.R. and Rakestraw, J.A. (2000) Structural aspects of constructing meaning from text, in Kamil, M.L., Rosenthal, P.B., Pearson, P.D. and Barr, R. (eds.) *Handbook of Reading Research Vol. 3*, Mahwah, NJ: Lawrence Erlbaum Associates.
- Gutema Nigatu (2011). An investigation into the techniques and challenges of teaching writing skill in large EFL classes. Department of English Language and Literature. Bahir Dar University: Bahir Dar.

- Haregewein Abate (2003). The Effect of Communicative Grammar on the grammatical accuracy of students' writing: An Integrated Approach to TEFL. Unpublished PhD dissertation, Addis Ababa. Addis Ababa University.
- Hedge, T. (2000). Teaching and Learning in the language Classroom .Oxford: OUP.
- Hedge, T. (2005). Writing. London: Oxford Printing Press.
- Hughes, R. (2003). Teaching and researching speaking. Warlow: Longman.
- Hyland, K. (2003). Second Language writing. Cambridge: Cambridge University Press.
- Hyland, K. (2004). Genre and Second language writing. Ann Arbor MI: University of Michigan: Michigan Press.
- Ibrahim, B.A. (2016). An analysis and evaluation of the academic writing processes. *Journal of humanities*, vol.12 (4).
- Jiang, X. and Grabe, W. (2009) Building reading abilities with graphic organizers, in Cohen, R. (ed.) *Explorations in Second Language Reading*, Alexandria, VA: Teachers of English to Speakers of Other Languages (TESOL).
- John, S. (2001). Collins Combuild: English dictionary for advanced learners. The University of Birmingham (3<sup>rd</sup> Ed.). Harper Collins publishers (p.1540).
- Kharma, N. (1986). Composition problem: Diagnosis and Remedy. Journal of English Teaching Forum. Vol, 24(3).
- Kolade, T. (2012). The influence of process approach on English as a second language students' performance in essay writing. *Journal of English Language teaching*, 5 (3), 16-29
- Kothari, C.R. (2004). Research Methodology: Methods and techniques 2<sup>nd</sup> Ed. New Delhi: Published by New Age International (p) Ltd. publisher.
- Krashen, S.D. (1984). Writing: Research, theory and applications. Oxford: Pergamum Institute of English
- Kroll, B. (1991). Second Language writing: Research in sights for classroom. Cambridge: CUP.
- Langan, J. (2005). College writing skill with reading. McGraw.Hill.ISBN:0-07-287132-6
- Lee, C. and Tan, S. (2010). Scaffolding writing using feedback in students' graphic organizers-novice writers' relevance of ideas and cognitive loads. *Journal of Educational Media International*. Vol.47 (2), 135-152.
- Leki, I. (1991). Teaching Second Language Writing: What we seem to be. Forum, vol.29(2).

- Lorenz, B., Green, T., & Brown, A. (2009). Using multimedia graphic organizers Software in the prewriting activities of primary school students. What are the benefits? *Computers in the schools*, 26, 115-129.
- Madsen, H.S. (1983). Techniques in Testing. New York: Oxford University Press.
- MoE (1994). The New Education and Training Policy. Addis Ababa. Ethiopia.
- Mengistu Atinafu (2018). The effect of explicit grammar instruction on EFL students' paragraph writing performance. Department of English Language and Literature. Bahir Dar University: Bahir Dar.
- Miller, R.K. (1999). Motives for writing. University of St. Thomas. (3<sup>rd</sup> edition).
- Misrak Tesfaye (2007). Techniques employed in teaching writing through plasma. (Unpublished) MA thesis, AAU.
- Molla Asmare (2009). Some causes of writing problems of second year English majors at Abbiyi Addi College of teacher Education. Addis Ababa University: Addis Ababa.
- Mulusew Addisu (2018). Exploring the practice of teachers' written feedback on students' writing.

