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**The Effectiveness of Clustering in Improving
Students' Expository Paragraphs
Case of Third Year Scientific Classes at Badi Mekki
Secondary School Zeribet El Oued**

**Thesis submitted to the Department of English in candidacy for the degree
of 'Doctorat LMD' in TEFL**

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Dedication

In memory of my father

This work is dedicated to:

my mother

my husband, Issam

my brothers and sisters: Faycel, Chaouki, Adnane, Ahlem and Sana

all my relatives and friends.

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Abstract

Producing an effective paragraph in English constitutes a difficult task for students due to the complex nature of the writing skill as well as the way of teaching it. The present study aimed to check whether the use of clustering as a prewriting strategy would enhance third-year scientific stream students' expository paragraphs at Badi Mekki Secondary School, Zeribet El-Oued, Biskra at the level of content, organization, vocabulary, language use and mechanics. To achieve the aforementioned objective and to test the hypotheses, a quasi-experimental research was conducted with a control group of 27 students who were taught using the conventional technique of questioning during the pre-writing stage and an experimental group of 28 students. Before starting the treatment, a pre-questionnaire was administered to 7 teachers of English at Zeribet El-Oued Secondary Schools to confirm that problems in terms of all features of writing exist among third-year scientific classes. After the exposure of the experimental group to the treatment during six months, a comparison was made between the pre-test and the post-test results of both groups and the calculation of the t-test was done to remark if there is any change in terms of the five tested aspects of writing. Further, a post-interview was held with the experimental group to know about their attitudes towards the clustering technique. The post-test findings showed that the latter group positively worked out in three aspects only (content, organization and vocabulary); however, they did not score well in the remaining ones (language use and mechanics). The results revealed the significant use of the clustering strategy (t-test value= 10.75), if compared to the critical value (1.67), on developing students paragraphs in addition to the students' positive attitudes towards it.

Keywords: writing process, pre-writing stage, clustering technique, expository paragraphs, third-year scientific stream students, teachers of English.

List of Abbreviations

C: Clustering

CBA: Competency-Based Approach

ESL: English as a Second Language

EL: English Language

EFL: English as a Foreign Language

ZPD: Zone of Proximal Development

TEEP: Test of English for Educational Purposes

OEF: Oracle Education Foundation

ICTs: Information Communication Technologies

TPS: Think, Pair, Share

Exp G: Experimental Group

CG: Control Group

MD: Means of Difference

LMD: License, Master and Doctorate

TEFL: Teaching English as Foreign Language

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General Introduction

1. Background of the Study

English has become the official international language that is used for science, business, education and other arenas. Its global dominance leads to be the world's current lingua franca. It has such an important role in communication between people around the world that it is taught as the main foreign language in many countries. It is why, teachers always aim to develop students' ability to master the four basic skills of this language: listening, speaking, reading and writing.

Writing is one of the four basic skills of the English language. It is an essential skill that must be mastered by students so as to express and convey their thought to the readers. This productive skill is required in many contexts throughout life as the academic, professional, and social context. Brooks and Grundy state that writing is not an easy process for students of English as a foreign language since it needs hard thinking and higher cognitive abilities to produce ideas, words, sentences, and paragraphs (1998). Writing as a process stands on five principle stages that writers take while producing a text, including prewriting, drafting, revising, editing, and publishing (Dorn & Soffos, 2001; Strickland, Ganske & Monroe, 2002).

Prewriting, as the first stage of that process, requires careful attention on the part of the writing teachers who have to look for the best strategies to reduce the difficulty of writing, get students easily involved in the writing task and improve their writing performance. In this context, Zamel said that: "less proficient writers need to be taught how to make use of prewriting strategies or invention techniques "(1982, p. 203). Based on this view, we deduce that the instruction in writing must essentially aim at training student writers to get used to brainstorm using prewriting techniques.

Among these strategies “clustering (C)”, which is also called mapping or webbing, can be used as a prewriting strategy which consists of making a visual map about a topic. When you cluster your ideas, you try to reveal the possible relations among them so as to narrow the subject. Galko (2001) says that C is to write the topic in the centre of a blank sheet of paper and draw a circle around it. From there, we draw spokes linking ideas together. This technique helps students to generate new ideas and connect them to one another. In the present study, we investigated the effectiveness of C in improving third-year scientific stream students’ performance in writing expository paragraphs.

2. Statement of the Problem

Getting ready to write in English has always been a big problem for most EFL students. Based on the researcher’s short experience in teaching at the secondary school, it has been observed during the “think, pair, share” task for third-year classes at Badi Mekki Secondary School, Zeribet El-Oued, Biskra that some students start writing directly without preparation and planning and some others feel unable to get started writing easily. Consequently, they produce pieces of writing including several problems in terms of content, organization, vocabulary, language use and mechanics.

The aforementioned problem was justified using a questionnaire submitted to 7 teachers of Zeribet El-Oued secondary schools. The data gathered from this questionnaire was a support, evidence and justification to the already stated problem. Thus, the latter may be caused by some factors that are related to methods or techniques of teaching writing. To help students overcome these problems, many techniques for teaching this productive skill can be used. “Clustering” is one of the prewriting techniques that can develop students’ written productions. It is used for stimulating students’ ideas via a visual map following specific

steps. According to what has been mentioned before, the research question is as follows:
“Would the clustering technique improve students’ writing ability?”

3. Aims of the Study

The purpose of this study was to investigate the effectiveness of the clustering technique on third-year scientific stream students’ performance in writing expository paragraphs in terms of content, organization, vocabulary, language use and mechanics. It further aims to find out the students’ attitudes and opinions towards that technique.

4. Research Questions

This study aimed to answer the following questions:

1. Would the use of the clustering strategy have a significant impact on secondary school students’ expository paragraphs in terms of content, organization and vocabulary?
2. Would the use of the clustering strategy have a significant impact on secondary school students’ expository paragraphs in terms of language use and mechanics?
3. Could the clustering technique motivate students to get started in paragraph writing?

5. Hypotheses

Based on the above research questions, the following hypotheses along with their parallel null hypotheses were tested.

- If third-year scientific stream students of Badi Mekki Secondary School were exposed to the clustering technique, their expository paragraphs would develop in terms of content, organization and vocabulary.

- If third-year scientific stream students of Badi Mekki Secondary School were exposed to the clustering technique, their expository paragraphs would develop in terms of language use and mechanics.
- **Null hypotheses:** - If third-year scientific stream students of Badi Mekki Secondary School were exposed to the clustering technique, their expository paragraphs would not develop in terms of content, organization and vocabulary.
- If third-year scientific stream students of Badi Mekki Secondary School were exposed to the clustering technique, their expository paragraphs would not develop in terms of language use and mechanics.

6. Rationale of the Study

The pre-writing stage represents the most significant part of the writing process; however, it has been ignored by many writing teachers and students, as a result, this makes learners encounter lots of difficulties in writing. Within this context, the prior questionnaire submitted to Zeribet El-Oued Secondary Schools teachers before conducting the experiment revealed that the students have problems in all the writing aspects. This problem may be attributed to the low emphasis devoted to this skill by middle school teachers who only focus on developing some basic skills like grammar and vocabulary rather than higher-level skills.

Teaching writing as a process in Algerian secondary schools involves teachers guiding students go through the different recursive stages of that process. In this context, since the pre-writing stage always forms the hardest phase for many writers, there are a large number of studies conducted to identify the effectiveness of the prewriting strategies in teaching writing tasks. The current study attempted to experiment whether the use of clustering as a prewriting strategy would have a positive impact on secondary school students' expository paragraph writing.

7. Research Methodology

The current research examined the impact of the prewriting technique of clustering on improving third-year scientific stream students' expository paragraphs. Its major objective was to measure to what extent the independent variable (C technique) affected the dependent variable (expository paragraphs). On this ground, the researcher adopted a methodological triangulation which requires the application and combination of several research methods and various data collection instruments.

To test the relationship between the already mentioned variables, the researcher used the quasi-experimental method with two groups of students during the 2017-2018 academic years. An experimental group of 28 informants were taught using the clustering technique during the pre-writing stage and a control group of 27 students were instructed by the traditional technique of questioning. Both of these groups were administered a pre-test and post-test for the purpose of comparing them and measuring whether there was any significant change in the participants' performance.

Additionally, the researcher opted for the exploratory method which was done through the use of teachers' questionnaire in the pilot study phase and students' interview in the post-experiment stage. This research method was implemented to gain insights into the students' levels, needs and problems in writing, as well as the methods and techniques that were usually used to facilitate the process of writing in general and the pre-writing stage specifically. It was also adopted to elicit the participants' perceptions and attitudes towards the technique of clustering and to support and validate the results of the experiment.

8. Significance of the Study

The results of this research are expected to bring benefits and contributions to education because it examines the effectiveness of the clustering technique in improving third-year

scientific stream students' expository paragraphs. In this regard, secondary school teachers, students and researchers can get some theoretical and practical advantages from these findings.

For the teachers, they can be provided with information about the different prewriting strategies and their use in teaching the writing skill, as well as the importance of the clustering technique in developing expository paragraphs. For the students, the researcher expects that the findings of this study can help students write expository paragraphs properly through the use of the clustering technique. They can also be active, motivated and interested in learning writing.

For the researchers, this study is considered a reference for those who intend to carry out further studies in the same area. Based on the participants' attitudes towards the use of clustering, the researchers can gain insights into further uses of this technique in the teaching-learning process. Therefore, more researches can be conducted to test the effect of clustering on reading and vocabulary in addition to its impacts on the study skills.

9. Delimitations of the Study

Concerning the delimitations of this study, they are as follow:

1. The participants' number was only 55 third-year scientific stream students at Badi Mekki Secondary School, Zeribet El-Oued-Biskra, during the 2017-2018 academic years.
2. This study used only clustering as a prewriting technique in teaching expository paragraph writing.
3. It measured the effect of clustering on the writing skill in terms of content, organization, vocabulary, language use and mechanics.

10. Limitations of the Study

The current research, like any research, has some limitations that hindered its application and findings. These limitations are summarized in the following points:

1. As far as the quasi-experimental method is concerned in this study, the researcher could not randomly select the sample of the students because they are already intact groups assigned by the school administration.
2. The study sample involved two third-year scientific stream classes from Badi Mekki Secondary School, Zeribet E-Oued, Biskra and this was not possible to generalize the gained results to all the other Algerian secondary schools.
3. We faced difficulties with students who lack the motivation to write in English.
4. Inability to access some interesting resources related to the technique of clustering.

Despite the aforementioned limitations and shortcomings, the researcher carried out the study to answer the research questions and test the formulated hypotheses.

11. Operational Definitions of Key Terms

The following key terms and concepts are defined as used in the current research to facilitate the understanding of the essence of the thesis.

Clustering: It is a prewriting technique through which the student explores, develops and organizes the ideas visually. It starts with writing the topic in the centre of the paper. Then, jotting down any related ideas inside circles and connecting them to the topic using lines. Finally, grouping the ideas that are associated with each other (Anker, 2010; Checkett & Checkett, 2010).

Expository Paragraph: Expository writing is a type of writing used to analyze, explain, inform or educate the reader through presenting specific evidence or reasoning. This genre is

widely done in colleges and professions as it is based on logic, analysis, critical thinking, organization and clarity. Expository paragraph structure has three basic parts: the topic sentence or the general idea, supporting sentences or the body of the paragraph and the conclusion (Nazario, Borchers & Lewis, 2010). In this study, students are asked to write expository paragraphs where they present facts, explain cause/effect relationships, compare and contrast two things and display steps in a process using the prewriting technique of clustering for the sake of developing their writing performance in terms of content, organization, vocabulary, language use and mechanics.

12. Structure of the Thesis

This thesis is made up of four chapters. Chapter one presents an overview of paragraph writing, chapter two introduces the prewriting technique of clustering, chapter three sheds light on the research methodology, chapter four includes the description and analysis of the findings obtained from the experiment and students' interview and it ends up with the general conclusion and implications.

Chapter one, entitled *Paragraph Writing*, firstly introduces some theoretical concepts related to the nature of the writing skill, its purposes, its relationship with the reading and speaking skills, the common approaches for teaching writing, its stages as well as the different types of this skill. Secondly, it focuses on paragraphs as the main part of any written passage by presenting its parts and features. This chapter finishes up by mentioning the most used ways of assessing the various components of writing.

In the second chapter, *Clustering: A Prewriting Strategy*, various prewriting strategies are presented due to their usefulness in getting learners to start writing and making plans for their papers. It explains how each technique works and the procedures that writers must follow to implement each one of them. On the one hand, several invention techniques are

introduced and described to help learners come up with new ideas and thoughts. On the other hand, several arrangement techniques are displayed to organize these produced ideas. The essence of this chapter is based on clustering as an effective strategy for facilitating thinking and encouraging visual learners to participate in the writing task. It provides an overview of its foundation, the stages for applying the clustering strategy, its features, uses and advantages. It also emphasizes the way of teaching writing using this strategy since it will be used during the treatment sessions.

Chapter three, *Research Methodology*, includes the research design and method, population and sampling and data gathering tools. It presents the secondary school teachers' pilot questionnaire description and analysis which includes experiences and perceptions of the students' writing problems and solutions to overcome them. Generally, this data gathering tool helped us take a closer look at the situation before the experiment took place. Besides, this chapter contains the description of the methodology used, including the experiment, the pre-test, the treatment based on clustering in the pre-writing stage. It also contains the content and implementation of the experiment, the post-test and ultimately piloting both the pre and the post-tests in addition to the assessment grid to be used for evaluating the students' written performance tests as well as the procedure for analyzing data. Finally, the third chapter closes up with the description of the interview being conducted with eight experimental group students to know their reaction towards the use of clustering on their writing achievement.

Chapter four, *Analysis of the Findings*, shows the quantitative results obtained from the pre-test and post-test, the comparison between both tests, the description and analysis of these results in addition to testing the hypotheses using inferential statistics. Moreover, it presents the qualitative results gained from the post-semi-structured interview used with students who took part in the intervention to see their attitudes towards the implementation of the clustering strategy. Finally, it provides a general conclusion for the whole study and some

pedagogical implications that may help secondary school teachers approach the writing tasks so as to develop their learners' writing competencies, skills and creativity.

Chapter One

Paragraph Writing

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Chapter One

Paragraph Writing

Introduction

This chapter aims at providing a general overview of what theorists and educationists have considered of the writing skill. For this sake, it sheds light on some notions related to this term. Firstly, it defines writing from different standpoints. Then, it includes the various purposes of writing in the realm of education as well as in social life. It also casts light on the nature of the relationship between writing and the skills of speaking and reading. In addition to the common ways of approaching the writing tasks, it deals with the process that learners follow to produce their pieces of writing; starting from generating ideas to the final production. Moreover, it displays the types of writing including the traditional and the new classifications. Secondly, this chapter is devoted to introducing the paragraph as the basic building block of English academic writing. Next, it explains the three major parts that constitute the paragraph. After that, it presents the characteristics of a typical paragraph which tend to have the traits of cohesion, coherence and unity. The last point focuses on the main scoring procedures for assessing the written product which are error-count, holistic, primary trait and analytic scoring.

1.1 The Nature of Writing

Thinking about the nature of writing has been a central topic of discussion among linguists and educationists. There is no agreement on one notion concerning this concept; as a result, it has been defined differently from several angles. Brookes and Grundy (1998) explained the traditional and the earliest views about writing. They stated that language was studied in the last century in terms of spoken form rather than the written one as it was considered as just putting the speech into written form. Many linguists as de Saussure and

Chomsky focused on spoken language and ignored the written one; consequently, the skill of writing was absent in the language teaching curriculum for a long time.

At a surface level, writing has been seen as an act of forming graphic symbols which relate to the sounds we produce through our speech. In this light, Patel and Jain (2008, p. 125) pointed out that:” Writing is a kind of linguistic behavior; a picture is not. It presents the sounds of language through visual symbols”. This indicates that writing is a linguistic act that involves the knowledge of the basic system of language as grammar, punctuation, vocabulary, spelling, and sentence structure. Besides, it is just a graphic representation of speech and a means to preserve it.

Raimes supports what has been said about writing as just putting sounds into letters. He said that “...writing is not simply speech written down on paper. Learning to write is not just a “natural” extension of learning to speak a language” (1983, p. 4). This means that speech is the basis of writing and they are closely similar in several language forms. As a result, learning to write relies to a great extent on learning to speak. Speaking is acquired naturally within the surrounded environment, whereas writing requires well-organized instructions in official institutions.

As far as writing is concerned, it needs much focus and attention on the part of the learners who are required to follow multiple steps so as to produce any piece of writing. In this context, Richards and Schmidt stated that: ” Writing is viewed as the result of complex processes of planning, drafting, reviewing and revising and ... processes” (2010, pp. 640-641). It is apparent that writing comes from complex and recursive processes which demand various stages to go through. This process starts with planning that is just a step of getting ready to write. Then, it is followed by drafting where we write our first version, moving on to reviewing and revising what has been written and finally publishing the final version.

Expanding on the nature of the composing process of writing, Brown states that creating any piece of writing needs particular skills and strategies which are learned by systematic training due to the highly complex nature of writing. Teaching writing is about guiding and helping students think about the topic, produce ideas, and organize and bind them into a coherent and cohesive text. It is also about controlling them while revising and editing their products to produce meaningful final versions (2000).

Writing as a process involves thinking abilities, specific steps including drafting and revising. These processes need skills that are not gifted for all. To develop those skills, the writing teacher leads learners on what to do in each stage of the process from generating ideas, drafting, revising, editing to producing the final work.

In addition to the perspective of writing as a cognitive activity, it is also thought of as a social phenomenon. Writing is “an act that takes place within a context that accomplishes a particular purpose, and that is appropriately shaped for its intended audience” (Hamp-Lyons & Kroll, 1997, p. 8). Within this context, we can say that the activity of writing is performed in a social context and it aims at achieving a certain purpose that is successfully directed to the right readers. Hayes also provides a detailed explanation for the social nature of writing. He notes that: “[Writing] is also social because it is a social artifact and is carried out in a social setting. What we write, how we write, and who we write to is shaped by social convention and by our history of social interaction” (1996, p. 5).

As culture is one important factor that affects the aspects of writing, it led to a variety of controversies among researchers. In this sense, writing has taken a new dimension and it has been considered a cultural phenomenon. This idea was firstly discovered by Kaplan in 1966. After he had analyzed a group of ESL essays written by students from distinctive cultures, he noticed that there were plenty of differences that go back to the influence of culture on their

writing aspects. On this ground, based on the contrastive rhetoric, Kaplan represented the movements of those essays graphically where; for example, he symbolized the English written discourse as a straight line, whereas the oriental one was described as an inward-pointing spiral. Although the concept of contrastive rhetoric was widely criticized, it has now taken great importance among researchers.

The conclusion that we can draw from all the above discussion concerning the identification of writing is that there is no unified definition for this skill, each author expresses what writing is according to his orientation; this is due mainly to its difficult and complex nature that requires great efforts by the writer. The following diagram incorporates the different aspects that writers have to be concerned with while producing a piece of writing.

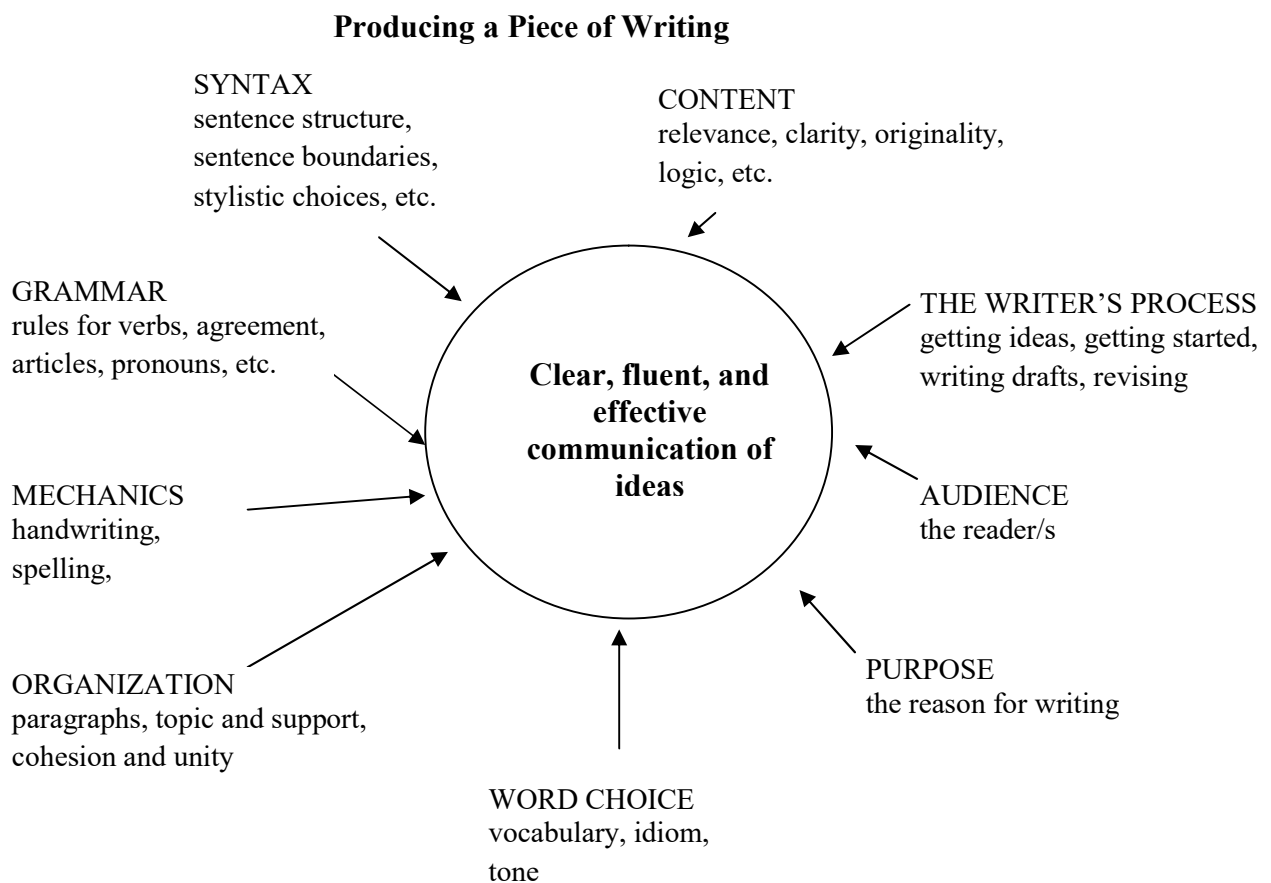


Figure 1.1. Writing Framework (Raimes, 1983, p. 6)

The figure above shows that a piece of writing is a result of a combination of distinctive skills, processes and aspects. Writing fluently and effectively requires the writer to state the audience whom he or she is going to write to and the reason for writing. Then, getting started to write, writing drafts and revising them in terms of content, syntax, grammar, mechanics, organization and word choice. As observed in that figure, writing is a complex skill since the writer has to deal with all of these various elements.

1.2 The Purpose of Writing

The question of the reasons for writing has always given great interest among scholars and researchers. Not many years ago, Hedge (2005) stated that she has surveyed groups of EL teachers from different nations to find out their reasons behind asking students to write in the classroom. Then, she has summarized their interesting points of view about the purposes for writing as follows:

- for pedagogic purposes, to help students learn the system of language
- for assessment purposes, as a way of establishing a learner's progress or proficiency
- for real purposes, as a goal of learning, to meet students' needs
- for humanistic purposes, to allow quieter students to show their strengths
- for creative purposes, to develop self-expression
- for classroom management purposes, as a calm activity which settles students down
- for acquisitional purposes, as a careful mode of working with language which enables students to explore and reflect on language in a conscious way
- for educational purposes, to contribute to intellectual development and to develop self-esteem and confidence. (p. 09)

Brookes and Grundy summarize the purpose of writing in three points: transcending the here and now, the problem of volume, and filtering and shaping experience. Firstly, writing helps us record and keep information in printed and electronic folders for future use. It is a means that facilitates our works and make us closer by using faxes and electronic mails. Secondly, unlike the past when people depended on memorization to store information, they today rely on writing which remains the guaranteed way to do that. Therefore, it must be learned as it is used for different social and personal purposes. Thirdly, writing allows us to think and understand our experience as well as to filter it during the editing stage. In the other way, it is useful for shaping new experiences through thinking of the purpose, the audience, what and how we want to compose (1998).

Writing occupies a very important place in educational settings, social lives and workplaces. Within this context, Graves (1978) pinpoints that writing is an activity that helps to develop the writer's thinking level through such specialized mental processes. It is a process in which the learner improves initiative because he/she must do and handle everything from shaping letters to producing and organizing sentences. In addition, this productive skill enhances the quality of being courageous since the learner is burdened with a set of conventions to respect and a series of stages to go through. Therefore, the ability to withstand and resist writing difficulties creates that kind of mental and moral aspects. Moreover, it is a way for the learner to achieve personal development in learning. Finally, writing is an active task in which the learner produces meaning as well as constructs and comprehends it. This is meant that it contributes firmly to the reading skills.

It is quite clear that the process of writing aids in a person's cognitive growth as it needs higher-order thinking skills to deal with the different aspects and conventions of that skill. In addition, learners involved in a variety of writing activities elaborate the ability to take

initiative, to be courageous and make personal improvement in learning. Furthermore, writing greatly serves the reading skills and comprehension of both child and adults learners.

1.3 Writing and the Other Skills

It is a common truth that the English language is based on four skills: listening, reading, speaking, and writing. To be competent and to communicate effectively using this language, you need to master all of its skills since they are interrelated and complete each other. Comparing writing with the other skills of language as speaking and reading is something significant to identify the relationship among them.

1.3.1 Writing and Speaking

Spoken and written discourse differs in a variety of ways. According to Raimes (1983), the processes of these two forms of language are different in terms of the following set of differences. First, speech is characterized by a universality which means that every kid can acquire his native language naturally in the early stages of his life, but not everyone can learn how to write and read. Then, speaking is not similar to writing in that it has linguistic variations, whereas the written language is based on specific conventions which include grammar, vocabulary, and syntax. Besides, unlike writers who tend to express their ideas via words on paper, speakers rely on their voices and bodies. Next, speech is full of pauses and intonation, but written texts include punctuation marks. In addition, the system of speech is based on pronunciation which is highly different from the writing system that relies on spelling.

Moreover, the two processes are not the same in the way that speech occurs spontaneously without any planning. However, writing is a planned process. In face-to-face communication, listeners can ask questions and interrupt in case he/she misunderstands or misinterprets some expressions, but in writing there is no immediate or no response at all on

the part of the reader. In this case, the writer must make his text so excited and precise to attract the attention of his audience. Furthermore, speech is informal and full of repetition, while writing is formal, accurate and concise. The last difference between these two skills is that speakers tend to use simple language which is connected by coordinating conjunctions; especially, **and**'s and **but**'s. Writers, on the other hand, use complex sentences linked by words as in addition, however, and who.

In another way, Harris (1993) narrowed the scope of the differences between writing and speaking in the following factors: situation, grammatical choices and lexical density.

As speakers exchange the same setting with their listener, they can refer to someone or something by gestures or pointing words, whereas writers have to use clear reference words since readers are absent during the conversation. Speakers have different ways to check if their speech is understood or not via the listener's responses, asking questions or by being a reminder. However, writers cannot do so with their readers, they just try to expect the likely possible misunderstandings and to predict the suitable levels of shared information. Telephone conversations are characterized by some motivating expressions on the part of the listener as *mm* and *yes*, while writers need to encourage themselves so as to keep on producing a text. Speakers can go back to what has been said at any moment and fill in information that has been excluded, so in this case, effective communication does not necessarily need an accurate sequence of information. Writers, likewise, need to plan to search a sequence and a selection that are so essential for getting a typically written discourse.

The second feature that distinguishes writing from the speech is the grammatical choices. Kress (1982) clarified that speech is based on units that are different from sentences. It is composed of identical or closely identical clauses that are linked together in sequence. Within the same area, the two skills are different in terms of grammatical structure. He

summarized saying that:” Speech, typically, consists of chains of coordinated, weakly subordinated and adjoined clauses; writing, by contrast, is marked by full subordination and embedding“(p. 51). It is obvious that speech mainly consists of chains of simple and compound utterances or clauses and it rarely incorporates complex sentences. Writing, nevertheless, is full of subordination and partially implicit relations between the main and the subordinate clauses.

The last factor that differentiates speech from writing is lexical density. Halliday demonstrates that writing is broadly known by a high degree of lexical density. Generally speaking, lexises are classified into two types: content words and structure words. The latter is largely used than the content ones. Structure words cover some parts of speech which are fixed and do not need a certain addition. Content words, by contrast, are not closed and additions are often made. In writing, the relationship between content and structure words is much higher than speech and this shows that there is a great density of information in writing than in speech (1989). The conclusion that we can draw from the differences between spoken and written language is that they are equally significant productive skills as they constitute an essential part of the English language in spite of their total distinction in many characteristics.

1.3.2 Writing and Reading

Writing and reading relationships is one of the interesting topics that have a large body of research from various scholars. According to Jensen, this correlation existed many years ago, and it came back to Vygotsky, Rosenblatt, and other theorists’ contributions in which they have proved that there is a strong connection between writing, reading, and thinking. We, both as readers or writers, construct meaning via these two mental processes (1984).

Although writing and reading are two language processes that have the function of communication, they are dissimilar in nature. Reading is a receptive skill that requires

decoding meaning for comprehending the message. Thus, readers play a passive role in receiving that message. However, writing is a productive skill and writers are so active to compose meaning and expressing thoughts (Jensen, 1984).

In the field of language teaching, many recent studies have supported using reading experiences to develop writing abilities because of their positive effects. In this respect, Loban (1963) noted that:” those who read well also write well; those who read poorly also write poorly” (as cited in Stotsky, 1983, p. 628). This shows that good readers usually compose more proficient writing and poor writing is the outcome of poor reading. In other term, Krashen argued that reading is an absolute necessity to improve writing skills. He contended that:” reading remains the only way of developing competence in writing” (1981, p. 9). To conclude, reading and writing are interrelated processes. Through reading instructions, students can improve their writing capacities. But this does not neglect the fact that the more students are engaged in effective writing instructions and practice; the more they will be better writers.

1.4 Current Approaches in Teaching Writing

Writing has become an important part of the worldwide educational system. As a result, different approaches were proposed to teach this skill in and out of the EFL classrooms, but the widely used ones are the product, the process, the genre and the process-genre approaches. The last two decades witnessed too much attention and focus on the traditional approaches, text-based and process approaches, which have been the predominant approaches at that era. They aim at making students focus on the final products or on the process of writing in itself. Recently, a new perspective for practising writing has emerged under the name of the genre approach which gives much more focus to the reader for whom the written messages are addressed and it aims at enabling students to be acquainted with various genres of writing.

Accordingly, these three ways of how to approach the writing tasks are complementary and complete each other; that is why EFL teachers need to be eclectic while teaching writing to meet students' needs.

1.4.1 The Product Approach

The product approach is also called text-based approaches or product-based approaches. Badger and White said that this traditional approach views writing “as mainly concerned with knowledge about the structure of language, and writing development as mainly the result of the imitation of input, in the form of texts provided by the teacher” (2000, p. 154). In this context, teachers who focus on form want students not only to learn the correct use of linguistic knowledge but also to produce outputs that are just a response to their teacher's stimulus via modal texts.

In addition to the forward description, Tribble added that those who adopt this kind of approach put much emphasis on the correctness of language and they consider errors as something that must be corrected or deleted wherever possible (1996). Harmer was among the authors who discuss the product approaches to teaching writing. He stated that the teacher's main role is to concentrate on “...the aim of a task and in the end product” (2001, p. 257). Along this line, it is clear that the construction of the final product and the achievement of the task's goal is the most important point that teachers aim to realize through applying this sort of approach.

Undoubtedly, the product approach as a first attempt suggested teaching writing was not without some negative points which made it unsuccessful to produce proficient writers. In this light, Parson mentioned the causes leading to the failure of this traditional approach:

- It emphasizes form and mechanics before, and-often-at the expense of, ideas and meaning.

- It focuses on the product rather than process.
- It seriously neglects the earliest stages of the writing process.
- It offers too many artificial contexts for writing (formula assignments), and artificial audiences (the teacher).
- It isolates mechanical skills from the context of writing.
- Rather than being an outgrowth of research and experimentation, the traditional approach is based on the sheer historical momentum of outmoded theoretical assumptions. (1985, p. 9)

In line with these shortcomings, it is important to delve into another approach that firstly focuses on meaning rather than the linguistic structure of language. Hence, priority while writing instruction must be given to expressing thoughts and ideas and stating the purpose and the readers for whom the product is oriented instead of focusing on form and mechanics which will be dealt with later in the editing stage. Secondly, it must rely on the process of writing in order to create texts rather than the product which is the result of imitating some provided literary models. Thirdly, it must stress the pre-writing stage which is the biggest block learners face while getting started to write. In addition, it needs to give attention to the learners as the only producer of the product by offering them opportunities to select their topics and determine their purpose and real readers. Learners have to be aware that mechanical and content skills go together for an efficient piece of writing. Indeed, there is an urgent need to look for an approach that involves teachers becoming researchers, creators and coming out of the textbooks' scopes.

Briefly, we can say that although the product approach dominated the teaching of writing for a long time, it has been subjected to criticism of how students can produce the end-paper without going through the stages of the writing process.

1.4.2 The Process Approach

The process approach appeared as a reaction against the product approaches. It pays particular attention to the writer and it gives much interest to the linguistic skills rather than the linguistic knowledge. The process approach, as the name implies is based on a sequence of steps. In this light, Tribble proposes that it focuses on " ...a cycle of writing activities which move learners from the generation of ideas and the collection of data through to the 'publication' of a finished text" (1996, p. 37). In this suggestion, it can be said that teachers who advocate this approach see writing as a complex activity that requires learners to get involved in various stages. This process starts with the generation of ideas, then gathering them in the form of first drafts and finally publishing the end products. Harmer describes those stages and provides a typical model that rests on four stages: "pre-writing phase, editing, re-drafting and finally producing a finished version..." (2007, p. 326).

In another way, Kroll gives a thorough definition of the process approach as follows:

The "process approach" serves today as an umbrella term for many types of writing courses... What the term captures is the fact that student writers engage in their writing tasks through a cyclical approach rather than through a single-shot approach. They are not expected to produce and submit complete and polished responses to their writing assignments without going through stages of drafting and receiving feedback on their drafts, be it from peers and/or from the teacher, followed by revision of their evolving texts.

(2001, pp. 220-221)

The idea that one can get from Kroll's definition of the process approach or what is called the cyclical approach is no effective piece of writing can be produced without moving through the stages of that process.

Concerning the nature of this approach, Raimes indicates that it is a sequence of recursive stages. This could mean that:” ... writers do not follow a neat sequence of planning, organizing, writing, and then revising” (1985, p. 229). It is obvious that during this process writers follow a non-linear set of steps through which they can continuously go back and forth. In the same breath, Badger and White explained what writers do in each stage. Firstly, they start with the brainstorming process. Then, they use and organize the data collection to produce the first drafts. After that, they revise what has been written either individually or in groups and lastly, writers must edit their written products (2000).

Among the shortcomings of this approach is a time-consuming. Writers will certainly take a considerable amount of time to brainstorm on the topic, draft, revise, edit and so on (Harmer, 2007). Hence, it should be noted that the process approach is quite necessary for writers to communicate the topic effectively; however, it is not convenient in writing classrooms where time is so limited.

In brief, after having explained the characteristics of each approach separately, it is better to consider the differences between them. Therefore, the following table shows a comparison between the process and the product approaches according to Steele (2004).

Table1.1

Comparison between the Process and the Product Approaches

Process writing	Product writing
<ul style="list-style-type: none"> • text as a resource for comparison • ideas as starting point • more than one draft • more global, focus on purpose, theme, text type, i.e., reader is emphasised • collaborative • emphasis on creative process 	<ul style="list-style-type: none"> • imitate model text • organisation of ideas more important than ideas themselves • one draft • features highlighted including controlled practice of those features • individual • emphasis on end product

(<https://www.teachingenglish.org.uk/article/product-process-writing-a-comparison>)

Based on the displayed facts about the process approach, particularly the features that need more than one draft and emphasize on the creative process, it is convenient to say that the process approach requires not only much time but also intellectual efforts and enough energy from the learner and the teacher as well. Accordingly, a more socially oriented approach called the genre approach has been emerged and broadly supported by researchers and writing instructors (Bhatia, 1993; Hicks, 1997; Hyland, 2003) as an initial solution to overcome the pitfalls of the preceding approach.

1.4.3 The Genre Approach

As far as the genre approach is concerned, writing has been seen as an important means of communication with readers. Within this context, written texts should be structured based on

specific social conventions to convey a particular purpose. The essence of this orientation in teaching writing is that it combines both “discourse and contextual aspects of language use” (Hyland, 2003, p. 18). In another word, the linkage that exists between the text and its social functions can benefit the writer, the reader and the teacher as well (Hyland, 2003).

The concept of the genre came from the theory of systematic functional linguistics and it is defined by Martin (1992) as “a goal-oriented, staged social process” (as cited in Hyland, 2003, p. 19). This means that genres are set to achieve a purpose through many steps within a social context. More specifically, teaching writing using this approach needs to state the purpose to be achieved and the stages to go through to convey meaning (Hyland, 2003). This trend of teaching writing is based on the ideas of Vygotsky (1978) and Bruner (1986). They thought that teachers should select writing tasks according to their students’ Zone of Proximal Development (ZPD) to ensure effective learning process. According to them, learning occurs through a cycle that starts with contextualizing, modelling, negotiating and ends with constructing. The teacher role here is to guide to make sure if students can get what they have been asked to do (Hyland, 2003).

All the approaches introduced to teaching writing have been criticized as there is no single way that can meet the needs of all learners and situations. As shown in the table below which summarizes the compared features of both process and genre approaches in terms of their core idea, teaching focus, positive and negative outcomes, it should be said that even though the genre approach is a new orientation in the field of teaching writing and adds important contributions mainly the focus on the reader to whom we as writers intend to communicate with, it has exposed to criticism. It needs the knowledge of all facets of texts language which can be prescribed and taught in the form of different genres of texts. Much attention and interest are given to written outputs which can lead to undergoing some essential skills of writing (Hyland, 2003).

Table1.2

A Comparison of the Process and Genre Approaches (Hyland, 2003, p. 24)

Attribute	Process	Genre
Main Idea	Writing is a thinking process Concerned with the act of writing	Writing is a social activity Concerned with the final product
Teaching Focus	Emphasis on creative writer	Emphasis on reader expectations and product
Advantages	How to produce and link ideas Makes processes of writing transparent Provides basis for teaching	How to express social purposes effectively Makes textual conventions transparent Contextualizes writing for audience and purpose
Disadvantages	Assumes L1 and L2 writing similar Overlooks L2 language difficulties Insufficient attention to product Assumes all writing uses same processes	Requires rhetorical understanding of texts Can result in prescriptive teaching of texts Can lead to over attention to written products Undervalue skills needed to produce texts

Accordingly, we can say that since the shift from viewing writing as a thinking act to as a social activity can not fit all the learners’ types, the recent attempts are directed to synthesizing more than one approach or what is named the process-genre approach.

1.4.4 The Process-Genre Approach

In this approach, writing requires the linguistic knowledge, knowledge of context, purpose and skills involved to practice language. It focuses on how to express social purpose

following process and using linguistic features of language as grammar, vocabulary and others. As its name implies, it is a combination of the product, the process and the genre approaches attributes. It integrates the linguistic background of language (as in product and genre approaches), knowledge of the situation and the reason for writing (as in genre approaches), skills and processes by which texts are written (as in process approaches) (Badger & White, 2000).

Teaching writing adopting the process genre approach (as illustrated in the figure below) has five aspects: situation, purpose, consideration of mode/field/tenor, planning/drafting/publishing, and text. Therefore, teachers have to create a situation and help the students to discover the purpose to be achieved. Students firstly have to think of the purpose, audience, context (field) and genre (mode). Then, they need to use their knowledge of the language as well as the essential skills of the process as planning and drafting to publishing the final text (Badger & White, 2000).

Concerning the development of writing in this approach, it is different from one group of students to another since they are unequal in terms of either knowledge or skills involved in writing. In this context, they need in addition to their mental capacities such input which can be taken from the teacher, peers, and texts as shown in the right-hand column of the figure below (Badger & White, 2000).

According to Kim and Kim, integrating the process-genre approach in teaching writing compositions is so useful for learners. They clarified that: “composition courses will not only afford students the chance to enjoy the creativity of writing and to become independent writers ... help them understand the linguistic features of each genre and emphasize the discourse value of the structures they are using...”(2005, p. 7). This indicates that this kind of approach incorporates the valuable features and advantages of each approach (product,

process, and genre). It covers the feature of creativity and the learner being independent (as in the process approach), knowledge of the convenient language of each genre and purpose (as in the genre and the product approaches).

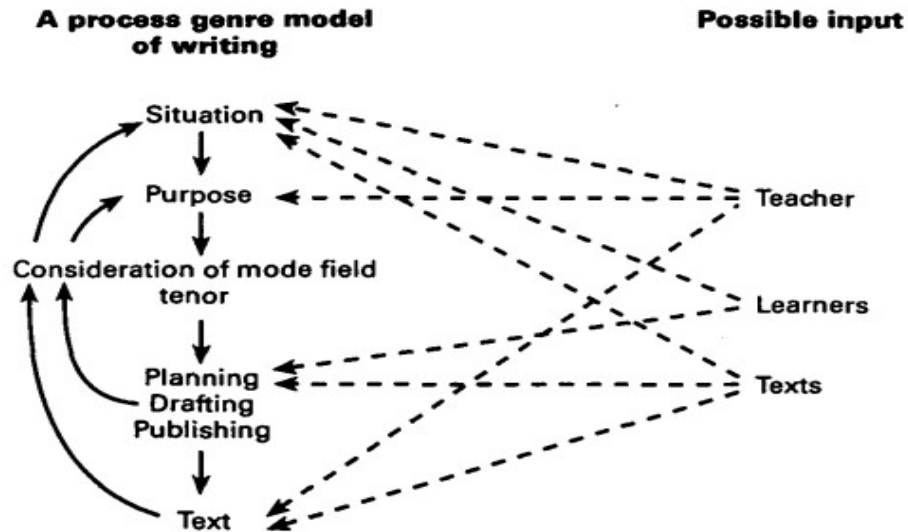


Figure 1.2. A Genre Process Model of Teaching Writing (Badger& White, 2000, p. 159)

The process genre model of writing presented above reveals that learners need to determine the purpose according to a specific situation as well as the tenor for whom the written product is addressed. They also have to identify how (mode) and what (field) they are going to compose such a piece of writing. The teacher leads learners on going through planning and drafting procedures so as to publish the final text. The possible input can be gained from the teacher, peers and texts. Following this model possibly involves learners to move forward and backwards between all the previously mentioned steps for an effective prepared production.

Besides the different approaches that every writing teacher should be knowledgeable about to meet his or her students’ needs, learning styles and individual differences in terms of this skill, he/she has to guide them to identify and follow the standard way of composing a

text. As a result, he/she needs to accustom them that writing is never to be the result of a one-step, but it occurs in various non-linear stages as presented below in the upcoming point.

1.5 The Writing Process

Since writing is the outcome of highly complex processes, it involves some stages to produce texts. To clarify the process of writing, several attempts have been made by authors and researchers that lead to suggest different figures and diagrams.

Boardman and Frydenberg (2008) explain that the process of writing includes six sequential steps, but some of them can be repeated more than once; especially, writing the first and the final drafts. These steps are shown in the diagram below.