  Department of English Language and Literature. Bahir Dar University: Bahir Dar.
- Nejadansari, D. (2012). The Effect of Different Prewriting Strategies on Iranian EFL Writing Achievement. *International Educational Studies*, Vol. 5(1).
- Nesbit, J & Adesope, O. (2006). Learning with concept and knowledge maps: A meta-analysis. *Review of Education Research*, 76(3), 431-448.
- Neumann, H., and McDonough, K. (2015). Exploring student interaction during collaborative prewriting discussions and its relationship to L<sub>2</sub> writing. *Journal of second language* writing 27 (84-104).
- Oso, Y. & Onen, D. (2005). A general guide to writing research proposals and report. Nairobi: Option printers and publishers.
- Peter, E. (1992). Writing without teachers: free writing- Wikipedia: http://en.m.wikipedia.org.
- Raimes, A. (1983). Techniques in teaching writing. Oxford: Oxford University press.
- Raphael, J. &Barton, R. (2015). Standards for scoring writing tests. Retrieved from http://educationnorthwest.org/
- Reid, J. (1993). Teaching ESL writing. USA: Regents Prentice Hall.
- Richards J.C. & Lockhart, C.(2006).Reflective in second language classrooms. New York: Cambridge University press.

- Roach, P. (1991). English phonetics and phonology. Cambridge: Cup, 2<sup>nd</sup> Ed.
- Rubin, J. (1997).Learner strategies: Theoretical assumptions, research history and typology. Englewood cliffs, NJ: Prentice Hall.
- Sam, P.D. & Rajan, P. (2013). Using graphic organizers to improve reading comprehension skills for the middle school ESL students. *Journal of English Language Teaching vol* (6), 155-170 doi: 10.4304.jltr.5.1.215-220
- Servati, K. (2012). Prewriting Strategy and their Effects on Students' Writing. Fisher Digital Publications
- Solomon Abate (1996). The realization of process approach to writing at the level of grade 10 students. Unpublished MA thesis. Addis Ababa University.
- Sommers, N. (1982). Responding to student writing. College Composition and Communication, 33, 148-156.
- Sintayehu G/ Mariam (2009). An assessment of cooperative learning in the teaching- learning Writing in Addis Ababa three private Secondary Schools. Unpublished MA thesis, Addis Ababa.
- Squire, J.R. (1979). Instructional Focus and the Teaching of Writing. Learning to write: First language Second language learning. London and, New York.
- Tayib, A.M. (2015). The effect of graphic organizers on writing. A case study of preparatory college students at Saudi Arabia University. *International Journal of English language* and Linguistic Research. Vol.3 (1), 15-36.
- Tekle, F., Endalfer, M., & Ebabu, T. (2012). A Descriptive Survey on Teachers' Perception of EFL Writing and Their perception of Teaching Writing. *Journal of English Language and literature*. *Vol.* 8(1).
- Teshome Tola (2008). Exploring the effectiveness of teaching and learning of the writing skill.

  Asela college of Teachers' Education in focus. Unpublished MA thesis . Addis Ababa University.
- Tompkins, G., Rod C. R., and David G. D. (2010). Literacy for the 21<sup>th</sup>Century. Pearson Australia.
- Yin, R.K. (2011). Qualitative research from starting to finish. New York: The Guilford press.
- Youlia,L.(2018). Students' perception on teaching writing Through Face Book in EFL class. *Journal for language and foreign Language learning. Vol.7(1),57-66. Retrieved from*<a href="http://dx.doi.org/10.21580/vjv7i12739">http://dx.doi.org/10.21580/vjv7i12739</a>.

Yu-Feng, L., Chun-Ling, H., & Hung-Ju, H. (2011). Effects of guided writing strategies on students' writing attitude based on media technology theory: *The Turkish Online Journal of educational technology*. 10(4)

Weigle, S.C. (2002). Assessing writing. Cambridge: Cambridge University Press.

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#### **APPENDICES**

#### Appendix 'A' pre-test paragraph writing achievement

N <u>0</u>	Gran	nmar		Mecl	hanics		Orga	anizatio	n	Cohe	erence		Sum.
sts	R1	R2	AV.	R1	R2	AV.	R1	R2	AV.	R1	R2	AV.	Av.
1	3	4	3.5	3	4	3.5	4	4	4	3	3	3	14
2	3	3	3	3	2	2.5	3	4	3.5	3	4	3.5	12.5
3	2	3	2.5	2	2	2	3	3	3	3	2	2.5	10
4	2	2	2	2	3	2.5	2	3	2.5	2	2	2	9
5	3	3	3	3	2	2.5	2	2	2	3	2	2.5	10
6	3	4	3.5	3	2	2.5	3	2	2.5	3	3	3	11.5
7	3	2	22.5	2	3	2.5	4	4	4	3	4	3.5	12.5
8	4	3	3.5	4	4	4	4	5	4.5	2	2	2	14
9	1	2	1.5	3	3	3	2	1	1.5	1	1	1	7
10	2	2	2	2	2	2	2	3	2.5	2	1	1.5	8
11	3	3	3	3	3	3	1	2	1.5	3	2	2.5	10
12	2	3	2.5	3	1	2	1	1	1	1	1	1	6.5
13	3	4	3.5	2	3	2.5	1	3	2	3	2	2.5	10.5
14	2	3	2.5	2	1	1.5	2	2	2	2	2	2	8
15	3	2	2.5	1	1	1	2	1	1.5	1	2	1.5	6.5
16	3	3	3	3	2	2.5	3	1	2	2	1	1.5	9
17	2	3	2.5	2	2	2	2	1	1.5	3	1	2	8
18	2	2	2	2	3	2.5	3	1	2	1	3	2	8.5
19	1	2	1.5	1	1	1	1	2	1.5	2	2	2	6
20	2	3	2.5	3	3	3	2	2	2	2	3	2.5	10
21	3	3	3	2	2	2	2	1	1.5	3	3	3	9.5
22	3	2	2.5	3	2	2.5	1	1	1	2	1	1.5	7.5
23	4	2	3	1	2	1.5	3	1	2	2	2	2	8.5
24	2	2	2	3	2	2.5	2	1	1.5	3	3	3	9
25	3	3	3	4	3	3.5	1	3	2	2	3	2.5	11
26	3	2	2.5	3	3	3	2	3	2.5	3	2	2.5	10.5
27	2	3	2.5	3	1	2	1	1	1	1	3	2	7.5
28	1	1	1	2	2	2	1	2	1.5	2	1	1.5	6
29	4	4	4	3	4	3.5	3	2	2.5	3	2	2.5	12.5
30	3	3	3	3	4	3.5	2	1	1.5	3	3	3	11
31	2	2	2	3	2	2.5	2	2	2	3	2	2.5	9
32	2	3	2.5	1	2	1.5	3	2	2.5	2	2	2	8.5
33	3	3	4	3	3	3	2	3	3	1	2	1.5	11.5
34			3	4		3.5			2.5	1		1	10
35	2	5	3.5	3	1	2	1	3	2	1	2	1.5	9
36	3	3	3	4	3	3.5	3	2	2.5	3	2	2.5	11.5
37 38	3	3	3.5	2	3	3.5	2	3	1.5 2.5	3 2	2 2	2.5	9.5
Sum	3	3	103.5	4	3	95.5	<u> </u>	3	92.5	<u> </u>		83	364.5
Av.	+		2.72			2.51			2.43			2.18	9.59

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#### **Appendix 'B': Posttest Paragraph Writing Achievement**

No of	Gram	mar		Mech	anics		Organization Coherence			Sum			
Sts	R1	R2	Av.	R1	R2	Av.	R1	R2	Av.	R1	R2	Av.	Av.
1	4	4	4	3	5	4	5	4	4.5	3	3	3	15.5
2	3	4	3.5	4	3	3.5	4	3	3.5	4	4	4	14.5
3	3	3	3	3	3	3	4	3	3.5	3	3	3	12.5
4	5	4	4.5	3	3	3	3	3	3	3	3	3	13.5
5	4	4	4	3	3	3	4	4	4	5	4	4.5	15.5
6	4	3	3.5	4	3	3.5	3	4	3.5	3	3	3	13.5
7	3	3	3	2	4	3	5	5	5	2	3	2.5	13.5
8	3	2	2.5	4	4	4	5	5	5	4	3	3.5	15
9	2	3	2.5	3	4	3.5	3	2	2.5	3	2	2.5	11
10	3	3	3	3	2	2.5	3	2	2.5	3	2	2.5	10.5
11	2	3	2.5	4	3	3.5	2	2	2	2	3	2.5	10.5
12	2	2	2	3	2	2.5	2	2	2	3	3	3	9.5
13	4	3	3.5	3	3	3	3	2	2.5	3	4	3.5	12.5
14	3	3	3	2	2	2	3	2	2.5	3	3	3	10.5
15	3	4	3.5	2	2	2	2	2	2	3	2	2.5	10
16	2	3	2.5	3	2	2.5	3	3	3	3	3	3	11
17	3	2	2.5	2	2	2	2	3	2.5	3	3	3	10
18	2	2	2	2	2	2	3	2	2.5	2	3	2.5	9
19	3	3	3	2	3	2.5	2	2	2	2	3	2.5	10
20	4	2	3	2	2	2	3	3	3	2	3	2.5	10.5
21	4	4	4	2	3	2.5	2	2	2	3	3	3	11.5
22	3	1	2	1	1	1	2	1	1.5	2	2	2	6.5
23	2	1	1.5	1	1	1	3	1	2	2	3	2.5	7
24	3	3	3	3	2	2.5	2	2	2	3	3	3	10.5
25	3	4	3.5	3	3	3	2	3	2.5	3	3	3	12
26	2	2	2	3	3	3	3	3	3	3	3	3	11
27	2	3	2.5	3	2	2.5	2	2	2	3	2	2.5	9.5
28	1	3	2	3	1	2	2	2	2	3	3	3	9
29	2	2	2	3	3	3	3	2	2.5	3	3	3	10.5
30	4	3	3.5	4	4	4	3	3	3	3	4	3.5	14
31	3	2	2.5	2	2	2	2	2	2	4	3	3.5	10
32	3	3	3	2	2	2	3	4	3.5	3	4	3.5	12
33	4	5	4.5	4	3	3.5	4	4	4	3	3	3	15
34	4	4	4	3	4	3.5	3	3	3	3	2	2.5	13
35	3	5 3	3	3	2	2.5	3	4	3	3	3	2.5	12
36 37	4	4	4	3	2	2.5	2	3	3.5 2.5	3	4	3.5 3.5	14 12.5
38	3	4	3.5	4	4	4	3	3	3	3	2	2.5	13
sum	_	•	115.5	•		105.5			108		-	112.5	442
Av.			3.04			2.78			2.86			2.96	11.63
AV.			3.04			2.70			2.00			2.50	11.03