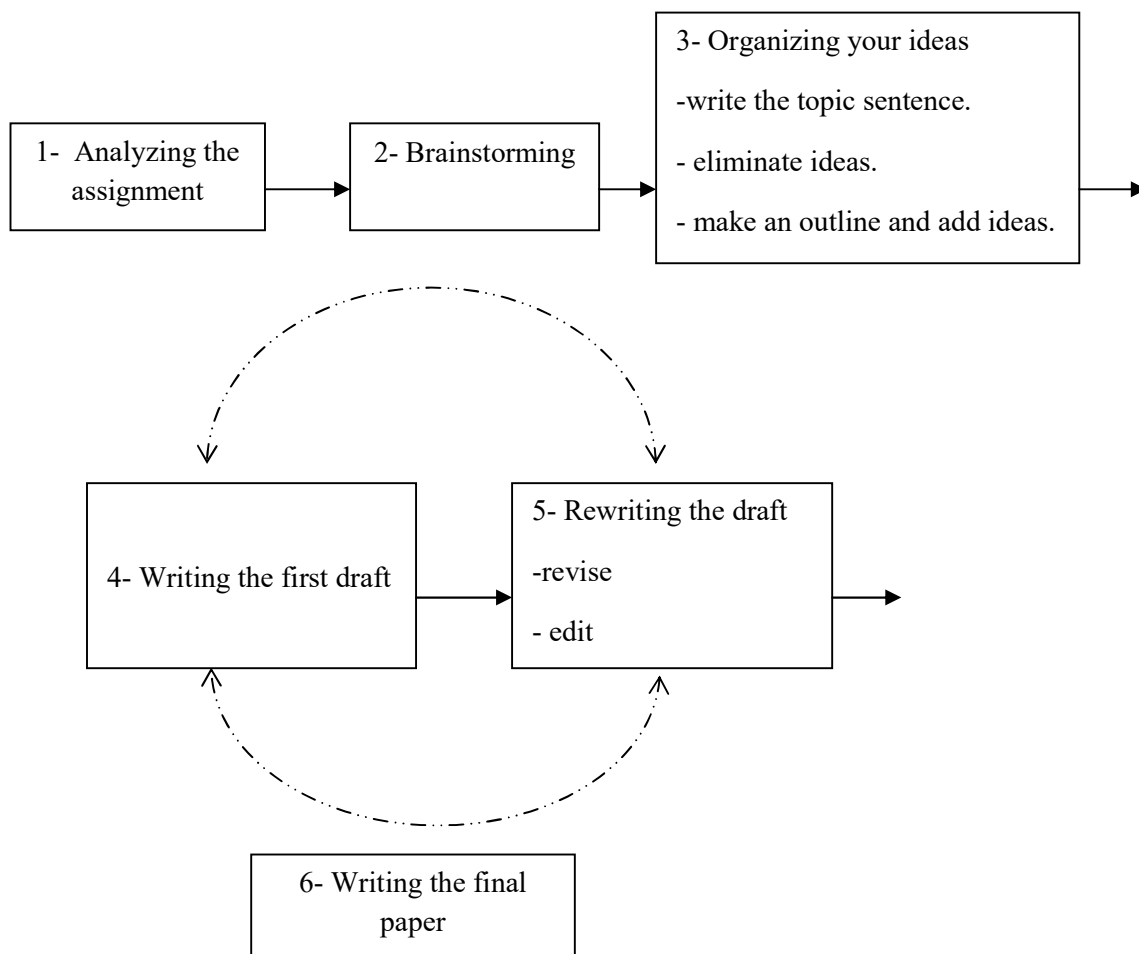


Figure 1.3. The Writing Process (Boardman & Frydenberg, 2008, p. 31)

Initially, the writer should ask himself different questions so as to understand the assignment carefully. Then, he jots down all the ideas that come to his mind on the paper and he does not need to evaluate his ideas since he will do so later on. Next, he should organize all of what has been written down in the previous stage. To do that, he needs to write the topic sentence, delete the needless ideas, draw an outline and add the necessary information. After he turns the outlines into a first draft, he has to revise and edit his first paper. At last, the writing process ends with writing the final draft.

As far as the composing process is concerned, Oshima and Hogue mention that the paragraph writing process is divided into four principal stages. Each stage also involves more than a sub-stage. Starting with the process of prewriting, it incorporates two essential steps: choosing and narrowing the topic in case that the instructor does not specify what the writer is going to write about. In the second step, brainstorming, the writer jots down all the ideas that come to his mind freely. Then, the planning stage implies making sub-lists, writing the topic sentence, and drawing an outline for the paragraph. The writing and revising drafts stage covers writing the first rough draft, revising content and organization, proofreading the second draft and finally the process ends up with writing the final version to hand in (1998).

No matter how different the stages of writing are called, they share the same goals of generating material, planning, writing and reviewing the first draft, and publishing the finished product. Within this scope, Langan presents the steps of essay writing as follows:

1. Discovering a thesis-often through prewriting.
2. Developing solid support for the thesis-often through more prewriting.
3. Organizing the thesis and supporting material and writing it out in a first draft.
4. Revising and then editing carefully to ensure an effective, error-free essay (2008, p. 25).

In addition to that writers transform ideas and thoughts via several stages, they may have to repeat them once they write, rethink, and rewrite. Therefore, they need to go through the following steps so as to produce any piece of writing:

- Getting and coming up with ideas.
- Organizing and arranging what has been written previously.
- Drafting or writing the first copy.
- Revising and reviewing the written material in terms of the content and the organization.
- Editing and error checking (Fellag, 2004).

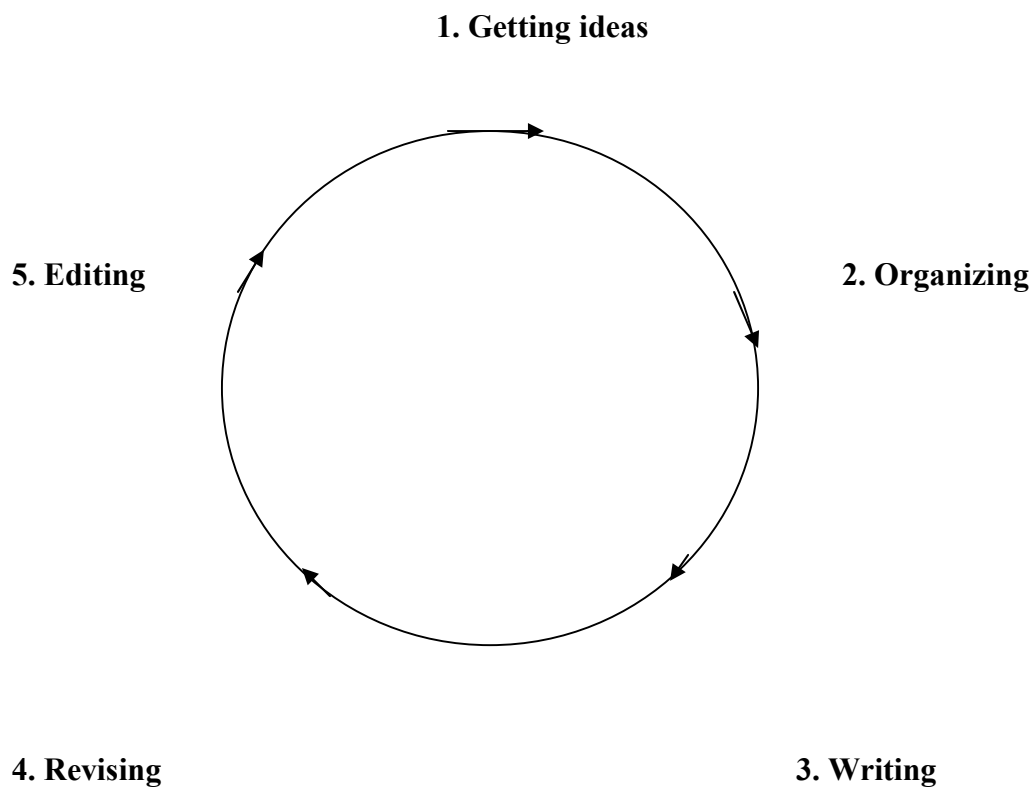


Figure 1.4. The Writing Process (Fellag, 2004, p. 10)

The model above shows the writing process in the form of a circle that revolves in one direction from the left to the right. Thus, each step can be done more than once as writers move around the five stages while they produce and communicate thoughts, reconsider,

modify and write some ideas again. Through this description, it should be said that Fellag views the process of writing as a recursive process through which writers need to go forwards and backwards. Generally, writers start with getting ideas about the topic under the discussion, they think and formulate thoughts and ideas. Then, organize the ideas generated before. Next, produce the first rough paper. After that, revise the subject matter whether it is thoroughly developed and well-kept or not. Finally, correcting errors and making the necessary modifications for the material.

D'Aoust mentioned that the stage-process model incorporates seven stages: prewriting, writing, sharing/responding, revising, editing, and evaluating. The pre-writing stage is stimulated by any task that urges the writer's internal thought to be ready to start writing as brainstorming, clustering and many other activities. In the second stage, writing, students' ideas are transformed into words on the paper as a primary attempt at writing. By sharing what students write builds a kind of power for them that their words leave a strong impression on others. They also build the feature of being an audience that is affected by others' words. While in responding they can easily find the areas of distinctions between successful and unsuccessful writing. Revising stage requires students to review the aspects of semantics and lexis where they add, omit, rewrite and rearrange some words to be more meaningful. During the editing stage, students concentrate on correcting grammar, spelling, and punctuation. The final stage of the writing process is evaluation in which students get grades as the ultimate feedback (1987). To clarify more how teaching writing as a process occurs and what is the role of both the teacher and students in each stage is illustrated in the following conceptual figure.

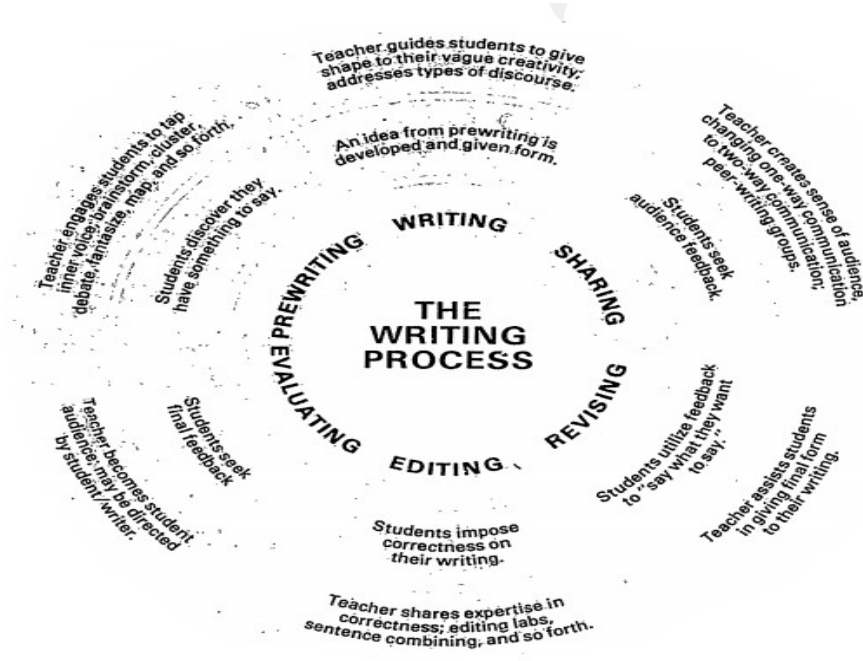


Figure 1.5. The Writing Process (D'Aoust, 1987, p. 19)

To sum up, it is necessary to note that writing cannot be considered as a one-step act because it is such a complex skill that needs different stages for producing a well-written output.

1.6 Stages of the Writing Process

Producing a well-written text, naturally leads writers to do considerable activities and move through a series of intervening stages before publishing the final copy. There are several steps of the composing process but the four major ones are prewriting, drafting, revising, editing and publishing the final version.

1.6.1 Prewriting

The process of prewriting, as the name implies, is the first act in the writing process that writers do before writing their first rough drafts. To clarify what this stage covers. Zemach and Rumisek explain that: "Before you begin writing, you decide what you are going to write about. Then you plan what you are going to write" (2005, p. 05). Therefore, it is

noticed that this step occurs before starting to write and its general goals are to look for a topic to talk about, produce ideas and make a plan so as to begin writing.

Preparing to write is a basic starting step for both novice and experienced writers. Brown and Hood said that during the preparation stage, writers should consider the audience for whom he writes, why he is going to write or the purpose behind treating this topic, the content and the writing situation (1989).

In the writing classroom, teachers apply different prewriting activities or what they are also called invention activities because of their effective role in stimulating the mind to discover and keep flowing new ideas. This invention stage is described by Williams as:” ...the thinking and reflecting good writers do before they start composing” (2003, p. 108). This means that the pre-writing stage helps to activate the writers’ schemata to create as many ideas as they can. Later on, it is followed by another stage which is called drafting.

1.6.2 Drafting

At this stage, the writer uses what has been generated and planned in the preceding stage to write the first rough draft. Oshima and Hogue (2007) added that all that occurs is to convey your ideas onto the paper quickly without taking into account grammar, spelling, or punctuation errors since they will be corrected in the next stage.

The concept of drafting, in its broadest sense, revolves around writing a rough draft of your paper. The term rough draft is like “a road map, marking the general direction the paper will take” (Williams, 2003, p. 116). This second stage of the writing process constitutes the basis for the final version that you will hand in at the end of the process. When drafting, you might do some various things “...you might skip sections or make notes to yourself to come back and add more examples in certain spots or to check your facts later” (Galko, 2001, p .49). This simply means that the first draft will not certainly be your perfect product; it is just

a scratch where it could have some changes. Hence, you might add or delete some irrelevant ideas to make your message very interesting.

To draft your paper, there are many strategies that help writers start this process. They can either write the topic sentences and each one will be developed into a paragraph or they can write the rough draft of each paragraph separately (Galko, 2001). Once the writer ends up writing the rough paper, he will begin doing another process which is known as revising.

1.6.3 Revising

The notion of revising, generally, comes from the Latin word *revisere* which signifies “to visitor look at again...”(Starkey, 2004, p. 56). This indicates that the revising stage is concerned with evaluating, examining, and re-looking at what has been written in the drafting stage. When revising, you should first consider the reader, the purpose, and stance. In another term, she points out that writers should take into account whether the topic had been directed properly to the audience, whether the ideas were logically connected, whether each paragraph was essential to be included and whether it was put in the right way. Then, they”...add more ideas as they go along, change words, rephrase bits, move sections around, review parts of what they have written, cross things out...”(Mc Donough, Shaw & Masuhara, 2013, p. 191). Thus, at the revising stage, writers reread, review to add or take out unnecessary words and sentences.

For a successful revising process, good writers follow a sequence of four strategies to fix their essays carefully. First, once they have finished the first draft, they leave it away for a while before starting to revise. Then, they read what has been written once and with a loud voice to discover things that may not be appeared in the silent reading. After that, they write down any remarks about the content, the audience, introduction, thesis statement, organization

of the ideas, conclusion, and so on. At last, they amend the written material, so they add and/or cross out the needless words, phrases, or sentences (Starkey, 2004).

To conclude, revising process is just an initial preparation for the coming stage which needs a strong closer look than before. This stage is called editing.

1.6.4 Editing

In the field of rhetoric and composition, it is important to edit your paper before handing it in. Editing is nearly the last act that writers do to publish their works. It is mainly concerned with the grammatical correctness of a text. At the editing stage, “There are weedy words to pull, unclear sentences to straighten out, and sections that need to be rearranged – all to make the writing its shining best” (Means & Lindner, 1998, p. 161). The editing process has two steps. First, revision, where writers add, delete; rearrange, and rewrite words, sentences and paragraphs. The second and the last step of editing goes under the name of polishing. Writers check the errors in spelling, punctuation, and style.

In other words, Leki focused on when and what to edit. To do this when “...you are satisfied with the larger components of your text: the explanation of the ideas, their arrangement, the sentences, and so on” (1998, p. 166). Writers should first think of the broad issues of the paper like the logical development and organization of the ideas. Then, they should refine the mechanical side of their writing. Concerning what writers edit, both native and non-native writers commit whether serious or less serious errors which they need to be edited for getting an accurate and neat piece of writing.

It is worth mentioning that the major reason for editing any piece of writing from grammar, spelling, and punctuation errors is to share and to publish the final version of your work.

1.6.5 Publishing

The ultimate step in the writing process is to share and publish the written material with its intended readers. Practically, whenever” you share your finished work outside your writing group, you have published it” (Means & Lindner, 1998, p. 161). It could be said that the main goal of the final stage is to share the finished product with other groups or readers. In more detail, Williams added that publishing your paper is not restricted to “getting the text printed in a journal. It includes turning a paper into a teacher, a boss, or an agency” (2003, p. 107).

As a side note, the final copy somehow seems different from the planning and drafting paper due to the great changes that have occurred during the editing stage (Harmer, 2004). It seems reasonable to say that the final copy is considered the result of what the writer has made from the prewriting to the editing phase. Therefore, whether he/she had done good work or not, this may reflect on the level of his/her final work. Furthermore, Kane highlighted that the “...final copy should always be neat and legible” (1988, p. 40). Thus, it seems ever clearer that the final version should be clear and readable. In conclusion, attaining the publishing stage is the reason that urges the writer to pass through all the previous writing stages.

As a summary of the writing process, we can say that each stage has a big role in reaching a well-written product. In writing sessions, writers get involved in many activities and various recursive stages. They get started to write using the brainstorming activities that can help them gather several ideas about the topic under the discussion and then, they write the first rough paper without paying attention to the grammatical and mechanical correctness at this stage. Next, they review and improve their first drafts’ content by adding, removing, moving or changing some ideas. After that, they relook and edit what has been written previously in terms of grammar, sentence structure, punctuation and spelling and finally, they rewrite clear and neat drafts to be handed out to the teacher for correction.

1.7 Types of Writing

Writing is a critical means of communication needed in the development of human's life. As soon as this productive skill emerged, it had been divided into two categories. The first category or what is called the traditional classifications is concerned with the common writing types, namely: expository, narrative, descriptive and persuasive. The second category is to classify writing according to one of these three criteria: purpose, form or audience.

1.7.1 Traditional Classifications

Once writing began to occupy a great place as a subject in the field of English language teaching, huge efforts have been expended to classify this skill. Harris (1993) pointed out that writing was traditionally classified according to forms into four types: exposition, narration, description and argument. This division takes into account the writer's intentions behind his product. As this tradition dominated the writing curriculum for a long time, it is important to look at the features of each type.

The term exposition is derived from the Latin word *exponere*. This mode of discourse explains something in the form of textbooks, reports, personal and business letters, press releases and others (Rozakis, 2003). It also informs facts, defines something, gives reasons and explains a process in chronological order, so the use of sequencers as *first*, *then*, *next*, and *finally* in this case help to set the paragraph in good order (Smith, 2003).

Narrative writing tells a story and it differs from the expository one in structure and purpose. Narrative writing in itself has two types: simple and complex narratives. The first describes events that are ordered chronologically depending on their occurrence, whereas the second type aims at resolving the conflict and it includes the following elements: characters, setting, theme, and others (Smith, 2003).

Descriptive writing is concerned with the description of people, places/buildings, objects, or events. To begin with the description of a person, we should first introduce that person briefly and inform the reader about how and where we have found him or her. Then, we should speak about the person's physical and moral appearance, so we should give details and clear images of the person's internal and external traits and end up the description by expressing our impression of that person. In the description of places or buildings, we should initially talk about the name, the situation and why we select this place exactly. After that, we should state the general characteristics, then move to the specific ones. The conclusion of this kind of description should summarize our opinion or suggestion about the topic. In the case of descriptive writing about an object, we should give precise information about the size, weight, colour, shape and other things on that object. The last sort of description is when we describe an event, a festival or a ceremony in which we should mention the name and type, when and where it took place and why we celebrate it. Then, describe what we do before and during the event. The conclusion should include the attendees' impressions or comments on the event (Evans, 1998).

In this kind of paragraph, the writer relies on senses to express his viewpoints by using plenty of adjectives (Smith, 2003). In general, Rozakis added that: "Description is the only mode of discourse that's used in every type of writing" (2003, p. 273). This idea shows that it is obligatory to overlap description in all the previous genres of writing.

Persuasive or argumentative writing displays facts or a point of view. In this form of writing, ideas are generally structured by presenting the arguments of the opposite opinion, then the arguments that support your claim or by presenting a stated opinion supported by arguments that are ordered from the least to the most important (Smith, 2003).

But in fact, this old classification affected the writing curriculum unsuccessfully because it gives much importance to types of writing which have no relation to the outside world. This sign of dissatisfaction with this classification recently urges curriculum designers to reshape the writing curriculum by looking upon those types in a way that fits students' present needs and the reasons for this are that the content of writing curriculum must depend on types of learning rather than forms; especially, with the large number of pupils who enrol in education and both the development and assessment of writing are linked to the type of the writing task (Harris, 1993).

1.7.2 Purpose, Form and Audience

The main problem with these classifications of writing is that they focus only on one of the following features: purpose, form, and audience.

The writer's intentions are also another factor through which writing can be classified, but it is not considered the only dimension of a text as we can have texts that have the same communicative function but they are different in form and readers (Harris, 1993).

In general, writers write for many diverse purposes, but the most often ones as Hacker and Sommers (2015, p. 3) stated:

to inform	to analyze
to explain	to synthesize
to summarize	to propose
to persuade	to call readers to action
to evaluate	to change attitudes

Writing can also be grouped according to the dimension of form or "text-type" as letters, stories, reports, and so on. However, it is evident that depending only on the form

would lead to difficulties. For instance, we can find two texts share a common form but differences may happen because of the communicative function feature and the audience to whom the text is addressed (Harris, 1993).

One of the important dimensions that pieces of writing could be divided into is readership. The latter appeared in the writing curriculum as a reaction against the traditional practices that were always directed to the teacher. Thus, the purpose here is to create a more flexible and real writing curriculum by suggesting a variety of readers (Harris, 1993).

1.8 Definition of a Paragraph

A paragraph is a basic unit for any piece of academic writing. Boardman and Frydenberg (2008) state that the paragraph constitutes the fundamental unit of all types of writing in English. It has a specific and linear structure that starts with the topic sentence. The latter introduces the central idea of the paragraph. Then, the body includes sentences that provide details to support the main idea of the paragraph so that they are named supporting sentences. The final part of the paragraph is the concluding sentence which restates what has been said in the topic sentence.

1.9 Parts of a Paragraph

It is agreed on that the typical academic paragraph in English has three parts: the topic sentence, the body (supporting sentences) and the concluding sentence.

A topic sentence comes at the beginning of the paragraph and declares the main idea that shows the reader what the paragraph will be about. Boardman and Frydenberg (2008) stated that the topic sentence consists of the topic of the paragraph followed by the controlling idea which narrows that subject. In the following example: “ New York is a fun place to be on New Year’s Eve”, “ New York” is the topic and “ is a fun place to be on New Year’s Eve” is

the controlling idea (p. 4). In more general terms, a good topic sentence presents the writer's point of view clearly so as to convince the reader with this opinion. Consequently, it is highly important to avoid ineffective topic sentences as statements of facts since nothing can be developed in the paragraphs later on.

The body comes after the topic sentence in order to develop and support its information. This is done by using facts, examples and illustrations from personal experiences. In expository paragraphs, supporting sentences are divided into two types: major supporting sentences that explain the topic sentence and minor supporting sentences which give details about the major supporting sentences (Boardman & Frydenberg, 2008).

The concluding sentence is the last sentence that the paragraph ends with. It restates what has been established in the topic sentence. Usually but not all the closing sentences begin with transitional words as *at the end*, *in short*, or *all in all* (Boardman & Frydenberg, 2008).

Harmer (2004) also supported this structure where he declared that although paragraph structure in English has different sorts, the common pattern is shown as follows:

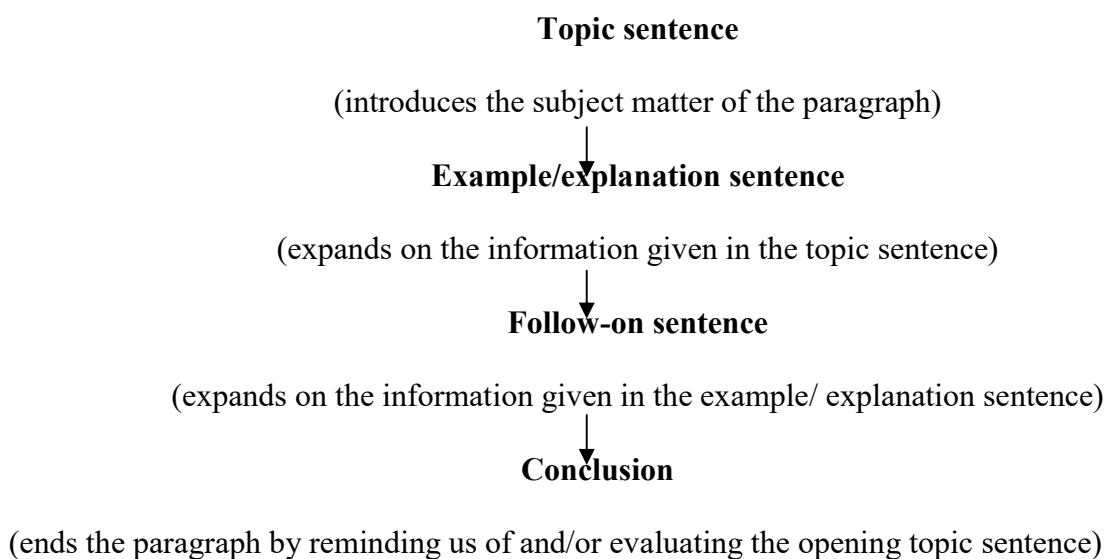


Figure 1.6. Paragraph Structure (Harmer, 2004, p. 21)

In the topic sentence, the writer introduces the main or the central idea of the subject whereas, in the next step, he gives details on the information that have been said in the topic sentence. After that, he goes deeper into the discussed subject and provides more information on the previous part of the paragraph. In the end, the writer tends to remind or evaluate the information provided in the topic sentence so as to conclude his paragraph.

As the form of the paragraph is an important element for distinguishing its different parts, the content also has some features that make the reader easily access and understand what the writer wanted to convey. As a consequence, for a smooth and flow sequencing of the ideas, we need to respect the characteristics of cohesion, coherence and unity.

1.10 Characteristics of a Good Paragraph

Good writers can produce paragraphs in that the audience really gets impressed to finish reading the whole paper. To do that, they need to use discourse markers as well as make coherent and unified ideas. In this context, the features of cohesion, coherence, and unity are explained below separately and in detail.

1.10.1 Cohesion

In a cohesive text, all the ideas are stucked together by using some linguistic techniques as lexical and grammatical devices. Lexical cohesion is attained by repetition of some content words and/or lexical set ‘chains’ that are words within the same scope of the discussed subject. Grammatical cohesion is reached by using pronouns and a possessive reference to a noun, article reference; especially, the definite article ‘the’ which is used either for anaphoric or exophoric reference. In addition to the tense agreement which binds the elements of a text and the frequent changes in tenses that lead the text to be incohesive, linkers are also used for getting a cohesive text like words that express addition, contrast,

time, result and other functions. The last grammatical device is substitution and ellipsis. Writers tend to replace short phrases instead of the long preceding ones (Harmer, 2004).

1.10.2 Coherence

Writing a text full of cohesive devices does not signify that it makes sense because it lacks the feature of coherence. The latter is a very important element to make an easily understandable text. Within this context, Harmer (2004) points out that a coherent text "...needs to have some kind of internal logic which the reader can follow with or without the use of prominent cohesive devices" (p. 24). Therefore, writing a coherent text means all the ideas and arguments are arranged and connected logically and this helps the reader follow the writer's thought with or without cohesive devices. He also added that a coherent text should clearly state two important elements. The writer's purpose behind his written work should be understandable by readers and they will also be able to follow the writer's line of thought. In other words, Boardman and Frydenberg (2008) said that in a coherent paragraph, the supporting sentences are put in order according to a principle that differs from one type of paragraph to another one.

As stated by Murray and Hughes (2008), the element of coherence in academic writing is concerned with structuring your ideas clearly and logically so as to be understood by the reader. To do so, the following figure shows how the sequence of ideas is:

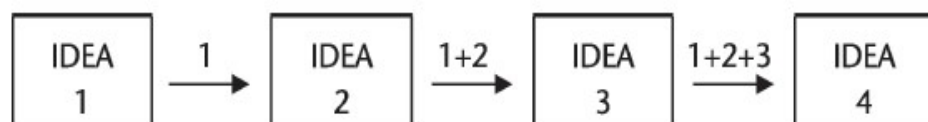


Figure 1.7. A Sequence of Ideas (Murray & Hughes, 2008, p. 46)

As shown in the figure above, ideas 1, 2, 3 and 4 are connected with links constituting a chain. The first link connects idea 1 with 2; the second link joins ideas 1 and 2 with 3 and the last link relates all the three ideas that have gone before with idea 4. In this sense, writers must be careful while linking between their ideas since the more the ideas are clearly connected the more the reading passage is understandable by the reader.

1.10.3 Unity

The final significant trait of a good paragraph is unity. Paragraph unity means that the supporting sentences relate to the topic sentence. On that basis, Wyrick argued that: “Every sentence in a body paragraph should relate directly to the main idea presented by the topic sentence” (2011, p. 65). A unified paragraph must discuss only one idea and it must include only one aim in all of its parts.

Unity is an important element for composing an effective paragraph. “Unity not only keeps the reader from straggling off in all directions; it satisfies the readers' subconscious need for order and reassures them that all is well at the helm”(Zinsser, 2001, p. 50). Therefore, unity helps the reader feel secure and keep a straight order and direction toward a clear conclusion.

To get a paragraph unity, the writer should keep to his choice of variables as pronoun, tense and mood. First, the writer should stick to one pronoun, the first, the second or the third person. Second, he could use distinctive tenses, but without moving backwards and forward of the tenses used. Finally, the writer can use casual or formal tones, but what is not acceptable is to mix two or three voices (Zinsser, 2001).

1.11 Methods of Assessing Writing

It is evident that assessment is an inherent part of the teaching and learning process. It gives information not only about what has been learned but also what has been taught. For assessing writing, teachers score the students' written performance through one of the four widely used methods: error-count, holistic, primary trait and analytical.

1.11.1 Error-Count Scoring

Error-count method is also named as the mechanical accuracy. As its name indicates, it is concerned with the correctness of some written rules of mechanics such as punctuation, spelling, capitalization and others. It is characterized by being the most objective compared to the rest scoring methods. Using this way of assessing writing involves the tester to count the number of errors committed in each student's written performance and take it off from the given total mark. Mechanical accuracy is the less used method because it emphasizes form and mechanics rather than the act of communication itself. This undue spotting of errors as negative points made by the testee leads them to be unable to write because they are afraid of making mistakes (Heaton, 1988).

Obviously, the error-count method of scoring written products badly affects learners and puts them in anxious and unwanted positions. In this regard, Raimes (1984) mentions that: "They worry about accuracy; they stop after each sentence and go back and check it for inflections, word order, spelling and punctuation, breathe a sigh of relief and go on to attack the looming giant of the next sentence" (as cited in Tsui, 1996, p. 102). It seems that students find it so hard to move from one sentence to another since they struggle with any written sentence to make sure it is correct at the level of word form and order, spelling and punctuation. In brief, it could be seen that this marking proceeding is a purely mechanical

focus than a meaningful one, and this may be a destructive result of both the processes of teaching and learning of writing skills.

1.11.2 Holistic Scoring

Holistic scoring is a method that has been used for assessing writing for a long time. A test designer who draws on the holistic scoring tends to give a single score that represents the reader's general impression of the written product. Holistic scoring has a set of positive and negative aspects. The first positive feature is that putting one score makes the process of assessment faster. Second, it is a reliable scoring procedure and scores are not only limited to professionals. Third, it is based on the fact that scores tend to emphasize the writer's strengths (Cohen, 1994, as cited in Brown, 2003). The last positive point is that it can be implemented in writing in a variety of fields. Concerning the negative aspects of the holistic method, it neglects the writer's writing sub-skills and it does not show his or her strengths and weaknesses areas. Besides that the scale cannot be used equally in all types of writing, it demands more practice on the part of the assessor (Brown, 2003).

1.11.3 Primary Trait Scoring

Primary trait scoring is a method for assessing writing in that scores are rested on the factor of how well the student achieves or fulfils the text's primary purpose. In a similar scope, Weigle demonstrates that this method concentrates on "how well students can write within a narrowly defined range of discourse" (2002, p. 110). This means that the teacher would assess the learners' ability to accomplishing the function of that text.

In general, this scoring procedure would evaluate how well students summarize a text, write a clearly planned report, describe a graph, and express a viewpoint (Brown, 2003).

1.11.4 Analytic Scoring

The philosophy behind the analytical method is that written texts are evaluated on different sub-skills. This procedure divides texts into several features as content, vocabulary, grammar, mechanics and others. Those who implement the analytic scoring to assess students' written production get more information about the students' needs in each sub-skill. Learners, on the other hand, can find their weaknesses and benefit from their strengths since each aspect of writing is rated separately (Brown, 2003).

Researchers and applied linguists suggest different analytic scales for assessing writing in ESL, but the mainly used ones are Jacobs et al scale (1981), the TEEP scale by Cyril Weir (1988), and the Michigan Writing Assessment. Analytic scoring has such useful features that it shows the learners' abilities in writing and it is easily implemented; especially, by new evaluators. Even though analytic scoring is considered a reliable method than the mentioned ones, it takes a long time as the evaluator needs to assess each sub-skill individually (Weigle, 2002).

Conclusion

Writing occupies a crucial place within and out of the classroom for several cognitive and social purposes. However, it always constitutes the most daunting process among the English language four skills despite the strong interrelation between them; especially, between writing and reading. This skill requires plenty of effort from teachers and learners as well. Teachers need to introduce the writing tasks using the appropriate approaches that meet all the learners' needs, styles and expectations. Conversely, learners must consider: purpose, audience and genre, as well as they, have to go through several stages of the writing process in order to produce a piece of writing. The first point that EFL secondary school teachers must tackle is how to develop learners' paragraph writing since it is the basic building block for

any written text. In other words, learners need to understand the three major elements of good paragraph writing. They must also know which aspect of writing needs to be improved so that teachers have to rest on the analytical method of assessing writing to enable students to take a closer look at their areas of weaknesses.

Chapter Two

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Chapter Two

Clustering: A Prewriting Strategy

Introduction

This chapter firstly introduces worthy information about the various prewriting strategies suggested to help both native and non-native speakers, as well as novice and experienced writers generate and organize their thoughts. These strategies are grouped into two types: invention and arrangement activities. Secondly, it sheds light on clustering as one of the invention prewriting techniques that is based on brain research and plays a far more essential role in overcoming the students' writing mental block. Therefore, it provides in addition to its definition a theoretical background about the concept which includes when, how and who discovered the idea of clustering. Next, it lays out the steps that writers have to follow while using this process. It also deeply discusses some features making clustering different from the other prewriting techniques as the quality of being non-linear, visual and others. In addition to some practical uses of clustering inside and outside the classroom, this chapter considers what different scholars and researchers said about the benefits of clustering. Moreover, it outlines the effective instructions that writing teachers should give to start the process of clustering. Last but not least, it focuses on teaching writing using the clustering technique. The final part of this chapter stresses the impact of clustering on writing.

2.1 Prewriting Strategies

Getting ready to write forms the biggest problem writers face once they intend to communicate and grapple with an idea. This refers to that prewriting is still the most ignored stage despite its great importance for writers (Tompkins, 2017). The concept of prewriting can

refer to the earliest stage when children start developing their hard skills or to the first part of the writing process (Mogahed, 2013).

In composition, prewriting pertains to “... a structured design to energize student participation in thinking, talking, group interaction, and skeletal writing such as building the components of a writing task ” (Go, 1994, p. 02). Once students warm up, they undergo organized planning that encourages them to do several tasks, including thinking, talking, interacting and so on.

In the pre-writing phase, the writing teacher plays the role of a facilitator that helps students get over writing mental blocks. He also has to be a guide, illustrative and supportive. However, students actively react to the presented activity and interact with each other, as well as with their teacher (Go, 1994). Prewriting as a first step of the process writing goes through six stages as shown in the figure below.



Figure 2.8. Pre-writing Stage (Nazario et al., 2010, p. 10)

During the pre-writing stage, students start with finding and narrowing the topic using multiple prewriting techniques. Then, they identify the reader for whom they intend to address their writing as well as they state the goal to be achieved. Next, they express their attitudes via

words chosen appropriately. After that, they produce and set the idea they want to talk about. Finally, they draw the outline which will be developed later on.

Before writing, students should be engaged in various activities that initiate the process of thinking. According to Roberts, prewriting is a crucial stage that “helps students create images and ideas about the assigned topic, as well as consider their emotions and values in relation to the topic. It involves recalling, finding, analyzing, and organizing content” (2004, p. 6). In this light, prewriting has significant roles that aids students activate cognitive potentials, in which they generate ideas and take into account their affections towards the topic. It also facilitates some mental activities, including remembering prior knowledge, discovering and studying the topic carefully and planning the material.

Regarding the inherent qualities of the selected prewriting activity, writing teachers can pre-write with an oral discussion, written notes or illustrative examples that learners act individually, in pairs or teams (Go, 1994). Within the same scope, Roberts mentioned some activities writing teachers can use in their classrooms as”...listening to music, moving around the room, dramatizing scenes, looking at or drawing pictures” (2004, p. 6). These activities raise students’ motivation and enable them to believe in themselves that they can write effectively.

Cameron added that prewriting is a saving time stage, in that it makes the upcoming stages easier and less time consuming (2008). However, it is considered the most difficult stage for both novice and experienced writers (Wyrick, 2011). To overcome this difficulty, students need to use several prewriting strategies which are explained in details below.

As suggested by Mogahed (2013), the pre-writing stage is categorized into two activities as shown in the figure below.

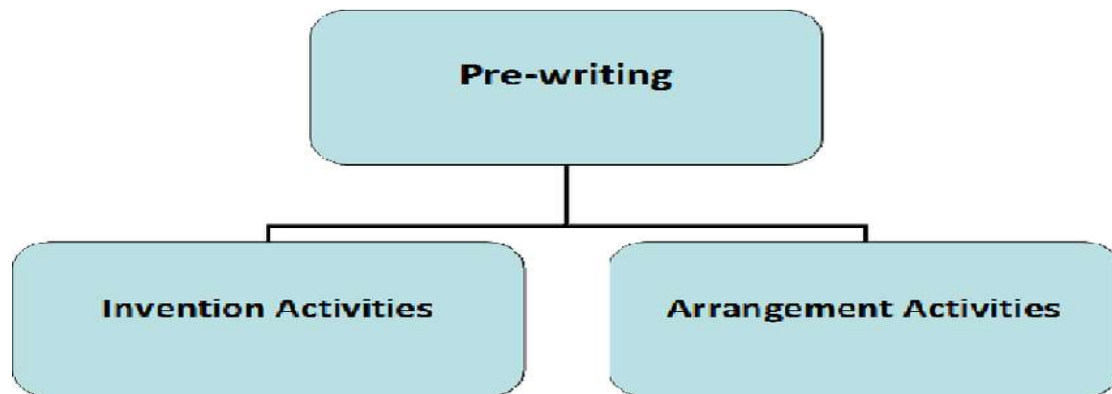


Figure 2.9. The Suggested Framework of the Pre-writing Stage (Mogahed, 2013, p. 64)

Since the pre-writing stage plays a significant role in the process of writing, many activities are suggested to help teachers present the topic effectively and learners get started to write easily. Based on Mogahed's classification, it can be noticed that the stage of prewriting stands on two steps: the invention and the arrangement activities.

During the first step in which students generate ideas, they should experiment with all of those techniques so as to discover their effectiveness in each type of writing and then match each tool with its appropriate kind of writing. The second step is concerned with structuring what has been produced in the preceding step.

2.1.1. Invention Activities

Invention activities are a set of prewriting techniques designed to motivate and help learners create and innovate plenty of ideas and thoughts. Therefore, both skilful writers and student writers need to be familiar with them and be aware of their importance in improving their writing skill. Writing teachers should vary in these strategies to meet the learners' needs, abilities and style. Invention activities include the following: brainstorming, free or speed writing, questioning, interviewing, listing, looping, cubing and clustering or mind map.

2.1.1.1 Brainstorming

The concept of brainstorming rose in 1953 by Alex Osborn. It can be used individually or in teamwork to activate and record what we know about the assignment and to build new knowledge. It takes from ten to twenty minutes. The brainstorming method is characterized by the unique quality since humans' brains are different from each other in experiences and memories. According to Osborn, there are four rules of brainstorming:

1. No criticism of other people's ideas
2. The wilder the idea, the better
3. Aim for quantity of ideas, and quality will follow
4. Try combining ideas to develop new ones (Bates, 2015).

Hacker and Sommers focused on the good results brainstorming bring to writers. They declared:

Brainstorming is a good way to figure out what you know and what questions you have. You begin by listing ideas in the order in which they occur to you. Listing ideas can help a writer narrow a subject and identify a position. An early list is often a source of ideas and a springboard to new ideas. Writers can come back to their brainstorming notes and rearrange them, delete some, or add others. (2015, p. 7)

On the whole, it can be said that brainstorming is used to spill out thoughts, put the ideas as they take place in the brain, limit the topic under the discussion and each idea is a good starting point for the new one to emerge.

Based on what has been said above, the terms of brainstorming and listing are used interchangeably; as a result, they share the same common features. The following list is done by a student while preparing for an essay assignment about “community service requirements for college students” :

- Volunteered in high school.
- Teaching adults to read motivated me to study education.
- “The best way to find yourself is to lose yourself in the service of others.”-Gandhi
- Volunteering helps students find interests and career paths.
- Volunteering as requirement? Contradiction?
- Many students need to work to pay college tuition.
- Enough time to study, work, and volunteer?
- Can’t students volunteer for their own reasons?
- What schools have community service requirements?
- What do students say about community service requirements? (Hacker & Sommers, 2011, pp. 7-8)

The idea of brainstorming means” you ‘storm’ or search your brain for ideas” (Brown & Hood, 1989, p. 7). Brainstorming as a gathering data strategy involves you copying down your ideas very quickly. It does not matter if they are not in English and do not worry about the ideas usefulness, neatness, and correctness. According to Go (1994), writing instruction using the brainstorming technique requires specific guidelines as laid out in the table below:

Table 2.3

Teacher's Guide to Brainstorming Activity (Go, 1994, p. 06)

Technique	Teacher's Role	Student Activity	Example
Brainstorming (in groups) -To generate related ideas to write on. -To stimulate creative thinking and add depth to an idea.	- Writes questions about an idea under focus. - Asks groups to consolidate answers for own use. - Allows each group 10 minutes to pool ideas on the chalkboard or Manila paper.	-Each student spends five minutes individually to think of answers to questions before brainstorming starts. -Group leader directs initial thinking to the importance of the given idea and its relevance to current interests. - Pooling of answers to questions follows. -Group leader closes the section with an afterthought: What would occur if we show or not show concern on the given stimulus-denuded forests.	Idea: Denuded Forests, pictures or sketches of denuded forests are displayed. Questions : 1 .Why are our forests denuded? 2 .What program of action can be suggested to stop forest denudation? 3. What could be some expected barriers and consequences of the proposed action plan? Possible Titles : Destroy the Forest, Destroy the Earth, Our Balding Forests-Who's to Blame?

Brainstorming as one of the invention techniques is important for producing ideas and fostering creativity. In group brainstorming, the teacher writes some questions about the topic

and asks students to collect their possible responses which will be shared among the groups in just five minutes for each. Conversely, the students think of the teacher's questions, discuss the proposed answers with the group leader guidance, exchange their answers and finally rethink other choices for the already suggested answers.

2.1.1.2 Free or Speed writing

Freewriting is also called “automatic writing”, “babbling”, or “jabbering” activities (Elbow, 1973). Hacker and Sommers said that: “freewriting is simply nonstop writing... without pausing to think about word choice, spelling, or even meaning” (2011, p. 9). In brief, using the freewriting technique requires you to keep writing any idea that exists in your mind without stopping or having a break. You do not have to consider some conventions as word choice and spelling and whether the ideas make sense or not.

To use the free or speed writing activity, you need to:

- limit your time to two minutes only.
- write down what you know about the subject.
- write everything you think about without taking into your consideration if it is meaningful or not.
- continue in writing until the time is up.
- never bear in your mind the correctness and neatness of the paper (Brown & Hood, 1989).

Freewriting activity is no doubt without compelling benefits. It facilitates the process of writing and gets you to avoid such writing problems, particularly if it is continuously used. This kind of preliminary activity not only makes you ready for writing and overcomes some of its difficulties, but also stimulates you to write even you do not care for writing.

Freewriting trains you to write freely and hurriedly without taking into your consideration the rules of writing. Besides, it is a good way to express your feelings towards someone or something. More significantly, it helps you think and become a better writer (Elbow, 1998).

2.1.1.3 Questioning

This warming-up strategy works well for writing long content. It is based on asking “wh” questions. Thus, in case you adopt this activity, you need to write and think of some “wh” questions about the given topic as who, what, where, when, why, and how? (Brown & Hood, 1989).

Asking the journalist’s questions is useful for writing about historical or contemporary events. It is also beneficial for many academic disciplines as: “one set of questions for analyzing short stories, another for evaluating experiments in social psychology, still another for reporting field experiences in criminal justice” (Hacker & Sommers, 2011, p. 9). It is clear that asking or posing questions is not only limited to generating writing materials, but it can be widely used by many scholars for different contexts.

2.1.1.4. Interviewing

Interviewing as a prewriting technique is used to produce and come up with ideas for writing. It is a useful strategy for all types of students and teachers; especially, in academic events. This strategy encourages students to express and share their ideas in a comfortable atmosphere. As an example, students in pairs ask each other about their interests, take notes, organize them, then present their drafts to the rest of the class for discussion and suggestions (Oluwadiya, 1995).