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#### Appendix 'C': Students' Interview Questions

This interview is concerned with the perceptions you have regarding the use of graphic organizers as pre-writing strategies you were given for about six weeks i.e. from February 14- March 26/2019. I kindly request you to be genuine in your response.

- 1. As I stated in the introduction, you have been taking training about prewriting strategy particularly using graphic organizers to your writing performance. Have you liked the training or not? Why?
- 2. Were you encouraged and motivated by the writing strategies that you have instructed or trainined previously?
- 3. What feature(s) of writing (accuracy of grammar, mechanics, organization or coherence is/ are improved by the training that you have given?
- 4. What can you say specifically about the advantages of graphic organizers as prewriting strategy?
- 5. In general, what can you say about the advantage of using graphic organizers in your writing task?

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#### **Appendix 'D': Transcription of the Interview.**

This interview is concerned with the perceptions you have regarding the use of graphic organizers as prewriting strategy during the instruction or training since Feb.14/2019. I kindly request you to be genuine in your response.

- **Q1**. As I stated earlier, you have been taking part the training about the use of graphic organizers as prewriting strategy. Have you liked the instruction or not? Why?
- **S1**: Yes, I liked the training very much! Because the training changes my feeling radically towards the writing skills.
- **S2**: Ya!! I liked the training. Because the instruction period that was taken over the past six weeks was interesting in terms of overcoming the writing difficulties. For example, topics and their details.
- **S3:** Yes, I liked the instruction period definitely. Because the training enabled me to identify my strength and weakness during writing tasks.
- **Q2**: Were you encouraged and motivated by the writing strategies that you have instructed or trained previously?
- **S1**: I am motivated because the training made me courageous to practice writing a lot in a range of prewriting techniques.
- **S2**: I am really encouraged by the graphic organizers as prewriting strategy. Because they are the best ways to dare the challenges of the writing skills.
- **S3**: I am encouraged and motivated by the training because the training provided me the best methods or techniques in order to improve the writing skills.
- **Q3**: What feature(s) of writing skills (accuracy of grammar, mechanics, organization and/or coherence) is /are improved by the training?
- **S1**: Graphic organizers as I understood during the training are the visual representation of ideas. Therefore, they are very advantageous to put ideas in a visual way before arranging them in the form of paragraph.

- **S2**: Prewriting strategy has many advantages. The first and the most important one is arranging ideas in a logical way. It is easy for me to identify misrelated sentences from the details.
- **S3**: Among the different types of graphic organizers as prewriting strategy, I am really got advantage specifically on 'main idea and detail charts'. This type of graphic organizers made writing activities convenient to me.
- **Q4**: What can you say specifically about the advantages of graphic organizers as prewriting Strategy?
- **S1**: I know a little about grammar and mechanics in general before I participated this instruction. But the training that I/ we have taken for about six weeks developed more on organization and coherence than grammar and mechanics.
- **S2:** Actually, I have got many constructive instructions on all of the features of writing aspects. The instruction was very essential, thus I have encouraged writing on wards on favor of the lesson provided.
- **S3**: The instruction that I have attended was really significant in terms of improving the overall qualities of writing. But relatively I got constructive instructions on organization of ideas and internal logic of sentences among the four aspects of writing.
- **Q5**: In general, what can you say about the use of graphic organizers as prewriting strategy in developing or improving your writing skills?
- **S1**: Generally, graphic organizers or mind mapping are important techniques of improving my or our writing skills. Particularly my feeling towards the writing skills are changed positively, especially in order to develop idea generation, organization and internal relations of ideas are improved radically.
- **S2**: Graphic organizers or mind mapping or clustering of ideas are excellent technique in terms of organizing my ideas and they enables deleting an irrelevant ideas/ sentences from my written text/ paragraph.
- **S3**: These techniques enabled me to improve my overall writing skills in particular and English language in general. Thus, generally the quality of presenting my idea in written form is improved.

#### ባህር *ዳ*ር ዮኒቨርሲቲ *'*Lውማኒቲ ፋኩሲቲ

#### የድህረ ምረቃ ትምህርት የእንግሊዘኛ ትምህርት ክፍል

#### በ11ኛ ክፍል ተማሪዎች ቃለ መጠይቅ

ውድ ተማሪዎች የዚህ ቃለመጠይቅ ዋና አላማ የቅድመ ጽሁፍ ሥነ ስልትን መሠረት በማድረግ የተማሪዎችን የጽሁፍ ችሎታ ለማባሻል ስላለው ጥቅምና አተገባበር ጉዳዩችን በመፈተሽ የመፍትቴ አቅጣጫዎችን ለመጠቆም የሚያስችሉ መረጃዎችን ለመሰብሰብ ነው። በመሆኑም እናንተ የምትሰጡት ምላሽ ለዚህ ጥናታዊ ጽሁፍ ወይም ምርምር ማሰካት ከፍተኛ አስተዋጽኦ አለው።

**ማሳሰቢያ**፡ የምትሰጧቸው መልሶች የጥናቱን አሳማ ከማሳሰጥ ውጭ ስሌሳ አ*ገ*ልግሎት አይውልም፡፡

- 1. መግቢያው ላይ እንደገለፀሁት የቅድመ አንቀጽ ጽሁፍ ስነ ዘይ አጠቃቀምን በተመለከተ የተሰጠውን ሥልጠና ወደህዋል /ወደሽዋል/?ለምን?
- 2. ቀደም ብስህ ሥልጠና በወሰድኽው የቅድመ ውሁፍ ሥልት ላይ ዐንቀፀ ስመፃፍ ተበስታተሀል/ ሻል። ስምን?
- 3. ከሚከተሉት የጽሁፍ መመዘኛዎች /መስኪያዎች/ መካከል በየትኞቹ ላይ የተሻለ ለውጥ ወይም ማንዛቤ አማኝተዛል/ሻል/?
- 4. የአሪምሮ ስዕል በሚለው ሥነ ዘዴ ላይ ያለህ ወይም ያለሽን አመሰካከት በአጭሩ ግለጭ/ግለጽ/፡፡
- 5. በአጠቃላይ በጹፍህ/ሽ/ ክህሎት ላይ የአዕምሯዊ ሥዕል ወይም የይዘት ካርታ ያገኘህውን/ሽውን/ ግንዛቤ እንዴት መግለፀ ትችልለህ/ሽ/?

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#### Appendix' E': Paragraph Writing Evaluation Criteria