Go (1994) did research on some prewriting activities and found that the practice of interviewing during the pre-writing phase requires particular procedures as shown in the coming table:

Table 2.4

Teacher’s Guide to Interview Activity (Go, 1994, p. 07)

Technique	Teacher’s Role	Student Activity	Example
Interview -To collect ideas for writing at a later date. -To use interaction as a means to gather information. - To observe living conditions of "marginal people". Title: Dwellers in Mangrove Areas How Mangrove Dwellers can Rejuvenate Their Environment? The Harsh Environs of Mangrove Dwellers	-Explains the value of establishing rapport with interviews. -Creates a relaxed atmosphere for writing. -Allows students the time to interview 3-5 respondents without use of a structured questionnaire. - Makes arrangements before hand with prospective interviewees.	-In classroom- created groups, the students visit the interview area for a look-see and familiarization with people. - Establishes an interview focus like : Livelihood activities Environmental conditions Meeting basic needs Recreational activities. -Takes mental notes or uses an unobtrusive checklist. -Makes an interview guide in the vernacular with clusters in English. -Practices asking questions among students first.	-Respondents: Three households living near mangrove area, bordering the seashore. Focus : Environmental conditions 1. What made you decide to live in this area? 2. How do you cope with high tides, typhoons and monsoons? 3. What changes have you observed of the river, sea, mangrove and beach? 4. How can you help improve your environment? 5. What in the environment affect your living conditions?

The prewriting technique of interviewing constitutes a good way to gather information through interaction. Guiding students to dialogue with each other involves the writing teacher showing the importance of building friendly relationships using interviews and preparing a comfortable atmosphere that allowed students to communicate their ideas freely. Then, he organizes and directs them to hold interviews spontaneously. Consequently, each group of students trains on how to ask and reply to questions, acts and discusses the given topic and gets acquainted with each other.

2.1.1.5. Listing

Listing as a pump-primer strategy is essentially used to brainstorm whatever comes to your mind freely in just ten minutes (Nazario et al., 2010; Wyrick, 2011). This quick strategy is based on writing a word or a phrase and copying down any related ideas. Once the allocated time is ended, you have to review your ideas in terms of selecting the related ideas; crossing out the irrelevant ones as well as considering those that needed much elaboration (Nazario et al., 2010).

While listing, Cameron recommended that you do not pay attention to the ideas order, correctness and whether they are general or specific. The list of the following questions may help you produce more ideas.

Why? Why is this the case? Why is it important?

When? When did this happen? When does it matter?

Where? Where could this happen again?

Who? Who's involved? Who's affected? Who cares?

What? What does this mean? What are other points of view?

How? How has it changed over time? How does it relate to x? (2008, p. 03).

Asking such questions leads you to broaden the area being discussed. Thus, you can discover the topic from different angles and get more clarified ideas.

2.1.1. 6. Looping

Looping is a variation of freewriting that helps writers find out a topic to write about. As a result, both techniques share the same rules of writing quickly without stopping and without taking into accounts errors correction. Once you loop, you need to spend just five to ten minutes jotting down everything from the too general ideas to the more specific ones. After looping, you have to look at your notes and draw circles around the items that hold your attention. This last step can be made by a co-worker as looping looks like the other prewriting strategies which are generally based on peer interaction. As soon as you finish circling the interesting ideas, you only need to free-write on one circle until you get a more focused and specific product (Rose, 2017).

Based on a study conducted by Go (1994), introducing looping as a prewriting technique involves writing teachers and students doing some activities before starting the process of drafting. These activities are displayed in the following table:

Table 2.5

Teacher's Guide to Looping Activity (Go, 1994, p. 07)

Technique	Teacher's Role	Student Activity	Example
<p>Looping</p> <p>To pile ideas that pop out in relation to a given topic for later use.</p> <p>To sort out related ideas pertinent to title expansion.</p>	<p>Gives instructions on looping :</p> <ul style="list-style-type: none"> -Write nonstop about a given topic. -Forget grammar and mechanics but focus on the topic. <p>Title: What Man Builds He also Destroys.</p> <ul style="list-style-type: none"> -Follow the word cluster technique except that instead of words you have phrases, clauses and sentences. -Derive meanings from your thought loops by constructing one or two sentences per bundle of loops. 	<p>Reflects on the given topic for a few minutes before looping thought units.</p> <ul style="list-style-type: none"> -Writes nonstop in sentences, clauses or phrases without thinking of grammar. -Deletes or modifies loose thought units. -After about four or five loops, he sorts out main ideas and sums these up in a sentence or two. -May add new related ideas in the process. 	<p>Topic: Man builds and destroys</p> <p>Looping: Buildings and bridges man constructs- he cuts forest trees to build homes and sell as fuel- forests are bald- floods occur to destroy the bridges and buildings that man builds.</p> <p>Summing up: Man is both builder and destroyer. He constructs homes, buildings and bridges but forest trees are cut to build these structures which floods, caused by the felling of trees, destroy.</p>

Looping plays a great role in collecting ideas about the assigned topic and selecting the relevant ones. Integrating this strategy requires the teacher to ask the students to write phrases, sentences or clauses without stopping and paying attention to some writing

conventions as grammar and mechanics. Then, he asks them to form one or two sentences from each group of loops. Students think of the given topic and jot down everything that comes into their minds. After that, they review the produced ideas and construct one or two full sentences.

2.1.1.7. Cubing

Cubing is a prewriting technique used for gathering information. As its name exactly means, it consists of six sides, each side allows you to discover the topic from a different angle. While cubing, you need to deal with the following six elements:

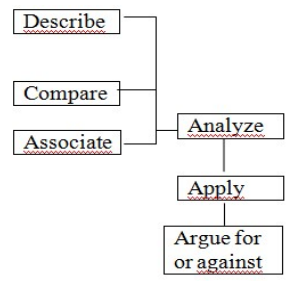
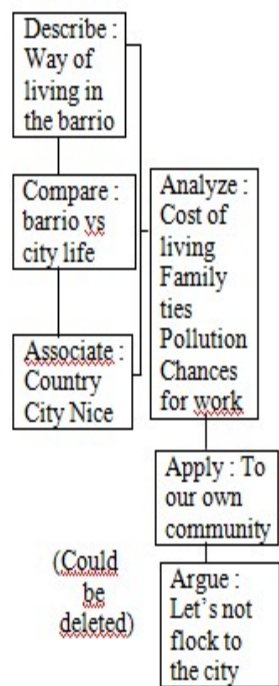
1. Describe it: What does your topic look like?
2. Compare and contrast it: What is your topic similar to or different from?
3. Associate it: What does this topic remind you of?
4. Analyze it: How does your topic work? What is its significance? What does it consist of?
5. Apply it: What are the uses of the topic? What can you do with it?
6. Argue for and against it: What are the benefits or challenges of the topic? What changes should be made? (Nazario et al., 2010, p. 11).

During this process, you write a general description of the topic on the first side of the cube. Then, you discuss the similarities and differences between your topic and others. On the next side, you determine what you already know about the topic. After that, you study it carefully in terms of its components, purpose and others. In the fifth side, you talk about the uses of the topic and the procedures you apply to communicate it. Last of all, you speak about the advantages and disadvantages of the topic.

Therefore, the six steps that students have to go through while implementing the cubing technique are clearly explained in the table below:

Table 2.6

Teacher's Guide to Cubing Activity (Go, 1994, p. 08)

Technique	Teacher's Role	Student Activity	Example
<p>Cubing</p> <p>To explore a subject from six points of view:</p> <p>Describe it</p> <p>Compare it</p> <p>Associate it</p> <p>Analyze it</p> <p>Apply it</p> <p>Argue for or against it</p> <p>To generate ideas for organization later.</p>	<p>Gives tips on what students are expected to do when cubing, to generate materials to write on.</p> 	<p>- Goes through the steps of cubing.</p> <p>-Chooses a subject matter that takes in Suggestions.</p> <p>- After cubing, expands and organizes ideas into a composition.</p> <p>- May delete or fuse a couple of cubes for brevity and unity.</p>	<p>Topic: Life in the Rural Area</p> 

Cubing is such a useful technique that it helps to study the topic from various angles and produce writing materials. In the process of cubing, the teacher explains its steps and the students follow their teacher's explanation and guidance. As a result, they determine the area they want to talk about and start writing their compositions.

2.1.1.8. Clustering (Mind Map)

Clustering is important for “understanding the relationships between the parts of a broad topic and for developing sub-topics” (Hamp-Lyons & Heasley, 2006, p. 73). It is evident that clustering helps the writer to discover how the different sections of the topic are

connected. On this basis, he/she can generate sub-topics. As illustrated in the figure below, clustering stands on writing the topic inside a circle in the centre of the page. Then, linking it with encircled sub-topics using lines. Each sub-topic is surrounded and connected with related ideas which are encircled too.

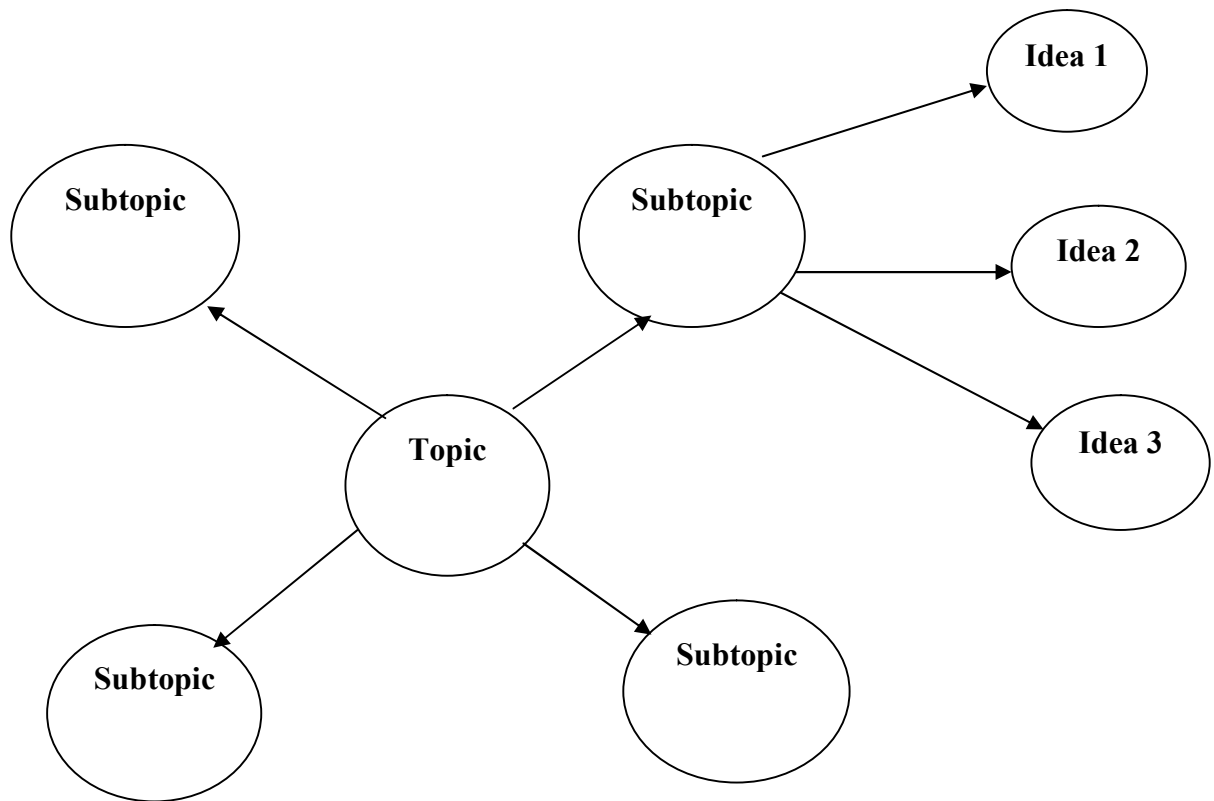


Figure 2.10. Clustering Model (Hamp-Lyons & Heasley, 2006, p. 73)

2.1.2. Arrangement Activities

Arrangement activities follow directly the invention ones and their function is just to organize the produced notes of the invention step. Once learners finish jotting down ideas onto the paper, it is time to group them according to their relationship and relevance, as well as to leave out the irrelevant ones. It can be said that it is the step in which learners select what fits the topic and cross out the needless ones. There are several arrangement activities proposed to help learners make fluent ideas as webbing, graphic organizers, flowcharts, concept mapping, spider map, fishbone map, series of events chain and branching.

2.1.2.1. Webbing

Webbing is a visual technique used to arrange ideas through connecting related ones. This strategy could be implemented in different areas as for literature comprehension and elementary reading activities. The figure below illustrates a simple form of a web (Danielson, 1985).

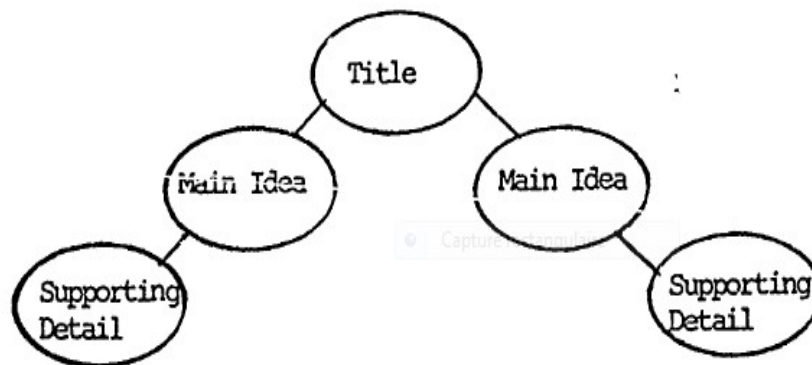


Figure 2.11. A Web Model (Danielson, 1985, p. 03)

The figure above shows that webbing is based on organizing ideas hierarchically. The highest point represents the title which is written in the centre inside a circle. Then, directly under the title, each main idea is also encircled and followed by a supporting detail which is enclosed in a circle too.

2.1.2.2. Graphic Organizers

Graphic organizers are concerned with indicating the relationship between concepts and ideas. They are essential spatial learning strategies because of several fundamental reasons. At first glance, they facilitate the process of teaching and enable students to understand and manipulate the ideas easily. Accordingly, using these tools enhances comprehension, promotes mental storage and develops critical thinking skills. More precisely, they help the thinking process, in which learners acquire and build specific abilities and skills

to find out connections between the schema and the new ideas. In this case, graphic organizers are a sort of scaffolding for the learning process and that makes learners' brains to be amplified. They also create an enjoyable atmosphere for learning that copes with the 21st educational changes. Besides, they are very useful for visual learners who get easily engaged in the tasks while exposed to such visual boost. In addition to their flexibility of doing various functions, they limit the general topics to more specific ones. Graphic organizers, as has been proved by Anne Ford in 2007, are beneficial for developing the level of students with special needs (Swoosh, 2013).

In other words, the advantages of graphic organizers can be simply summarized in four main points. They are successful in grasping how ideas match with each other. They are good at remembering facts, facilitating the next stages of the process and publishing the final version easily. They help in straightening any genre of writing (Oracle Education Foundation [OEF], 2013).

Generally, graphic organizers include different types, so selecting the suitable tool depends on the kind of writing you want to communicate. Here are some types as mentioned by (OEF, 2013).

Charts: These are used in writing when you want to give instructions or categorize ideas into groups. Generally, KWL and four column charts are the commonly used types of charts because they proved their efficacy as graphic organizers during the pre-writing stage.

The KWL chart is a prewriting method that helps students write whatever they know (K), what they want to learn (W) and what they learn or still need to learn (L) about the assigned topic (Byrd, 2011; Geyimci, 2014). The four-column chart is a graphic organizer which contains the main idea at the top of each column, followed by supporting details. Hence, each column includes the information needed to write a paragraph with its topic

sentence (main idea) and supporting sentences (details) (Byrd, 2011). An example about the KWL and four column charts are presented below:

Topic: _____

K	W	L

Figure 2.12. KWL Chart (Byrd, 2011, p. 72)

The use of the KWL chart involves students writing the topic at the top of the chart. Then, they write all the information they know about this topic in the first column. The next column includes the questions that students generate from the previous step and want to find solutions for them. In the last column, they fill what they learn from the answers they got and what they still need to learn.

Topic: _____

Support #1	Support #2	Support #3	Support #4
Detail #1	Detail #1	Detail #1	Detail #1
Detail #2	Detail #2	Detail #2	Detail #2
Detail #3	Detail #3	Detail #3	Detail #3

Figure 2.13. Four Column Chart (Byrd, 2011, p. 72)

In the four-column chart, students write the selected topic above the chart. Then, they write each main idea at the head of its column (Support 1, 2, 3, 4). After that, lists of details (Detail 1, 2, 3) are generated to support each main idea.

Venn Diagrams: They are useful to express similarities and differences between things. The form of the Venn diagram looks like the following:

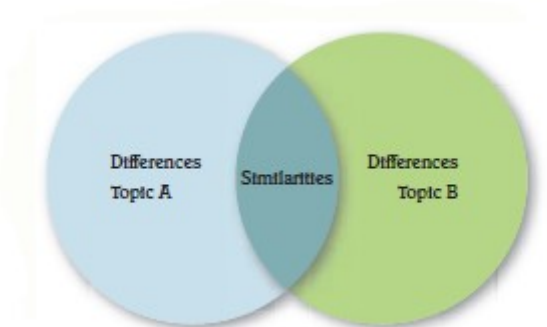


Figure 2.14. Venn Diagram Example (Nazario et al., 2010, p. 13)

As seen in the figure above, the Venn diagram consists of two overlapping circles where each circle represents differences between the topics and the central overlapping region includes the similarities in which topics A and B are alike.

Story Maps: A story map generally helps to recount stories or books. It also makes the process of understanding, analyzing and organizing the story elements so simple and easy. While implementing this prewriting graphic organizer, the teacher should provide the learners a few minutes to fill in the model map either individually or in pairs. Through holding an oral class discussion, they will be able to get ideas and then complete the story map (Mcknight, 2010). A simple form of a story map is illustrated as follows:

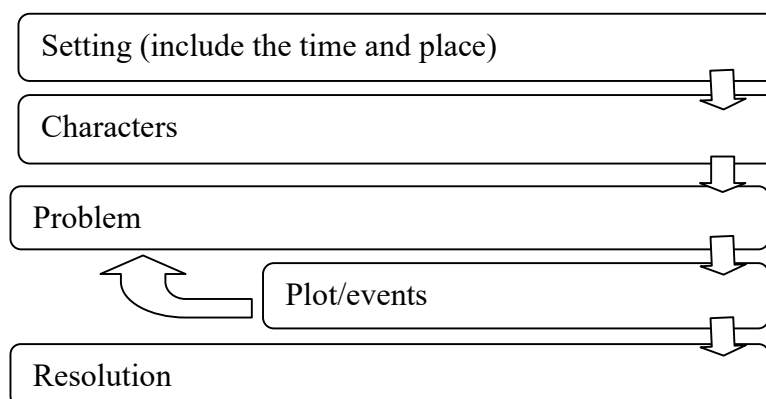


Figure 2.15. A Story Map Model (Mcknight, 2010, p. 181)

As shown in the figure above, a story map includes the five main elements of the story which are: the setting or when and where the story took place, characters, the problem to be settled, actions that happened and finally the resolution or how that problem could be solved.

Cause and Effect Diagrams: They are important as they help to explain actions. The figure below is an example of cause and effect graphic organizer of the water cycle.

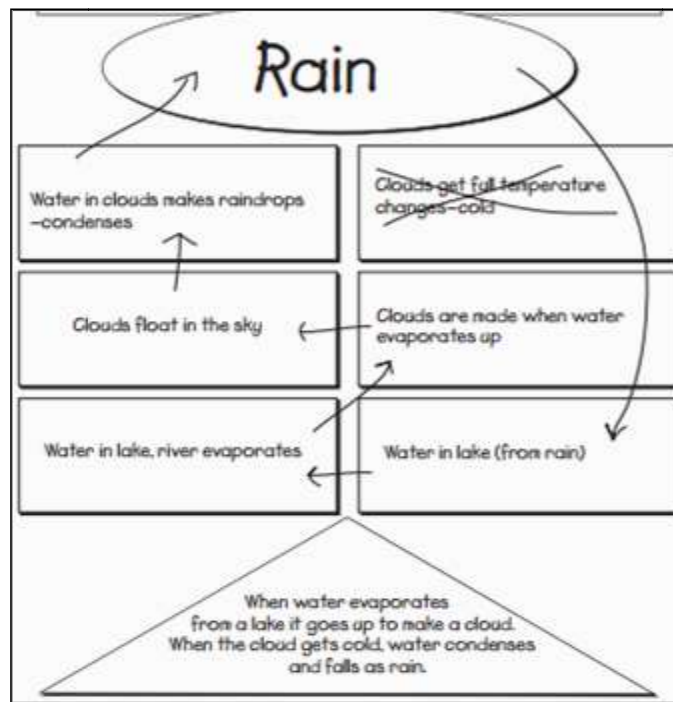


Figure 2.16. Cause and Effect Diagram Model (Roberts, 2004, p. 66)

A Cause and Effect diagram constitutes of three parts. At the top, we write the effect in the oval (Rain). Then, each cause is put in a rectangle under the oval form. After that, we link the causes with the effect on which we know that these causes occurred sequentially or simultaneously. At the bottom and inside a triangle, we write the concluding sentence in which we group all the aforementioned causes and effects (Roberts, 2004).

Outlines: They are commonly used for producing long papers as well as for the persuasive type of writing. Johnson showed the guidelines for outlining as follows:

1. Look at topic or theme.
2. List important ideas using numbers.
3. Use letters to add details.
4. Begin writing (2008, p. 189).

Using this technique requires you to have a look at the assigned topic, then write down the main ideas and enumerate them. Next, include supporting ideas using letters and finally start producing your first draft.

Timelines: A timeline is a prewriting graphic organizer used to order the actions chronologically. For clarification, Roberts explained that mapping out a biography or history assignment can be easily achieved through a timeline. We begin by writing down the start and end dates at the top and bottom of the line, then we move forward to organizing the essential dates, on the left side of the timeline, chronologically. Moreover, these dates can, later on, help us put a sequenced plan of writing. After that, we mention the names of the essential events and we scribble down, on the right side of the timeline, some notes that detail the latter. We can make use of these notes to better expand the content (2004).

In short, it can be said that a timeline is such a helpful graphic organizer for writing biographies or historical events that it arranges lists of dates, events and their brief content. An example about a timeline graphic organizer of biography is presented below:

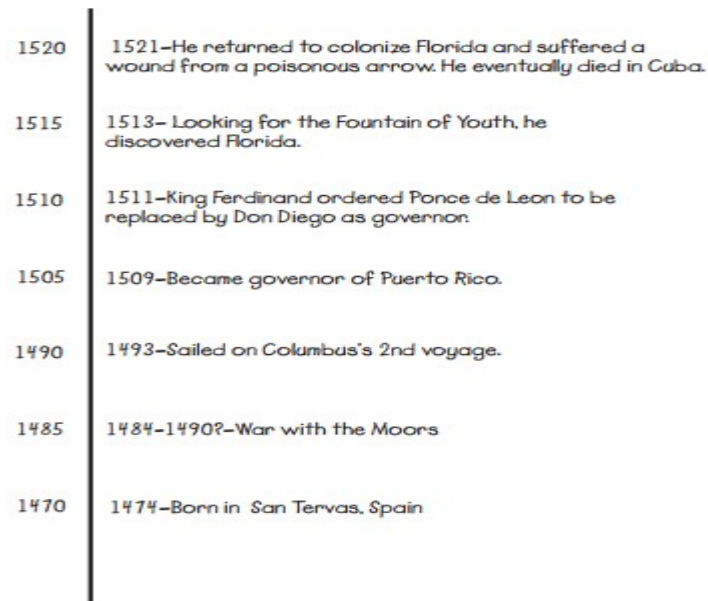


Figure 2.17. A Timeline of Biography Example (Roberts, 2004, p. 59)

The figure above displays the sequence of the essential facts and events of a famous explorer. These events are chronologically ordered from the bottom to the top. At the bottom, the timeline shows the explorer’s birth date and place, whereas the top of the line includes the death date and place and how he died.

2.1.2.3. Flowcharts

Flow charts are other effective types of graphic organizers characterized by visualization. They were firstly presented in the 1940/50s, but they became widely known and used in the field of trade in the 1970s. They are useful for training students to think, represent their thoughts and show connections between the ideas. Integrating flow charts helps teachers evaluate the students’ level of how much they grasp a series of events and a process of how something happens. Conversely, students will be able to arrange events and stages, connect between them and reach a concluding result (Watson, 2007). The following flowcharting examples are the best way to generate ideas for cause and effect writing.



Figure 2.18. Flowcharting Examples (Nazario et al., 2010, p. 12)

The left side of the flowcharting example shows that many causes lead to one result. However, the right side figure represents that many effects come from one cause.

2.1.2.4. Concept Mapping

The technique of concept mapping was developed by Joseph D. Novak at Cornell University in the 1960s. It originally came from David Ausubel theories of learning (1968) which viewed that learning new knowledge depends on the already existing knowledge (Novak & Cañas, 2006, 2008, 2010; Novak, 2010; Plotnick, 1997). Concept mapping is a graphical process for organizing and representing knowledge. It contains nodes to indicate concepts, and the relationship between them is usually shown by links of lines. To specify this relationship, words are put on the line (Novak and Cañas, 2008; Plotnick, 1997).

It is clear that the chief function of concept maps is to show and arrange your ideas. Generally, you are required to write concepts inside boxes or circles and use lines to connect two related concepts. On each line, you write words, phrases or prepositions to label the relationship between one concept and the other. The structure of the concept map is as follows:

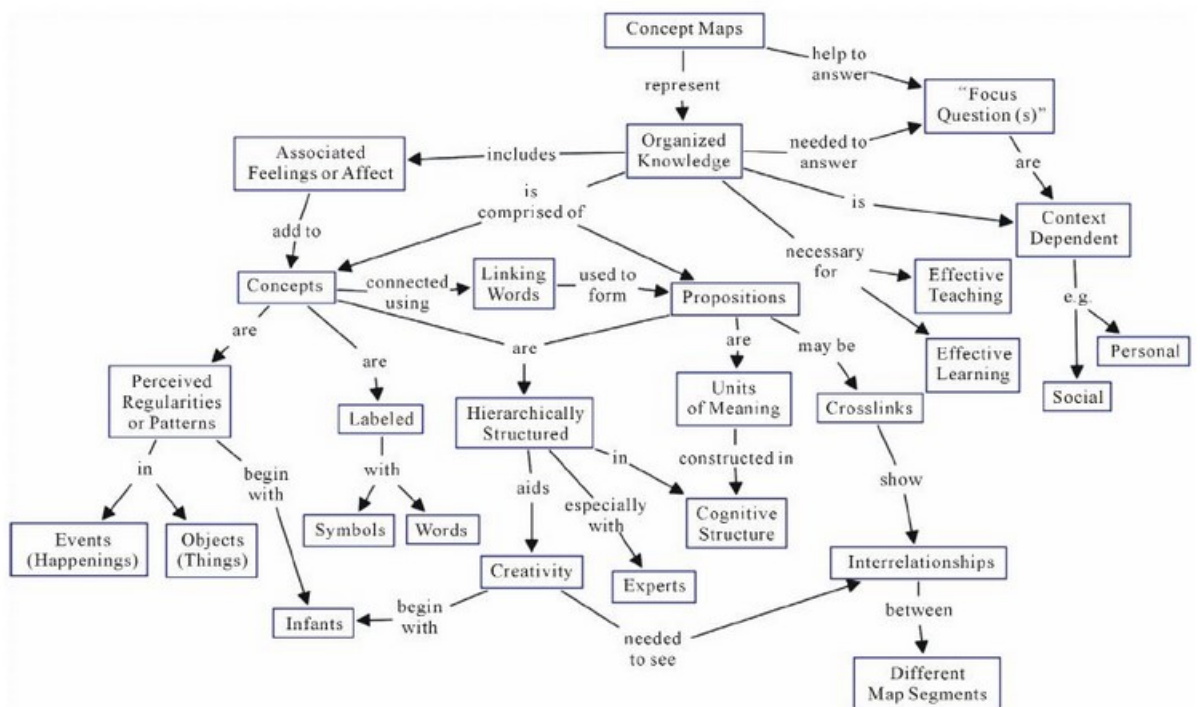


Figure 2.19. A Concept Map Example (Novak & Cañas, 2008, p. 02)

A concept map is a network of hierarchically structured boxes, including concepts and lines that connect every two related concepts. These lines can take one, two or no directions. Concept mapping has a set of advantages that are summarized in three main points:

- Visual symbols are quickly and easily recognized;
- Minimum use of text makes it easy to scan for a word, phrase, or the general idea; and
- Visual representation allows for development of a holistic understanding that words alone cannot convey (Plotnick, 1997, pp. 2-3).

Visual representation of knowledge is beneficial for making meaning easily understood in a short amount of time, so using symbols is effective in grasping the meaning and looking carefully at a particular concept or word. Concept mapping permits writers to get the complete meaning that words alone can never do.

The tool of concept mapping has different uses in the field of education. It can be applied as a brainstorming technique to create new concepts and ideas. It can also be used as a

hypertext design tool that makes concepts and information well structured in computers unlike the old linear way of text writing. Besides, this strategy is successful in communicating concepts and establishing connections between them. Concept mapping may be implemented to encourage the process of learning and enhance the teaching process, in which it increases the learners' ability to solve the problems effectively, recognize and evaluate the misconceptions that hinder the instruction to be efficiently oriented (Plotnick, 1997).

2.1.2.5. Spider Map

The spider map technique is defined as "a free-form graphic organizer that allows students to think about information as both visual and metaphorical. The students are also able to visualize the interconnectedness of information and ideas to a central idea" (Mcknight, 2010, p. 48). This activity is important for writers who prefer to think of the topic visually and metaphorically and to see the internal connections of the produced ideas to the general idea.

To apply this type of graphic organizers involves writing teachers to go through a set of steps. Select a topic to talk about. Tell the students that the use of the spider map will help them see, arrange, and link their ideas. In pairs, ask them to complete the organizer and then share what they did. Finally, in a group discussion, compare and contrast the students' answers (Mcknight, 2010).

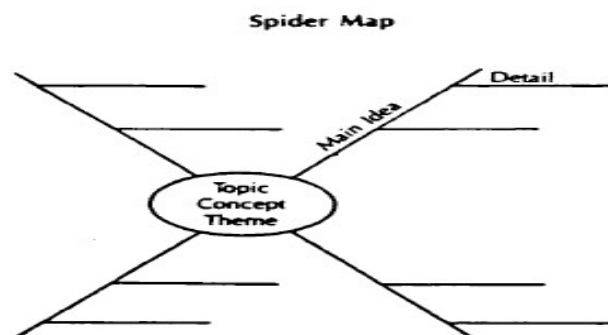


Figure 2.20. A Spider Map (Jones, Pierce & Hunter, 1988, p. 22)

The spider map activity starts with writing the topic, the concept, or the theme to be discussed in the centre inside a circle. Each link of the four links shows the main idea and its two or more details.

2.1.2.6. Fishbone Map

The fishbone map strategy (the Cause and Effect Diagram or Ishikawa Diagram) was invented by the Japanese theorist and Professor Kaoru Ishikawa (1915-1989). It is better to be implemented in a large-group discussion to make sure that students can know the various parts of the organizer (Mcknight, 2010). The prewriting technique of fishbone map helps to find out the causal connection between a complex event or phenomenon (Jones et al., 1988). A simple graphic form of this strategy looks like figure (2. 21).

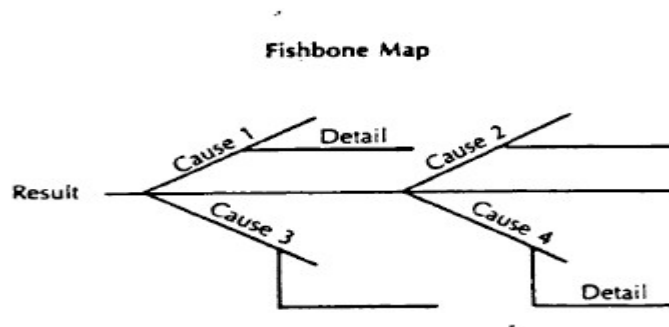


Figure 2.21. Fishbone Map (Jones et al., 1988, p. 23)

It can be noticed that the fishbone map begins with stating the result. Then, establishing the causes behind this effect and finally, from each cause, a one detail must be included.

2.1.2.7. Series of Events Chain

The series of events chain technique is used to show the order of events. Jones et al. (1988, p. 22) mentioned that it can be “used to describe the stages of something (the life cycle of a primate); the steps in a linear procedure (how to neutralize an acid)...; or the goals,

actions, and outcomes of a historical figure or character in a novel (the rise and fall of Napoleon)”. Therefore, this tool has broad uses, including the field of science, history, literature and others. The figure below indicates this technique.

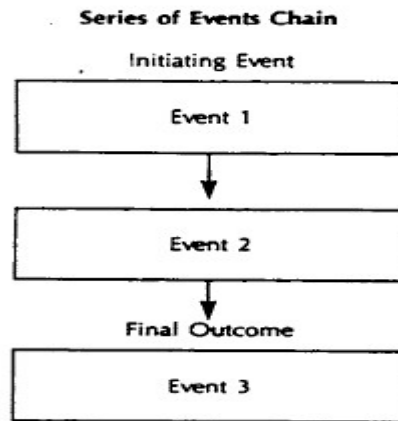


Figure 2.22. Series of Events Chain (Jones et al., 1988, p. 22)

As it can be observed in the figure above, the series of events chain technique starts with writing the initial event which is followed by the first and the second event until we reach the third and the last event or what is called the final outcome.

2.1.2.8. Branching

The prewriting activity of branching is also named a tree diagram or map. It means to divide your topic into smaller branches, in that you arrange the different parts of your topic and you visualize your thinking clearly (Nazario et al., 2010). The following figure shows an example of branching.

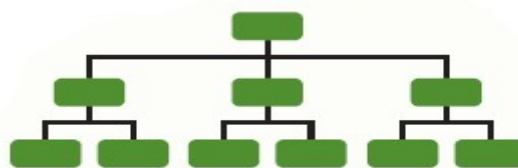


Figure 2.23. Branching Example (Nazario et al., 2010, p. 10)

As disclosed in the figure above, the topic is written inside the top box and it is divided into branches. Each branch or division includes the main idea which is subdivided into supporting details.

2.2 Background of Clustering Strategy

In the 1970s, the story of clustering emerged as a new prewriting strategy by Gabrielle Lusser Rico, a PhD researcher at Stanford University. This invention was based on the revolutionary results of brain research when Rico attempted to link the way the human brain works with writing skill. Dr Rico was also a teacher of composition courses at San Jose State University where she marked a great deal of benefits clustering brought to her students. Actually, Dr Rico enriched the field of education with great and precious publications, but she was famous for her book: "Writing the Natural Way: Using Right-Brain Techniques to Release Your Expressive Powers". After the publication of this book in 1983, the notion of clustering was gradually being started to spread and it became so popular through her presentation at a San Diego Area Writing Project Workshop at the University of California, San Diego. During the debate of the workshop, Rico declared that clustering helped her a lot to outline *Writing the Natural Way* book in just a few hours after several months of trial and failure. Dr Rico died in March 2013 leaving the magical tool of clustering that helps to activate the right side of the brain and improve the writing skill whenever and wherever is being implemented (Scott, 2012).

Dr Gabriele Lusser Rico, an associate professor of English and creative arts at California State University, San Jose, said that the concept of clustering rose and developed when she got inspired by the last 20 years findings of brain research and studies. It is considered a tool to include the abilities of the right brain hemisphere in the process of writing. In this sense, Rico clarified what happens inside the brain while the writer uses the

process of clustering. She said that:” It works, very likely, by blocking the critical censorship of the analytic left brain and by allowing the synthesizing right brain to make flash-like nonlinear connections” (1987, p. 29). This shows that clustering as a non-linear activity needs the collaboration and unity of the brain’s two hemispheres. The right hemisphere holds different capacities as being holistic and image-producing, whereas the left side is responsible for logical and linear thinking.

As a result of Rico’s experiment with clustering, some of the positive effects are being remarked. For instance, it improved fluency and coherence, provided tangible assistance and built a high sense of how to develop ideas. To conclude, after many years of integrating the clustering technique, Rico felt a mixture of excitement, surprise and awe towards it (1987).

2.3 Definition of Clustering

Writing as a very effortful cognitive process requires a series of stages to follow to produce an effective piece of writing. The first stage in which learners get started writing involves the teacher applying some techniques as freewriting, listing, journalistic questions, mapping or clustering to get students ready to write. Clustering as one of these prewriting strategies goes by several names: mind-mapping, diagramming, branching, bubbling and webbing. As a simple definition of clustering: “the student writes a topic or concept in the middle of a page and gathers ideas into clusters around the topic” (Richards, Schmidt, Kendricks & Kim, 2002, p. 58). It is clear that clustering is called so due to the clusters of ideas surrounding the topic in the centre of the page. Rico, the founder of the clustering technique, defined it as: ”nonlinear brainstorming process that generates ideas, images, and feelings around a stimulus word until a pattern becomes discernible” (1987, p. 29). Thus, clustering can be described as an activity performed in a non-linear way so as to come up with

words, ideas, images and emotions. This process depends on a keyword that motivates the writer's brain and allows patterns to emerge.

To clarify this notion, the following figure presents a graphic definition of her student evaluation of clustering:



Figure 2.24. An Anonymous Student Evaluation of Clustering (Rico, 1987, p. 30)

As shown in the figure above, clustering is a simple powerful tool that makes the process of thinking about complex symbols and images visible. Thus, it helps the ideas get out of the brain and become manipulated. However, the figure below displayed an extended definition of clustering. It can be seen as music, game or cooking. The writer should firstly think of the topic, write down ideas, opposites and parallels quickly. Finally, circle and connect them using lines.

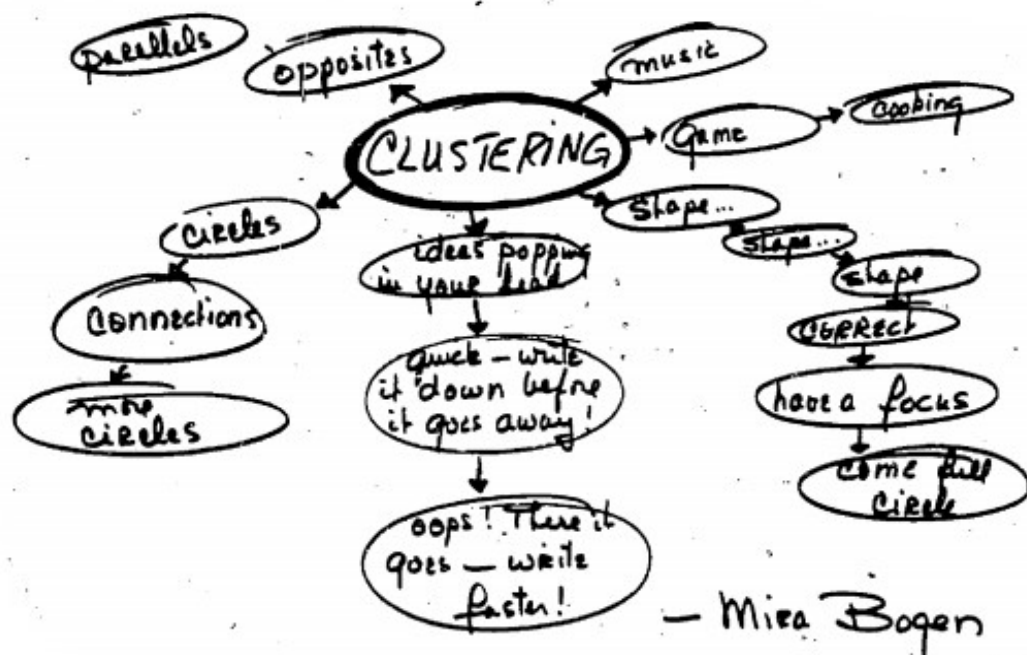


Figure 2.25. A College Freshman Description of Clustering (Rico & Claggett, 1980, p. 1)

Clustering (“branching” or “mapping”) is an organized process due to its orderly stages. It shares with the brainstorming and listing strategies the same associative basics, but it is different in being more heuristic (Buzan & Buzan, 1993; Sharples, 1999). Clustering helps students organize any sort of written language: words, sentences, impressions, arguments, souvenirs and ideas resulting from a single central trigger which can be a topic, arousing question, an image, or a metaphor (Ferris & Hedgcock, 2005).

The concept of clustering is usually linked with metaphor in many studies and researches (Cohen, 1968; Conner, 1990; Moreira, 1979; Rico, 1993). Metaphor as a sort of figurative perception can be defined as “... the natural language of the emotions, making us receptive to a similarity in dissimilarity” (Rico, 1993, p. 106). In the learning process, clustering works as a metaphor in the way of activating thoughts, generating materials and leading to creativity (Rico, 1976).

Langan stated that the strategy of clustering is useful for writers who want to think visually. It starts with writing the topic in the middle of the paper. Then, jotting down ideas inside circles and linking the related ideas together using lines. Finally, connecting those ideas with the subject in the centre (2008). In another way, Oshima and Hogue said:

Clustering is another brainstorming activity you can use to generate ideas.

To use this technique, first, write your topic in the center of your paper and draw a "balloon" around it. This is your center, or core, balloon. Then write whatever ideas come to you in balloons around the core. Think about each of these ideas and make more balloons around them. (2006, p. 269)

In brief, clustering is a prewriting strategy that stimulates learners to think creatively, generate ideas quickly and discover the relationships among them visually. Clustering, unlike the other prewriting techniques, relies on circles, lines, boxes, and arrows to show how the ideas are related. For instance, the process of clustering on “NEW WAYS TO COMMUNICATE“is as follows:

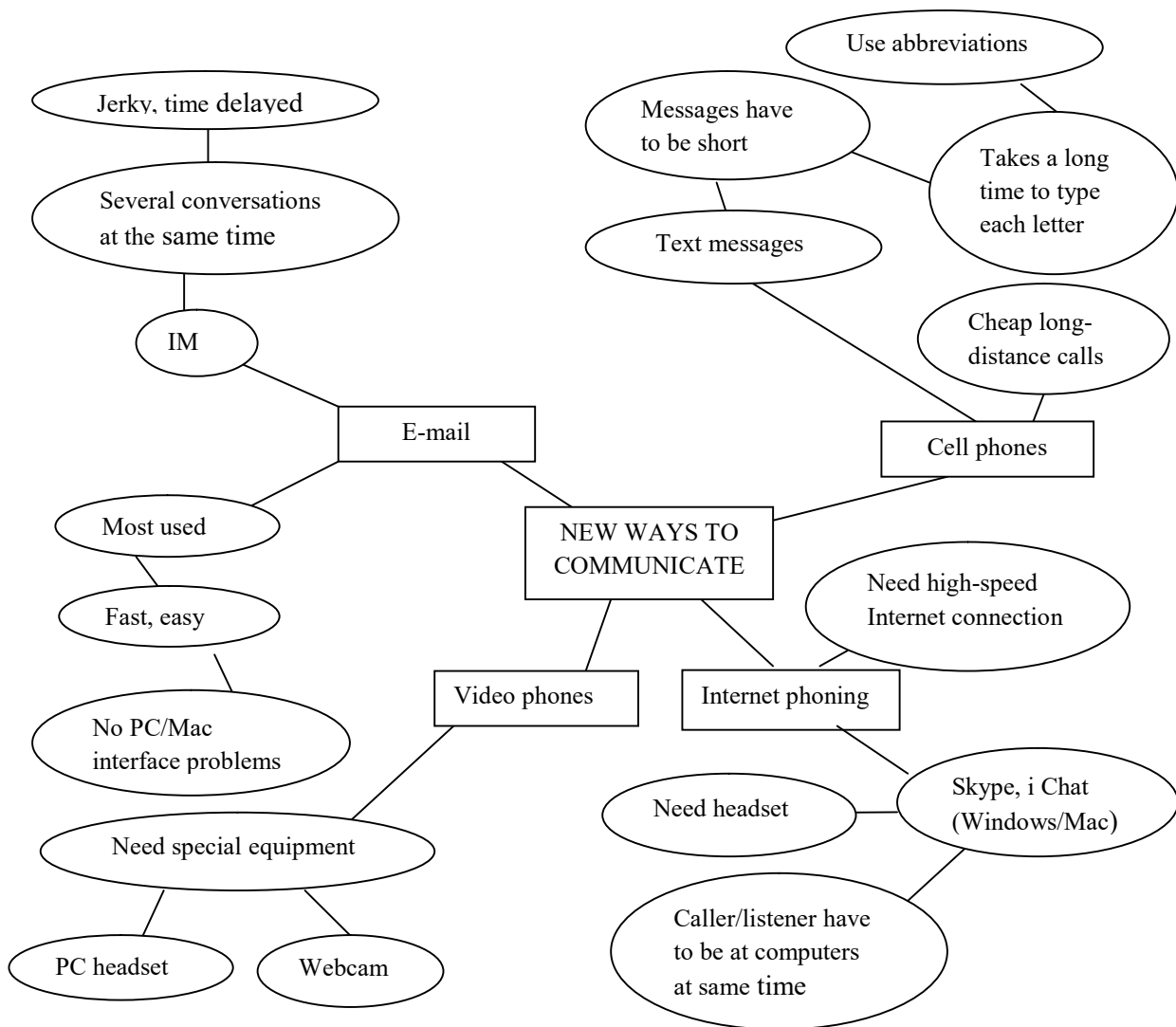


Figure 2.26. A Model of Clustering (Oshima & Hogue, 2006, p. 270)

Regarding the figure above, the key phrase is written in capital letters in the centre of the paper inside a box. It is connected by four main ideas using lines. Each main idea is linked by many examples, facts and details using lines too.

2.4 Steps of Using the Clustering Strategy

Clustering is a strategy in which writers follow specific steps. To explain how to cluster or how clustering works, Axelrod and Cooper showed the steps of clustering as follows:

1. In a word or phrase, write your topic in the centre of a piece of paper. Circle it.
2. Also in words or phrases, write down the main parts or ideas of your topic. Circle these, and connect them with lines to the topic in the centre.
3. Next, write down facts, details, and examples related to these main parts or ideas. Connect them with lines to the relevant main parts or ideas. (2015, p. 283)

It is clear that the process of clustering starts with writing a keyword or phrase (your topic) inside a circle in the middle of the paper. Then, jotting down any necessary ideas and linking them to the centre using lines. The final step is to copy down examples, facts, and details that have close associations with that necessary information and then link them with the appropriate information using lines too.

2.5 Characteristics of Clustering Strategy

To facilitate the planning stage for native and non-native speakers, there are a group of prewriting strategies that should be implemented for getting students ready to write. Clustering as one of those strategies has a set of merits that make it so different from the others.

Clustering is characterized by visuality which helps writers see what they think and how the ideas and facts are connected. In this sense, Kalandadze viewed clustering as:” making a visual map of your ideas. It frees you from following a strictly linear sequence...” (2007, p. 06). In addition to the visual quality, clustering is typically a non-linear process. Moreover, Steele and Steele argued that clustering has the trait of being positive before and after reading. Before reading, this strategy activates students’ schemata of the given topic. After reading, it enables them to connect new ideas to the known ones. Clustering is also valuable for teachers who can observe and evaluate how much students get knowledge and to what extent there has been a positive change in their production. In addition to its powerful

effects before and after reading, clustering can be applied individually or in groups without paying attention to the level of ideas and the spelling mistakes (1991).

2.6 Uses of Clustering

Using clustering to review and study essay exams is one of its various applications in the process of English language teaching and learning. Starbuck, a teacher of English at Jordan secondary school, showed that clustering has the trait of being holistic which helps the students a lot in their studies; especially, when they prepare for essay exams. Accordingly, implementing clustering and depending on the taken notes helps the students make visual clusters that can be easily learned. In doing so, they will acquire a kind of confidence that urges them to work well in the exams. The use of clustering as a review and study skill involves the students following seven principle steps:

1. Review class materials and identify what is important. In this step, the students identify the most important points that have been studied before through the general review that the teacher usually does before the exams, review the notes they took during the courses and highlight the heavily repeated concepts or review the textbook's chapter titles and subtitles and focus on the repeated words too.

2. Make preliminary clusters. At this stage, the students should draw initial clusters for the sake of evaluating their understanding and interpreting the material based on the previous review. However, in classes where the teacher has not shown the important notes of the course, the students start the process of clustering by asking the whole class about the objective of the course, themes, characters and patterns of the reading materials and then they use the possible answers to make preamble clusters.

3. *Self-check.* After having finished the clusters, the students should do self-check where they can return to their notes and textbook to add any missing words to their clusters.

4. *Reduce material to basic clusters and stimulus words.* The purpose of this stage is to decrease clusters and stimulus words as much as possible. Therefore, the students need to cluster many times, create their own stimulus words until they attain simplified and focused lists of words that are easily memorized for the exam.

5. *Memorize simplified lists from clusters.* For better exam readiness, memorization is the best way for the students to go through.

6. *Review final cluster (s) on the morning before the exam.* One last checkup of final clusters helps the students be as confident as acquainted with multiple facets of the matter.

7. *Cluster around specific test questions.* During the day of the exam, the students need to go through the most essential phases in which they test what they have grasped. Therefore, using clustering will be so beneficial for activating their memories and organizing their ideas (1987).

In conclusion, it can be said that only if students follow the steps mentioned above regularly, the material will be self-made due to this they will fit with the majority of questions that they will be exposed to.

Besides, O'Brien noted the efficient uses of clustering along the course of his experience. He stated that teachers use clustering as a remedy tool for beginners and a reinforcing way for advanced students. This process is used to develop the quality of being fluent. Literature; for example, as a vague area of study clusters work more effectively well in comparing and contrasting some of its elements. The figure below represents a sample of his students contrasting the main settings of Shakespeare's *Antony and Cleopatra* (1987).

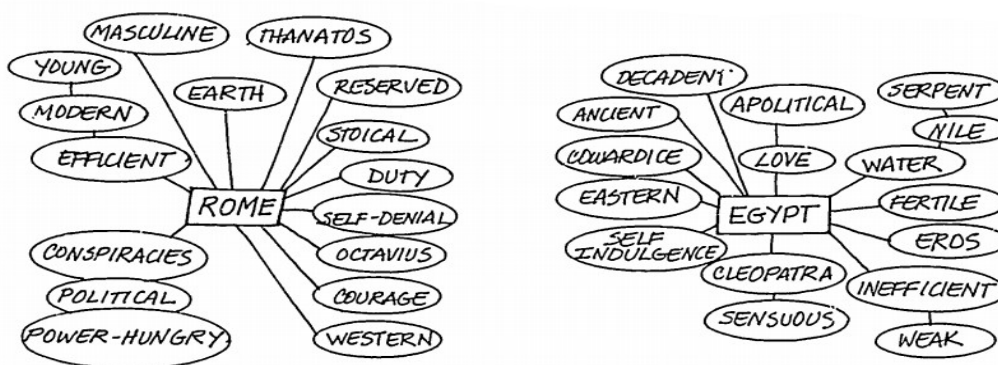
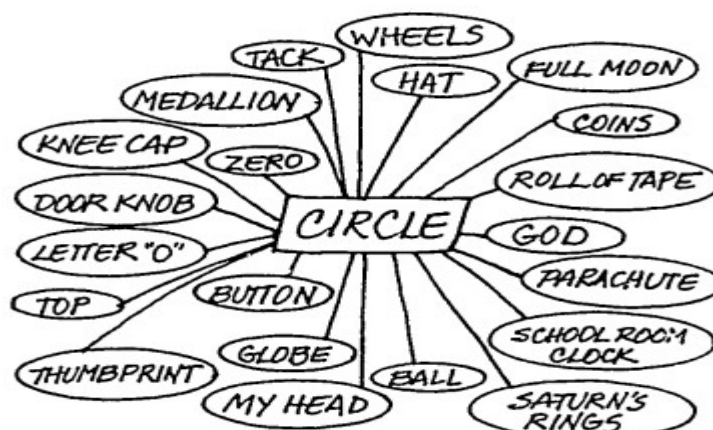


Figure 2.27. Contrasting the Main Settings in Antony and Cleopatra (O'Brien, 1987, p. 37)

In the first-grade classes, Pierce emphasized that using both journal writing, group and individual clustering have a big role in creating an atmosphere full of enjoyment, comfort and success. This is of course accompanied by questions that elicit plenty of information (1987). As an example of individual clustering on circles made by Jefferson Newman, a fifth-grade student at Los Alamitos Elementary School, Reeves (1987) demonstrated that Jefferson's mind follows a systematic path while producing ideas, moving from the real and literal meaning of objects to the conceptual and symbolic language which creates a kind of rhythm in his paragraph. Hence, the following paragraph is composed by Jefferson using his produced clusters about the circle.



The circle is round and smooth. Coins like dimes and fifty cent pieces are in circles. A circle takes the formation of your knee cap. It is the form of Saturn's rings. The circle is the shape of a medallion glittering in the sun. A circle is like the rings of a bracelet. People get married and have a circle placed on their finger, a wedding ring. A circle shows the significance of how God is infinite. A circle takes the brightness of the full moon. I wear a button almost every day, a circle button. It reminds me of a classroom clock-ticktock, ticktock, ticking time slowly away. A circle is the egg that rests on your table. A circle is the base on which your hair rests. It is the turning of the doorknob, the orbiting of the planets, the parachute springing out as the person leaps out of the airplane. It is the thumbprint of a human being twisted and turned, making the whirls in your thumb. It is the wheel on a bicycle spinning round and round. A circle is a fascinating two-dimensional object.

Figure 2.28. Paragraph Developed by Jefferson Newman from Clustering Circle (Reeves, 1987, p. 35)

As far as clustering is concerned, Carr (1987) remarked that using clustering with nonreaders and writers is the same as it is used with students, but instead of words they use symbols and pictures as shown in the figure below:



Figure 2.29. Clustering with Nonreaders (Carr, 1987, p. 33)

Carr described the process of teaching clustering to nonreaders and writers as follows:

1. Introduce the topic and get a few oral responses.
2. Write the topic word on the chalkboard and circle it.
3. Draw all the children's responses to the topic cluster.
4. Have children create their own clusters on large newsprint.
5. Have the children choose those symbols from their clusters that they want to write about and draw the symbols on good paper.
6. Have the children dictate their sentences to you; then have each student copy his or her sentence (Noncopiers can trace).
7. Have the children read their papers in a sharing group. (1987, p. 33)

At last, we can say that teaching children using clusters of drawings, pictures and symbols is a good way to have a strong will to succeed and why not to be successful future writers.

Clustering is effective in teaching and developing students' vocabulary. A recent experimental study conducted in 2017 by Andayani showed that the use of the clustering technique was successful in vocabulary instruction to the tenth-grade students of SMA Muhammadiyah Gisting. It revealed that the mean scores (75.29) and the standard deviation (8.638) of the experimental class in the post-test were higher than the control group ones (M= 66.37 and SD= 5.867). It also unveiled that clustering created an amazing class that made learners ready to learn English vocabulary. This fact supported the results of the classroom action research conducted by Surya in 2014 with the second-grade students of SMP Al-Kautsar BKUI, Jakarta. The findings showed that the students achieved better scores in vocabulary mastery.

2.7 Advantages of Clustering

As writers, in order to overcome the mental block and get ready to start writing, we need some invention and inquiry strategies or what is called heuristics. Clustering as an invention strategy has plenty of advantages that can help writers do initial preparation for the topic. Martinez, who was one of the attendees of the annual conference of the California Association of Teachers of English held in San Diego, California, was positively affected by Rico's idea of clustering. She noticed several advantages of this process based on her continued experiment with it.

- ✓ Clustering works well with all levels whatever their writing capacities were.
- ✓ It could be integrated with all aspects of the English language teaching program.
- ✓ The process was well received by the students and enthusiasm was a big part of their reaction towards this strategy which they labelled it as a "fun" task.
- ✓ It was so successful in reducing the feeling of fear of writing.
- ✓ It enhances the students' perceptions of the writing skill.
- ✓ Clustering gave the students confidence that not only led them to be better prepared but also their grades would be highly improved (1987).

In addition, Axelrod and Cooper stated the positives of clustering as follows. First, this prewriting strategy is useful for writers to explore the topic and get a clear glimpse of it before writing the first draft. Then, clustering is a way of solving problems creatively; especially, when writers get drafting and revising. This shows that its work is not only limited to generating ideas during the pre-writing phase but it can also be used while drafting and revising; particularly, in the case of essays where writers need to plan some of its parts at any stage. Besides, this kind of mapping strategy is beneficial for finding and organizing ideas. Therefore, writers who tend to use clustering rely on lines, circles or boxes to organize the

data collection. Finally, it can be used to analyze and solve lots of rhetoric contexts at schools, works and even in society. This indicates that the clustering strategy is convenient for any age and genre of writing (2012). In short, it can be said that clustering is a creative activity whereby writers can solve problems, explore a topic and organize ideas.

Clustering is an incredible strategy that stimulates the creative part or side of the brain and opens the way for the stream of creativity to overcome some writer's mental blocks (Scott, 2012). In other words, clustering "...is particularly good for students who know what they want to say but just can't say it" (Proett & Gill, 1986, as cited in Seow, 2002, p. 316). Clustering seems to be so effective for those who are inhibited and unable to free and express their thoughts easily.

According to Sabarun, clustering has a set of benefits. It allows the writer to produce, organize and reorganize ideas. It helps to cluster and focus the ideas around a central trigger, and this shows the initial frame of the piece. Clustering also connects and integrates the writer's prior knowledge with that tentative frame. Through clustering, the writer can discover his or her existing potentials and add them to the newest information. Thus, it associates between the known and unknown concepts, between the previous and new experience, between parts of an idea and its whole. Besides, it takes a short time, which is estimated from thirty seconds to two minutes, to write down any idea crosses out the mind until a signal indicating that it is enough to be developed into a full piece of writing. Moreover, clustering stands for connecting ideas freely or what is called free-association of ideas which makes its shape so distinctive from the other planning strategies although they have the same effectiveness. Finally, the clustering process is suitable for the type of students who want to learn in a visual and tactile-kinesthetic way (2013).

2.8 Instructions for Teaching Clustering

Writing teachers adopting the process of clustering ask students to follow the coming instructions:

1. Tell students that they are going to learn to use a tool that will enable them to write more easily and more powerfully, a tool similar to brainstorming.
2. Encircle a word on the board—for example, energy—and ask students, "What do you think of when you see that word?" Encourage all responses. Cluster these responses, radiating outward. When they have finished giving their responses, say, "See how many ideas there are floating around in your heads? Now, if you cluster all by yourself, you will have a set of connections as unique to your mind as your thumbprint is to your thumb".
3. Now ask students to cluster a second word for themselves. Before they begin, tell them that the clustering process should take no more than one to two minutes and that the paragraph they will write should take about eight minutes. Ask them to keep clustering until the "Aha!" shift, signalling that their mind is holding something they can shape into a whole. In writing, the only constraint is that they "come full circle"; i.e., that they do not leave the writing unfinished. Some excellent words are afraid or try or help.
4. After they finish writing, ask students to give a title to what they have written that is suggestive of the whole (Rico, 1987, pp. 29-30).

In short, we can summarize these effective instructions for teaching the clustering process as follows. Initially, introduce the technique of clustering to the students as a new brainstorming activity. Then, draw a circle around a stimulus keyword on the board; ask an effective question so as to activate the right side of the brain which will be reflected on various answers and cluster them. After that, announce to them that they are limited by a

certain amount of time to cluster a second word for themselves and keep on doing that until the time is up. However, the only factor hindering them is when they seem mentally saturated while writing. Finally, entitle the prepared sample.

2.9 Teaching Writing Using the Clustering Technique

Teaching writing is considered a difficult task, but through selecting, adapting and implementing the suitable strategies the process of transforming thoughts and ideas into written communication will be less challenging. Writing teachers have to begin with the pre-writing stage in which they use some invention and arrangement activities that can help learners produce well-organized pieces of writing. In this context, introducing clustering as one of the common invention techniques to teaching writing occurs in four steps:

Step 1: Let students identify what clustering is. Show its usefulness for them to produce ideas while getting started to write.

Step 2: Guide students to cluster together. Write the topic in the middle of the whiteboard inside a box or any other form, and surround it with keywords using lines or arrows. At this step, students do not give attention to the ideas and feel free whether to organize them or not.

Step 3: Students write the first draft using the designed model of clustering.

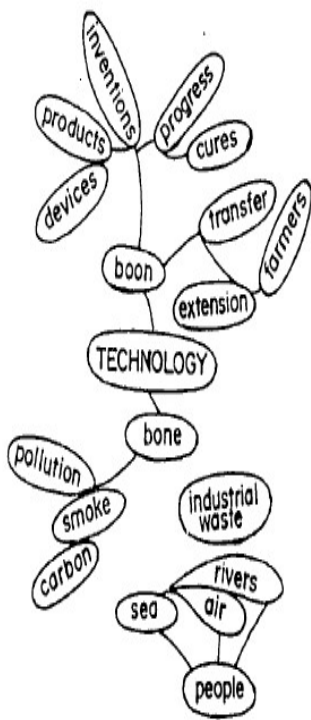
Step 4: Students do the process for themselves since they have become adept at using the clustering technique. They select a topic and narrate their personal experience. At this final stage, they need to evaluate and find out their areas of strengths and weaknesses in writing (Solehodin, 2015).

For more clarification about the process of teaching and learning writing through the prewriting technique of clustering, Go (1994) summarized its importance and both teacher's

and students' roles and provided an example to show the real application of this strategy as illustrated in the following table:

Table 2.7

Teacher's Guide to Clustering Activity (Go, 1994, p. 06)

Technique	Teacher's Role	Student Activity	Example
<p>Clustering</p> <ul style="list-style-type: none"> -To map out thoughts on a particular topic. -To provide an information bank from which to select meaningful clusters. 	<ul style="list-style-type: none"> -Explains clustering. It is similar to brainstorming except that the focus is on specific words or idea. -Circles the stimulus word on the board. -Encourages all types of reactions to the stimulus word. -Clusters responses with the nucleus word in the center, radiating outwards. <p>Topic sentence: Science has produced technologies that could benefit or destroy mankind</p>	<ul style="list-style-type: none"> -Responds to stimulus word. - Discerns the pattern of ideas with teacher guidance. -Chooses the meaningful clusters to write on and expand into a composition. - Not all clusters on the board are used. -For variation: Each group selects a stimulus word and proceeds with the same clustering technique. -Gives a title for the chosen clusters. 	<p>Stimulus word: Technology</p>  <p>Title: Technology- Boon or Bane.</p>

Clustering is a critical strategy that helps to produce ideas, facts and details. The writing teacher first has to introduce the process of clustering to his/her students. In the centre of the board, write a keyword inside a circle, ask them to think and say whatever comes to

their minds and finally group the ideas into clusters. On the contrary, students think about the given keyword, jot down ideas and categorize them, select and entitle the relevant clusters to be developed in the next stage.

2.10 The Impact of Clustering on Writing

Since clustering has emerged as a prewriting strategy that can help writers generate ideas and organize them into coherent and cohesive written forms, there were plenty of researches carried out by (Inal, 2014; Sahbaz & Duran, 2011; Triza, Kristiawan, Johari & Asvio, 2016; Widyawati & Trisanti, 2017 and others) to gauge how much the use of the clustering strategy could affect the process of teaching and learning the writing skill. Kellogg (1990) examined the effectiveness of outlining and clustering in improving college students' analytical and informative essays. The findings revealed that outlining significantly affected the students' writing style and content, while clustering just allowed them to create many words and ideas with no effect on the quality of the product. Therefore, clustering is good for creativity, whereas outlining is effective in generating and organizing ideas into well-improved texts.

Alawi (2011) used classroom action research with eighth-grade students of MTs, Jakarta to test the effectiveness of clustering in improving the students' ability in writing descriptive text. It lasted for 31 days. Data were collected through various tools, including an interview, observation and questionnaire to validate the results of the pre and post writing tests. The findings revealed that the students' writing achievements get significant improvement and their interest to learn writing gets increased after they had been exposed to the clustering technique.

Adriati (2013) investigated the efficacy of teaching narrative writing using the clustering technique, as well as the students' reactions towards this technique. It was a quasi-

experimental study with sixty tenth grade students of senior high school, Bandung. Data were gathered via the experimental method and interviews. The obtained results showed that clustering is such a useful technique that it improves the students' writing level and affects them positively.

In addition, Hendrawaty and Ambarwati (2017) conducted a study, entitled '*Using Clustering Technique towards Students' Writing Skill in Recount Text*'. Its main objective was to determine whether there is a significant difference between the learners' scores before and after they used the technique of clustering. The sample under the investigation was the tenth-grade students of SMK Mahadika 1 Ciracas, Jakarta (30 students for each group). The research method was the quasi-experimental method and the hypothesis was tested by the calculation of students' t-test. Based on the gained results, the researchers accepted the alternative hypothesis and rejected the null one which means that the clustering technique had a significant impact on the students' recount writing.

Moreover, Pangaribuan and Manik (2018) used buzz group and clustering techniques in teaching recount writing to the first-class students of SMA HKBP I, Tarutung. They found that the use of these techniques improved the students' writing ability. They also noticed that the buzz group was a very effective strategy that encouraged the students to express opinions and discuss in real-life contexts.

In conclusion, most studies conducted in this area unveiled that the clustering technique had a positive effect on learners' writing abilities.

In this research work, we aim to measure to what extent the use of the clustering technique could improve third-year scientific stream students of Badi Mekki expository paragraphs in terms of content, organization, vocabulary, language use and mechanics. This quasi-experimental research involves a control group and an experimental group.

Conclusion

Teaching the writing skill is considered a demanding process and an everyday hard job for teachers who spend much time looking for the best strategies that at least work for most of the class. They need to get students to try a variety of prewriting activities either the invention or the arrangement ones before deciding which one best fits them. No matter which prewriting strategy students use, all they need is just five to ten minutes to think of a specific topic and jot down any idea that crosses their minds without stopping and editing. Clustering as one of the invention and non-linear strategies goes through particular stages that end to form a network of circled ideas out forward from the central keyword. It is a successful tool for visual learners because it activates the right side of their brains where they naturally create lots of potential ideas, explore the relationships between this information and organize them into a first draft. This way of brainstorming is used to help learners break out the mental block, narrow broad topics into smaller ones and get easily involved in the task. More importantly, the quality of being a flexible strategy makes clustering successful for all group ages and with other skills and language components. Clustering remains one of the best discovery techniques writers could rely on to prepare for writing and to explore ideas before producing the first version.

Chapter Three

Research Methodology

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Chapter Three

Research Methodology

Introduction

This chapter deals with the research methodology and procedures used in this study. It explains the research design and methods, followed by the sampling and the different data collection instruments employed to gather the needed information. It displays the analysis and the discussion of the teachers' pilot questionnaire findings. It also provides the process of implementing the experiment which includes its content, the pre and the post-tests and the statistical technique used to measure the validity and reliability of those tests. This experiment was carried out with a group of third-year students at Badi Mekki Secondary School to test the impact of clustering on their paragraph writing achievement. In addition, it highlights the analytic scoring used in assessing the participants' written performance together with data analysis procedures and tools using Excel and SPSS software through which the set hypotheses were confirmed or rejected. Finally, this chapter ends with a description of students' post-interview designed to elicit their viewpoints on the technique to be used.

3.1. Research Design

A research design is a blueprint or a detailed plan of the research methods and techniques to be used for data collection and analysis that the researcher must prepare in advance to facilitate the research process (Kothari, 2004). In this investigation, we used the quasi-experimental research designs that "lack random assignment" (Shadish, Cook & Campbell, 2002, p. 14). The researcher could not randomly select the students in groups as they are already intact groups chosen by the school administration. This research procedure primarily involves the researcher designing and giving a pre-test and post-test to both the control and the experimental group participants before and after doing the intervention.

Besides, while introducing the technique of clustering, the researcher manipulated the technique to see and measure its impact on the dependent variable (expository paragraphs) in terms of content, organization, vocabulary, language use and mechanics.

Implementing the quasi-experimental design was suitable and easy for the researcher to observe and assess the students' behaviour during all the stages of the writing process. More precisely, it allowed her to evaluate their stimulus to the assigned topics, how much words rained out on the paper, their thinking and creativity while exploring and organizing the ideas and how effective the treatment was in their writing performance. In this research design, it was also possible for the researcher to reduce the effects of extraneous variables that might influence the research results.

3.2. Research Method

This study intended to investigate the effectiveness of clustering in improving third-year scientific stream students' performance in writing expository paragraphs at the level of content, organization, vocabulary, language use and mechanics. To prove the effectiveness of the independent variable (C technique) on the dependent one (expository paragraph writing), the mixed methods approach was used. It is defined by Tashakkori and Creswell as "research in which the investigator collects and analyzes data, integrates the findings, and draws inferences using both qualitative and quantitative approaches or methods in a single study or a program of inquiry" (2007, p. 4). Thus, this approach which is based on mixing and combining both qualitative and quantitative techniques is an appropriate way for addressing the research questions, as well as gaining new insights into the situation being studied.

First, a quasi-experimental research was conducted which is compatible with the situation of a formal institution where the study occurred. This design needed two groups to be compared: experimental and control groups. "These are groups into which students were

randomly assigned because they naturally belong to one group or another” (Chelli, 2012, p. 09). It is difficult for the researcher to randomly assign the students to groups since they already existed in groups. In addition to that the naturally occurring group design involves pre and post writing tests for both groups, it requires the researcher to control the independent variable (C technique) so as to see the impact on the dependent variable (expository paragraph writing).

Second, both a pre-questionnaire and a post-interview were used to analyze the context where the experiment will take place and find out the experimental students' attitudes and opinions towards the technique to be exposed to during the treatment period. Unlike the quasi-experimental design, in the descriptive research design, the researcher just gets an idea about the students' background knowledge and their writing difficulties, as well as observes and assesses the subjects' reactions after they had been exposed to the prewriting strategy of clustering for six months. This method is usually used to confirm and validate the results obtained from the experimental work.

3.3. Population and Sampling

In this investigation, seven (07) teachers of Zeribet El-Oued secondary schools were concerned in the pilot study to answer the questionnaire as well as third-year scientific stream students at Badi Mekki Secondary School, Zeribet El-Oued, Biskra, Algeria were used. The whole number of students enrolled in the academic year 2017-2018 was (N= 115) include 71 males (61. 74%) and 44 females (38.26%). Based on that number, it might be impossible for the researcher to work with the entire population from which a fairly representative sample must be drawn.

The sample used in this research was composed of two groups from Badi Mekki Secondary School, Zeribet El-Oued-Biskra- aged between 17 and 20 years old. A control group (n= 27) was taught through the conventional prewriting technique of questioning and an experimental group (n= 28) was trained using the clustering technique during the first stage

of the writing process. These groups were randomly assigned by the administration. Therefore, this way of selecting the sample is consistent with the quasi-experimental used in this investigation. This design is considered the most suitable for educational settings in which random assignments of the students is something impossible to occur. The same experimental sample was also used in the post-interview including eight participants. All the respondents have the same prior knowledge of English where they were instructed under the first generation reform using the Competency-Based Approach (CBA) in both middle and secondary schools.

3.4. Data Gathering Tools

The data of the study were gathered using the following three research tools:

-As a first tool, the researcher addressed a preliminary questionnaire to seven teachers of English at Zeribet El-Oued Secondary Schools to confirm if the problem exists and if this research is worthy of being conducted.

-The second tool used for collecting data was the experiment. Thus, pre and post writing tests were designed for both the experimental group participants and the control group.

-The third instrument was a post-interview held with a group of eight experimental students to check their attitudes towards the technique used. This qualitative data tool was designed to check the validity of the quantitative findings obtained from the post-test. In brief, using triangulation is important as it brings credibility, reliability and consistency to the research. This is confirmed by Burns (1999) who argues that triangulation is the best method of testing for validity and a useful strategy to collect rich and less subjective data about the teaching situation.

3.5. The Teachers' Pilot Questionnaire Analysis and Interpretation

This part of the thesis represents a starting point for the research work. It focuses on describing, analyzing and interpreting a questionnaire that has been designed and administered to secondary school teachers of Zeribet El-Oued-Biskra- to attain the following aims. First, this questionnaire aims at stating the students' background knowledge, their level, abilities, and difficulties in writing. It also determines the teachers' professional background, their ways of teaching writing, their perceptions of the writing process and identifying the techniques and strategies that are implemented to get students ready to write.

This section covers the pilot questionnaire, presents the sample of the study, and includes a deep analysis of the obtained data and it ends with a summary that enables us to build up general views about the research situation.

3.5.1 The Pilot Questionnaire

After preparing the questionnaire, it is necessary to evaluate its feasibility and make sure that the questions are clear and understood by piloting it. According to Mackey and Gass, this kind of study is a small-scale test to detect the existing problems in the prepared materials and methods before handing them to the research respondents (2005). The questionnaire was distributed to two teachers of Badi Makki Secondary School to check the accessibility of the questions before submitting it to the rest of the sample. One question related to clustering was added and another one was reformulated from a multiple-choice to yes or no question. To conclude, the feedback obtained from the pilot study helped us to reformulate one question and add another one (questions 16 and 19 in appendix 01).

3.5.2 Aim of the Questionnaire

The aim of the teachers' pilot questionnaire is to get a closer look at the situation being studied. It incorporates twenty items which are divided into three main sections. Section one

contains two questions dealing with teachers' experience in teaching English at secondary schools in general and teaching third-year classes specifically. Section two includes nine questions that cover teachers' viewpoints and perceptions of teaching English at secondary schools, whereas the last section is concerned with the most difficult teaching skill which is writing. This section is also composed of nine questions and aimed at collecting data about teachers' perceptions of writing as a process with a more precise emphasis on the prewriting strategies used in teaching writing at secondary school classes. The nature of those questions is simple and direct to avoid any misleading or ambiguity and to enable the informants to answer them without boredom and much time consuming to understand and interpret them. They are varied between yes or no, multiple-choice and open-ended questions to achieve as much as possible the questionnaire's underlined objectives.

3.5.3 The Sample

Since the number of English language teachers in one secondary school is insufficient to obtain significant information and varied opinions to achieve the aims of this questionnaire, it was better to distribute it to all teachers of English at the secondary schools of Zeribet El-Oued where their number is seven. Most of the teachers have sufficient experience in the field of education and their professional experience is between two to fourteen years. The questionnaire was distributed on Tuesday, September 12th, 2017, during a training day organized by secondary school teachers of Zeribet El-Oued. They were given enough time to answer the questions, a week for some teachers and a week and a half for others. Therefore, all the teachers without exception positively took part and contributed with information because we all share the same problem which is how to improve the level of writing for third-year students.

3.5.4. Questionnaire Analysis

Section One: Teachers' Experience

Table 3.8

Teachers' Experience

Informants	Item One	Item Two
	Experience of Teaching English at Secondary School	Experience of Teaching Third-Year Classes
1	14	13
2	12	8
3	6	5
4	5	1
5	4	4
6	4	3
7	2	1

Experience is an important factor in the field of teaching as it reflects the knowledge and skills that teachers gained along their career, in that they become more skilful concerning different teaching principles.

Starting the analysis of the first section with the first item which is about teachers' experience in teaching English at secondary schools, we found that two informants' experience varied from fourteen to twelve years. Therefore, this reflects the fact of being experienced in the field. Among the seven respondents, five have short experience which is between six and two years. Thus, they may lack some experience in the field.

Concerning the obtained data about the second item of this section, we noticed that only two teachers have long experience in teaching third-year classes which is between

thirteen and eight years. This indicates that they have great knowledge about the basics of third-year curriculum. Three informants have sufficient experience with the baccalaureate content while the rest of the sample has short experience which is only one year. Therefore, the latter needs more practice to be acquainted with the syllabus of the third-year.

To sum up, we can say that there are various experiences among the sample under study which lead to different viewpoints and answers.

Section Two: Teachers’ Perceptions of Teaching English at Secondary Schools

Item 3: What do you think about the general conditions of teaching English at secondary schools?

Table 3.9

Teachers’ Opinions about the General Conditions of Teaching English at Secondary Schools

Options	Subjects	%
a- Not good	7	100
b- Good	0	0
c- Very good	0	0
d- Excellent	0	0
Total	7	100

The first issue that was examined in this section is the general conditions of teaching English at Zeribet El-Oued Secondary Schools. The entire sample agreed that the situation is not good at all. It is apparent that there are so many factors that hinder teachers to do their tasks as the overcrowded classes, not enough time devoted to teaching English, lack of

materials such as data show which is available only to scientific subjects, and no laboratories for listening scripts.

Item 4: How can you see the actual level of your students in English?

Table 3.10

Teachers' Perceptions of the Students' Level

Options	Subjects	%
a- Not good	7	100
b- Good	0	0
c- Very good	0	0
d- Excellent	0	0
Total	7	100

To know whether third-year students have an acceptable level in English or not, it is important to elicit teachers' views on this issue. As shown in the table (3.10) above, there is a general agreement among the sample about third-year students' level in English. They said that the overall level of the final classes is weak. This refers to different reasons. First, the students were not trained enough during the middle school period. Second, they are highly interested in learning scientific subjects because of their considerable coefficients. More precisely, the students' low level in English is affected by the general conditions of teaching that subject.

Item 5: To Which skill do you give much importance in teaching English?

Table 3.11

Teachers' Views about English Language Skills

Options	Subjects	%
a- Listening	0	0
b- Speaking	0	0
c- Reading	0	0
d- Writing	4	57.14
c+ d	2	28.57
all of them	1	14.28
Total	7	100

Through this item, we tried to find out to which skill secondary school teachers gave much importance, time and extra effort so as to prepare students to pass the BAC exam. The collected answers revealed that the majority of the informants (four teachers) gave much importance to the writing skill because it is so difficult to be mastered. Two respondents tend to concentrate on reading and writing together since students are tested in both of them during their BAC Exam. Only one teacher focuses on all the language skills as they are interrelated and complete each other.

Item 6: If you choose writing, say why?

The arguments behind why teachers give much importance to the writing skill are: First, writing determines students' academic success as it is the only means used to pass their official exams. Second, all the students have difficulties at least in one aspect of writing or more. Third, teachers aim to train students to express themselves in writing. Generally speaking, we can say that the teachers' major target is to improve the students' level in writing.

Item 7: Put in order of difficulty the teaching of the following lessons.

Table 3.12

Teachers’ Viewpoints about the Difficulty of Teaching Third-Year Lessons

Rank	1 st		2 nd		3 rd		4 th		5 th	
	N	%	N	%	N	%	N	%	N	%
Listen and Consider	0	0	0	0	0	0	3	42.85	1	14.28
Read and Consider	0	0	1	14.28	1	14.28	1	14.28	3	42.85
Grammar Explorer	1	14.28	5	71.42	1	14.28	1	14.28	0	0
Vocabulary Explorer	0	0	0	0	4	57.14	0	0	1	14.28
Think, Pair, Share	6	85.71	1	14.28	1	14.28	2	28.57	2	28.57
Total	7	100	7	100	7	100	7	100	7	100

This item aims at identifying the most difficult lesson to which teachers gave much effort and time. In this type of question, teachers ranked the given lessons according to their difficulty of teaching. The obtained results were as follows: six teachers (85.71%) considered “Think, Pair, Share” to be the most difficult lesson to teach. Five teachers (71.42 %) confirmed that “Grammar Explorer” is the second lesson in the difficulty of teaching. After grammar, four teachers (57.14%) put “Vocabulary Explorer” in the third rank of difficulty and only three of them viewed that both “Read and Consider” and “Listen and Consider” lessons are a little bit less difficult than the mentioned ones. Therefore, it is evident that teaching a “Think, Pair, Share” lesson is the most difficult one as it requires various skills to be used and different stages to go through.

Item 8: In which of the above lessons do your students get bored? Why?

Table 3.13

Teachers’ Opinions about the Most Boring Lessons

Options	Subjects	%
a- Listen and Consider	0	0
b- Read and Consider	0	0
c- Grammar Explorer	0	0
d- Vocabulary Explorer	0	0
e- Think, Pair, Share	7	100
Total	7	100

The results revealed that all the teachers have a unified attitude that “Think, Pair, Share” is the most boring lesson because of the different steps students have to go through so as to produce a final product. In other words, they are required to get started to write using some prewriting activities, drafting, revising, editing and finally publishing their written work. Writing lessons also involve several skills, language functions and structures. It is a boring process as students are poor in ideas development and organization, spelling, vocabulary, and grammar. More precisely, they are unable to produce something in writing.

Item 9: In your opinion, which aspect of writing is difficult for students?

Table 3.14

Teachers’ Perceptions of Students’ Most Difficult Components of the Writing Skill

Options	Subjects	%
a- Grammar	1	14.28
b- vocabulary	1	14.28
c- Content	0	0
d- Form	0	0
e- Punctuation	1	14.28
f- Mechanics	0	0
g-Others	0	0
a+ b+ c	1	14.28
a+ c	1	14.28
c+ d	1	14.28
c+ g	1	14.28
Total	7	100

This item is concerned with teachers’ opinions about third-year students’ difficulties in terms of their writing skills. Nearly every teacher has a different view from the others according to their students’ abilities and needs. One of those teachers stated that his or her students suffer from limited vocabulary and low lexical background; whereas another one said that they misuse punctuation marks. Another teacher claimed that language use is the hardest point that hinders students while writing. This shows that they have low grammar mastery; consequently, they can produce broken sentences with no meaning and no organization. The three remaining teachers think that their students suffer from more than one aspect of writing. Another teacher adds the components of cohesion and coherence. These results show that

students face difficulty at least in one aspect and this reflects the complex nature of the writing skill.

Item 10: How do you deal with weaker students in writing?

This item sheds light on how teachers deal with different weaker students in writing. All the informants use ways and strategies concerning how to equip students with the basics of writing skills. Teachers said that we should firstly persuade them that they really do have capacities if they want to write. They stated that during the writing tasks special and much attention is given to those kinds of students and they tried to push them to write and practice more and more. They also exposed students with special needs in writing to pedagogical remedies whenever possible. Teachers advised and encouraged students to practice at home by supplying them with plenty of tasks as homework assignments. In addition, they tend to simplify the tasks, explain again, equip them with dictionaries and turn around to grant aid. It seems that teachers challenge the obstacles and do their best to help students improve their writing.

Item 11: Which of the following remedies do you think is suitable for your students?

Table 3.15

Teachers' Opinions about Writing Remedies

Options	Subjects	%
a- excess of practice	5	71.42
b- excess of guidance	0	0
c- excess of reading	0	0
d- Others	0	0
a + b+ d	1	14.28
a + d	1	14.28
Total	7	100

Concerning the effective remedies that can help students get rid of their writing problems, we found that five teachers rely on the excess of practice as a convenient remedy for their students. This means that students will be better if they are more exposed to writing tasks because they will benefit from their teachers’ extensive guidance, help, and feedback. By that time, they will gain confidence in themselves. Only one teacher considers that the best way to improve the students’ abilities is the excess of both practice and reading. It is true that reading is the first solution for writing problems, but the students are more interested in scientific subjects, philosophy, history and others. In addition to the above remedies, we have only one respondent who added other remedies as integrating group work and students’ errors corrections.

Section Three: Teachers’ Perceptions of the writing process

Item 12: How do you teach writing for third-year classes?

Table 3.16

Teachers’ Opinions about the Approaches of Teaching Writing

Options	Subjects	%
a- Using the product approach (focus on the final product)	1	14.28
b- Using the process approach (focus on the multiple stages of the writing process)	6	85.71
c- Using the genre approach (focus on studying different written genres)	0	0
d- Others.	0	0
Total	7	100

The question above focuses on the way of teaching writing in secondary schools. The gathered data showed that the process approach is widely used by secondary school teachers. It is an approach based on multiple stages: prewriting, drafting, revising/editing, and

publishing the final version. Only one teacher implements the product approach which is rested on providing learners with models of written texts and asking them to imitate those models and produce the final draft directly without going through steps.

Item 13: In the writing process, which stage do you think is mostly hard for students to perform?

Table 3.17

Teachers’ Opinions about the Most Difficult Stage of the Writing Process

Options	Subjects	%
a- Prewriting	3	42.85
b- Drafting	2	28.57
c- Revising/editing	0	0
d- Publishing	1	14.28
a + d	1	14.28
Total	7	100

As writing is based on several stages, it is necessary to see which stage learners find hard to do. As displayed in the table above, three teachers think that the pre-writing stage, which is the starting point of the writing process, is the hardest step for students to perform as it needs highly mental efforts to generate and organize the ideas. Two teachers consider the drafting stage as so difficult to do because it is the stage when students use the generated ideas to write the first version. Only one informant believes that both the first and the final stages are the most difficult ones among the other steps of the writing process. The rest of the population views that publishing the final paper is an uneasy task for students to do since this stage requires publishing a paper that is clear, neat and free from errors.

Item 14: Do all of your students follow those stages regularly?

Table 3.18

Teachers' Perceptions of the Writing Process

Options	Yes	No	Total
Subjects	1	6	7
%	14.28	85.71	100

Among the most important elements that make writing a daunting task is its complex and recursive process as it requires students to repeat the steps of the process multiple times. This question aims to find out the teachers' opinions on whether students follow those stages regularly or not. Six teachers confirm that their students do not respect the order of the process because it is something hard for intermediate students to master.

Item 15: If no, please say why?

The motives behind why students do not follow the stages of the writing process regularly are: the students lack the writing prerequisite skills and strategies. They are not interested in writing because of their low level. In short, they cannot just differentiate between those stages.

Item16: Do you use some techniques to get your students to start writing easily?

Table 3.19

Teachers' Opinions about Prewriting Techniques

Options	Yes	No	Total
Subjects	6	1	7
%	85.71	14.28	100

Teachers in EFL classes have different roles, among them implementing new techniques to get students involved in the writing tasks. The collected data about if secondary school teachers use techniques to get students to start writing easily demonstrated that the majority of informants (six teachers) use prewriting strategies to help students engage in the topic. This shows one important thing that teachers are aware enough about the different prewriting techniques that are used to encourage students to generate ideas.

Item 17: If yes? Mention them, please.

Concerning the prewriting techniques that are mostly implemented by secondary school teachers, we can mention the following ones: freewriting, word hock skill, brainstorming and flowcharting using pictures. Thus, these strategies can get students to start easily in the writing tasks.

Item 18: Do you have an idea about clustering as a pre-writing strategy?

Table 3.20

Teachers' Views about Clustering Strategy

Options	Yes	No	Total
Subjects	3	4	7
%	42.85	57.14	100

Getting ready to write is not so easy task for both teachers and students. Therefore, many strategies ought to be applied for producing well-written pieces of writing as clustering or mind mapping. After having gathered data about whether the teachers have an idea about clustering or not, we have found that three teachers are familiar with this technique, so they are aware of its way of working and its effectiveness, while the rest of the sample (four teachers) does not have any information about it.

Item 19: If yes, is it an effective way to improve students' compositions? Why?

Teachers who have experience with the clustering technique said that it is an effective method through which students get positive effects on their written performance. It motivates students not only to generate ideas but also to think creatively about the topic. In addition, it guides the students' ideas which are going to be included in the written work. Furthermore, it helps students in grouping similar ideas together to be used in the next stage of writing.

Item 20: As far as writing is concerned, what do you suggest to get students highly motivated and interested in writing tasks?

The last question of this questionnaire was designed to provide us with suggestions and solutions that may help students overcome their weaknesses. Teachers suggested resting on some ICTs to introduce the topic and champion group work to enable students to learn from each other. They also proposed moving from the simplest tasks to the most complex ones.

3.5.5 Summary

This preliminary study represents the cornerstone of this empirical research. It helped us to confirm that there is an existing problem concerning the writing skill at Zeribet El-Oued Secondary Schools which really needed urgent intervention. It consists of a questionnaire for secondary school teachers through which we obtained a detailed analysis about the situation of the intervention and the sample on which the study is based. Through this questionnaire, we deduced that the general conditions of teaching English at Zeribet El-Oued Secondary Schools are not good because of some administrative problems. It also displayed the ways of teaching writing at secondary school and the students' problems in terms of both the writing process and aspects.

Although students spent four years at middle school and three years at secondary school, teachers are not optimistic about their low level and how writing can be taught to these kinds of students. This situation needed solutions; especially, as only a few months are remaining for the BAC exam. Therefore, the treatment of this research work may enable pupils to master at least the basics of writing. Moreover, this initial study includes suggestions and recommendations on how to improve the students' writing performance, but the real question is to what extent the application of those suggestions can effectively influence their writing abilities. In short, we can say that the lack of practice and training courses lead in a way or another to that disastrous case.

3.6. The Experiment

To test the hypotheses stated in the general introduction, an experiment that aimed to achieve two general purposes was designed and carried out. Teaching writing through the use of the clustering technique would improve secondary school students' writing performance in terms of content, organization, vocabulary, language use and mechanics. Besides, the students would overcome some of their writing problems if they had been used this technique effectively.

This experiment involved the informants and the researcher who was at the same time the teacher and the implementer of this practical procedure to do different tasks. The teacher's task was to prepare and plan the lessons, introduce and train students on using the clustering technique, guide and help them during all the writing steps. The students served the role of applying the clustering strategy to create many ideas, organize them and write expository paragraphs. Thus, they were familiar with the conventions of this genre as well as they gained special skills and strategies which made them able to get started to write and go through the stages of the writing process easily.

3.6.1. The Pre-test

Conducting the preliminary test is considered as a trial to determine whether the two groups of the study have the same level, abilities, and skills in paragraph writing or not before receiving the treatment in addition to its use in the comparison with the post-test in the final phase. Hence, through the pre-test, we can know if both the control and the experimental groups can focus and pay attention to the five aspects of effective paragraph writing which are: content, organization, vocabulary, language use and mechanics.