Aspects of writing	Criteria to evaluate the students' paragraph writing	Rating scale
Grammar	All grammatical patterns are exactly correct	5
	Almost no grammatical patters are incorrect	4
	Grammatical inaccuracies rarely happened	3
	Frequently grammatical inaccuracy occurred	2
	Almost all grammatical pattern inaccuracies occurred	0-1
Mechanics (	Punctuation marks are totally used appropriately	5
punctuation)	Almost no error on punctuation marks	4
	Some punctuation marks are split /violated	3
	Many punctuation marks are violated	2
	Ignorance of appropriate punctuation marks are made	0-1
Mechanics	Accuracy of capitalization are used correctly	5
(capitalization)	Almost no incorrectness of appropriate of capitalization	4
	Capitalization inaccuracies are rarely used	3
	Almost all capitalization errors are occurred	2
	unawareness of conventional capitalization are clearly seen	0-1
Organization	Logically well structured and flow of ideas are clear	5
	Almost all sentences are written in parallel structure	4
	Sufficient organizational skills are applied	3
	Very few organizational skills are used	2
	No apparent organizational skills are used	0-1
Coherence	All necessary cohesive devices are available	5
	Almost no cohesive devices are violated	4
	Satisfactory use of cohesive devices are made	3
	Unsatisfactory cohesion devices are often used	2
	Cohesive devices are almost ignored	0-1

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#### Appendix 'F': Topics for Writing Activities in the Students' Textbook

Topics for writing presentation on the students' text-book

- 1. Saving water in Ethiopia
  - Write two to three paragraphs (not more than one side of a page) about the best water conservation method/ methods.
- 2. A report on some data
  - You are going to write a one- paragraph report on the data about NGO projects given in the table (P-271).
  - Begin by discussing the data with a partner or in a small group
- 3. A brochure about your NGO
  - Having found out about NGOs in your area, it is now time for you to create your own!
  - Phase 1: (what kind of NGO? What does it do?)
  - Phase 2: Plane your brochure
  - Phase 3: Write your brochure!
- 4. An Essay
  - You are going to write an essay on an aspects of development
  - Think about a topic you are interested in writing about. Here are some examples. Think of some others:
    - ✓ Why education in the key to development?
    - ✓ Corruption is the enemy of development
    - ✓ What (the name of your town / village /region/country needs to develop
    - ✓ Causes and consequences of deforestation
- 5. An information leaflet
  - Now you are going to write an information leaflet on one of these topics, or another climate or weather related topics.
    - ✓ Climate change
    - ✓ The greenhouse effect
    - ✓ Deforestation
    - ✓ Weather
    - ✓ The importance of weather forecasts. Follow these steps:
  - Research your information leaflet
  - Write your information leaflet

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## Appendix 'G': Teaching Instruction Material or Module to the Participants What are Graphic Organizers?

**Definition**: Graphic organizers are visual representation of knowledge that structures information by arranging important aspects of a concept or topic into a pattern using labels. (Bromley, DeVitis & Modlo, 1999). Their main function is to help present information in concise ways that highlights the organizations and relationships of concepts. They further define as graphic organizers provide a visual method of developing, organizing and summarizing students learning, they help to structure disjointed information .They facilitate the learning process by providing a scaffolding for the development of ideas and the construction of knowledge . Visual, auditory and kinesthetic learners all benefit from using the organizers. High quality teaching in mixed ability classrooms is also facilitated.

Another scholar define graphic organizers as: they are visual displays of key content information designed to benefit learners who have difficulty organizing information (Fisher & Schumaker, 1995). Graphic organizers are meant to help students clearly visualize how ideas are organized within a text or surrounding a concept. They provide students with a structure for abstract ideas.

Some graphic organizers are more applicable to the different aspects of the learning process than others, for example; collecting information, comparing and contrast, developing ideas, sequencing information, summarizing and extending thinking and learning. Some are also more relevant to different subjects and topics than others. They can all be used at the various stages of the learning process. Those are:

- > Pre-teaching
- Introducing topics
- > Teaching a topic
- > Independent learning
- > Study and revision
- Preparing answers to examination questions

They scaffold learning and help to build student confidence. They also facilitate formative assessment as students can clearly see how much they understand.

Graphic organizers, as illustrated by Drapeau (1998), can be used to enhance students' thinking skills by encouraging brainstorming, generating new ideas, connecting parts to the whole, drawing sequence, analyzing cause and effects etc.