The pre-test was set during a regularly scheduled session on 18th September 2017 with third-year scientific and experimental classes 2 and 4. It took just one hour for each group. Being the teacher of both control and experimental groups, it was so easy to tackle all the steps of the experiment. The participants were asked to write a paragraph about the causes and effects of child labour as an international phenomenon that threatens our innocents and future generation. The theme is from the third-year scientific stream curriculum and exactly from the first unit, entitled '*Ill-Gotten Gains Never Prosper*'. The findings of this pre-test will be compared with the post-test outcomes in the next chapter.

3.6.2. The Treatment

The experiment was run for six months during the school year 2017-2018. It means that the experimental participants were exposed to the clustering technique for a total number of 30 hours (3 hours per lesson). The aim of introducing this prewriting technique was to test its effectiveness in improving the subjects' paragraph writing performance and to what extent they built a positive attitude towards it. Accordingly, the researcher implemented clustering in ten different lessons (two lessons per month) aiming to develop the students' paragraph writing in terms of content, organization, vocabulary, language use and mechanics. These lessons were from the syllabus of third-year scientific stream classes and presented through

the use of the process approach. However, the main purpose of each lesson was to write a paragraph using the clustering technique in the pre-writing stage.

Since all the lessons of the treatment were taken and adapted from the Algerian third-year secondary school book, entitled '*New Prospects*', it is important to have a closer look at its content and division. Thus, it essentially includes six units that deal with various themes, language points, skills, strategies and functions. Actually, the two scientific classes which constitute the sample are concerned only with four units. Every unit has two parts (**Language outcomes** and **Skills and strategies outcomes**) with two sequences for each. Part one is classified to "Listen and consider" and "Read and consider" sequences which are also divided into different rubrics of grammar, vocabulary, pronunciation and spelling and 'Think, pair, share'. In the last rubric, students use the learned language items to express a particular function. However, part two encompasses "Listening and speaking" and "Reading and writing" sequences that focus on both spoken and written communication skills and strategies. The first sequence closes with the '*Say it in writing*' rubric while the second one ends with the '*Writing development*' lesson. It is clear that each unit contains four lessons of writing.

The primary step of the treatment sessions was just considered warming up that equipped learners with the situation of communication in which they could identify the topic, the target audience and the objective of that topic. During the pre-writing stage, which was presented in pairs or team works, they could think of the topic and share their ideas in a collaborative learning environment that would help them work together and learn from each other. To facilitate the process of getting ready to write and to stimulate learners for discussion, they were trained in using the clustering technique in all the treatment sessions so as to visually create, explore and organize ideas triggered by a single given word. During the writing stage (drafting), each student had to put his or her ideas on the paper and write the first rough paragraph. With the help of the teacher, they could elaborate their notes and

organize them without paying attention to the committed errors of grammar, spelling and punctuation.

In the post-writing stage, the teacher provided a brief classroom discussion about the common problems learners faced in the preceding stage and how to fix them. Each student reviewed his or her draft alone by adding, deleting or changing some words or sentences, exchanged the drafts with peers and then shared them in a group seeking meaningful evaluation of the content and the organization of the ideas. After that, they edited the mistakes and submitted their final products to the teacher who would assess them analytically and select the best work to be written on the board as a model.

3.6.3. Content of the Experiment

The experiment focused on the use of clustering as a prewriting strategy in teaching expository paragraphs. For this sake, students were trained in applying the clustering technique that would enable them to develop cognition skills and abilities in learning, brainstorming and creativity. In addition, they were taught about paragraph organization, as well as the language features of the expository genre of writing.

Generally speaking, writing has four main types: narration, description, persuasion and exposition. The latter is extensively used by secondary school scientific stream learners; it is why the present study dealt only with this genre. The writing style of exposition, as its name indicates, exposes or explains information about the topic. It seeks to inform the reader about facts, cause and effect relationships, comparison and contrast of two things and steps in a process. This genre should be presented in a concise and simple oral or written language; thus, it is largely used in social, academic and business contexts in the form of newspaper or magazine articles, reports, textbooks, research papers and others.

The experiment consisted of ten lessons which took 30 hours (three hours per lesson). It lasted for six months, from the last week of September 2017 to the third week of April 2018.

The first lesson of the treatment took one week (three hours) from September 24th to September 28th, 2017. It was a revision of the academic paragraph writing structure. It aimed at enabling students to learn and master the basics of writing a paragraph, as well as to get acquainted with the features of the expository writing genre. Hence, through the various given tasks, the students can distinguish between the different parts of a paragraph, in addition to, identifying how expository texts are developed.

The second lesson, entitled '*Fighting Counterfeit Products*', lasted one week extending from October 1st to October 5th, 2017. It was from the third-year scientific stream syllabus, precisely from unit one: '*Ill-Gotten Gains Never Prosper*'. Its major aim is to develop students' awareness about the importance of fighting counterfeiting at the national and international levels. It also aims at getting the students to use in writing their expository paragraphs, the language elements, grammatical structures and the new range of vocabulary acquired from the presented tasks. In this lesson, the experimental participants were introduced to the prewriting technique of clustering for the first time, so they get trained in using it to generate ideas and organize them into paragraphs. However, the control group received the same lesson traditionally with no support of clustering and special design and adaptation of the tasks.

The next five lessons started from November 8th, 2017 to January 18th, 2018. They were all chosen from unit two, entitled '*Safety First*'. Each lesson discusses a specific issue (eating habits, shopping habits, impacts of fast-food, pros, and cons of advertisements) aimed at raising students' awareness about safety, consumption and the effects of advertising on people. All of these lessons contain different tasks and have the same stages to develop the students' abilities to express their ideas and explain the topic being discussed. The use of the

clustering technique during the pre-writing phase of all those lessons is something mandatory for the experimental group to facilitate the process of getting ready to write. Thus, from one session to the next, the efficiency of clustering was remarked on the students' reactions and performance as well.

The last three lessons of the treatment stretched from January 28th to April 12th, 2018. They deal with different issues, which are related to unit three: '*It's a Giant Leap for Mankind*', including a presentation about the Moon, comparison and contrast between Earth and Mars and the benefits of astronomy for society and humankind. Their main aim is to develop students' understanding and interest in outer-space exploration. In each lesson, the students are required to produce a paragraph about the assigned topic using the prewriting strategy of clustering to map out their thinking through lines and circles. Some samples of the treatment lessons planning are presented in appendix (02).

In conclusion, we can say that the experimental group used to implement the clustering technique where it was naturally applied even during the revision sessions for the baccalaureate examination (written expression part). Indeed, they showed a positive change in their written productions, as well as in their attitudes towards writing skill. In contrast, the control group was taught conventionally without the intervention of any treatment.

3.6.4. Experiment Implementation Process

The experiment was carried out in six months. It expanded from the last week of September 2017 to the third week of April 2018 with a total number of 30 hours (three hours per lesson and two lessons per month). The first three sessions of the experiment were devoted to reminding learners about paragraph organization and enabling them to know about the expository genre of writing by providing them with four expository text models developed by examples, facts and statistics, cause and effect relationships or comparison and contrast.

This study sought to use the clustering technique through which learners would improve their writing and build a positive attitude towards it. For this purpose, learners generated and organized their ideas in pairs or small group works. Ur (1996) mentioned that group work triggers the learner to use the language, promotes a sense of responsibility and independence, can enhance motivation and create a relaxed and cooperative atmosphere inside the classroom. It is clear that the use of this kind of activity increases learners' time to talk, makes them responsible to work and interact independently and promotes motivation and cooperation to accomplish the task.

To achieve the objectives of the experiment lessons, students went through four steps:

- 1- Warming-up: The teacher creates a situation of communication so as to introduce the topic and prepare the students for the coming stage.
- 2- Pre-writing stage: The teacher designs tasks to get students involved in the topic. Then, she exposes them to the clustering technique where she asks them to
 - Write the topic in the middle of the paper and circle it.
 - Jot down the main ideas related to the topic, circle and link them with the central given topic.
 - Write down any details about these generated ideas and link each detail with its suitable main idea.
- 3- During the writing stage: The students write their first drafts using the notes produced previously.
- 4- Post-writing stage: The students review the drafts and share them with peers or small groups. Then, they correct the mistakes and hand out the final versions to the teacher.

In conclusion, we acknowledge that we did not face any difficulty while implementing the clustering technique during the pre-writing phase. All the students became adept at this

technique and they applied it competently, flexibly and successfully. Due to the effectiveness of clustering, their writing skills get gradually improved since a low number of common writing errors was marked in their paragraphs. They built confidence in themselves and got rid of boredom, fear and hesitation to writing, unlike the control group students who were always protesting that writing is so difficult task whenever the teacher announced the writing assignment. Therefore, we can say that if students have been exposed to clustering that matches their needs, level and abilities, they will be highly motivated, very responsive and score better.

3.6.5. The Post-test

After having conducted the experiment, the upcoming step was to set the post-test for both the control and the experimental groups on 25th April 2018. It was held on purpose in this time since the rate of absences among the baccalaureate students is increased continuously during the month of May. The topic was adapted from the BAC exam of 2012 and it was as follows: *Young people who are addicted to fast foods are the most likely to become obese. Within this context, write a paragraph stating the main causes of obesity and its dangers on youngsters' health.* The theme of this test, of course, is related to the content of third-year curriculum and exactly to unit two '*Safety First*', but in an indirect way. During the academic year, they have dealt with the causes and effects of fast food as one of the major worries that threaten our food safety. Therefore, the topic of obesity is just a part of this broad topic and it is considered a serious result of fast-food.

3.6.6. Piloting Pre-test/Post-test

Piloting the data gathering tools used in any academic research is an important step through which researchers make sure that they are on the right path or not. In this context, before administering the pre and post writing tests to the control and experimental group

participants, it is highly significant to test and check their validity and reliability. To do that, a group of twelve students are taken those tests and their scores are calculated based on an analytical scoring rubric which consists of five items: content, organization, vocabulary, language use and mechanics. Data are analyzed using Cronback's alpha test to gauge the internal consistency by which we can confirm that the designed tests are precisely measuring what we want. Reliability statistics of pre and post-tests are displayed in the table (3.21) below:

Table 3.21

Reliability Statistics of Pre-test/Post-test

Cronback's Alpha	N of Items
,889	5

On the basis of the result presented in the table above, we noticed that the alpha coefficient for the five items is ($\alpha = .889$). This indicates that the tests have a relatively high internal consistency.

3.7. Writing Analytical Scoring Rubrics

The written production of the two groups in both tests will be evaluated in terms of the five aspects of writing which are: content, organization, vocabulary, language use and mechanics. Then, their scores will be compared and the data will be objectively described, interpreted and analyzed in the next chapter.

Table 3.22

Writing Analytical Scoring Rubrics

Writing Components	Level	Traits
Content	4-3.5	EXCELLENT TO VERY GOOD: Knowledgeable; substantive; thorough development of topic; relevant to assigned topic
	3-2.5	GOOD TO AVERAGE: Some knowledge of subject; adequate range; limited development of topic; mostly relevant to the topic, but lacks detail
	2-1.5	FAIR TO POOR: Limited knowledge of subject; little substance; inadequate development of topic
	1-0	VERY POOR: Does not show knowledge of subject; non-substantive; not pertinent; or not enough to evaluate
Organization	4-3.5	EXCELLENT TO VERY GOOD: Fluent expression; well-organized; ideas clearly stated/supported; logical sequencing; cohesive
	3-2.5	GOOD TO AVERAGE: Somewhat choppy; loosely organized but main ideas stand out; limited support; logical but incomplete sequencing
	2-1.5	FAIR TO POOR: Non-fluent; ideas confused or disconnected; lacks logical sequencing and development
	1-0	VERY POOR: Does not communicate; no organization; or not enough to evaluate.
Vocabulary	4-3.5	EXCELLENT TO VERY GOOD: Sophisticated range; effective word/idiom choice and usage; word form mastery; appropriate mastery
	3-2.5	GOOD TO AVERAGE: Adequate range; occasional errors of word/idiom form, choice, usage but meaning not obscured
	2-1.5	FAIR TO POOR: Limited range; frequent errors of word/idiom form, choice, usage; meaning confused or obscured
	1-0	VERY POOR: Essential translation; little knowledge of English vocabulary, idioms, word form; or not enough to evaluate
Language Use	4-3.5	EXCELLENT TO VERY GOOD: Effective complex constructions; fewer errors of agreement, tense, number, word order/function, articles, pronouns, prepositions
	3-2.5	GOOD TO AVERAGE: Effective but simple constructions; minor problems in complex constructions; several errors of agreement, tense, number, word order/function, articles, pronouns, prepositions but meaning seldom obscured

	2-1.5	FAIR TO POOR: Major problems in simple/complex constructions; frequent errors of negation, agreement, tense, number, word order/function, articles, pronouns, prepositions and/or fragments, run-ons, deletions; meaning confused or obscured
	1-0	VERY POOR: Virtually no mastery of sentence construction rules; dominated by errors, does not communicate; or not enough to evaluate
Mechanics	4-3.5	EXCELLENT TO VERY GOOD: Demonstrates mastery of conventions; few errors of spelling, punctuation, capitalization, paragraphing
	3-2.5	GOOD TO AVERAGE: Occasional errors of spelling, punctuation, capitalization, paragraphing but meaning not obscured
	2-1.5	FAIR TO POOR: Frequent errors of spelling, punctuation, capitalization, paragraphing; poor handwriting; meaning confused or obscured
	1-0	VERY POOR: No mastery of conventions; dominated by errors of spelling, punctuation, capitalization, paragraphing; handwriting illegible, or not enough to evaluate

Adapted from Jacobs et al’ s 1981 scale (as cited in Weigle, 2002)

The table above represents the scoring guidance adapted from Jacobs et al. (1981). This analytical scoring method is used for assessing the students’ paragraph writing in both the pre-test and post-test. The scale includes five aspects of writing: content, organization, vocabulary, language use and mechanics. The total score of each aspect is 4 points out of 20. Each rubric is divided into four levels: excellent to very good, good to average, fair to poor and very poor.

The first level of the content rubric ranks from 3.5 to 4 points which represent a very good to an excellent level. This shows substantive and thorough development of the topic. The second level rates from 2.5 to 3 points. It is from average to good level that indicates some knowledge of the subject, limited development of the topic, mostly relevant ideas, but lack details. The third level is from 1.5 to 2 points and it ranks from poor to a fair level which reflects limited knowledge of the subject, little substance and adequate development of the topic. The last level is from 0 to 1 point and it represents very poor performance as it does not show knowledge of the subject, non-substantive, not pertinent or not enough to evaluate it.

The organization rubric which is the second component of the scale has 4 levels too. First, very good to excellent level (3.5-4 points) demonstrates fluent expressions, ideas clearly stated and supported and logical sequencing of ideas. Second, average to a good level (2.5-3 points) displays limited support, somewhat choppy, loosely organized but main ideas stand out and logical thought but with an incomplete sequencing. Third, poor to fair (1.5-2 points) reveals non-fluent ideas, confused or disconnected and lack of logical sequencing and development. The final level reflects very poor production (0-1 point). It seems to have no organization, no communication, or not enough to assess it.

The vocabulary rubric also starts with very good to excellent level (3.5-4 points). This level presents sophisticated range, effective word/idiom choice and usage and appropriate word form mastery. It further includes average to a good level that shows an adequate range, occasional errors of word/idiom form, choice and usage, but meaning not obscured. This level is followed by poor to fair (1.5-2 points) which incorporates limited range, frequent errors of word/idiom form, choice and usage and the meaning is confused or obscured. This rubric ends with a very poor level (0-1 point) and it comprises essential translation, little knowledge of English vocabulary, idioms and word form, or not enough to be evaluated.

In the rubric of language use, the first level is from very good to excellent and it ranks from 3.5 to 4 points. It is characterized by effective complex constructions, fewer errors of agreement, tense, number, word order/function, articles, pronouns and prepositions. Then, average to a good level (2.5 to 3 points) involves effective but simple constructions, minor problems in complex constructions, several errors of agreement, tense, number, word order/function, articles, pronouns and prepositions, but the meaning is seldom obscured. The next level is from 1.5 to 2 points (poor to fair) and it encompasses major problems in simple/complex constructions, frequent errors of negation, agreement, tense, number, word order/function, articles, pronouns, prepositions and/or fragments, run-ons, deletions and the

meaning is confused or obscured. The language use rubric is closed by a very poor level (0-1 point), it is virtually dominated by errors and it does not show mastery of sentence construction rules.

Finally, the scale finishes with mechanics. Its first level ranks from 3.5 to 4 points (very good to excellent) and it demonstrates mastery of conventions, few errors of spelling, punctuation, capitalization and paragraphing. The second level is from 2.5 to 3 points (average to good), it contains occasional errors in the common writing conventions, but the meaning is not obscured. The third level rates from 1.5 to 2 points (poor to fair) and it has frequent errors of conventions, poor handwriting and the meaning is confused or obscured. Very poor level (0 to 1 point) is dominated by errors of conventions and illegible handwriting which make it not enough to be evaluated.

3.8. Data Analysis Procedure

As stated previously, this research is a quasi-experimental study to test whether the prewriting technique of clustering as an independent variable has a positive effect on the students' paragraph writing production in terms of content, organization, vocabulary, language use and mechanics. On this ground, to display the quantitative results of that study, it is important to use descriptive statistics as a very useful tool for measuring each rubric mean scores and standard deviation. Besides, the procedure of student's t-test as a basic inferential statistic was used to determine the difference between the two groups' post-tests averages in each variable and to test the already formulated hypotheses. In addition, the analysis of qualitative findings obtained from the students' post-interview about their attitudes towards clustering as a prewriting technique was presented.

3.9. The Interview

In order to cross-check the post-test findings and gain more understanding and knowledge about the participants' perceptions of the treatment and the technique used, a semi-structured interview (guided interview) was conducted. According to Vogt, Gardner and Haeffele, "interviews are used in experimental designs to screen potential participants for eligibility and to debrief them after the experiment is over" (2012, p. 32). These techniques helped the researcher to gain in-depth insights into informants' experiences concerning the treatment they received. Before conducting this qualitative method, it was reviewed carefully by two teachers and then piloted with six experimental students to determine the clearness of the questions. At this point, one question regarding their writing improvement was refined and modified.

This individual face-to-face interview was held on the 29th of April, 2018 from 9:00 to 10:00 am with a group of eight experimental students so as to collect data on their attitudes towards the use of clustering on their writing. More importantly, it sought to elicit information on to what extent the treatment was useful in improving their expository paragraph writing performance. The interviewees' responses were a mixture between Arabic and English languages because they found it hard to express their ideas fluently in English without inserting their mother tongue. All the answers gained were recorded using a digital cell phone, transcribed and translated into English. Then, they were categorized, manually coded and analyzed in accordance with the collected themes. The interview questions are illustrated in appendix (10).

Conclusion

The prime focus of this chapter was on training the experimental students in using the clustering technique during the pre-writing stage of the treatment sessions. Before doing that, the participants were first taught about paragraph structure and the textual features of the expository writing where they became carefully aware of them. Then, implementing the clustering technique helped the students get ready to think of the topic, interact with each other and share their ideas and thoughts. Hence, this helped them a lot to get benefits and learn from their peers and their teacher. Besides, there was a considerable change in the students' writing level because they became interested and motivated to express their ideas and feelings without fear and boredom. However, this change was not enough due to the several committed errors in terms of language use and mechanics. Thus, the current situation does not only need urgent remedies and solutions from Badi Mekki Secondary School teachers of English but also continuing professional development to attain a good teaching quality.

Chapter Four

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Chapter Four

Analysis of the Findings

Introduction

This chapter reports the quantitative and qualitative findings of the study to test the previously set hypotheses. The quantitative data contains the participants' pre-test and post-test scores in the five aspects of writing, including content, organization, vocabulary, language use and mechanics. Descriptive and inferential statistics were used to analyze the results, compare the tests, test statistically the hypotheses and draw conclusions on whether there are positive effects of the independent variable (the clustering technique) on the informants' writing performance after the exposure to the treatment. This is followed by the description and interpretation of the post-interview held to check the participants' attitudes towards the use of clustering.

4.1 Quantitative Results of the Experimental Group

The quantitative results obtained from the experimental group pre-test and post-test in content, organization, vocabulary, language use and mechanics are described below.

4.1.1 Experimental Group Pre-test Results

The achievements of the experimental group pre-test in the five assessed rubrics are displayed below.

4.1.1.1 Experimental Group Pre-test Results in Content

The results obtained from the experimental group performance in the pre-test at the level of the content rubric are displayed in tables 4.23 and 4.24, accompanied by a description. They mainly cover the mean score, standard deviation, minimum and maximum scores and frequency of the students' scores.

Table 4.23

Descriptive Statistics of Content Rubric Scores of Experimental Group in the Pre-test

N Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
28	0	1.77	0.73	0.50	3.50

Table 4.24

Content Rubric Scores of Experimental Group in the Pre-test

	Frequency	Percent	Valid Percent	Cumulative Percent
0.50	1	3.6	3.6	3.6
0.75	1	3.6	3.6	7.1
1.00	5	17.9	17.9	25.0
1.50	6	21.4	21.4	46.4
1.75	3	10.7	10.7	57.1
2.00	6	21.4	21.4	78.6
2.50	2	7.1	7.1	85.7
2.75	1	3.6	3.6	89.3
3.00	2	7.1	7.1	96.4
3.50	1	3.6	3.6	100.0
Total	28	100.0	100.0	

Statistically, we noted from the tables above 4.23 and 4.24 that the mean score of the content rubric of the experimental group in the pre-test is (M=1.77), the standard deviation is (SD= 0.73), the minimum score is 0.50 point and the maximum score is 3.50 points. We also noticed that the mean frequencies are between 1.50 and 2.00 which show the scores of 15 students among 28. This result indicates that the 15 students' scores in the content rubric are from very poor and poor to fair levels. Accordingly, their performance included limited knowledge and inadequate development of the topic. They showed just a few main ideas without details because they lacked knowledge of the subject and this is not enough to be assessed.

4.1.1.2 Experimental Group Pre-test Results in Organization

The findings and descriptions of the experimental group pre-test in the aspect of organization are tabulated and presented in the following.

Table 4.25

Descriptive Statistics of Organization Rubric Scores of Experimental Group in the Pre-test

N Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
28	0	1.80	0.99	0.50	3.50

Table 4.26

Organization Rubric Scores of Experimental Group in the Pre-test

	Frequency	Percent	Valid Percent	Cumulative Percent
0.50	5	17.9	17.9	17.9
0.75	1	3.6	3.6	21.4
1.00	4	14.3	14.3	35.7
1.50	4	14.3	14.3	50.0
2.00	3	10.7	10.7	60.7
2.50	6	21.4	21.4	82.1
2.75	1	3.6	3.6	85.7
3.00	1	3.6	3.6	89.3
3.50	3	10.7	10.7	100.0
Total	28	100.0	100.0	

As shown in table 4.25, the value of the minimum score is 0.50 point, the maximum score is 3.50 points, the mean scores approximate (M=1.80) and the standard deviation is (SD= 0.99). Table 4.26 demonstrates that the values of the mean frequencies are limited between 1.00 and 2.00 which is the score of 11 subjects among 28. These statistics revealed that the 11 students' scores in the organization rubric are between very poor and poor to fair levels. Therefore, the participants produced non-fluent, confused and disconnected ideas which lack logical sequencing and development. Their ideas do not communicate because they lack organization and that is not enough to be evaluated.

4.1.1.3 Experimental Group Pre-test Results in Vocabulary

The following descriptive statistics of the vocabulary component are gained from the experimental group students’ production in the pre-test.

Table 4.27

Descriptive Statistics of Vocabulary Rubric Scores of Experimental Group in the Pre- test

N Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
28	0	1.48	0.75	0.50	3.50

Table 4.28

Vocabulary Rubric Scores of Experimental Group in the Pre-test

	Frequency	Percent	Valid Percent	Cumulative Percent
0.50	3	10.7	10.7	10.7
0.75	1	3.6	3.6	14.3
1.00	10	35.7	35.7	50.0
1.50	4	14.3	14.3	64.3
1.75	2	7.1	7.1	71.4
2.00	3	10.7	10.7	82.1
2.50	3	10.7	10.7	92.9
2.75	1	3.6	3.6	96.4
3.50	1	3.6	3.6	100.0
Total	28	100.0	100.0	

As can be seen in the tables 4.27 and 4.28 above, the mean score is (M=1.48) with a standard deviation of (SD= 0.75). The minimum score is 0.50 point and the maximum score is 3.50 points. These values show that the means of frequency distribution in the vocabulary rubric are confined within 0.75 and 1.50 which represent 15 participants' scores among 28 ones. Thus, we have 11 subjects who share the level of very poor. They mainly relied on translation since they have little knowledge of academic English vocabulary, idioms and word form. These few words and expressions are insufficient to be assessed. Only 4 subjects show poor to a fair level which implies that they had a limited range of words and they committed frequent errors in word/idiom form, choice and usage which made the meaning confused and obscured.

4.1.1.4 Experimental Group Pre-test Results in Language Use

The fourth calculated aspect is language use. The mean score, standard deviation, minimum and maximum scores and frequency scores were tabulated as follows:

Table 4.29

Descriptive Statistics of Language Use Rubric Scores of Experimental Group in the Pre-test

N Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
28	0	1.17	0.90	0.00	3.00

Table 4.30

Language Use Rubric Scores of Experimental Group in the Pre-test

	Frequency	Percent	Valid Percent	Cumulative Percent
0.00	4	14.3	14.3	14.3
0.25	2	7.1	7.1	21.4
0.50	6	21.4	21.4	42.9
1.00	3	10.7	10.7	53.6
1.50	3	10.7	10.7	64.3
1.75	2	7.1	7.1	71.4
2.00	4	14.3	14.3	85.7
2.50	3	10.7	10.7	96.4
3.00	1	3.6	3.6	100.0
Total	28	100.0	100.0	

According to the results presented in tables 4.29 and 4.30, we have a mean of (M=1.17) and a standard deviation of (SD= 0.90) and a minimum score of 0.00 point and a maximum score of 3.00 points. The descriptive statistics of the language use rubric also highlight the mean frequencies which are restricted between 0.50 and 1.50 and that represent 12 students' scores among 28 participants who took part in the intervention. Hence, we have 12 students whose level varies between very poor and poor to fair. 9 students are poor to fair. Their major problems were in simple and complex constructions, so they made frequent errors of negation, agreement, tense, number, word order and function, articles, pronouns, prepositions and fragments. They produced paragraphs with confused and obscured meaning. However, the rest of the students (3) virtually do not master the sentence construction rules which made their written production dominated by errors.

4.1.1.5 Experimental Group Pre-test Results in Mechanics

Scores presented in tables 4.31 and 4.32 show the mean score, standard deviation, minimum and maximum scores and frequency of the experimental group participants' production in the pre-test in terms of mechanics.

Table 4.31

Descriptive Statistics of Mechanics Rubric Scores of Experimental Group in the Pre-test

N Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
28	0	0.79	0.66	0.00	2.00

Table 4.32

Mechanics Rubric Scores of Experimental Group in the Pre-test

Frequency	Percent	Valid Percent	Cumulative Percent
0.00	7	25.0	25.0
0.25	2	7.1	32.1
0.50	5	17.9	50.0
1.00	7	25.0	75.0
1.50	4	14.3	89.3
2.00	3	10.7	100.0
Total	28	100.0	100.0

Tables 4.31 and 4.32 display the mean scores of (M= 0.79) with a standard deviation of (SD=0.66) and a minimum score of 0.00 point and a maximum score of 2.00 points. The means of the frequency distribution are between 0.00 and 1.00 which represent 21 students'

scores among 28. This means that all the 21 participants were very poor in mechanics. Thus, there was no mastery of the writing conventions since their production was dominated by errors of spelling, punctuation, capitalization, paragraphing and illegible handwriting.

4.1.1.6 Pre-test Final Scores of the Experimental Group

The final mark of the participants' paragraphs in the pre-test is out of 20 points according to the analytical scale that is divided into five aspects: content, organization, vocabulary, language use and mechanics. Each aspect or rubric has four different levels and this means that four points for each rubric. This method of assessing the students' written performance is so useful that it enables them to discover their strengths and weaknesses in each aspect of writing.

The students' marks are rated between 0 to 20 points. Excellent to very good paragraphs show thorough development of the topic, relevant content, fluent and cohesive expressions, appropriate mastery of vocabulary, effective language use and mastery of English language conventions of writing. Good to average paragraphs demonstrate some knowledge of the content but are mostly relevant to the topic, loosely organized but the main ideas stand out, occasional errors in lexis but the meaning is not obscured, effective but simple constructions with occasional errors in English writing conventions.

Fair to poor paragraphs reveal limited knowledge of the content, non-fluent ideas, frequent errors of lexis, major problems in simple and complex constructions and frequent errors of writing conventions. Very poor paragraphs do not show knowledge of the subject and do not communicate because of any mastery of grammar rules and writing conventions.

The descriptive statistics of the experimental group final scores in the pre-test are shown in table 4.33, followed by the overall results of the five rubrics presented in table 4.34.

Table 4.33

Descriptive Statistics of Final Scores of Experimental Group in the Pre-test

N Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
28	0	7.03	3.44	3.00	14.50

Table 4.34

Pre-test Final Scores of the Experimental Group

	Frequency	Percent	Valid Percent	Cumulative Percent
3.00	1	3.6	3.6	3.6
3.50	2	7.1	7.1	10.7
3.75	2	7.1	7.1	17.9
4.00	3	10.7	10.7	28.6
4.25	1	3.6	3.6	32.1
4.50	4	14.3	14.3	46.4
4.75	1	3.6	3.6	50.0
7.25	1	3.6	3.6	53.6
8.00	1	3.6	3.6	57.1
8.25	1	3.6	3.6	60.7
8.50	1	3.6	3.6	64.3
9.00	3	10.7	10.7	75.0
9.25	1	3.6	3.6	78.6
9.50	1	3.6	3.6	82.1
9.75	1	3.6	3.6	85.7
11.50	1	3.6	3.6	89.3
13.00	1	3.6	3.6	92.9
13.75	1	3.6	3.6	96.4
14.50	1	3.6	3.6	100.0
Total	28	100.0	100.0	

Tables 4.33 and 4.34 pinpoint the statistics of the pre-test final scores of the experimental group. The mean score is estimated by (M= 7.03) and the standard deviation is (SD= 3.44) and the minimum score is 3.00 points and the maximum score is 14.50 points. The means of frequency are from 3.00 to 4.50 points which represent 13 students’ scores among 28. This score is considered very poor and it shows no mastery of all the components of English writing.

4.1.2 Experimental Group Post-test Results

The quantitative data of the experimental group post-test in content, organization, vocabulary, language use and mechanics are tabulated below.

4.1.2.1 Experimental Group Post-test Results in Content

The results of the participants’ post-test in the area of content are demonstrated in tables 4.35 and 4.36.

Table 4.35

Descriptive Statistics of Content Rubric Scores of Experimental Group in the Post-test

N Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
28	0	2.51	0.76	1.50	4.00

Table 4.36

Content Rubric Scores of Experimental Group in the Post-test

Frequency	Percent	Valid Percent	Cumulative Percent
1.50	5	17.9	17.9
2.00	7	25.0	42.9
2.50	4	14.3	57.1
2.75	2	7.1	64.3
3.00	5	17.9	82.1
3.50	3	10.7	92.9
4.00	2	7.1	100.0
Total	28	100.0	100.0

As illustrated in the table 4.35 above, the mean score is (M=2.51), the standard deviation is (SD= 0.76), the minimum score is 1.50 points and the maximum score is 4.00 points. Table 4.36 reveals that the mean frequencies of the content rubric graduate between 2.00 to 2.75 which reflect the score of 13 students among 28. This score is somehow better than the pre-test scores (N=10). It means that there was an improvement in the students' level after they had been introduced to the prewriting technique of clustering.

4.1.2.2 Experimental Group Post-test Results in Organization

Tables 4.37 and 4.38 indicate the informants' post-test scores in the organization rubric.

Table 4.37

Descriptive Statistics of Organization Rubric Scores of Experimental Group in the Post-test

N Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
28	0	2.52	0.76	1.00	4.00

Table 4.38

Organization Rubric Scores of Experimental Group in the Post-test

Frequency	Percent	Valid Percent	Cumulative Percent
1.00 1	3.6	3.6	3.6
1.50 3	10.7	10.7	14.3
1.75 2	7.1	7.1	21.4
2.00 5	17.9	17.9	39.3
2.50 4	14.3	14.3	53.6
2.75 1	3.6	3.6	57.1
3.00 8	28.6	28.6	85.7
3.50 2	7.1	7.1	92.9
3.75 1	3.6	3.6	96.4
4.00 1	3.6	3.6	100.0
Total 28	100.0	100.0	

In the statistics above, we regarded that the mean score is (M= 2.52) and the standard deviation is (SD = 0.76) and a minimum score of 1.00 point and a maximum score of 4.00 points. The mean frequencies are restricted between 2.00 and 2.75. 10 students show poor to fair and average to good levels. In addition, we have 10 students who got the marks of [1.50; 2.00] (poor to fair level) unlike in the pre-test who were just 7 students. Concerning the scores of [2.50; 3.00], we get 13 students who were average to good. However, there were only 8 participants in the pre-test.

4.1.2.3 Experimental Group Post-test Results in Vocabulary

The findings of the respondents’ post-test in the third assessed aspect are shown in tables 4.39 and 4.40 below.

Table 4.39

Descriptive Statistics of Vocabulary Rubric Scores of Experimental Group in the Post-test

N Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
28	0	2.26	0.65	1.00	3.75

Table 4.40

Vocabulary Rubric Scores of Experimental Group in the Post-test

Frequency	Percent	Valid Percent	Cumulative Percent
1.00	1	3.6	3.6
1.50	4	14.3	17.9
1.75	1	3.6	21.4
2.00	10	35.7	57.1
2.50	5	17.9	75.0
3.00	5	17.9	92.9
3.50	1	3.6	96.4
3.75	1	3.6	100.0
Total	28	100.0	100.0

Based on the results obtained in the tables above, the mean is (M=2.26) and the standard deviation is (SD= 0.65) with a minimum score of 1.00 and a maximum score of 3.75. The mean frequencies are between 2.00 and 2.50 which are the scores of 15 participants among the total number (N=28). Conversely, we found only 6 students got the same scores in the pre-test. Hence, they show poor to fair and average to good levels. The statistics also reveal that there is 15 students rate from 1.50 to 2.00. It is considered a widely great score in comparison to the pretest (N= 9).

4.1.2.4 Experimental Group Post-test Results in Language Use

Concerning the aspect of language use, table 4.41 reveals the experimental group students’ post-test scores of the mean, standard deviation, minimum and maximum points. It is followed by the frequency distribution shown in the table 4.42 below.

Table 4.41

Descriptive Statistics of Language Use Rubric Scores of Experimental Group in the Post-test

N Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
28	0	1.92	0.70	0.50	3.00

Table 4.42

Language Use Rubric Scores of Experimental Group in the Post-test

Frequency	Percent	Valid Percent	Cumulative Percent
0.50	2	7.1	7.1
1.00	3	10.7	17.9
1.50	5	17.9	35.7
2.00	9	32.1	67.9
2.50	5	17.9	85.7
2.75	1	3.6	89.3
3.00	3	10.7	100.0
Total	28	100.0	100.0

Table 4.41 summarizes the scores of the experimental group students' post-test performance in the language use rubric. It includes the mean scores ($M=1.92$) and the standard deviation ($SD=0.70$) and a minimum score of 0.50 point and a maximum score of 3.00 points. The means of the frequency distribution are limited between 1.50 and 2.00 which represent the score of half of the participants who have poor to a fair level. Besides, 9 students got scores of [2.50; 3.00] which indicate the level of average to good, whereas only 4 participants got the same result in the pre-test.

4.1.2.5 Experimental Group Post-test Results in Mechanics

In the last tested rubric, tables 4.43 and 4.44 disclose the participants' post-test mean score, standard deviation, minimum as well as maximum scores and the frequency distribution of the students' scores.

Table 4.43

Descriptive Statistics of Mechanics Rubric Scores of Experimental Group in the Post-test

N Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
28	0	1.48	0.58	0.25	3.00

Table 4.44

Mechanics Rubric Scores of Experimental Group in the Post-test

Frequency	Percent	Valid Percent	Cumulative Percent
0.25	1	3.6	3.6
0.50	2	7.1	10.7
1.00	6	21.4	32.1
1.50	9	32.1	64.3
1.75	1	3.6	67.9
2.00	8	28.6	96.4
3.00	1	3.6	100.0
Total	28	100.0	100.0

The results presented in the table above 4.43 show that the mean score is (M=1.48) and the standard deviation is (SD= 0.58) with a minimum score of 0.25 and a maximum score of 3.00. The mean frequencies as displayed in the table 4.44 are centred between 1.00 and 1.50. On this ground, among the total number of participants (N=28), these scores represent 15 students who share very poor to poor level. However, we found 11 students had the same scores and levels in the pre-test. Moreover, 18 students got scores of [1.50; 2.00] in

mechanics, whereas only 7 participants in the pre-test. In short, it is clear that more than half of the participants go up from very poor to poor or fair levels. As a result, noticeable progress was recorded from no mastery of English writing conventions to writing paragraphs with frequent errors of spelling, capitalization, punctuation and paragraphing.

4.1.2.6 Post-test Final Scores of the Experimental Group

The overall scores of the experimental group students' post-test in the five evaluated areas are summarized in tables 4.45 and 4.46 as follows:

Table 4.45

Descriptive Statistics of Final Scores of Experimental Group in the Post-test

N Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
28	0	10.70	2.81	4.75	16.00

Table 4.46

Post-test Final Scores of the Experimental Group

	Frequency	Percent	Valid Percent	Cumulative Percent
4.75	1	3.6	3.6	3.6
7.50	1	3.6	3.6	7.1
8.00	2	7.1	7.1	14.3
8.25	2	7.1	7.1	21.4
8.50	2	7.1	7.1	28.6
8.75	2	7.1	7.1	35.7
9.00	1	3.6	3.6	39.3
9.50	2	7.1	7.1	46.4
9.75	2	7.1	7.1	53.6
10.50	1	3.6	3.6	57.1
11.50	1	3.6	3.6	60.7
12.00	1	3.6	3.6	64.3
12.50	1	3.6	3.6	67.9
13.00	2	7.1	7.1	75.0
13.50	3	10.7	10.7	85.7
13.75	1	3.6	3.6	89.3
14.75	1	3.6	3.6	92.9
15.50	1	3.6	3.6	96.4
16.00	1	3.6	3.6	100.0
Total	28	100.0	100.0	

The statistics displayed in tables 4.45 and 4.46 exhibit that the mean score is (M= 10.70) and the standard deviation is (SD= 2.81). The minimum score is 4.75 and the maximum score is 16.00. They also show that the mean frequencies of the post-test final scores of the experimental group are bounded between 10.50 and 11.50. Additionally, 11 students got scores from 4.75 to 9.00 which constitute less than the average level, 10 students got good marks from 11.50 to 14.75 and only 2 students obtained excellent grades from 15.50 to 16.00.

4.2 Quantitative Results of the Control Group

The quantitative results of the control group in both tests in content, organization, vocabulary, language use and mechanics are shown below.

4.2.1 Control Group Pre-test Results

The pre-test findings of the control group in content, organization, vocabulary, language use and mechanics are illustrated below.

4.2.1.1 Control Group Pre-test Results in Content

The pre-test scores of the control group concerning the first tested component are unveiled in tables 4.47 and 4.48.

Table 4.47

Descriptive Statistics of Content Rubric Scores of Control Group in the Pre-test

N Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
27	0	1.82	0.91	0.25	4.00

Table 4.48

Content Rubric Scores of Control Group in the Pre-test

Frequency		Percent	Valid Percent	Cumulative Percent
0.25	2	7.4	7.4	7.4
0.50	1	3.7	3.7	11.1
1.00	3	11.1	11.1	22.2
1.50	8	29.6	29.6	51.9
2.00	6	22.2	22.2	74.1
2.50	3	11.1	11.1	85.2
3.00	2	7.4	7.4	92.6
3.50	1	3.7	3.7	96.3
4.00	1	3.7	3.7	100.0
Total	27	100.0	100.0	

As stated in the tables 4.47 and 4.48 above, the mean is (M= 1.82) and standard deviation of (SD= 0.91) with a minimum score of 0.25 and a maximum score of 4.00. The mean frequencies rank between 1.50 and 2.00 which demonstrate that half of the sample is poor to fair. Consequently, they have little knowledge and insufficient development of the assigned topic.

4.2.1.2 Control Group Pre-test Results in Organization

The descriptive statistics of the control group pre-test scores in the organization rubric, including the means, standard deviation, minimum and maximum scores are displayed in table 4.49. The latter is followed by the frequency distribution presented in table 4.50.

Table 4.49

Descriptive Statistics of Organization Rubric Scores of Control Group in the Pre-test

N Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
27	0	1.73	0.58	0.00	3.75

Table 4.50

Organization Rubric Scores of Control Group in the Pre-test

	Frequency	Percent	Valid Percent	Cumulative Percent
0.00	3	11.1	11.1	11.1
0.25	1	3.7	3.7	14.8
1.00	1	3.7	3.7	18.5
1.50	3	11.1	11.1	29.6
2.00	7	25.9	25.9	55.6
2.50	8	29.6	29.6	85.2
3.00	1	3.7	3.7	88.9
3.50	1	3.7	3.7	92.6
3.75	2	7.4	7.4	100.0
Total	27	100.0	100.0	

As shown in table 4.49, the findings of the organization rubric reveal that the mean score is (M=1.73) and the standard deviation is (SD=0.58) with a minimum score of 0.00 and a maximum score of 3.75. Table 4.50 discloses that the frequency distribution of the control group pre-test scores is restricted between 1.50 and 2.00, and this represents the results of

more than one-third of the sample under study (10 informants among 27). The written production of those students in the organization rubric is from poor to fair which means that they suffer from basic problems that hinder them to write accurate and logical ideas.

4.2.1.3 Control Group Pre-test Results in Vocabulary

The scores of the third tested rubric are disclosed in tables 4.51 and 4.52 below:

Table 4.51

Descriptive Statistics of Vocabulary Rubric Scores of Control Group in the Pre-test

N Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
27	0	1.51	0.84	0.00	3.75

Table 4.52

Vocabulary Rubric Scores of Control Group in the Pre-test

Frequency		Percent	Valid Percent	Cumulative Percent
0.00	2	7.4	7.4	7.4
0.50	2	7.4	7.4	14.8
1.00	6	22.2	22.2	37.0
1.50	8	29.6	29.6	66.7
2.00	5	18.5	18.5	85.2
2.50	2	7.4	7.4	92.6
3.00	1	3.7	3.7	96.3
3.75	1	3.7	3.7	100.0
Total	27	100.0	100.0	

Table 4.51 exposes the descriptive statistics of the control group pre-test scores in English vocabulary. The mean is (M=1.51) and the standard deviation is (SD= 0.84) and the minimum score of 0.00 and the maximum score of 3.75. Nevertheless, the average of frequencies is between the marks of 00.00 and 1.50 which refers to 18 respondents' marks among 27. Generally, they got very poor and poor to fair levels. This denotes that they have a limited range of English words and expressions. Thus, they made frequent errors of word formation, choice and usage which make the meaning unclear and fully misunderstood. In another way, little knowledge of English vocabulary leads them to rely on translation which usually gives incomplete meaning.

4.2.1.4 Control Group Pre-test Results in Language Use

Table 4.53 clarifies the descriptive statistics of the control group pre-test production in the language use rubric. It includes the mean scores, standard deviation, minimum and maximum rates. Table 4.54 shows the frequency of the recorded values for this variable.

Table 4.53

Descriptive Statistics of Language Use Rubric Scores of Control Group in the Pre-test

Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
27	0	1.67	0.87	0.00	3.00

Table 4.54

Language Use Rubric Scores of Control Group in the Pre-test

	Frequency	Percent	Valid Percent	Cumulative Percent
0.00	1	3.7	3.7	3.7
0.25	2	7.4	7.4	11.1
0.50	2	7.4	7.4	18.5
1.00	4	14.8	14.8	33.3
1.50	1	3.7	3.7	37.0
1.75	1	3.7	3.7	40.7
2.00	10	37.0	37.0	77.8
2.50	3	11.1	11.1	88.9
3.00	3	11.1	11.1	100.0
Total	27	100.0	100.0	

The average score of the control group pre-test in the language use aspect is ($M=1.67$) and the standard deviation is ($SD= 0.87$) with a minimum score of 0.00 and a maximum one of 3.00. The scope of the mean frequencies is restricted between 1.00 and 1.75. In this way, they represent the scores of only 6 respondents among the total sample ($N=27$). This result is considered very poor and poor to fair. Therefore, they have deficiencies not only in simple and complex structures of language but also in the basic rules of sentence structure in English.

4.2.1.5 Control Group Pre-test Results in Mechanics

The following tables illustrate the results obtained from the control group pre-test in terms of mechanics.

Table 4.55

Descriptive Statistics of Mechanics Rubric Scores of Control Group in the Pre-test

Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
27	0	1.22	0.82	0.00	2.50

Table 4.56

Mechanics Rubric Scores of Control Group in the Pre-test

	Frequency	Percent	Valid Percent	Cumulative Percent
0.00	3	11.1	11.1	11.1
0.25	2	7.4	7.4	18.5
0.50	4	14.8	14.8	33.3
1.00	6	22.2	22.2	55.6
1.50	1	3.7	3.7	59.3
2.00	9	33.3	33.3	92.6
2.50	2	7.4	7.4	100.0
Total	27	100.0	100.0	

Broadly speaking, we found that the value of the mean score is (M=1.22) and the standard deviation is (SD=0.82) with a minimum score of 0.00 and a maximum score of 2.50. The mean frequencies vary between 0.50 and 1.50. In this case, among the entire sample (N=27), we have 11 informants who got very poor and poor to fair levels. At this rank, they made plenty of errors in the writing conventions led the meaning to be ambiguous and disoriented. This means that there is no command of the writing conventions which make their written performance not fairly to be graded.

4.2.1.6 Pre-test Final Scores of the Control Group

The whole rates of the control group pre-test in the five evaluated areas are summarized in tables 4.58 and 4.59 as follows:

Table 4.57

Descriptive Statistics of Final Scores of Control Group in the Pre-test

Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
27	0	7.95	4.03	0.00	16.50

Table 4.58

Pre-test Final Scores of the Control Group

	Frequency	Percent	Valid Percent	Cumulative Percent
0.75	1	3.7	3.7	3.7
2.00	1	3.7	3.7	7.4
3.00	1	3.7	3.7	11.1
4.50	3	11.1	11.1	22.2
5.00	1	3.7	3.7	25.9
7.00	1	3.7	3.7	29.6
7.50	1	3.7	3.7	33.3
7.75	1	3.7	3.7	37.0
8.00	1	3.7	3.7	40.7
8.50	3	11.1	11.1	51.9
9.00	5	18.5	18.5	70.4
9.50	2	7.4	7.4	77.8

10.50	1	3.7	3.7	81.5
11.50	1	3.7	3.7	85.2
12.00	1	3.7	3.7	88.9
14.00	1	3.7	3.7	92.6
14.75	1	3.7	3.7	96.3
16.50	1	3.7	3.7	100.0
Total	27	100.0	100.0	

The statistical data illustrated in the table 4.57 above revealed that the mean score is (M= 7.95), the standard deviation is (SD= 4.03), the minimum score is 0.00 and the maximum score is 16.50. The mean frequencies (as displayed in table 4.58) are confined between 7.50 and 9.00. As a consequence, the overall sample obtained a poor to fair level in the five components of writing.

4.2.2 Control Group Post-test Results

The quantitative data of the control group post-test in content, organization, vocabulary, language use and mechanics are tabulated and described respectively. These numerical data essentially focus on the mean scores, standard deviations, minimum and maximum scores and the frequency distribution of the informants' scores in each rubric.

4.2.2.1 Control Group Post-test Results in Content

The calculated data regarding the control group post-test in the first component are clearly shown in tables 4.59 and 4.60 below:

Table 4.59

Descriptive Statistics of Content Rubric Scores of Control Group in the Post-test

Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
27	0	1.94	1.04	0.00	4.00

Table 4.60

Content Rubric Scores of Control Group in the Post-test

	Frequency	Percent	Valid Percent	Cumulative Percent
0.00	1	3.7	3.7	3.7
0.25	1	3.7	3.7	7.4
0.50	1	3.7	3.7	11.1
1.00	2	7.4	7.4	18.5
1.50	7	25.9	25.9	44.4
1.75	1	3.7	3.7	48.1
2.00	6	22.2	22.2	70.4
2.50	4	14.8	14.8	85.2
3.50	1	3.7	3.7	88.9
4.00	3	11.1	11.1	100.0
Total	27	100.0	100.0	

It can be seen from the table 4.59 that the average of the data values is (M=1.94) and the sample standard deviation is (SD= 1.04) and the smallest data value is (0.00) and the largest data value is (4.00). Table 4.60 revealed that the mean frequencies vary between 1.50 and 2.00. This last score represents 14 participants among the whole sample (N= 27) that

show poor to fair level. We further have 5 students who got marks from 0.00 to 1.00 and 8 students who obtained scores from 2.50 to 4.00.

4.2.2.2 Control Group Post-test Results in Organization

Both the control group post-test results and their descriptions in terms of the organization aspect are pinpointed below:

Table 4.61

Descriptive Statistics of Organization Rubric Scores of Control Group in the Post-test

Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
27	0	1.95	1.00	0.00	4.00

Table 4.62

Organization Rubric Scores of Control Group in the Post-test

	Frequency	Percent	Valid Percent	Cumulative Percent
0.00	2	7.4	7.4	7.4
0.50	2	7.4	7.4	14.8
1.00	1	3.7	3.7	18.5
1.50	6	22.2	22.2	40.7
2.00	5	18.5	18.5	59.3
2.50	6	22.2	22.2	81.5
2.75	1	3.7	3.7	85.2
3.00	1	3.7	3.7	88.9
3.50	2	7.4	7.4	96.3
4.00	1	3.7	3.7	100.0
Total	27	100.0	100.0	

Table 4.61 provides four basic statistics (M= 1.95, SD=1.00, min=0.00 and max= 4.00). Table 4.62 indicates the mean frequencies rank between 1.00 and 2.00 which demonstrate the scores of 12 students who got very poor and poor to fair levels. Besides the 5 participants who obtained a very poor level (0.00-1.00), 8 participants gained average to good level (2.50-3.00) and only 3 students got very good to excellent level.

4.2.2.3 Control Group Post-test Results in Vocabulary

Tables 4.63 and 4.64 show the calculated data of the control group post-test in vocabulary. It contains the average, standard deviation, minimum and maximum scores and frequency distribution.

Table 4.63

Descriptive Statistics of Vocabulary Rubric Scores of Control Group in the Post-test

Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
27	0	1.77	0.76	0.25	3.50

Table 4.64

Vocabulary Rubric Scores of Control Group in the Post-test

	Frequency	Percent	Valid Percent	Cumulative Percent
0.25	1	3.7	3.7	3.7
1.00	6	22.2	22.2	25.9
1.50	7	25.9	25.9	51.9
1.75	2	7.4	7.4	59.3
2.00	4	14.8	14.8	74.1
2.50	3	11.1	11.1	85.2
2.75	1	3.7	3.7	88.9
3.00	2	7.4	7.4	96.3
3.50	1	3.7	3.7	100.0
Total	27	100.0	100.0	

According to the results presented in tables 4.63 and 4.64, the mean score is estimated by 1.77 and the SD= 0.76 with the least score of 0.25 and an utmost score of 3. 50. The mean frequencies are centred between 1.00 and 2.00 which represent the scores of 19 respondents among the whole of the control group (N=27) who reveal very poor and poor to fair levels. Likewise, six students obtained scores from 2.50 to 3.00 and this reflects the level of average to good.

4.2.2.4 Control Group Post-test Results in Language Use

The control group post-test results at the level of language use are as follows:

Table 4.65

Descriptive Statistics of Language Use Rubric Scores of Control Group in the Post-test

Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
27	0	1.68	0.80	0.00	3.50

Table 4.66

Language Use Rubric Scores of Control Group in the Post-test

	Frequency	Percent	Valid Percent	Cumulative Percent
0.00	1	3.7	3.7	3.7
0.25	1	3.7	3.7	7.4
0.50	1	3.7	3.7	11.1
0.75	1	3.7	3.7	14.8
1.00	3	11.1	11.1	25.9
1.50	7	25.9	25.9	51.9
2.00	6	22.2	22.2	74.1
2.50	6	22.2	22.2	96.3
3.50	1	3.7	3.7	100.0
Total	27	100.0	100.0	

The findings showed that the mean score is 1.68 and the standard deviation is 0.80 and the minimum score is 0.00 and the maximum score is 3.50. They also pointed to the average of frequencies which is between 1.00 and 2.00. These scores constitute 16 students among (N=27) who receive very poor and poor to fair levels. In addition, the scores from 0.00 to 1.00 represent 7 students that got very poor level in the language use aspect and the same number of participants obtained average to very good level (2.50-3.50).

4.2.2.5 Control Group Post-test Results in Mechanics

The descriptive statistics and the frequency distribution of the control group post-test in mechanics are displayed in the following tables:

Table 4.67

Descriptive Statistics of Mechanics Rubric Scores of Control Group in the Post-test

Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
27	0	1.44	0.87	0.00	3.50

Table 4.68

Mechanics Rubric Scores of Control Group in the Post-test

	Frequency	Percent	Valid Percent	Cumulative Percent
0.00	3	11.1	11.1	11.1
0.50	3	11.1	11.1	22.2
1.00	4	14.8	14.8	37.0
1.50	7	25.9	25.9	63.0
1.75	1	3.7	3.7	66.7
2.00	6	22.2	22.2	88.9
2.75	1	3.7	3.7	92.6
3.00	1	3.7	3.7	96.3
3.50	1	3.7	3.7	100.0
Total	27	100.0	100.0	

As noticed in tables 4.67 and 4.68, the mean is 1.44 and the standard deviation is 0.87 and the minimum score is 0.00 and the maximum value is 3.50. The interval of the mean frequencies is limited between 1.00 and 1.50 which are the scores of 11 students who got very poor and poor levels. Additionally, the scores [0.00; 1.00] are performed by 10 students while the marks [2.00; 3.00] are produced by 8 participants.

4.2.2.6 Post-test Final Scores of the Control Group

Tables 4.69 and 4.70 summarize the final results of the control group post-test in the five evaluated components.

Table 4.69

Descriptive Statistics of Final Scores of Control Group in the Post-test

Valid	Missing	Mean	Std. Deviation	Minimum	Maximum
27	0	8.86	3.81	1.25	17.00

Table 4.70

Post-test Final Scores of the Control Group

	Frequency	Percent	Valid Percent	Cumulative Percent
1.25	1	3.7	3.7	3.7
2.25	1	3.7	3.7	7.4
5.00	3	11.1	11.1	18.5
5.50	1	3.7	3.7	22.2
6.50	1	3.7	3.7	25.9
7.00	1	3.7	3.7	29.6
7.50	2	7.4	7.4	37.0
8.00	1	3.7	3.7	40.7
9.00	4	14.8	14.8	55.6
9.50	3	11.1	11.1	66.7
9.75	2	7.4	7.4	74.1

10.00	1	3.7	3.7	77.8
10.50	1	3.7	3.7	81.5
11.50	1	3.7	3.7	85.2
13.75	1	3.7	3.7	88.9
15.75	1	3.7	3.7	92.6
16.25	1	3.7	3.7	96.3
17.00	1	3.7	3.7	100.0
Total	27	100.0	100.0	

The post-test overall scores of the control group show that the mean score is 8.86 and the standard deviation is 3.81 and the minimum score is 1.25 and the maximum score is 17.00. On this ground, the means of the frequency distribution are restricted between 8.00 and 9.00. This reveals that 7 students got up than the mark 10 and the rest of the subjects (20) got down than the average 10.

4.3 Comparing the Research Findings

4.3.1 Comparing Pre-test and Post-test Scores of the Experimental Group

After having implemented the prewriting technique of clustering, it is important to find out whether there is a positive change in the participants' written production through comparing the mean scores and standard deviations of both pre-test and post-test at the level of the five rubrics respectively: content, organization, vocabulary, language use and mechanics. Each rubric comparison is presented in the following table:

Table 4.71

Comparing Pre-test and Post-test Scores of the Experimental Group

Rubric	N	Tests	Means	Standard Deviation
Content	28	• Pre-test	1.77	0.73
		• Post-test	2.51	0.76
		• Difference	0.74	0.03
Organization	28	• Pre-test	1.80	0.99
		• Post-test	2.52	0.76
		• Difference	0.72	-0.23
Vocabulary	28	• Pre-test	1.48	0.75
		• Post-test	2.26	0.65
		• Difference	0.78	-0.10
Language Use	28	• Pre-test	1.17	0.90
		• Post-test	1.92	0.70
		• Difference	0.75	-0.20
Mechanics	28	• Pre-test	0.79	0.66
		• Post-test	1.48	0.58
		• Difference	0.69	-0.08

The table above 4.71 presents the comparison between the experimental group pre-test and post-test means scores and standard deviation in terms of the five tested rubrics: content, organization, vocabulary, language use and mechanics.

Starting with the content rubric, we noticed that there is a fairly higher difference between the two tests scores of the mean ($M=0.74$) and a very little difference between the pre-test and the post-test standard deviations ($SD=0.03$). Second, the findings of the organization rubric showed that the participants do well in the post-test compared to the pre-test marks. In this case, the mean difference between these tests would be statistically significant ($M= 0.72$). The results of the vocabulary aspect revealed the highest scoring of the post-test which makes the

mean difference between the tests is somehow high ($M= 0.78$). This means that students participating in the experiment achieved considerable progress in learning new words form, choice and usage.

Concerning the fourth aspect of language use, we remarked a numerically significant difference between the two tests mean scores ($M= 0.75$). This higher difference demonstrated that the subjects produced some effective sentence structures with few grammar errors. Finally, what attracts attention to the difference between the post-test and pre-test results of mechanics is that it constitutes the lowest score as compared to the other rubrics. Therefore, it is obvious that the conventions of English writing were hardly assimilated and mastered by the respondents who took part in the experimental work.

In conclusion, it is worth mentioning that the results showed a statistically significant difference in each rubric, but it was so close and range from 0.69 to 0.78. In more detail, the progress was top in vocabulary by (0.78), while both the content (0.74) and the language use (0.75) variables had nearly the same rate of development. Then, they are followed by the organization aspect (0.72) and the lowest improvement was in mechanics by (0.69). Consequently, this slight degree of change is due mainly to the prewriting technique of clustering which affects the students' level, abilities, skills and readiness to learn writing.

The following table 4.72 provides a summary of the difference between the experimental group outcomes of both tests in content, organization, vocabulary, language use and mechanics.

Table 4.72

Pre-test and Post-test Final Scores Difference of the Experimental Group in Content, Organization, Vocabulary, Language Use and Mechanics

N	Difference between Post-test/Pre-test	Content		Organization		Vocabulary		Language Use		Mechanics	
		M	SD	M	SD	M	SD	M	SD	M	SD
		0.74	0.03	0.72	-0.23	0.78	-0.10	0.75	-0.20	0.69	-0.08

Table 4.73

Pre-test and Post-test Final Scores Difference of the Experimental Group

N	Pre-test/Post-test Final Scores Difference	Means	Standard Deviation
28	• Pre-test	7.03	3.44
	• Post-test	10.70	2.81
	• Difference	3.67	0.63

The statistical analysis of the entire scores of the pre-test and post-test shows a very positive shift (3.67) in the experimental students’ written performance. This great effect demonstrates that the treatment, which is relied on the prewriting technique of clustering to get the students ready to write and generate ideas, was as expected because it brought significant improvement in the students’ writing skills.

4.3.2 Comparing Pre-test and Post-test Scores of the Control Group

The table 4.74 below presents the comparison between the two tests mean scores and standard deviations of the control group so as to check to what extent the use of questioning as a prewriting technique has positive effect on the participants' performance. The results of this comparison in terms of all the five tested rubrics (content, organization, vocabulary, language use and mechanics) are respectively presented as follows:

Table 4.74

Comparing Pre-test and Post-test Scores of the Control Group

Rubric	N	Tests	Means	Standard Deviation
Content	27	• Pre-test	1.82	0.91
		• Post-test	1.94	1.04
		• Difference	0.12	0.13
Organization	27	• Pre-test	1.73	0.58
		• Post-test	1.95	1.00
		• Difference	0.22	0.42
Vocabulary	27	• Pre-test	1.51	0.84
		• Post-test	1.77	0.76
		• Difference	0.26	-0.08
Language Use	27	• Pre-test	1.67	0.87
		• Post-test	1.68	0.80
		• Difference	0.01	-0.07
Mechanics	27	• Pre-test	1.22	0.82
		• Post-test	1.44	0.87
		• Difference	0.22	0.05

As observed in the table 4.74, it summarizes the differences between the post-test and pre-test means and standard deviations of the control group at the level of content, organization, vocabulary, language use and mechanics.

Based on the results obtained from the content aspect, we noted that the extent of differences between both tests mean scores and standard deviations are small ($M= 0.12$ and $SD= 0.13$). We also remarked a relatively small change in the students' performance in the organization rubric which means that the questioning strategy was a little bit good in helping learners to organize their ideas easily.

The findings of the vocabulary rubric are closely similar to those of content and organization rubrics. Accordingly, no noticeable progress was recorded concerning this aspect. This indicates that students still were not able to write paragraphs free from frequent errors of word form, usage and choice. In addition, we deduced that the way of teaching writing to the control group students was a little bit unsuccessful in enabling them to acquire new words and expressions or even to remember the already known ones.

In the language use rubric, the mean scores of both tests are nearly the same with a slight increase in the post-test scores (only 0.01). Hence, this little recorded change cannot be regarded as important since students still produced sentences and paragraphs grammatically incorrect. At last, the results of mechanics showed a small distinctive improvement in the post-test grades. In this sense, although students have dealt with many interesting topics during the whole of the academic year, their results revealed virtually non-existent progress in spelling, punctuation, capitalization and paragraphing.

In conclusion, it is apparent that each control group student has nearly an equal level in the pre-test and post-test with a very small remarkable degree of change in all the aspects of writing. These merely balance in the tests scores went through what we have expected since they received the lessons with no treatment.

The following table 4.75 shows a summary of the difference between the control group results of both tests in content, organization, vocabulary, language use and mechanics.

Table 4.75

Pre-test and Post-test Final Scores Difference of the Control Group in Content, Organization, Vocabulary, Language Use and Mechanics

N	Difference between Post-test/Pre-test	Content		Organization		Vocabulary		Language Use		Mechanics	
		M	SD	M	SD	M	SD	M	SD	M	SD
		0.12	0.13	0.22	0.42	0.26	-0.08	0.01	-0.07	0.22	0.05

Table 4.76

Pre-test and Post-test Final Scores Difference of the Control Group

N	Pre-test/Post-test Final Scores Difference	Means	Standard Deviation
27	• Pre-test	7.95	4.03
	• Post-test	8.86	3.81
	• Difference	0.91	0.22

As shown in table 4.76, there is a slight change in the overall mean scores of both the pre-test and post-test (only 0.91). What numbers indicate confirm that the control group students have a low level in all the five tested aspects. It implies that the conventional instructions and procedures used for teaching this group were ineffective, mainly in the pre-writing stage. Theoretically speaking, this situation truly needs successful ways for teaching this productive skill from the topic introduction to the final product submission.

Before testing the already stated hypotheses which need to calculate the t-test value in each rubric in order to confirm or refute the effectiveness of clustering in improving students’

paragraph writing in content, organization, vocabulary, language use and mechanics, it is essential to display the comparison between both groups in each of the aforementioned rubrics respectively.

4.4 Comparison between Experimental and Control Groups

After having dealt with the comparison between the two tests scores of each group independently, we will compare the results of the control group to the experimental group in content, organization, vocabulary, language use and mechanics. Each rubric comparison is tabulated and described below:

4.4.1 Comparison between Experimental and Control Groups in Content

In the component of the content, the comparison between the experimental and control groups means scores and standard deviations is tabulated and illustrated in the table 4.77 and the figure 4.32 as follows:

Table 4.77

Comparison between Experimental and Control Groups in Content Rubric

Experimental Group				Control Group			
N	Tests	Means	Std Deviation	N	Tests	Means	Std Deviation
28	Pre-test	1.77	0.73	27	Pre-test	1.82	0.91
	Post-test	2.51	0.76		Post-test	1.94	1.04
	Difference	0.74	0.03		Difference	0.12	0.13

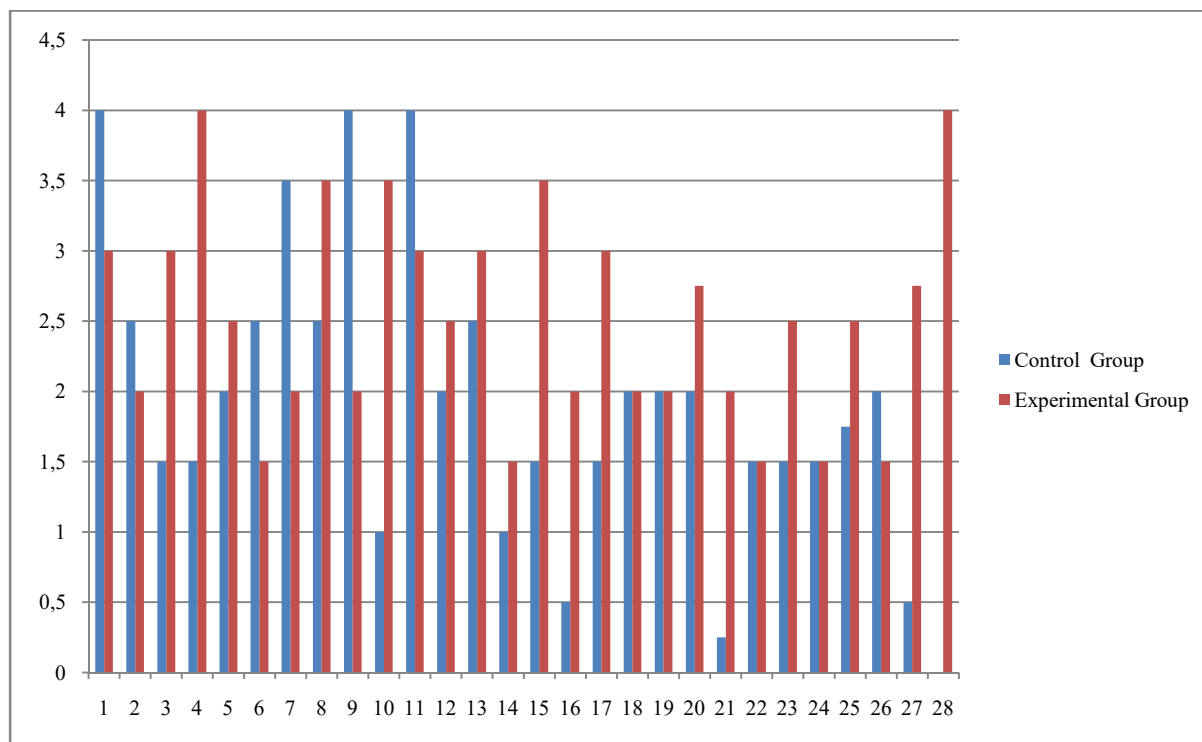


Figure 4.30. Comparison between Experimental and Control Groups in Content Rubric

According to the information displayed in the table 4.77, it is clear that the pre-test scores of both the experimental and control groups in terms of the content aspect are nearly the same (Exp G pre-test=1.77/CG pre-test= 1.82). This implies that the students of both groups shared the same problems regarding this area. Therefore, they produced pieces of writing that did not show knowledge of the topic or they just wrote limited and poor ideas which lacked details and explanation to be fairly assessed.

After the experiment, we remarked considerable difference between the two groups means (MD of Exp G=0.74> 0.12 MD of CG). Figure 4.32 also confirmed that more than half of the experimental group participants gained good marks in this rubric. As a suggestion, the rest of the students who are still poor in content level have to broaden and deepen their knowledge so as to be able to make meaningful and thorough development of the assigned topics.

4.4.2 Comparison between Experimental and Control Groups in Organization

In the second rubric, we compare the means scores and standard deviations of the pre-test and post-test of the two groups and present them in the table 4.78 and figure 4.33 below:

Table 4.78

Comparison between Experimental and Control Groups in Organization Rubric

Experimental Group				Control Group			
N	Tests	Means	Std Deviation	N	Tests	Means	Std Deviation
28	Pre-test	1.80	0.99	27	Pre-test	1.73	0.58
	Post-test	2.52	0.76		Post-test	1.95	1.00
	Difference	0.72	-0.23		Difference	0.22	0.42

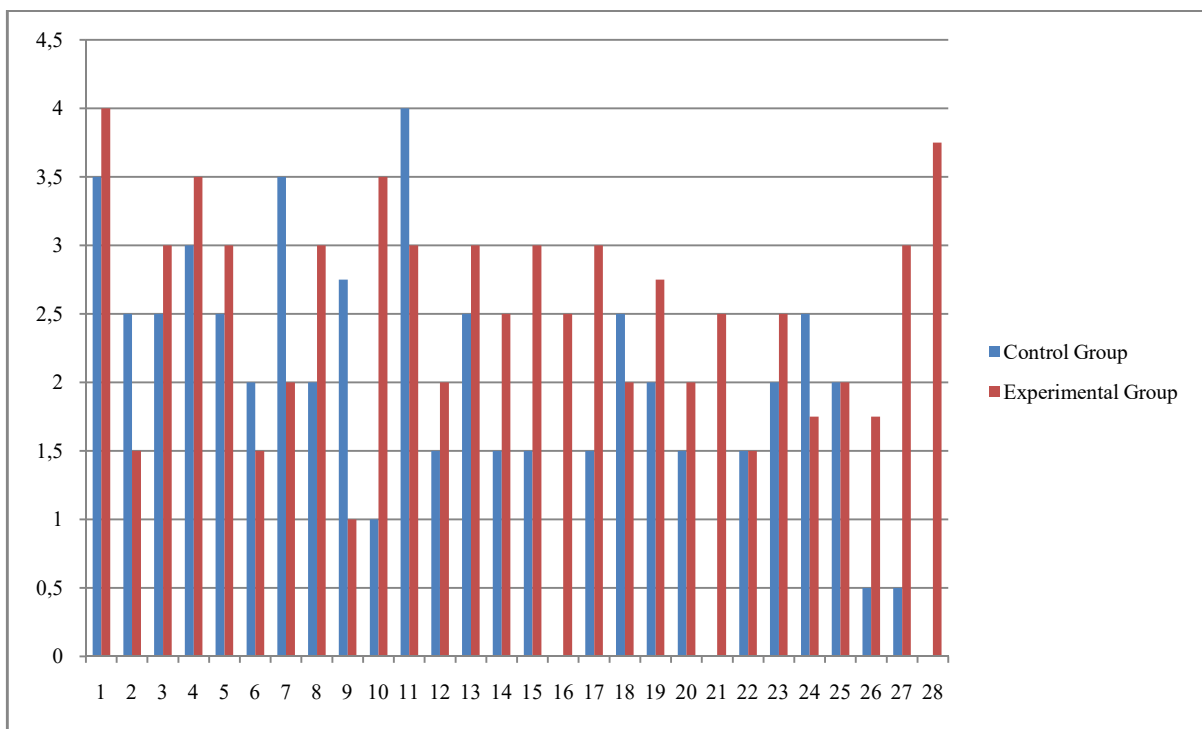


Figure 4.31. Comparison between Experimental and Control Groups in Organization Rubric

Table 4.78 and figure 4.33 include the mean scores, standard deviation and comparison between the experimental and control groups in the pre and post-tests. In general, it can be seen that unlike the pre-tests mean scores of the two groups which are almost

identical (Exp G pre-test=1.80/CG pre-test= 1.73), the post-tests means are totally different (Exp G post-test=2.52> CG post-test= 1.95).

Besides, an inconsiderable difference was highlighted between the two mean scores of the control group (MD of CG= 0.22) and a high difference was recorded between the two means of the experimental one (MD of Exp G= 0.72). In addition, they showed that 17 students' marks vary from good, very good to excellent. This result is enough to say that clustering had an effective role in developing students' organization aspect.

4.4.3 Comparison between Experimental and Control Groups in Vocabulary

In the vocabulary aspect, the results obtained from the comparison of the control and experimental groups pre-test and post-test performance are shown as follows:

Table 4.79

Comparison between Experimental and Control Groups in Vocabulary Rubric

Experimental Group				Control Group			
N	Tests	Means	Std Deviation	N	Tests	Means	Std Deviation
28	Pre-test	1.48	0.75	27	Pre-test	1.51	0.84
	Post-test	2.26	0.65		Post-test	1.77	0.76
	Difference	0.78	-0.10		Difference	0.26	-0.08

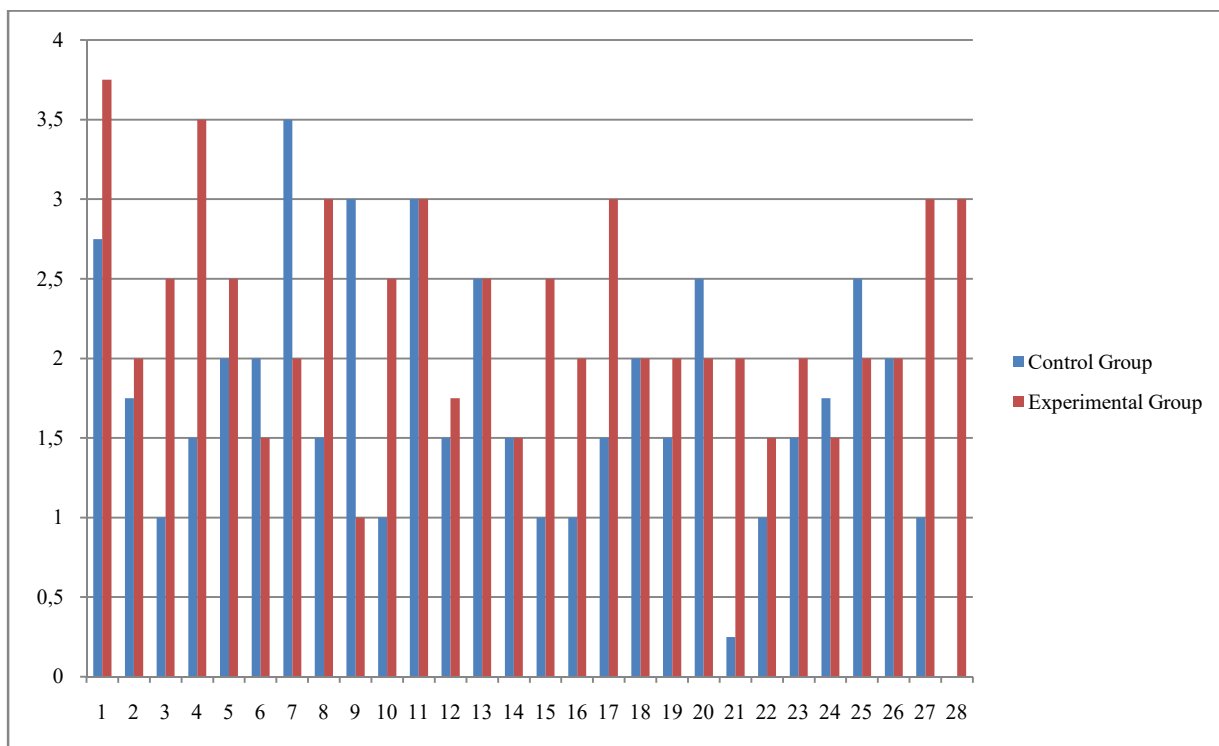


Figure 4.32. Comparison between Experimental and Control Groups in Vocabulary Rubric

As formerly mentioned whilst analyzing the findings of the content and organization variables, the pre-tests of both groups in terms of vocabulary aspect are very similar too (Exp G pre-test=1.48/CG pre-test= 1.51). It can be stated that the students of both groups had a lack of adequate English vocabulary which made them depend on translation as a key solution to express their ideas. Accordingly, this poor level might be attributed to the lack of interest in the writing activities.

We also noted that the mean difference between the experimental group (0.78) and the control group (0.26) is slightly far. The graph above 4.34 revealed that less than half of the participants (only 11 students) got good to very good level (2.5 to 3.75 points). In conclusion, though the majority of the students show a positive change at the level of vocabulary because of the use of the clustering strategy in the pre-writing stage, they still need to develop their account of words and expressions.

4.4.4 Comparison between Experimental and Control Groups in Language Use

In the fourth tested aspect, the following table 4.80 and graph 4.35 revealed the differences in the means scores and standard deviations of the pre-test and post-test of both groups.

Table 4.80

Comparison between Experimental and Control Groups in Language Use Rubric

Experimental Group				Control Group			
N	Tests	Means	Std Deviation	N	Tests	Means	Std Deviation
28	Pre-test	1.17	0.90	27	Pre-test	1.67	0.87
	Post-test	1.92	0.70		Post-test	1.68	0.80
	Difference	0.75	- 0.20		Difference	0.01	-0.07

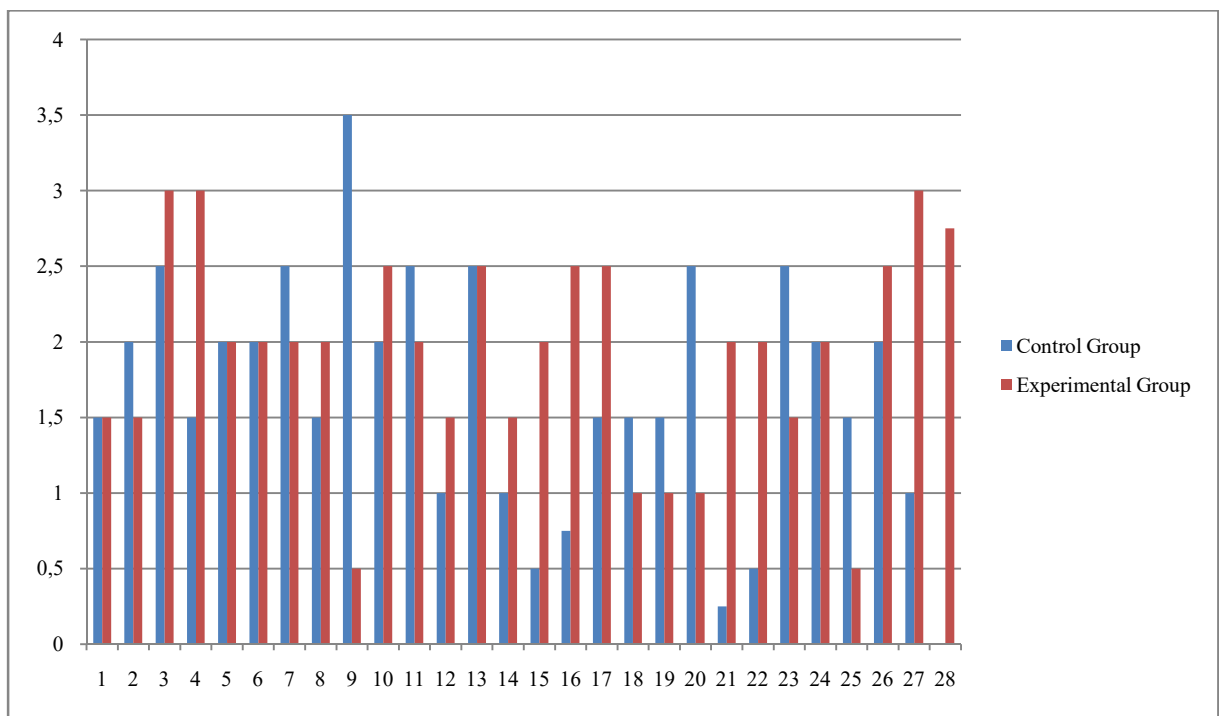


Figure 4.33. Comparison between Experimental and Control Groups in Language Use Rubric

Table 4.80 provides the statistics of the comparison between the pre-test and post-test results of both the control and experimental groups. In the language use rubric, a highly significant difference was found between the mean scores of the experimental group (0.75)

and the control group (0.01). This means that the students mastered some basic rules of grammar which made the number of their errors fewer than before.

As shown in the figure 4.35, we have 22 students whose grades were poor to average (1.5 to 3.00 points). This demonstrates that the majority of the participants made some progress in language use, but they did not reach what was expected from them. To conclude, it can be said that the lessons designed for the treatment as well as the use of the prewriting technique of clustering had great roles in helping the students perform somehow well in grammar. However, there were still deficiencies in complex constructions, tenses and sentence fragments.

4.4.5 Comparison between Experimental and Control Groups in Mechanics

In mechanics, the table 4.81 and figure 4.36 below present the findings gained from the comparison of the two groups pre-test and post-test scores.

Table 4.81

Comparison between Experimental and Control Groups in Mechanics Rubric

Experimental Group				Control Group			
N	Tests	Means	Std Deviation	N	Tests	Means	Std Deviation
28	Pre-test	0.79	0.66	27	Pre-test	1.22	0.82
	Post-test	1.48	0.58		Post-test	1.44	0.87
	Difference	0.69	-0.08		Difference	0.22	0.05

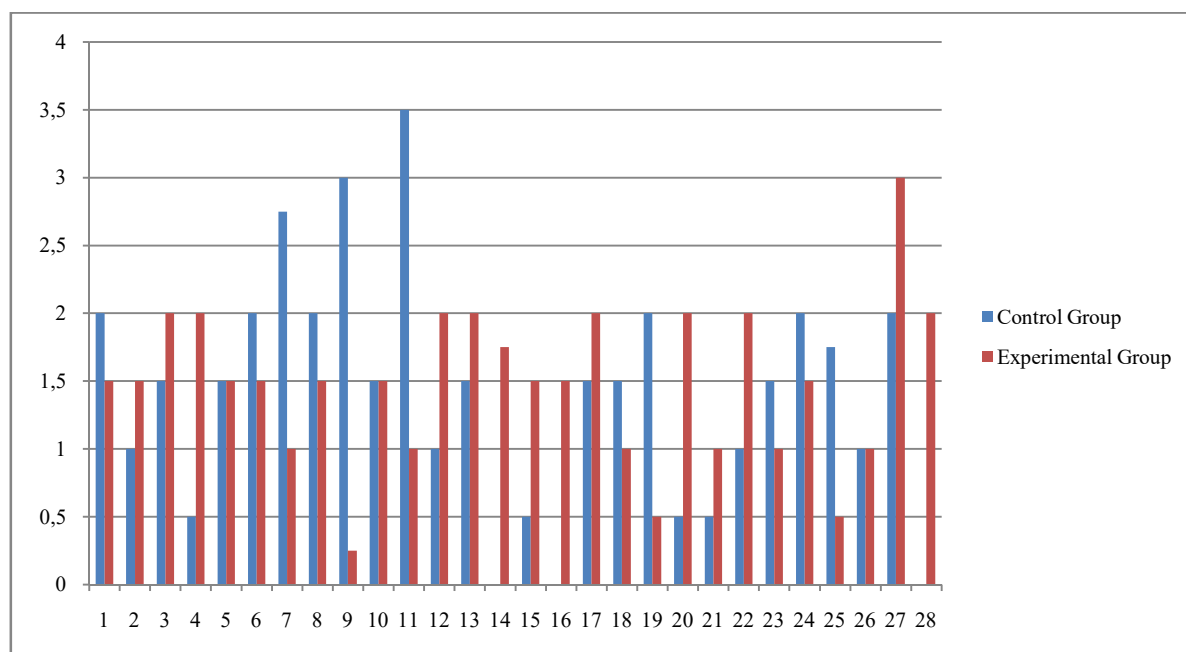


Figure 4.34. Comparison between Experimental and Control Groups in Mechanics Rubric

In the table above, we recorded that the pre-test scores of the experimental group at the level of mechanics are less than those of the control group (Exp G pre-test=0.79 < CG pre-test= 1.22). Conversely, students who taught using the clustering technique in the pre-writing stage showed a mere advance (1.48) in their post-test than the control ones (1.44). This involves that the difference between the mean scores of the experimental group (0.69) is higher than the control group ones (0.22). Despite this positive change, they were still incapable to write paragraphs free from the common errors of writing conventions. In other words, more practice in writing is needed to reach at least an average level in this aspect.

In short, the findings showed that there was a significant difference between the two groups' means in all the aspects. It was due to the use of clustering, most students' written production was developed. However, this progress was not enough and extra remedial sessions were added to help students be ready for setting the BAC examination in a well-prepared manner through which they would score well in English in general and in the written expression part specifically.

4. 5 Statistical Hypothesis Testing

After we had finished the comparison between the experimental and control groups mean scores and standard deviation in the five rubrics, it is important to test the hypotheses using independent samples t-test to determine if there is any significant difference between the two groups' tests. Before doing that, the analyst has to take into account the following key terms and concepts:

Null hypothesis (H0) proposes that no statistical significance exists between the two tests means.

Alternative hypothesis (H1) states that there is a statistical significance between the two tests means

Level of significance (Alpha Level): $\alpha=0.05$

Degree of freedom (df): it can be calculated by using either the first or the second formula

$$1) \text{ df} = (N1-1) + (N2-1) = (28-1) + (27-1) = 53$$

$$2) \text{ df} = (N1+N2-2) = (28+27-2) = 53$$

Critical Value: 1.67

4.5.1 Statistical Hypothesis Testing in Content

Null hypothesis (H0) = if third-year scientific stream students of Badi Mekki Secondary School were exposed to the clustering technique, their expository paragraphs would not develop in terms of content.

Alternative hypothesis (H1) = if third-year scientific stream students of Badi Mekki Secondary School were exposed to the clustering technique, their expository paragraphs would develop in terms of content.

Level of significance (Alpha Level): $\alpha=0.05$

Degree of freedom (df) = 53

Critical Value: 1.67

Table 4.82

Experimental and Control Groups Means and Means Squared Differences in Content

Group Students (N)	Experimental		Control	
	Post-test	Post-test Squared	Post-test	Post-test Squared
1	3	9	4	16
2	2	4	2.5	6.25
3	3	9	1.5	2.25
4	4	16	1.5	2.25
5	2.5	6.25	2	4
6	1.5	2.25	2.5	6.25
7	2	4	3.5	12.25
8	3.5	12.25	2.5	6.25
9	2	4	4	16
10	3.5	12.25	1	1
11	3	9	4	16
12	2.5	6.25	2	4
13	3	9	2.5	6.25
14	1.5	2.25	1	1
15	3.5	12.25	1.5	2.25
16	2	4	0.5	0.25
17	3	9	1.5	2.25
18	2	4	2	4
19	2	4	2	4
20	2.75	7.56	2	4
21	2	4	0.25	0.06
22	1.5	2.25	1.5	2.25
23	2.5	6.25	1.5	2.25
24	1.5	2.25	1.5	2.25
25	2.5	6.25	1.75	3.06
26	1.5	2.25	2	4
27	2.75	7.56	0.5	0.25
28	4	16		
Sum Σ	$\Sigma X_1 = 70.5$	$\Sigma X_1^2 = 193.12$	$\Sigma X_2 = 53$	$\Sigma X_2^2 = 130.62$

Table 4.83

Mean, Variance and T-test in Content Rubric

Group	Experimental	Control
Mean \bar{x}	2.51	1.94
Variance s^2	0.56	0.99
T-test Value	2.31	

Table 4.84

Student's T-test in Content Rubric

Students (N)	Tests	Mean \bar{x}	Standard Deviation (SD)	T-test	Alpha Level (α)
28	Pre-test	1.77	0.73	2.31	0.05
	Post-test	2.51	0.76		
	Difference	0.74	0.03		

Statistical Decision for Hypothesis Testing

The t-test value in content is greater than the critical value 1.67 for fifty-three degrees of freedom. Thus we accept the alternative hypothesis; if third-year scientific stream students of Badi Mekki Secondary School were exposed to the clustering technique, their expository paragraphs would develop in terms of content, and we reject the null hypothesis. This positive change in the participants' performance shows the significance of the treatment. Therefore, the subjects produced developed and relevant ideas due to the use of the clustering technique.

4.5.2 Statistical Hypothesis Testing in Organization

Null hypothesis (H0) = if third-year scientific stream students of Badi Mekki Secondary School were exposed to the clustering technique, their expository paragraphs would not develop in terms of organization.

Alternative hypothesis (H1) = if third-year scientific stream students of Badi Mekki Secondary School were exposed to the clustering technique, their expository paragraphs would develop in terms of organization.

Level of significance (Alpha Level): $\alpha=0.05$

Degree of freedom (df) = 53

Critical Value: 1.67

Table 4.85

Experimental and Control Groups Means and Means Squared Differences in Organization

Group Students (N)	Experimental		Control	
	Post-test	Post-test Squared	Post-test	Post-test Squared
1	4	16	3.5	12.25
2	1.5	2.25	2.5	6.25
3	3	9	2.5	6.25
4	3.5	12.25	3	9
5	3	9	2.5	6.25
6	1.5	2.25	2	4
7	2	4	3.5	12.25
8	3	9	2	4
9	1	1	2.75	7.56
10	3.5	12.25	1	1
11	3	9	4	16
12	2	4	1.5	2.25
13	3	9	2.5	6.25
14	2.5	6.25	1.5	2.25
15	3	9	1.5	2.25
16	2.5	6.25	0	0
17	3	9	1.5	2.25
18	2	4	2.5	6.25
19	2.75	7.56	2	4
20	2	4	1.5	2.25
21	2.5	6.25	0	0
22	1.5	2.25	1.5	2.25
23	2.5	6.25	2	4
24	1.75	3.06	2.5	6.25

25	2	4	2	4
26	1.75	3.06	0.5	0.25
27	3	9	0.5	0.25
28	3.75	14.06		
Sum Σ	$\Sigma X1 = 70.5$	$\Sigma X1^2=192.99$	$\Sigma X2 =52.75$	$\Sigma X2^2 =129.56$

Table 4.86

Mean, Variance and T-test in Organization Rubric

Group	Experimental	Control
Mean \bar{x}	2.52	1.95
Variance s^2	0.55	0.98
T-test Value	2.35	

Table 4.87

Student's T-test in Organization Rubric

Students (N)	Tests	Mean \bar{x}	Standard Deviation (SD)	T-test	Alpha Level (α)
28	Pre-test	1.80	0.99	2.35	0.05
	Post-test	2.52	0.76		
	Difference	0.72	-0.23		

Statistical Decision for Hypothesis Testing

The results obtained from the hypothesis testing in the organization rubric demonstrate that the value of t (2.35) for fifty-three degrees of freedom is more than the critical value (1.67). This result denies that students' progress in terms of this aspect happens by chance. On this ground, we refute the statistical hypothesis (H0) and we accept the alternate hypothesis. This confirms that teaching students' paragraph writing using the clustering technique was effective as they managed to explore the relationship among the ideas and connect them logically.