#### 1. Reasons for Using Graphic Organizers

- 1.1 Graphic organizers are tools for critical and creative thinking- they help students focus on what is important (Bromley, DeVitis & Modlo, 1995). Because they highlight key concept and vocabulary, and the relationships among them. Thus, providing the tools for critical and creative thinking.
- 1.2 They are tools for organizing information-The human mind organizes and stores information in a serious of networks (Ausubel, 1968). Graphic organizers are visual representations or depictions that resemble networks and allo2 students to add or modify their background knowledge by seeing the connections and contradictions between existing knowledge and new information.
- 1.3 They are tools for understanding information relationships- they are serve as a mental tools (Vygotsky, 1962) to help the students understand and retain important information and their relationships.
- 1.4 Graphic organizers are tools for depicting knowledge and understanding-They provide an optional way of depicting knowledge and understanding (Sorenson, 1991), so it is particularly beneficial for students who have difficulty with expressing relationships among parts academic writing concepts in written works.
- 1.5 They are tools for self-learning-Students who use graphic organizers in the classroom develop their ability to use them independently as study tool for note making, planning ,presentation and review (Dunston, 1992). In other words, graphic organizers are beneficial to students' learning inside and beyond classroom.

#### 2. Types of Graphic Organizers

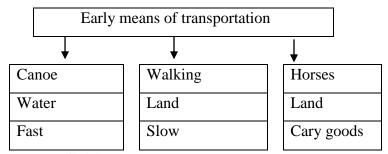
Graphic organizers can be categorized in many ways according to the way they arrange information: hierarchal, conceptual, sequential, or cyclical (Bromley, et.al 1995). Some graphic organizers focus on one particular content area. For example, a vast number of graphic organizers have been created solely around reading and pre-reading strategies (Merkely & Jeffries, 2000).

The different types of graphic organizers and their uses are illustrated below.

#### 1. Concept Map

Concept map is a general organizer that shows a central idea with its corresponding characteristics. Concept maps can take many different shapes and can be used to show any type of relationships that can be labeled. Maps are excellent for brainstorming, activating prior knowledge, or generating synonyms. Maps can be used to show hieratical relationships with the most important concept placed at the top.

**Example 1: Means of Transportation** 



**Example 2: Concept Definition Map** 

Topic- Money

#### Concept

- ✓ Money is defined as a generally accepted medium of exchange
- ✓ Besides the function of medium of exchange, money usually performs basic functions of unit of account, standard of deferred payment and store of value
- ✓ To perform the functions effectively, money should have the qualities of stability (in intrinsic value), durability, visibility, portability and homogeneity.
- ✓ Paper notes, coins and demand deposit (cheques) are generally accepted as examples of money because they perform most of the basic money functions.

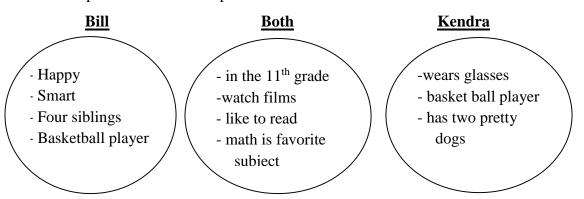
**Definition**- Generally accepted medium of exchange

**Function**- medium of exchange, unit of account, store of value, standard of deferred value **Qualities**- divisibility, homogeneity, portability, durability, and stability

**Example**- Paper money and coins are money because they perform all four functions of money.

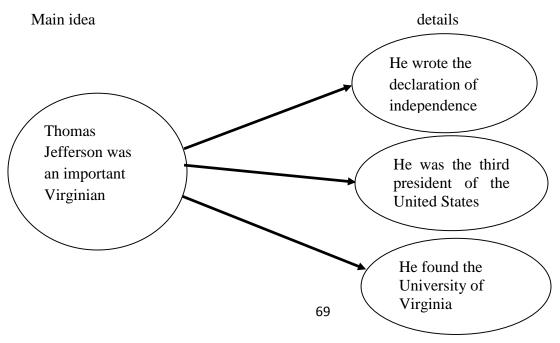
Compare and Contrast or Venn diagram- Compare and contrast or Venn diagram is
used to identify the similarities and difference between two or more concepts. They are
the most commonly used organizer. This instructional tool is found in text books,
standardized tests, and teacher resource materials.

Example 2: Character comparison



**3. Main Idea and Details Chart-** The main idea and detail chart shows the hierarchical relationships between major concepts and their subordinate elements. This organizer is extremely beneficial in helping students to distinguish central ideas and their corresponding details from less important information. When using this type of graphic organizer clearly label the main idea and the details as such use a different shape or area for the main idea and the details.

Example 3:



**4. Cause and Effect diagram**- A cause and effect diagram highlights the direct relationships between different events or concepts .This tool is one of the most beneficial organizers because of its main applications in all subjects .Foe example, this diagram might be used to analyze characters and events in all language skills, to discuss major events in social studies, or to study the importance of science experiment.