4.5.3 Statistical Hypothesis Testing in Vocabulary

Null hypothesis (H₀) = if third-year scientific stream students of Badi Mekki Secondary School were exposed to the clustering technique, their expository paragraphs would not develop in terms of vocabulary.

Alternative hypothesis (H₁) = if third-year scientific stream students of Badi Mekki Secondary School were exposed to the clustering technique, their expository paragraphs would develop in terms of vocabulary.

Level of significance (Alpha Level): $\alpha=0.05$

Degree of freedom (df) = 53

Critical Value: 1.67

Table 4.88

Experimental and Control Groups Means and Means Squared Differences in Vocabulary

Group	Experimental		Control	
Students (N)	Post-test	Post-test Squared	Post-test	Post-test Squared
1	3.75	14.06	2.75	7.56
2	2	4	1.75	3.06
3	2.5	6.25	1	1
4	3.5	12.25	1.5	2.25
5	2.5	6.25	2	4
6	1.5	2.25	2	4
7	2	4	3.5	12.25
8	3	9	1.5	2.25
9	1	1	3	9
10	2.5	6.25	1	1
11	3	9	3	9
12	1.75	3.06	1.5	2.25
13	2.5	6.25	2.5	6.25
14	1.5	2.25	1.5	2.25
15	2.5	6.25	1	1
16	2	4	1	1
17	3	9	1.5	2.25
18	2	4	2	4
19	2	4	1.5	2.25
20	2	4	2.5	6.25
21	2	4	0.25	0.06
22	1.5	2.25	1	1
23	2	4	1.5	2.25
24	1.5	2.25	1.75	3.06
25	2	4	2.5	6.25
26	2	4	2	4
27	3	9	1	1
28	3	9		
Sum Σ	$\Sigma X_1 = 63.5$	$\Sigma X_1^2 = 155.62$	$\Sigma X_2 = 48$	$\Sigma X_2^2 = 100.49$

Table 4.89

Mean, Variance and T-test in Vocabulary Rubric

Group	Experimental	Control
Mean \bar{x}	2.26	1.77
Variance s^2	0.41	0.56
T-test Value	4.90	

Table 4.90

Student's T-test in Vocabulary Rubric

Students (N)	Tests	Mean \bar{x}	Standard Deviation (SD)	T-test	Alpha Level (α)
28	Pre-test	1.48	0.75	4.90	0.05
	Post-test	2.26	0.65		
	Difference	0.78	-0.10		

Statistical Decision for Hypothesis Testing

As revealed in the table 4.90 above, for a level of significance ($\alpha = 0.05$) and fifty-three degrees of freedom the t-test statistic score (4.90) is greater than the critical value (1.67). This proves the effectiveness of the clustering technique in improving the participants' paragraph writing in terms of vocabulary rubric. For that reason, it is improbable that the considerable account of lexis shown in the students' paragraphs is due to the factor of chance. We, therefore, confirm that the alternative hypothesis is true and the null hypothesis has no value or is statistically invalid.

In conclusion, we can say that the different writing tasks the students dealt with during the period of the experiment broaden and develop their lexical knowledge and competence. The teacher and peers feedback help them learn and master new word form, choice and usage,

as well as remember some prior vocabulary; especially, during the pre-writing stage in which the clustering technique had a great role in prompting deeper thinking, stimulating the potentials and creating fruitful interaction.

4.5.4 Statistical Hypothesis Testing in Language Use

Null hypothesis (H0) = if third-year scientific stream students of Badi Mekki Secondary School were exposed to the clustering technique, their expository paragraphs would not develop in terms of language use.

Alternative hypothesis (H1) = if third-year scientific stream students of Badi Mekki Secondary School were exposed to the clustering technique, their expository paragraphs would develop in terms of language use.

Level of significance (Alpha Level): $\alpha=0.05$

Degree of freedom (df) = 53

Critical Value: 1.67

Table 4.91

Experimental and Control Groups Means and Means Squared Differences in Language Use

Group	Experimental		Control	
	Post-test	Post-test Squared	Post-test	Post-test Squared
1	1.5	2.25	1.5	2.25
2	1.5	2.25	2	4
3	3	9	2.5	6.25
4	3	9	1.5	2.25
5	2	4	2	4
6	2	4	2	4
7	2	4	2.5	6.25
8	2	4	1.5	2.25

9	0.5	0.25	3.5	12.25
10	2.5	6.25	2	4
11	2	4	2.5	6.25
12	1.5	2.25	1	1
13	2.5	6.25	2.5	6.25
14	1.5	2.25	1	1
15	2	4	0.5	0.25
16	2.5	6.25	0.75	0.56
17	2.5	6.25	1.5	2.25
18	1	1	1.5	2.25
19	1	1	1.5	2.25
20	1	1	2.5	6.25
21	2	4	0.25	0.06
22	2	4	0.5	0.25
23	1.5	2.25	2.5	6.25
24	2	4	2	4
25	0.5	0.25	1.5	2.25
26	2.5	6.25	2	4
27	3	9	1	1
28	2.75	7.56		
Sum Σ	$\Sigma X1 = 53.75$	$\Sigma X1^2=116.56$	$\Sigma X2 =46$	$\Sigma X2^2 =93.62$

Table 4.92

Mean, Variance and T-test in Language Use Rubric

Group	Experimental	Control
Mean \bar{x}	1.92	1.68
Variance s^2	0.48	0.57
T-test Value	1.09	

Table 4.93

Student's T-test in Language Use Rubric

Students (N)	Tests	Mean \bar{x}	Standard Deviation (SD)	T-test	Alpha Level (α)
28	Pre-test	1.17	0.90	1.09	0.05
	Post-test	1.92	0.70		
	Difference	0.75	- 0.20		

Statistical Decision for Hypothesis Testing

Table 4.93 displays that the language use t-score (1.09) for fifty-three degrees of freedom is slightly less than the critical value (1.67). Thus, we reject the alternative hypothesis and we accept the null hypothesis. In other words, the implementation of the prewriting technique of clustering does not improve the students' paragraph writing at the level of language use. Accordingly, this value indicates that the treatment had no positive effect on the students' writing since they still do the same errors of English language rules and structure. This requires looking for another technique that could ameliorate those paragraphs in the language use aspect.

4.5.5 Statistical Hypothesis Testing in Mechanics

Null hypothesis (H0) = if third-year scientific stream students of Badi Mekki Secondary School were exposed to the clustering technique, their expository paragraphs would not develop in terms of mechanics.

Alternative hypothesis (H1) = if third-year scientific stream students of Badi Mekki Secondary School were exposed to the clustering technique, their expository paragraphs would develop in terms of mechanics.

Level of significance (Alpha Level): $\alpha=0.05$

Degree of freedom (df) = 53

Critical Value: 1.67

Table 4.94

Experimental and Control Groups Means and Means Squared Differences in Mechanics

Group	Experimental		Control	
Students (N)	Post-test	Post-test Squared	Post-test	Post-test Squared
1	1.5	2.25	2	4
2	1.5	2.25	1	1
3	2	4	1.5	2.25
4	2	4	0.5	0.25
5	1.5	2.25	1.5	2.25
6	1.5	2.25	2	4
7	1	1	2.75	7.56
8	1.5	2.25	2	4
9	0.25	0.06	3	9
10	1.5	2.25	1.5	2.25
11	1	1	3.5	12.25
12	2	4	1	1
13	2	4	1.5	2.25
14	1.75	3.06	00	0
15	1.5	2.25	0.5	0.25
16	1.5	2.25	0	0
17	2	4	1.5	2.25
18	1	1	1.5	2.25
19	0.5	0.25	2	4
20	2	4	0.5	0.25
21	1	1	0.5	0.25
22	2	4	1	1
23	1	1	1.5	2.25
24	1.5	2.25	2	4
25	0.5	0.25	1.75	3.06
26	1	1	1	1
27	3	9	2	4
28	2	4		
Sum Σ	$\Sigma X1 = 41.5$	$\Sigma X1^2 = 71.12$	$\Sigma X2 = 39.5$	$\Sigma X2^2 = 76.62$

Table 4.95

Mean, Variance and T-test in Mechanics Rubric

Group	Experimental	Control
Mean \bar{x}	1.48	1.44
Variance s^2	0.34	0.70
T-test Value	0.10	

Table 4.96

Student's T-test in Mechanics Rubric

Students (N)	Tests	Mean \bar{x}	Standard Deviation (SD)	T-test	Alpha Level (α)
28	Pre-test	0.79	0.66	0.10	0.05
	Post-test	1.48	0.58		
	Difference	0.69	-0.08		

Statistical Decision for Hypothesis Testing

After having calculated the t-test of mechanics, we found that the value of t (0.10) for fifty-three degrees of freedom is merely less than the critical value (1.67). The null hypothesis was accepted and the alternative one was refuted. This shows that there is no significant difference before and after the treatment in this area. In turn, the participants lack control of writing conventions as spelling, punctuation, capitalization and paragraphing which consistently lead to committing plenty of errors that make the meaning unclear. More precisely, they need to be exposed to more practice in this aspect.

4.6 Summary of the Quantitative Data

Table 4.97

Student's T-test in Content, Organization, Vocabulary, Language Use and Mechanics

Rubric	N	Tests	Means	Standard Deviation	T-test score	Alpha Level (α)
Content	28	• Pre-test	1.77	0.73	2.31	0.05
		• Post-test	2.51	0.76		
		• Difference	0.74	0.03		
Organization	28	• Pre-test	1.80	0.99	2.35	0.05
		• Post-test	2.52	0.76		
		• Difference	0.72	-0.23		
Vocabulary	28	• Pre-test	1.48	0.75	4.90	0.05
		• Post-test	2.26	0.65		
		• Difference	0.78	-0.10		
Language Use	28	• Pre-test	1.17	0.90	1.09	0.05
		• Post-test	1.92	0.70		
		• Difference	0.75	- 0.20		
Mechanics	28	• Pre-test	0.79	0.66	0.10	0.05
		• Post-test	1.48	0.58		
		• Difference	0.69	-0.08		
Total					10.75	

Table 4.97 includes the value of the t-test (**10.75**) in the five tested rubrics. Compared with the critical value 1.67 for fifty-three degrees of freedom, the t-value of vocabulary (4.90) is the higher value, then the organization aspect with (t-value= 2.35) and content (t= 2.31). In this sense, the alternative hypotheses concerning these aspects are accepted and the null hypotheses are rejected. These results helped us to answer the first research question (would the use of the clustering strategy have a significant impact on secondary school students' expository paragraphs in terms of content, organization and vocabulary?). Consequently, the

implementation of the clustering technique was effective in developing the students' paragraph writing in terms of vocabulary, organization and content.

In conclusion, we can say that the treatment was significant in producing paragraphs with a varied range of items, complete development of ideas and logical connection among them.

Conversely, the language use and mechanics t-scores (1.09/0.10) are less than the critical value (1.67) which means that the alternative hypotheses regarding these rubrics are rejected and the null hypotheses are accepted. On this ground, these findings provided us with an answer to the second research question (would the use of the clustering strategy have a significant impact on secondary school students' expository paragraphs in terms of language use and mechanics?) showing that the use of the clustering strategy was unsuccessful in improving the students' paragraphs in language use and mechanics because it could not help them overcome their common writing conventions problems.

4. 7 Qualitative Data of the Study

After having described and analyzed the quantitative data, the description and analysis of the semi-structured interview findings are displayed below.

4.7.1 Students' Post-Interview Results

4.7.1.1 Aim of the Interview

This part of the study presents the description and analysis of the results obtained from the post-interview held with eight third-year scientific stream students at Badi Mekki Secondary School. The main aim of that interview was to know the informants' attitudes towards the use of clustering as a prewriting technique in improving their writing production. This data collection tool is made up of a few open questions. The number of questions is

appropriate to allow the informants to feel at ease and answer them without any kind of boredom or loss of attention and concentration. They are simple, clearly stated and ordered in a rational way to attract and motivate the participants to respond to all the items with great interest and enjoyment.

4.7.1.2 The Sample

The sample used in this interview was eight experimental group students who were taught with the clustering strategy during the 2017-2018 academic years at Badi Mekki Secondary School, Zeribet El-Oued, Biskra. They were two males and six females who were randomly selected after the post-test.

4.7.1.3 Post-Interview Analysis

Students' Practical Knowledge of Expository Paragraph Writing

All the participants were aware that expository paragraph is totally different from the other types of writing in structure and features. They said that it has special characteristics and conventions as giving or explaining information and facts and using time sequencers to link between the ideas. They were self-confident when they named the different parts of the expository paragraph (topic sentence, major and minor supports and conclusion). Two of the respondents stated that they dealt with paragraph structure before the experiment, but they mastered it well after the treatment. This is truly clear in their post-test productions which show good paragraph organization.

Students' Opinions about the Pre-writing Stage and Strategies

Most of the interviewees unveiled that writing is a process that must be gone through steps. When we asked them about the pre-writing stage, they reported that before the experiment they did not know about the writing purpose, readers and genre (expository), as

well as the techniques used for generating and organizing the ideas. In this light, they told that they used to start writing freely or they just took notes from their teacher's direct questions. They agreed that whatever the prewriting strategy is, it helps them to do better than starting to write directly without any planning. They also mentioned that clustering was the best strategy that was ever seen because it was effective in generating ideas, remembering experiences, discovering and believing in their mental abilities and raising their self-esteem.

Students' Attitudes towards the Clustering Technique and its Benefits

Concerning the students' prior knowledge about clustering, seven interviewees said that they did not know and use this type of brainstorming before. Therefore, clustering is a new strategy where the participants need to identify, apply and get acquainted with it. More precisely, they were not aware of how the clustering strategy works and how many positive effects it gives. However, one respondent told that he used to implement it as a note-taking strategy in history, geography and Islamic education. It is clear that he can use clustering easily or at least has a clear image about it.

When asking the interviewees about whether the use of clustering in the pre-writing stage was useful or not and how it was effective, all of them had positive answers that clustering helped them a lot in thinking of the topic, generating and organizing thoughts. Student (A) said that: "yes, it helped me understand the topic I was going to write on". Student (B) added that: "yes, it lets me try to think and remember what I know about the topic even though I do not want to write. By clustering, I remember a lot of words were in my mind for a long time ago". Student (C) mentioned that: "I felt happy when I saw the huge ideas I wrote. It really prevented my continuous fear of making disorganized and unplanned ideas". Student (D) told that: "clustering made me feel confident because I could go on writing and nothing could stop me". Student (E) reported that: "I did not feel worried about how I get started in writing because clustering reduced the stress from writing". The respondent (F)

preferred this strategy for getting her engaged in the task and jotting down the ideas easily and quickly. It allows limiting broad topics to more specific ones.

All the participants agreed that clustering is a useful strategy. They said that they were not used to brainstorming with a strategy as powerful as clustering. This technique matched their needs and learning styles and affected them positively based on the gradual progress marked in their writing performance. Indeed, the clustering process was in line with the scientific thinking style of the sample under investigation. Besides, each step of that process had a considerable impact on the students' writing skills.

Most importantly, clustering was a good tool for those who produced plenty of ideas, but they did not know how to display them in well-organized pieces of writing. Thus, it helped learners to explore the relationship between the ideas and draw a visual map that guides and directs them in the coming stages of the writing process. In brief, it could be said that using the clustering technique was successful in developing the participants' writing performance, but how much it was effective depended on their mental abilities and potentials.

Concerning the participants' experience with clustering, they showed positive perceptions of using the clustering technique in the writing skill. They also revealed great interest in learning to write with clustering. An interviewee (B) informed that: "from now, I do not feel that writing is something boring and impossible. Clustering gives me the power to believe in myself and my abilities. It permits me to write many ideas easily". Student (F) responded that: "it really makes me love English writing a lot". Student (E) told that: "it encourages me to say so many things about the topic that I never used to do before".

Clustering is a way of raising students' motivation to write and getting rid of boredom because of the drawings that make the writing task funny and enjoyable. Therefore, using the clustering technique helps learners wrap around the task and build an intimate relationship towards the topic, the lesson and even the teacher. In group work tasks, it creates competition

and builds self-confidence. Accordingly, thanks to clustering by which learners improve low self-esteem and increase pleasure and self-satisfaction in writing. In short, we can say that clustering is the real source of motivation in writing classrooms since it activates the students' schemata and urges them to think creatively using the right side of their brains.

Students' Views of their Writing Improvement

All the informants thank the clustering strategy for its positive impact on their writing performance. They viewed that their production was more developed, organized and rich in new lexis.

More precisely, 80% of the informants learned a bank of words due mainly to the use of clustering as well as the lessons of vocabulary and reading that are always preceded each writing session. 65% of them get improved in the organization aspect. This discloses that the technique of clustering helped them to write coherent paragraphs. 60% of the interviewees said that their written performance was developed in terms of content. It means that they acquired some skills of how to develop the ideas effectively. However, all the respondents still had problems with language use and mechanics. They committed plenty of grammar and spelling mistakes and misused punctuation marks and capitalization.

To conclude, these findings are consistent with the post-test scores and this situation really needs to reconsider the third-years teaching syllabus, methods and techniques being implemented.

Students' Difficulties in Using the Clustering Technique

Regarding the difficulties in using the clustering strategy, two interviewees talked about the time allotted to the pre-writing stage. They said that 10 to 15 minutes were not sufficient for jotting down what came to their minds, writing details and organizing them.

They could not assimilate all these activities in a very quick way. This means that they are slow thinkers who cannot undergo all the steps of the clustering process in a limited time.

Within the same context, three informants complained that they had a problem with how to group the produced ideas into categories. They said that they lacked concentration and the strategies to discover the connection between the ideas and group them effectively. Only one interviewee told that she gets confused about whether some ideas belong to this group or another. She explained that:” many ideas seem they are closest in meaning, so it was difficult for me to make difference between the most and the least appropriate ideas”.

Other respondents attributed the difficulty in implementing this prewriting strategy to the steps of generating the ideas and giving details for them. Although clustering could trigger them, they still face such kind of mental block or they had ideas, but they could not transform them into words and sentences due to the lack of vocabulary.

The informants give various explanations concerning the difficulty in using the process of clustering. They said that it needed imagination and clear association of ideas, this obliged them to be creative to invent new ideas and make mental connections among them. Others added that clustering did not fit their way of thinking because they are stimulated to think and write linear notes. This is because the non-linear and holistic thinking style needs much attention, creativity and focus. To sum up, we can say that the non-linear nature of the clustering process, how it works and the time allotted to use it were the major factors that hindered some students to use this prewriting strategy perfectly.

Students' Suggestions and Recommendations

As a suggestion, some students asked for other techniques that can help them learn and improve not only writing but also grammar, vocabulary, listening, reading and speaking. They know that the fluent English learner must master all the components of that language. They

said that the prewriting strategy of clustering and other techniques attract their attention and motivate them to learn languages rather than focus on scientific subjects only. They also told that the teacher should rethink the time given to cluster the ideas as it was not enough to think, bring back and empty what they know about the assigned topic.

4.7.1.4 Summary of the Qualitative Data

The analysis of the results obtained from the students' post-interview helped us in answering the last research question (could the clustering technique motivate students to get started in paragraph writing?). Even though most of the participants had been taught with clustering for the first time, they had positive attitudes towards it. They showed great interest to discover and knowing more about what is coming next. All of them interacted, expressed their thought and linked the relevant ideas together. This made the classroom full of motivation, competition and enjoyment. Accordingly, clustering turns writing from a boring to an enjoyable activity because it creates a learning environment based on sharing and getting knowledge and feedback from their instructor and from each other. The process of clustering took a while to train all the students to be familiar with it because some steps were difficult to perform as it needed highly cognitive abilities to think, jot down and associate similar information. Clustering has several advantages that make it so appreciated method among learners. In addition to facilitating thinking and narrowing the topic, it helped them produce expository paragraphs that respect most of the paragraph writing structure and conventions.

Conclusion

The conclusion drawn from this chapter is that the use of the clustering technique in teaching expository paragraph writing to third-year secondary school students has a positive impact on their writing performance at the level of content, vocabulary and organization. However, this technique was ineffective in improving the students' writing products in terms of language use and mechanics. Accordingly, the prewriting technique of clustering was useful for visual thinkers because a given central word can stimulate and facilitate their thinking process during which they were able to generate plenty of ideas, make associations and discover the connections among these ideas. The strategy of clustering also developed the learners' creativity and imagination through its four different steps by which they get easily engaged in the task, build self-confidence and raise their interest in writing. Indeed, clustering was the real source of motivation, interaction and engagement in the classroom.

General Conclusion and Implications

General Conclusion

The current research investigated the effectiveness of clustering in improving third-year scientific stream students' expository paragraph writing at Badi Mekki Secondary School, Zeribet El-Oued, Biskra. It aimed at finding out whether the use of this strategy could improve the students' five writing components: content, organization, vocabulary, language use and mechanics. For this purpose, a pre-questionnaire was administered to a sample of 7 teachers from Zeribet El-Oued Secondary Schools to confirm that this research was worth undertaking. Then, a quasi-experiment was conducted to test the hypotheses based on their aim stated previously. Moreover, a post-interview was conducted with the experimental group participants to supplement the findings.

After the experiment, the experimental group students recorded higher scores than before the experiment (the total mean of the pre-test is $7.03 < 10.70$ of the post-test) and a significant difference between the two tests means of the experimental group in terms of content (**0.74**), organization (**0.72**), vocabulary (**0.78**) and language use (**0.75**), however, just a slight difference at the level of mechanics (**0.69**) was recorded. The use of clustering during the pre-writing stage was more efficient than the traditional technique (questioning) used with the control group. Furthermore, compared with the critical value 1.67 for fifty-three degrees of freedom, the t-tests values in content (**2.31**), organization (**2.35**) and vocabulary (**4.90**) show the significance of the treatment.

The results of the post interview held with eight experimental group students revealed that they had a positive attitude towards using the technique of clustering. All of them felt that this technique was a useful tool for their writing skills. This strong feeling encourages them to apply it independently whenever possible in the future. It is noticed that they became familiar

with it and used it even after the intervention; particularly, when they reached the written expression part of their English tests and exams.

In the light of these obtained quantitative and qualitative data, it can be said that the alternative hypothesis is accepted and the null hypothesis is rejected concerning the aspects of content, organization and vocabulary. However, the alternative hypothesis of the language use and mechanics is refused and the null one is accepted. Therefore, although the clustering technique did not work as anticipated in terms of language use and mechanics, it was effective in helping students to write developed, coherent, rich and varied vocabulary paragraphs.

On the basis of what was mentioned in chapter two and the observation made during the treatment sessions, clustering was powerful because it helped learners build confidence in their writing capacities and develop creativity and critical thinking skills that can be used in other subjects within or outside the classroom. It was also successful in getting learners fully engaged in learning writing, encouraging interaction and creating a relaxed atmosphere where all students expressed their thought and ideas freely. Thus, the more students are acquainted with the clustering design, the more they show a positive effect on the quality of their written products.

As teaching English in middle and secondary schools is considered as the basis for higher education, teachers should not neglect any skill; especially, writing. They should not ignore any stage of the writing process as they are interrelated and complete each other. Most importantly, much emphasis needs to be put on the first stage where learners find difficulties in thinking and jotting down words on paper. At this stage, learners can develop higher-level skills that enable them to think creatively of the given topics and go through the stages of the process regularly and smoothly. Moreover, they can improve lower-level skills like vocabulary and some features of expository writing.

Recommendations

On the basis of the drawn conclusion, some suggestions are presented for secondary school teachers and students as follows:

Teachers need to raise students' awareness of the importance of the planning stage as well as the clustering technique in improving their writing performance. They ought to keep on motivating and giving students several opportunities that enable them to use this technique independently later on. Thus, they will become more creative, analytical and responsible for the quality of their production.

It is advisable to use the clustering technique because it helps to create an enjoyable atmosphere that makes students comfortable and happy to do their best in writing. In other words, this technique helps to manage the classroom effectively where students can think and share their ideas freely.

EFL teachers of secondary schools need to foster learners' thinking skills, autonomy and creativity while teaching writing by using some active learning strategies as clustering. This surely requires exposing students to extensive individual, pair or teamwork practice to write actively and creatively. Moreover, they should get students accustomed to the writing process stages in order to develop the cognitive skills of higher-order thinking.

This study was basically conducted on the expository type of writing. As a consequence, the participants became familiar with how to present factual information in the form of paragraphs. In this scope, researchers need to do similar studies on the impact of clustering on the other genres of writing such as narrative, descriptive and argumentative so as to get learners acquainted with the textual features of each type.

Since the lessons of written expression are always programmed at the end of the sequence, teachers should give a great deal of training and focus on grammar, reading and vocabulary tasks because of their importance in improving writing. In this context, they should vary in the tasks of reading that enable students to acquire new words, phrases and structures. They should also train them well in grammar as it is needed to write grammatically correct productions. This raises students' awareness of the strong connection among writing, reading, grammar and vocabulary. Hence, they reinforce and expand their knowledge in these aspects and skills.

Assessing students in every writing session is important as this leads them to be more active and get written or oral feedback. Therefore, teachers should rely on formative assessment and portfolios that enable students to view their writing progress from the first to the last product. In addition, peer assessment is required to create a kind of interaction among students and develop some skills on how to revise the written performance. Moreover, teachers may use checklists to assess what and how much students progress in writing.

Syllabus designers have to rethink the time devoted to teaching English in the Algerian secondary schools. Three hours per week are not enough to teach and develop the language four skills. Thus, two hours for each writing lesson are not sufficient to go through the stages of the writing process, guide, evaluate and give feedback. Time is an important factor in teaching and learning writing because the more students are given time to write several drafts, the more they learn, correct errors and improve their writing skills.

Additionally, curriculum developers should design syllabuses that primarily focus on developing learners' thinking and imagination skills which benefit them in academic and social life. In this light, the secondary school course books should be enriched with various prewriting strategies that fit students of different learning styles, needs and tendencies.

The National Education Ministry and members responsible for setting the third-year's program should reconsider three main elements: the type of English language used in third-year curriculum, the nature of the assigned topics and some grammar points. For instance, the shift from using British English for six years or more to American English with the final classes hinders students' readiness for learning. In addition, dealing with topics related to corruption and outer space exploration are broad and not consistent with the students' limited knowledge and experiences. Moreover, some grammar items as *expressing wish* and *regret* are hard to be received by students with low linguistic competence (pre-test scores).

Continuous meetings and coordination between the inspector and the teachers or between teachers within the same school or from the same district are very necessary to discuss the major problems encountered by EFL learners at Biskra Secondary Schools and look for remedies that can help them attain an adequate level. They should also select, adopt and develop some writing strategies that fit their students' proficiency level, as well as enhance their creativity, innovation and critical thinking.

Creating a twinning relationship between the Algerian universities and secondary schools becomes a necessity. University teachers should support their secondary school colleagues with updated strategies for teaching English. Furthermore, they should prepare training days and seminars which help secondary school teachers with the 21st educational changes. Besides, the Ministry of Education should make conventions with the American and British schools to exchange experiences in the field of English language teaching and learning.

Suggestions for Future Research

The results of this study are considered a starting point for many researchers who intend to conduct studies in the same area. In this light, they can do similar investigations on the effects of clustering on students of different age groups, levels or streams (foreign languages, literary,

management and economy and others) to see its efficacy on writing, their perceptions of this technique and their personal profile, including motivation, interest or anxiety.

In addition to the use of clustering in the pre-writing stage, it is suggested to be accompanied by a variety of other strategies in the drafting, revising, editing and publishing stage so as to increase students' motivation and decrease writing anxiety, boredom and difficulty.

Researchers can also use the strategy of clustering with large classes where they are divided into groups. They interact with each other and hitchhike on their mates' ideas to validate their own so that they can get benefits from each other and from their teacher continuous assessment, correction and feedback. Moreover, clustering is an effective tool for making communication less challenging among students themselves and between the teacher and his/her students.

As a final suggestion, since clustering showed a significant influence on the expository paragraphs of third-year scientific stream classes at Badi Mekki Secondary School, Biskra at the level of content, organization and vocabulary, further investigations can be done to see its effectiveness at the university level with essay writing.

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Appendices

Appendix 01: Teachers' Questionnaire

Dear colleagues,

The following questionnaire serves as a data collection tool for LMD Doctorate in TEFL. It investigates the effectiveness of clustering in improving third-year scientific students' expository Paragraphs. This questionnaire will help us to state the students' background knowledge, abilities and difficulties in writing. It will also be very useful to determine the strategies that are used by secondary school teachers in order to get students started in writing. I would be very grateful if you could fill in this questionnaire because your answers will be of great help to me.

Loucif Leila.

Section One: Teachers' Experience

1- How long have you been teaching English at the secondary school?

a- 1 year

b- 4 years

c- 10 years

d- More than 10 years

2- How long have you been teaching third-year classes?

a- 3 years

b- 5 years

c- 8 years

d- More than 8 years

Section Two: Teachers' Perceptions of Teaching English at Secondary Schools

3- What do you think about the general conditions of teaching English at secondary schools?

- a- Not good b- Good c- very good d- excellent

4- How can you see the actual level of your students in English?

- a- Not good b- Good c- very good d- excellent

5-To Which skill do you give much importance in teaching English?

- a- Listening b- Speaking c- Reading d- Writing

6-If you choose writing, say why?

.....

7- Rank, in order of difficulty the teaching of the following lessons.

- a- Listen and Consider
b- Read and Consider
c- Grammar Explorer
d- Vocabulary Explorer
e- Think, Pair, Share

8- In which of the above lessons do your students get bored? Why?.....

.....

.....

9- Which aspect of writing do you think students suffer more?

- a- Grammar

b- vocabulary

c- Content

d- Form

e- Punctuation

f- Mechanics

g- Others, please mention them.....

.....
.....

10-How do you deal with weaker students in writing?

.....
.....
.....

11-Which of the following remedies do you think is suitable for your students?

a- excess of practice

b- excess of guidance

c- excess of reading

d- Others, please mention them.....

.....
.....

Section Three: Teachers' Perceptions of the writing process.

12-How do you teach writing for third-year classes?

e- Using the product approach (focus on the final product)

f- Using the process approach (focus on the multiple stages of the writing process)

g- Using the genre approach (focus on studying different written genres)

h- Others, please specify.....
.....
.....

13-In the writing process, which stage do you think is mostly hard for students to perform?

a- Prewriting b- drafting c- revising/editing d- publishing

14-Do all of your students follow those stages regularly?

a- Yes b- no

15-If no, please say why?

.....
.....

16-Do you use some techniques to get your students to start writing easily?

a- Yes b- No

17- If yes? Mention them, please.....

.....

18-Do you have an idea about clustering as a pre-writing strategy?

a- yes b – no

19-If yes, is it an effective way to improve students' compositions? Why?

.....

.....

20-As far as writing is concerned, what do you suggest to get students highly motivated and interested in writing tasks?

.....

Thank you for your cooperation

Appendix 02: Samples of the Lessons Planning

Lesson: Paragraph Structure

Teacher: Mrs. Leila LOUCIF

Level: 3rd year (pre-intermediate)

Stream: Scientific Experimental

Lesson Plan

General Aims: This lesson enables students to learn:

- different types of sentences.
- how a paragraph is constructed.
- how different sentences are joined to organize a well-written paragraph.

Competencies:

To develop the competency of interpreting, interacting, and producing.

- The capacity to interpret the given materials.
- Students will interact with the teacher.
- Students will be able to form a paragraph based on ordering the jumbled sentences.

Time allotted: Three hours (three sessions)

The Needed Materials:

A picture, paragraph models, whiteboard, pens, pencils, and papers.

Personal goal:

- To master writing a paragraph that will be later a basic element of writing a composition.

Objective:

By the end of the lesson, students will be able to learn the basics of writing a paragraph.

Lesson Procedure: (Individual work)

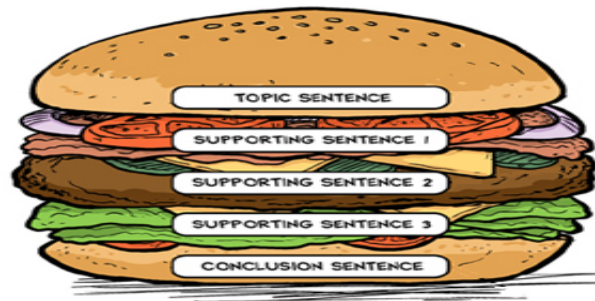
Step One: Warming Up

Task One:

Aim: To elicit students' reactions and responses to the picture.

Instructions:

- Look at the picture and say what it represents.
- What is written in the picture?
- What do they refer to?



Students' answers

-The picture represents: a hamburger

-The phrases which are written in the picture are: topic sentence, supporting sentence 1, 2, 3 and concluding sentence.

-They refer to the parts of a paragraph.

Task Two

Aim: To recognize the different components of the paragraph.

Instruction: Match the different parts of the paragraph with their definitions.

Parts of the paragraph	Definitions
1- Topic sentence	a-The last sentence of the paragraph that tells the main idea again.
2- Supporting details	b-The first sentence of the paragraph that tells us what the paragraph is about.
3- Concluding sentence	c-The sentences which come after the topic sentence and tell more about the main idea.

Students' answers

Parts of the paragraph	Definitions
1- Topic sentence	a-The last sentence of the paragraph that tells the main idea again.
2- Supporting details	b-The first sentence of the paragraph that tells us what the paragraph is about.
3- Concluding sentence	c-The sentences which come after the topic sentence and tell more about the main idea.

Step Two: Pre-Writing Stage

Task One:

Aim: To train students to identify the type of discourse.

Instruction: Read the paragraph carefully then choose the appropriate answer.

Reasons for Some of our Eating Habits

There are several reasons why many of us choose our eating habits, and I will outline below some of these reasons. Those of us who watch a lot of TVs may attribute advertisements to our choice of snacks. On the other hand, the generation who grew up with fresh produce probably favours fruits and vegetables as a result. There are, however, some of us who, despite having access to fresh fruit and veggies, still reach out to a salty snack late at night; this choice may be due to our upbringing. As you can see, these are some of the reasons behind some of our eating habits.

The paragraph is: **a-** expository **b-** descriptive **c-** narrative

Students' expected answers

The paragraph is: a- expository

Task Two:

Aims: - To understand some rules for punctuation marks.

- To show command of the convention of capitalization.

Instruction: Supply punctuation and capitals where necessary.

- last year scientists discovered water on the moon
- recently there is fewer snowfalls and rainfalls in north africa

Students' answers

- Last year, scientists discovered water on the Moon.
- Recently, there is fewer snowfalls and rainfalls in North Africa.

Task Three

Aim: To deconstruct the paragraph into its different parts.

Instruction: Divide the above paragraph into: topic sentence, supporting sentences, and concluding sentence.

Students' expected answers

Reasons for Some of our Eating Habits

There are several reasons why many of us choose our eating habits, and I will outline below some of these reasons. Those of us who watch a lot of TVs may attribute advertisements to our choice of snacks. On the other hand, the generation who grew up with fresh produce probably favours fruits and vegetables as a result. There are, however, some of us who, despite having access to fresh fruit and veggies, still reach out to a salty snack late at night; this choice may be due to our upbringing. As you can see, these are some of the reasons behind some of our eating habits.

Step Three: During Writing Stage

Task One

Aim: To be able to write a meaningful topic sentence.

Instruction: Complete the following paragraph with an appropriate topic sentence of your own.

Healthy Food

.....
..... In other words, food contains something from each of the three main groups of food. These groups are proteins, carbohydrates and fat. Proteins are very important for our body: they help us to build new cells as old ones die. Meat and dairy products are major sources of protein, but not the only ones. We can also get proteins from fish, eggs and beans. Our body will keep healthy if it takes a sufficient amount of these three main groups of food.

Students' possible answers

Healthy Food

In order to stay healthy, it is important to have a balanced diet. In other words, food contains something from each of the three main groups of food. These groups are proteins, carbohydrates and fat. Proteins are very important for our body: they help us to build new cells as old ones die. Meat and dairy products are major sources of protein, but not the only ones. We can also get proteins from fish, eggs and beans. Our body will keep healthy if it takes a sufficient amount of these three main groups of food.

Task Two

Aim: To be able to write a meaningful concluding sentence.

Instruction: Complete the following paragraph with an appropriate concluding sentence of your own.

The Moon

The moon is covered with craters. On the moon, it is hot during the day and cold at night. The moon goes through eight phases. Neil Armstrong was the first astronaut to walk on the moon.....
.....

Students' answers

The Moon

The moon is covered with craters. On the moon, it is hot during the day and cold at night. The moon goes through eight phases. Neil Armstrong was the first astronaut to walk on the moon. There are many more interesting facts about the moon.

Step Four: Post-Writing Stage

Task

Aim: To reorder the scrambled sentences in order to get a coherent paragraph.

Instructions:

- Sentences A-F below are not in order. Re-order them to get a coherent paragraph. One of the sentences is irrelevant.
- Indent the first line.
- Use a capital letter at the beginning of each new sentence.
- Write the topic sentence that tells the main idea.
- Write sentences that support the main idea.
- Include a closing sentence.

- Use ending punctuation.

A. Algeria has recently adopted a new model of economic development.

B. It has also set high standards of governance including social auditing and public accounts reporting.

C. Such tasks are carried out by the National Economic and Social Council and by the Accounts Court.

D. This model balances economic growth, social justice and the sustainable use of natural resources.

E. Algeria regained its independence in 1962.

F. In addition to the setting of standards of governance, it has accorded ethically responsible companies tax reductions so as to encourage them to promote sustainable development and social well-being.

Students' possible answers

Algeria has recently adopted a new model of economic development. This model balances economic growth, social justice and the sustainable use of natural resources. It has also set high standards of governance including social auditing and public accounts reporting. Such tasks are carried out by the National Economic and Social Council and by the Accounts Court. In addition to the setting of standards of governance, it has accorded ethically responsible companies tax reductions so as to encourage them to promote sustainable development and social well-being.

-The irrelevant sentence is: E

Paragraph checklist

Topic Sentence

Detail #1

Detail # 2

Detail #3

Conclusion

Editing checklist

Capital letters

Spelling

Makes sense

Unit One: Ill-Gotten Gains Never Prosper

Lesson: Fighting Counterfeit Products

Teacher: Mrs. Leila LOUCIF

Level: 3rd year (pre-intermediate)

Stream: Scientific Experimental

Sequence Two: Read and Consider

Source: 3AS New Prospects/Internet

Lesson Plan

Language Focus: In this lesson, students will tackle the following language points: expressing results using: so...that/such ...that - present simple and present continuous passive - modals.

Language Functions: expressing cause and effect - expressing obligation and necessity.

General Aims:

- To develop students linguistic competency through the discussed language points.
- To express their opinions on counterfeit goods.
- To implement the language points they have learned in this sequence.
- To analyze the problem of counterfeiting from different angles.
- To encourage students to produce a coherent paragraph about how to fight counterfeit goods.

Competencies:

In this lesson, students are going to develop the following competencies: Interpreting, interacting and producing.

- Students can interpret pictures to open up the discussion about the topic.
- Students can interact and respond to the given pictures using their previous knowledge.

- Students will use the clustering strategy to generate ideas and then produce their paragraphs.

Duration: Three hours (three sessions)

Teaching Aids: Pictures, whiteboard, pens, pencils, and papers.

Personal goals:

- To distinguish between genuine and fake goods.
- To raise students awareness about the importance of fighting counterfeiting at a personal level.
- To prepare different interconnected tasks to form students' short term goals and long term competencies.
- To develop students traits to select the original products.

Objective: By the end of the lesson, students will be able to write an expository paragraph explaining the problem of counterfeiting and how to fight it.

Lesson Procedure

Step One: Warming Up

Task One:

Aim: To brainstorm and get a general idea about the discussed topic.

Instruction: Look at the pictures and tick the right answers.



The pictures represent

- a- Expensive products
- b- Harmful products
- c- Original products and their imitations.

Students' possible output

- The pictures represent: c- Original products and their imitations.

Task Two

Aim: To introduce keywords that will pave the way to the coming tasks.

Instruction: Choose the appropriate phrase that is closest in meaning to copies of products.

- a- Genuine or authentic products
- b- Fake or counterfeit products
- c- Manufactured products

Students' answers:

- b- Fake or counterfeit products.

Step Two: Pre-Writing Stage

Task One:

Aim: To push students to be involved in the lesson smoothly.

Instruction: Classify the given adjectives into their appropriate column.

Dangerous - good quality - cheap - legal - low/bad quality - harmful - expensive - illegal - safe.

Genuine/authentic products are ...	Counterfeit/fake products are
.....
.....

Student' possible output:

Genuine/authentic products are ...	Counterfeit/fake products are
Good quality/legal/expensive/safe/healthy/	Dangerous/cheap/low /bad quality/harmful/ illegal/unhealthy

Task Two:

Aim: To practice the use of link words expressing results.

Instruction: Link the following pairs of sentences with **so + adjective+ that** or **such+ noun phrase+ that**.

- a- Counterfeit car parts are risky. The number of accident victims is increasing.
- b- Imitations are of poor quality. They do not last long.
- c- Fake medicines are dangerous. They can kill people.
- d- Copies of brands are a widespread phenomenon. The government must take tough measures.

Students' answers:

- a- Counterfeit car parts are **so** risky **that** the number of accident victims is increasing.
- b- Imitations are of **such** poor quality **that** they do not last long.
- c- Fake medicines are **so** dangerous **that** they can kill people.
- d- Copies of brands are **such** a widespread phenomenon **that** the government must take tough measures.

Task Three

Aim: To practice active and passive voice.

Instruction: Rewrite sentence (b) so that it means the same as sentence (a).

a 1- Counterfeiters are copying all sorts of products.

b 1- All sorts of products.....

a 2- Counterfeit medicines affect peoples' health.

b 2- Peoples' health

Students' output:

b1- All sorts of products **are being copied by** counterfeiters.

b2- Peoples' health is affected by counterfeit medicines.

Task Four:

Aim: To find the mistakes and correct them.

Instruction: Spot the mistakes and write the corrected sentence.

- fake medicines are harmful, consequently, governments must imposed strict laws to punish counterfeiters.

Students' answers

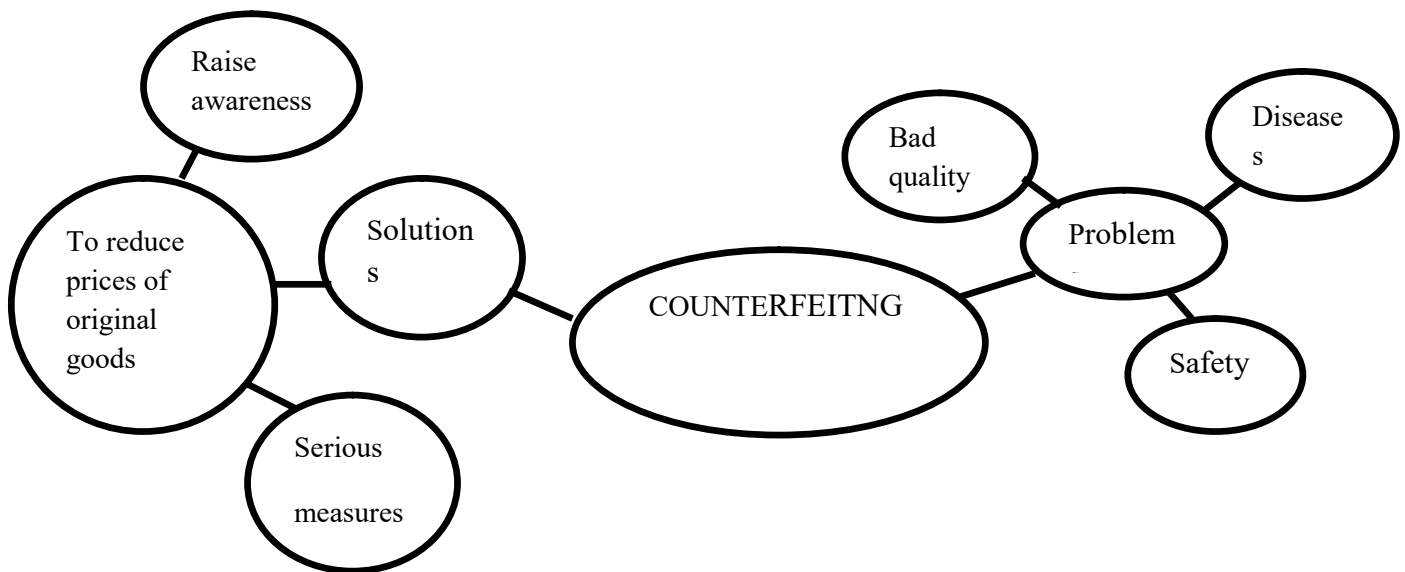
- Fake medicines are harmful; consequently, governments must impose strict laws to punish counterfeiters.

Task Five:

Aim: To introduce the strategy of clustering to students.

Teaching Procedures using clustering

- The teacher writes the main topic FIGHTING COUNTERFEIT PRODUCTS in the centre of the whiteboard and circles it.
- The teacher asks students to think individually about the main topic for a few minutes.
- The teacher draws two main lines out of the circle and asks students to generate more new keywords which have a relation to the problem of counterfeiting.
- At this stage, the teacher accepts all the ideas of students to encourage them to use this strategy for making notes.
- Since students are introduced to the clustering strategy for the first time, the teacher tends to do this activity with the whole class as a means of motivating students to be more involved and being creative while doing the task.



Class Model of Clustering about Fighting Counterfeit Products

Step Three: During Writing Stage

Task One:

Aim: To produce the first draft.

Instructions:

- Use the previously generated ideas to write a paragraph (Pair work).
- Follow the process of writing a paragraph (topic sentence, supporting details, and concluding sentence).

Step Four: Post-Writing Stage

Aim: To produce the final version.

Instructions:

- Review the first draft by asking questions in order to delete or add some ideas.
- Exchange drafts for errors checking and mistakes correcting.

Students' possible output

Fighting Counterfeit Products

Counterfeiting is a widespread problem that threatens peoples' safety. It touches many aspects of our lives and leads to serious issues. Imitations are of such poor quality that they do not last long. For instance, many counterfeit car parts are so risky that the victims of accidents are increasing day after day. Moreover, fake medicines may cause health disorders and put peoples' lives at stake. Thus, urgent solutions must be taken to stop this unethical practice. Campaigns should be launched to raise peoples' awareness towards refraining to buy fake products. Companies had better reduce the prices of their brands to enable the consumers to afford them. Tough measures must take place to punish counterfeiters.

Feedback: The teacher corrects and writes comments on each pair's paragraph.

Unit Two: Safety First

Lesson: Impacts of Fast-Food

Teacher: Mrs. Leila LOUCIF

Level: 3rd year (pre-intermediate)

Stream: Scientific Experimental

Sequence Two: Read and Consider

Source: 3 AS New Prospects/Internet

Lesson Plan

Language Focus: In this lesson, students will deal with the following language points: because (of), due to, owing to, as, for/so, as a result, that is why, as a consequence.

Language Functions: Expressing cause and effect.

General Aims:

- To make students aware of the reasons for the widespread of fast food.
- To raise students awareness about the impact of consuming junk food on peoples' health.

Competencies:

The competencies to be developed in this lesson are interpreting, interacting and producing.

- Students will interpret pictures to stimulate their interests as a brainstorming step.
- Students will interact with the teacher and with each other.
- Students will be able to produce an expository paragraph based on the clustering technique.

Time allotted: Three hours (three sessions)

Teaching Material Required:

Pictures, coursebook, whiteboard, pens, pencils, and papers.

Personal goals:

- Understanding the importance of keeping good health by choosing healthy food.
- Being aware of harms caused by readymade food.

Objective: By the end of the lesson, students will be able to write an expository paragraph about the negative impacts of fast food.

Lesson Procedure: (Pair work)

Step One: Warming Up

Task One:

Aim: To introduce the topic through the description of pictures.

Instruction: Look at the pictures and say what they represent.



1



2



3

Students' possible output

- Picture one represents a fat boy in a fast-food restaurant.
- Picture two represents a packet of chips.
- Picture three represents a burger and chips.

Task Two:

Aim: To build schematic knowledge about the topic.

Instructions:

- Which kind of food do the pictures show?
- Do you think that this type of food is healthy? If no why?

Students' answers:

- The pictures show fast food.
- No, it is not healthy because it contains a lot of fats.

Step Two: Pre-Writing Stage

Task One:

Aim: To make students aware of cause and result relationships.

Instruction: Link the following pairs of sentences using the given connectors.

- a- Children become overfed and undernourished. They eat snack food. (as a result)
- b- Childhood obesity is on the rise. Children consume fast foods and junk foods. (because of)
- c- Teenagers tend to eat too many sugary foods. They suffer from diabetes. (so)
- d- Adverts for fatty food are being shown on television. Many people are attracted to buy it. (since)

Student' possible answers:

- a- Children eat snack food; **as a result**, they become overfed and undernourished.
- b- Childhood obesity is on the rise **because of** the consumption of fast foods and junk foods.

- c- Teenagers tend to eat too many sugary foods, **so** they suffer from diabetes.
- d- **Since** adverts for fatty food are being shown on television, many people are attracted to buy it.

Task Two:

Aim: To form meaningful sentences based on jumbled words.

Instruction: Reorder the following words to make coherent sentences.

- a- it-cause-problems-essential-to maintain-our-Food-health-is-However,-may.
- b- overweight-the-food-due to-People-consumption-fast-become-of.
- c- habits-serious-blood-The-diseases-wrong-eating-developing-lead to-like-and-high-diabetes-pressure.
- d- taken-Health-that-a gift-is-care of-must be.

Students' answers:

- a- Food is essential to maintain our health. However, it may cause problems.
- b- People become overweight due to the consumption of fast food.
- c- The wrong eating habits lead to developing serious diseases like high blood pressure and diabetes.
- d- Health is a gift that must be taken care of.

Task Three:

Aims: - To understand some rules for punctuation marks.

- To show command of the convention of capitalization.

Instruction: Supply punctuation and capitals where necessary.

- as the number of obese people is increasing tremendously the world health organization warns all countries to take measures against this phenomenon

Students' answers

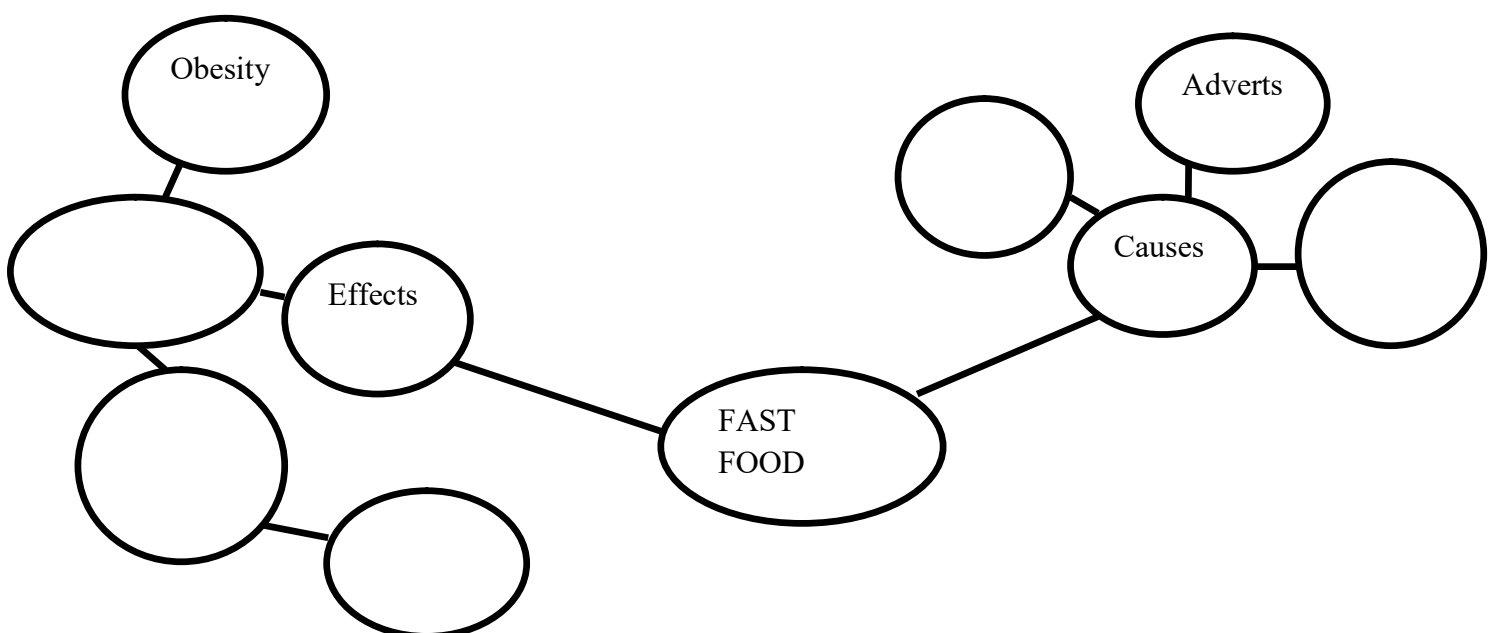
- As the number of obese people is increasing tremendously, the World Health Organization warns all countries to take measures against this phenomenon.

Task Four:

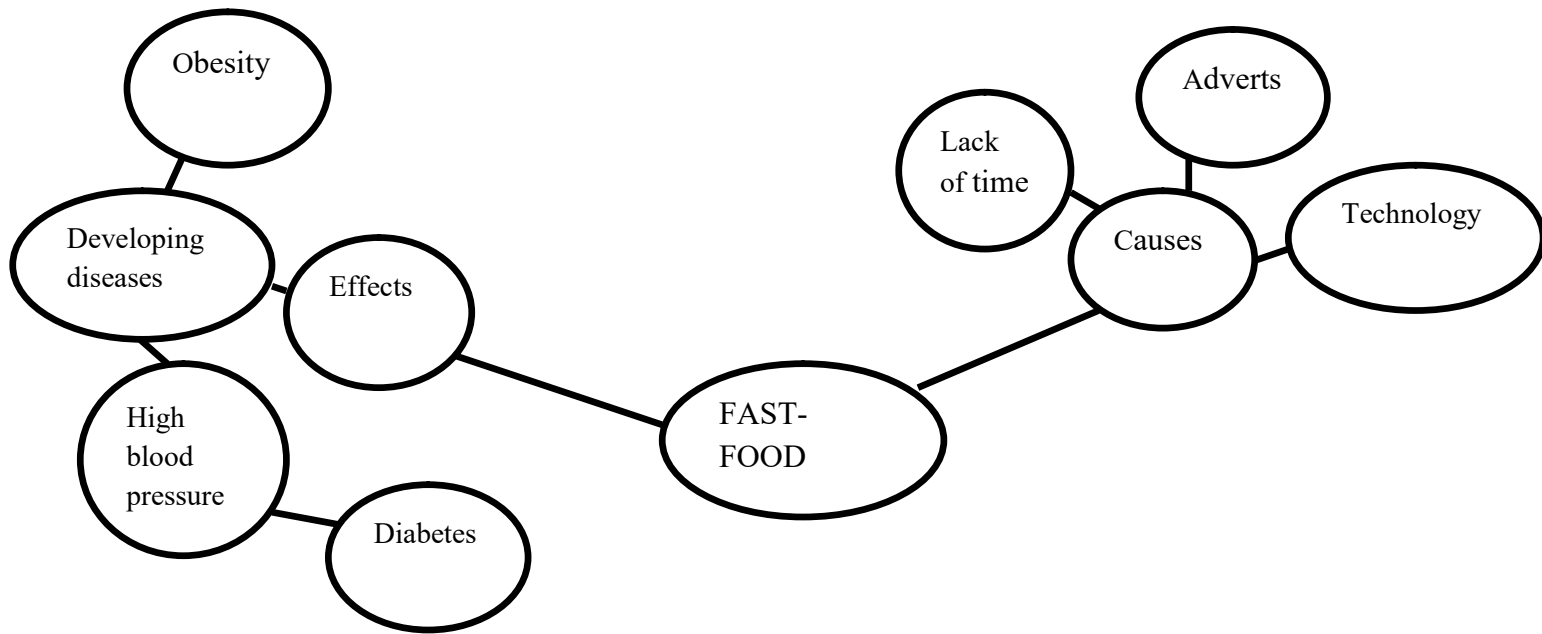
Aim: To help students to be acquainted with the strategy of clustering.

Teaching Procedures using clustering (Pair work)

- The teacher circles the topic FAST-FOOD in the middle of the whiteboard.
- The teacher gives students a few minutes to think about it.
- Since the students are exposed to the clustering strategy many times, the teacher tends to leave the majority of bubbles empty and provide them with just some keywords to help them elicit their own related words.
- At this stage, the teacher gives chance to all the students to participate and express their ideas freely but she selects the most appropriate ones.



Teacher's Helping Model to Use Clustering



Students' Clustering Model about Fast-Food

Step Three: During Writing Stage

Task One:

Aim: To produce the first draft.

Instructions:

- Use the previously generated ideas to write a paragraph.
- Follow the process of writing a paragraph (topic sentence, supporting details, and concluding sentence).

Step Four: Post-Writing Stage

Aim: To produce the final version and hand it out to the teacher

Instructions:

- Review the first draft by asking questions in order to delete or add some ideas.

- Exchange drafts for errors checking and mistakes correcting.

Students' possible output

Fast-Food

Fast-food and ready-made meals have led people to take undesirable eating habits, like nibbling at work or home or having frequent snacks in front of the computer or the TV set. More worrying is the fact that the younger generation is the most prone to consume fast food and soft drinks. These eating habits, as shown in “advanced” countries especially, have caused a large part of the population to become overweight or obese, and to develop diseases like diabetes or high blood pressure. These are due to excess consumption of animal fat and fried food, as well as sugar and salt.

Feedback: Teacher uses group peer correction of papers.

Unit Three: It's a Giant Leap for Mankind

Lesson: A Presentation about the Moon

Teacher: Mrs. Leila LOUCIF

Level: 3rd year (pre-intermediate)

Stream: Scientific Experimental

Sequence One: Listen and Consider (Think, Pair, Share, p. 141).

Source: 3 AS New Prospects/Internet

Lesson Plan

Language Focus: In this lesson, students will deal with the present simple.

Language Functions: describing and presenting facts.

Language Skills: Listening/Writing

- Students listen and respond to a short video.
- Students write an expository paragraph describing the Moon.

General Aims:

- To have an idea about the universe.
- To discover the nature and the characteristics of the moon.
- To learn vocabulary related to the moon and space.

Competencies: The competencies to be developed in this lesson are interpreting, interacting and producing.

- The ability to interpret a video to clarify what is going on in the next steps of the lesson.
- Interacting orally with the teacher and with each other so as to get information as they can.

- Students will be able to make notes using clustering and then write a paragraph.

Timing: Three hours (three sessions)

Needed Materials: Video, data show, worksheets, whiteboard, pens, pencils, and papers.

Personal goals:

- To explore outer space.
- To develop students' interests in seeking more about the universe.

Objective: By the end of the lesson, students will be able to write an expository presentation about the moon.

Lesson Procedure:

Step One: Warming Up

Task One:

Aim: To introduce the topic and invite students to discuss and come out with new facts about the moon.

Instruction: Watch the video and choose the appropriate answer.

- 1- The video shows:
 - a- Trip to discover the space.
 - b- Presentation of the moon.
 - c- Description of the sun.
- 2- The difference between the moon and the planet is:
 - a- The moon orbits the earth while the planet orbits the sun.
 - b- The moon is a natural satellite whereas the planet is an artificial one.
 - c- The moon is a star but a planet is a round object.

Students' expected answers

- 1- The video shows: b- Presentation of the moon.
- 2- The difference between the moon and the planet is: a- the moon orbits the earth while the planet orbits the sun.

Step Two: Pre-Writing Stage

Task One:

Aim: To help students to listen for specific information.

Instruction: Watch the video again and say if the following statements are true or false.

- a- Water and oxygen are available on the surface of the moon.
- b- The moon orbits in an east-to-west direction.
- c- Yuri Gagarin was the first man who set foot on the moon.

Students' answers:

- a- Water and oxygen are available on the surface of the moon. **False**
- b- The moon orbits in an east-to-west direction. **False**
- c- Yuri Gagarin was the first man who set foot on the moon. **True**

Task Two:

Aim: To be familiar with words related to measurements.

Instruction: Match words in column **A** with their associated words in column **B** to get suitable information about the moon.

A	B
- Orbit	-3.476 km
- Diameter	- only 0.16 that of Earth
- Mass	- rocky
- Surface gravity	- 7.35e22 kg
- Composition	- about 4.6 billion years
- Age	- west-to-east

Students' possible answers:

A	B
- Orbit	-3.476 km
- Diameter	- only 0.16 that of Earth
- Mass	- rocky
- Surface gravity	- 7.35e22 kg
- Composition	- about 4.6 billion years
- Age	- west-to-east

Task Three:

Aims:

- To understand some rules for punctuation marks.
- To show command of the convention of capitalization.

Instruction: Supply punctuation and capitals where necessary.

- can we live on the venus he asks
- he answers: no we can not.

Students' answers

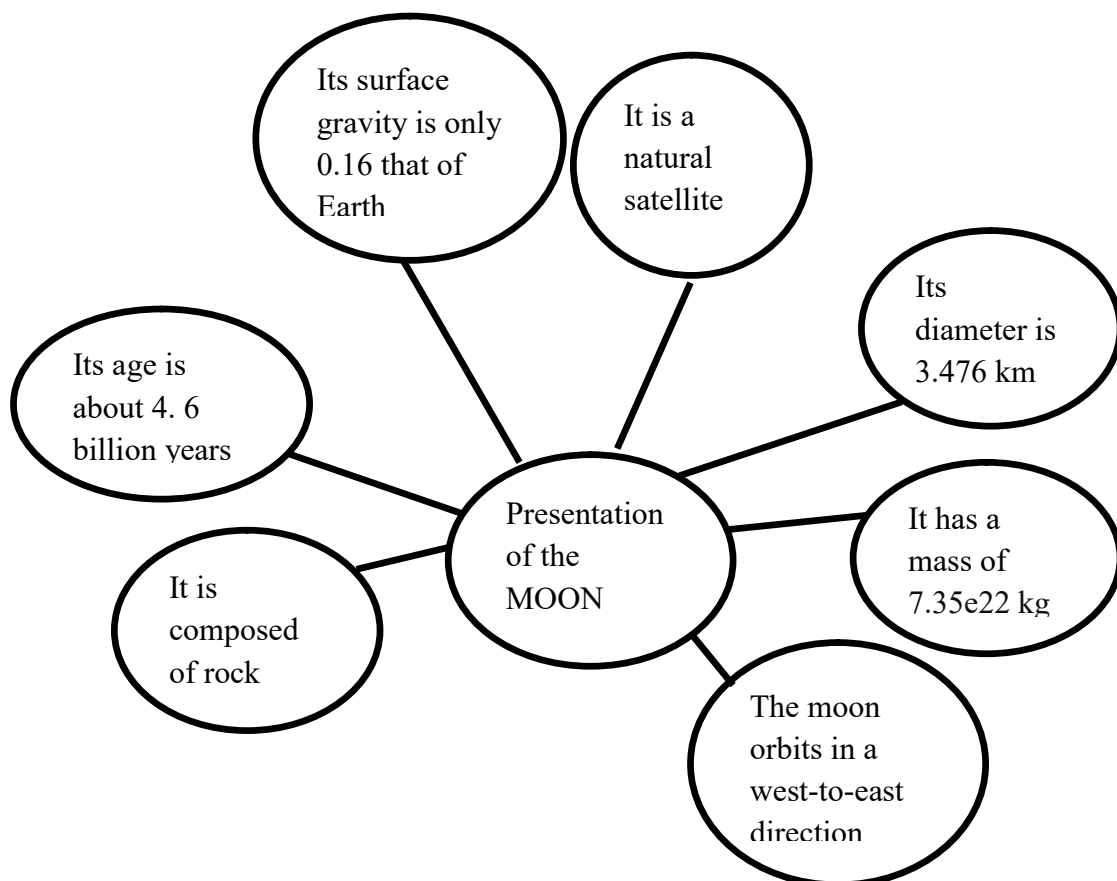
- "Can we live on the Venus?", he asks.
- He answers: no, we cannot.

Task Four:

Aim: To encourage using the strategy of clustering.

Teaching Procedures using clustering

- In pairs, the teacher instructs the students to imagine and think about the MOON for a few minutes to elicit more ideas.
- The teacher asks students to jot down any ideas that come to their minds related to the topic implementing the clustering strategy.
- The teacher asks each pair of students to collect and organize their ideas in one well- formed cluster.
- At this stage, the teacher guides and controls the written ideas.
- At this pre-writing step, the teacher gives the students the opportunity to communicate and generate as many ideas as possible without paying attention to whether they are relevant, correct, or not.



Students' Clustering Model about Presentation of the Moon

Step Three: During Writing Stage

Task One:

Aim: To write the rough drafts.

Instructions:

- Use the prepared clustering to write the first draft.
- Respect the different parts of paragraph writing (topic sentence, supporting details, and concluding sentence).

Step Four: Post-Writing Stage

Aim: To write the final piece of writing.

Instructions:

- Follow the forthcoming logical steps of the writing process (revising/editing and publishing)
- Revise the first draft and make your ideas clear and understandable to the reader.
- Share drafts with the other groups for error checking.

Students' possible output

The Moon

The Moon is an earth satellite orbiting our planet from a distance of 384.402 km on average, and its orbit is in a west-to-east direction. Its surface gravity is only 0.16 that of the Earth (one-sixth), and it does not seem to have life on it, since it has neither atmosphere nor water. Minimum and maximum temperatures on it are wide apart, with +110° C on the sunlit side and -170°C on lunar nights. The geology of this satellite is rock only, and its age is about 4.6 billion years.

Feedback: The teacher picks up different errors related to the language use from students' papers and makes a class correction to avoid using them later on.

Unit Three: It's a Giant Leap for Mankind

Lesson: Comparison and Contrast between Earth and Mars

Teacher: Mrs. Leila LOUCIF

Level: 3rd year (pre-intermediate)

Stream: Scientific Experimental

Sequence One: Read and Consider

Source: 3 AS New Prospects/Internet

Lesson Plan

Language Focus: In this lesson, students will use the following language points:

- Present simple.
- Comparatives of superiority, equality, and inferiority with short and long adjectives and adverbs.
- Link words for expressing comparison and contrast: while, whereas, like, unlike, in contrast to.

Language Functions: Comparing and contrasting.

General Aims:

- To learn how to describe a planet and how to compare it to another one.
- To put the learned grammar points into practice.

Competencies: The competencies that students will develop in this lesson are interpreting, interacting and producing.

- Interpreting a picture about two different planets and finding out the similarities and differences between them.

- The capacity to interact orally with the teacher and with each other to collect facts from the discussed topic.
- The ability to write down ideas using clustering and then write a paragraph.

Timing: Three hours (three sessions)

Materials: Pictures, worksheets, whiteboard, pens, pencils, and papers.

Personal goals:

- To perceive the moral behind the creation of the universe.
- To know more about our solar system.
- To raise students curiosity by exploring the unknown things.

Objective: By the end of the lesson, students will be able to write a compare and contrast paragraph about Earth and Mars.

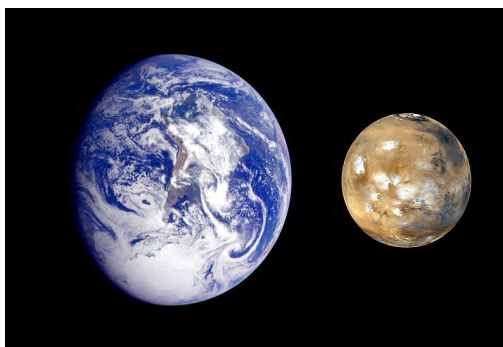
Lesson Procedure:

Step One: Warming Up

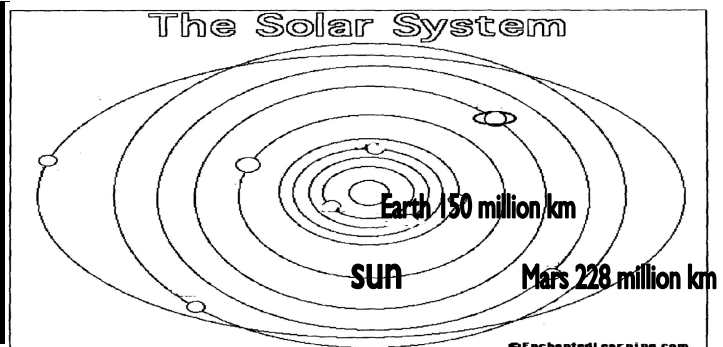
Task One:

Aim: To brainstorm and predict the content of the lesson.

Instruction: Have a look at the pictures and answer the following questions



Picture 1



Picture 2

- What do the two pictures represent?
- What is the colour of those two planets?
- How do we call them?
- How far is the Earth from the sun?
- How far is Mars from the sun?

Students' expected answers

- Pictures represent two planets.
- Planet one is blue and planet two is red.
- Earth is 150 million km away from the sun.
- Mars is 228 million km away from the sun.

Step Two: Pre-Writing Stage

Task One:

Aim: To train students to ask questions about measurements.

Instruction: Ask the questions that the underlined words answer.

- a- Mars is **34.65 million miles** far from the earth.
- b- Earth weighs **5.972E24 kg**.

Students' answers:

- a- How far is Mars from the Earth?
- b- How much does the Earth weigh?

Task Two:

Aim: To practice comparatives of adjectives.

Instruction: Use the information in the table below to compare the planets using the following adjectives: distant-remote-close to-heavy-large-long.

Planets	Diameter (km)	Mass (kg)	Distance from the sun (million km)	Surface area (km ²)
Earth	12760	5.972E24	150	10.072.000
Mars	6790	639E21 kg	228	144.798.500

Students' possible answers:

- Mars is **more distant/ remote** from the sun **than** the Earth.
- Earth is **closer** to the sun **than** Mars.
- Earth is **heavier than** Mars.
- Mars is **larger than** the Earth.
- Earth's diameter is **longer than** Mars.

Task Three:

Aim: To find the mistakes and correct them.

Instruction: Spot the mistakes and write the corrected sentence.

- both mars and earth are planets that orbit around the sun, however, they are different in composition, size, temperature and distance from the sun.

Students' answers

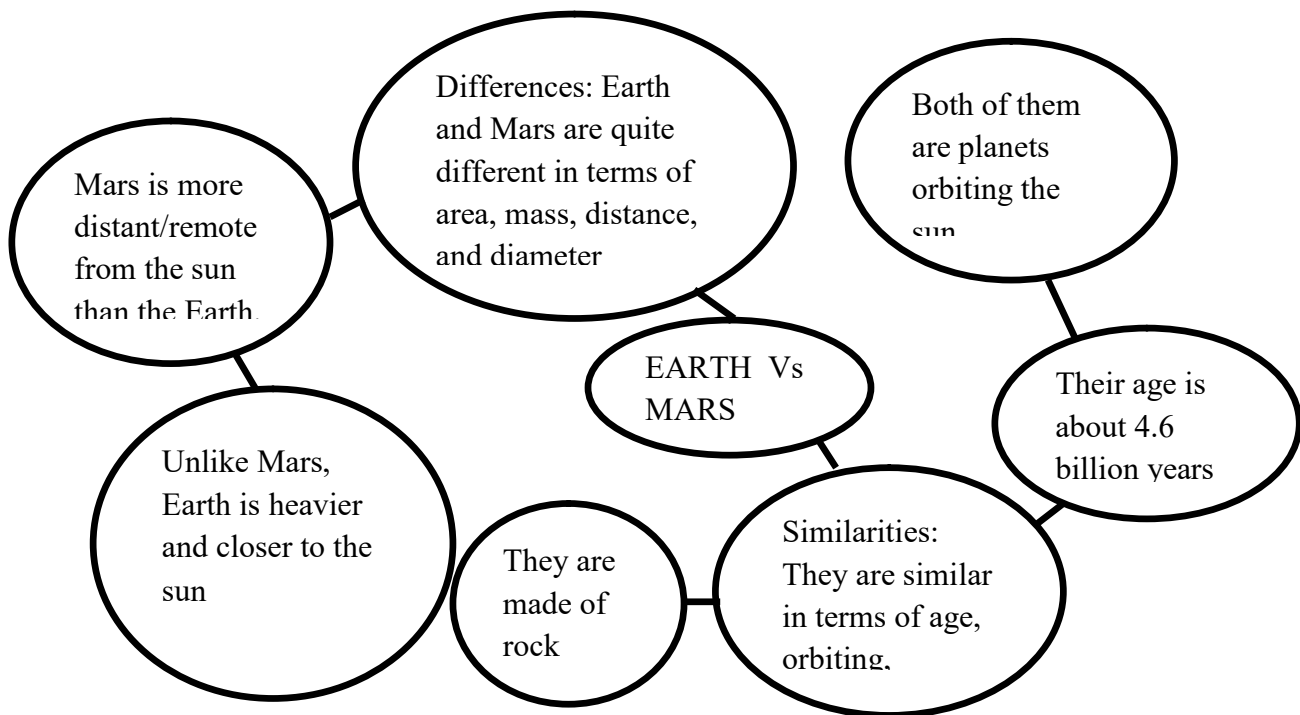
- Both Mars and Earth are planets that orbit around the sun. However, they are different in composition, size, temperature, and distance from the sun.

Task Four:

Aim: To train students to use the clustering technique.

Teaching Procedures using clustering (group work)

- The teacher asks students to draw two images about the two planets in their minds and then start thinking individually about the possible similarities and differences between them to develop more ideas.
- The teacher asks students to write all the possible ideas that emerge from the topic following up the clustering strategy.
- The teacher asks students to create more ideas and arrange them in well-organized clusters.
- At this stage, the teacher guides students to explore more ideas about the topic.



Students' Clustering Model about Comparison and Contrast of Mars and Earth

Step Three: During Writing Stage

Task One:

Aim: To write the first version.

Instructions:

- Use the above cluster to write the first draft.
- Regard the paragraph writing organization (topic sentence, body and conclusion).

Step Four: Post-Writing Stage

Aim: To publish the final draft.

Instructions:

- Proofread over the paragraph writing and makes any necessary changes.
- Help proofread the other group's paper for mistakes correction.

Students' possible output

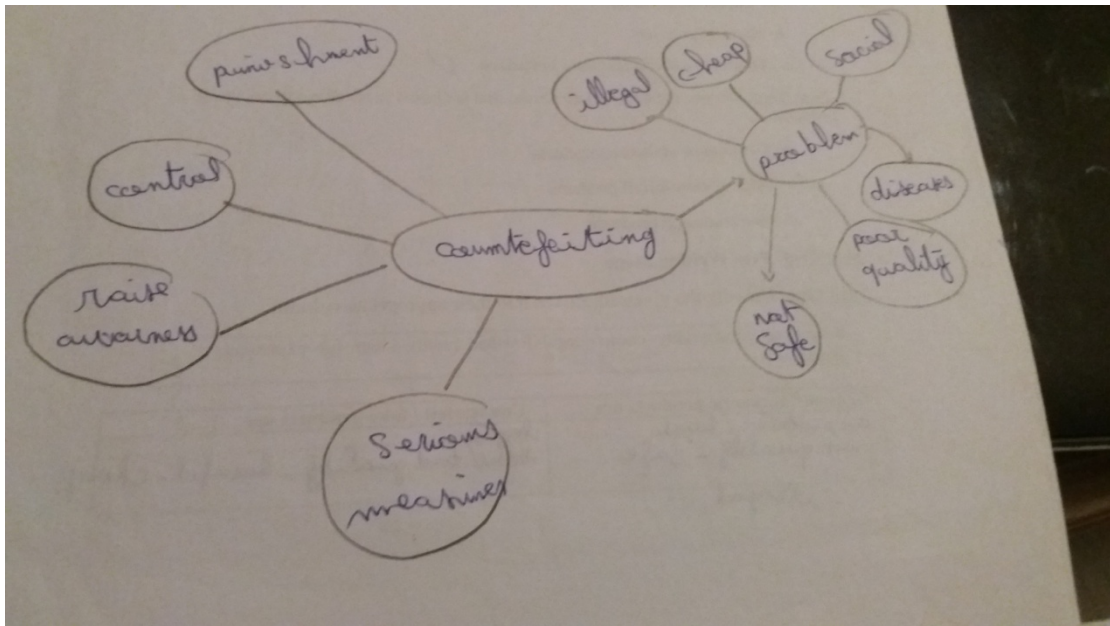
Earth versus Mars

Both Earth and Mars are rocky planets that orbit in our Solar System. The Earth is the third planet from the Sun, whereas Mars is the fourth planet from the Sun. The Earth and Mars are neighbours. Both are very similar, but they are also different at the same time. Earth is the only planet in the Solar System to have water in its three states of matter. It is 12760 km in diameter and 10.072.000 km² in surface area; however, the red planet is larger and more distant from the sun than the blue one. Unlike Mars, Earth is heavier and closer to the sun. Earth remains the best planet for humans to live on because it is provided with the necessary elements of life.

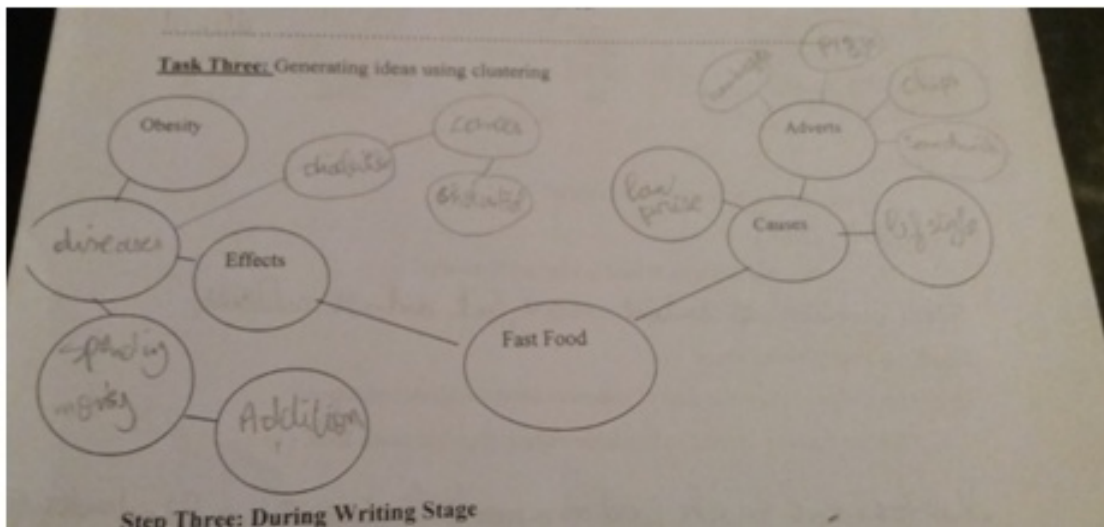
Feedback: The teacher corrects the paragraph of each group to assess their writing performance and progress.

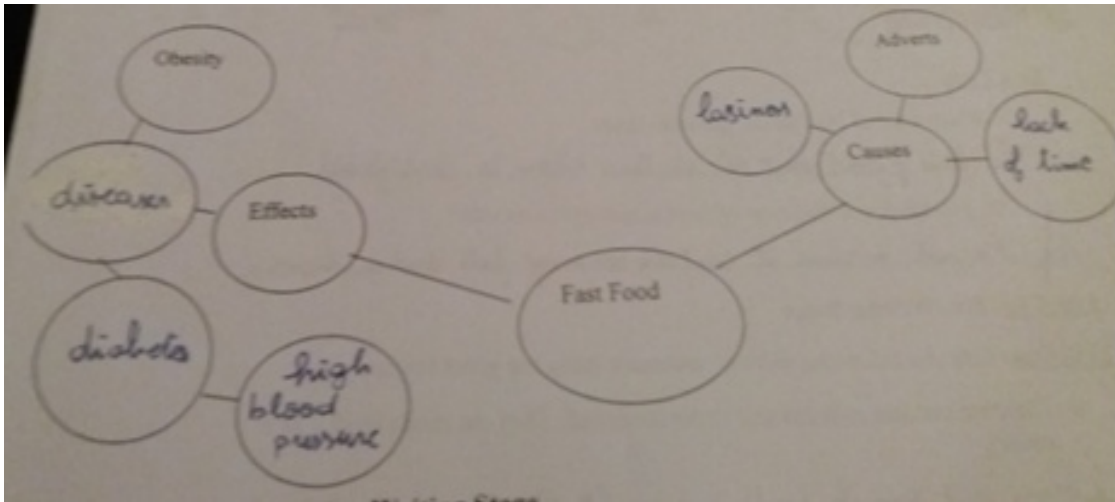
Appendix 03: Samples of Some Students' Clustering

Lesson: Fighting Counterfeit Products

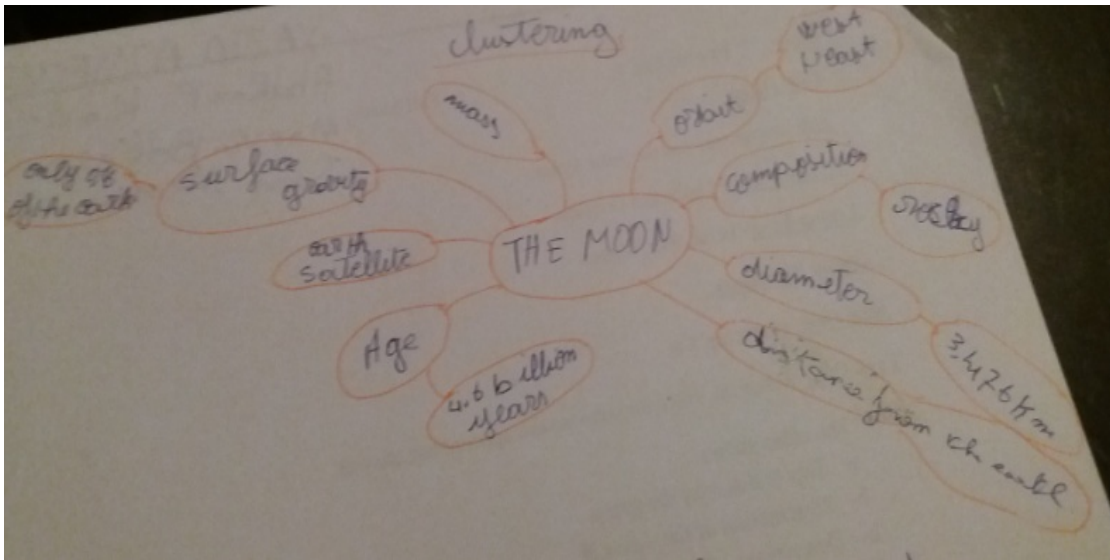


Lesson: Impacts of Fast-Food

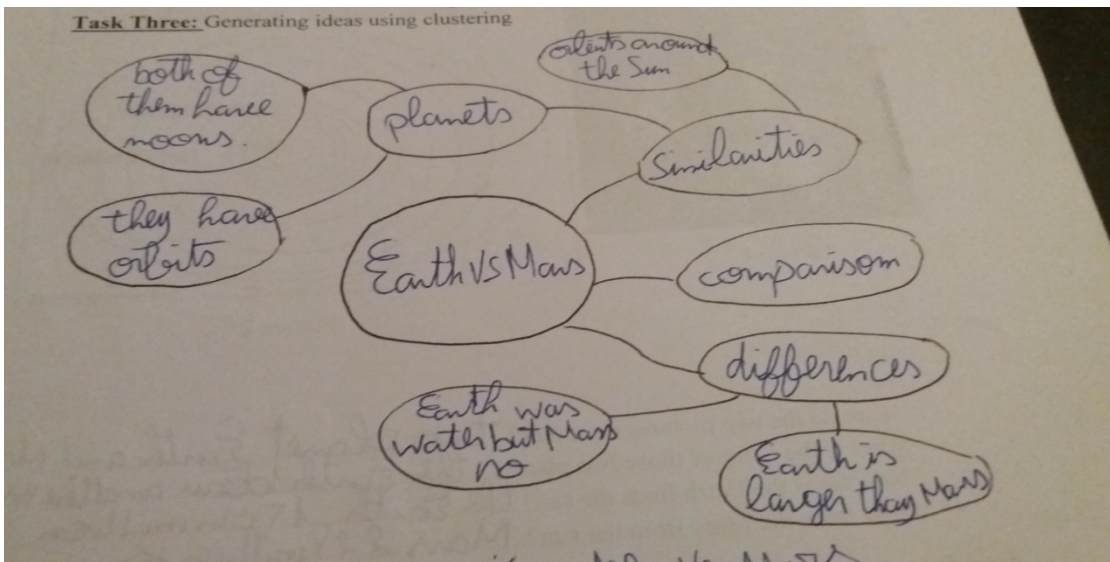




Lesson: A Presentation about the Moon

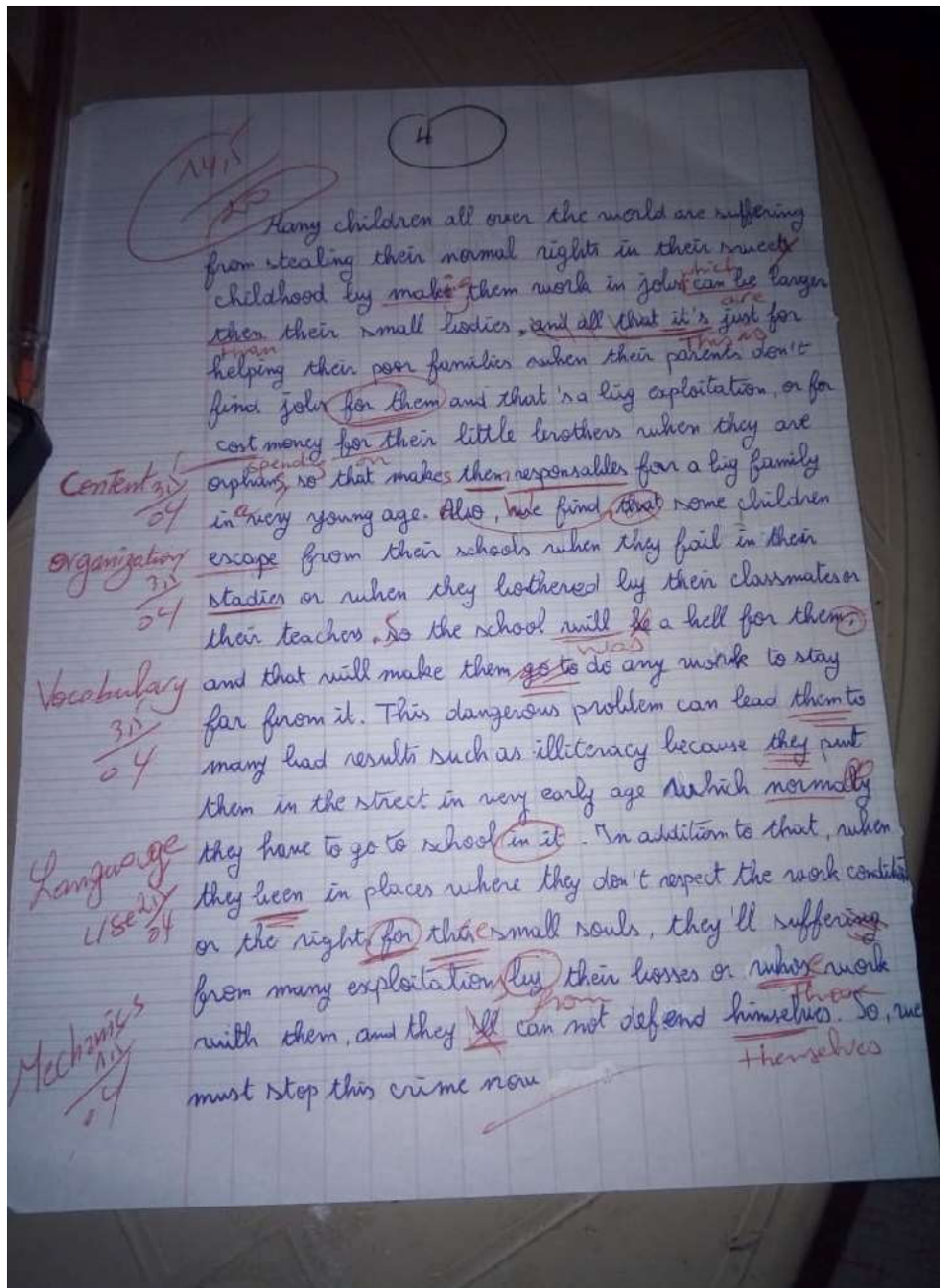


Lesson: Comparison and Contrast between Earth and Mars

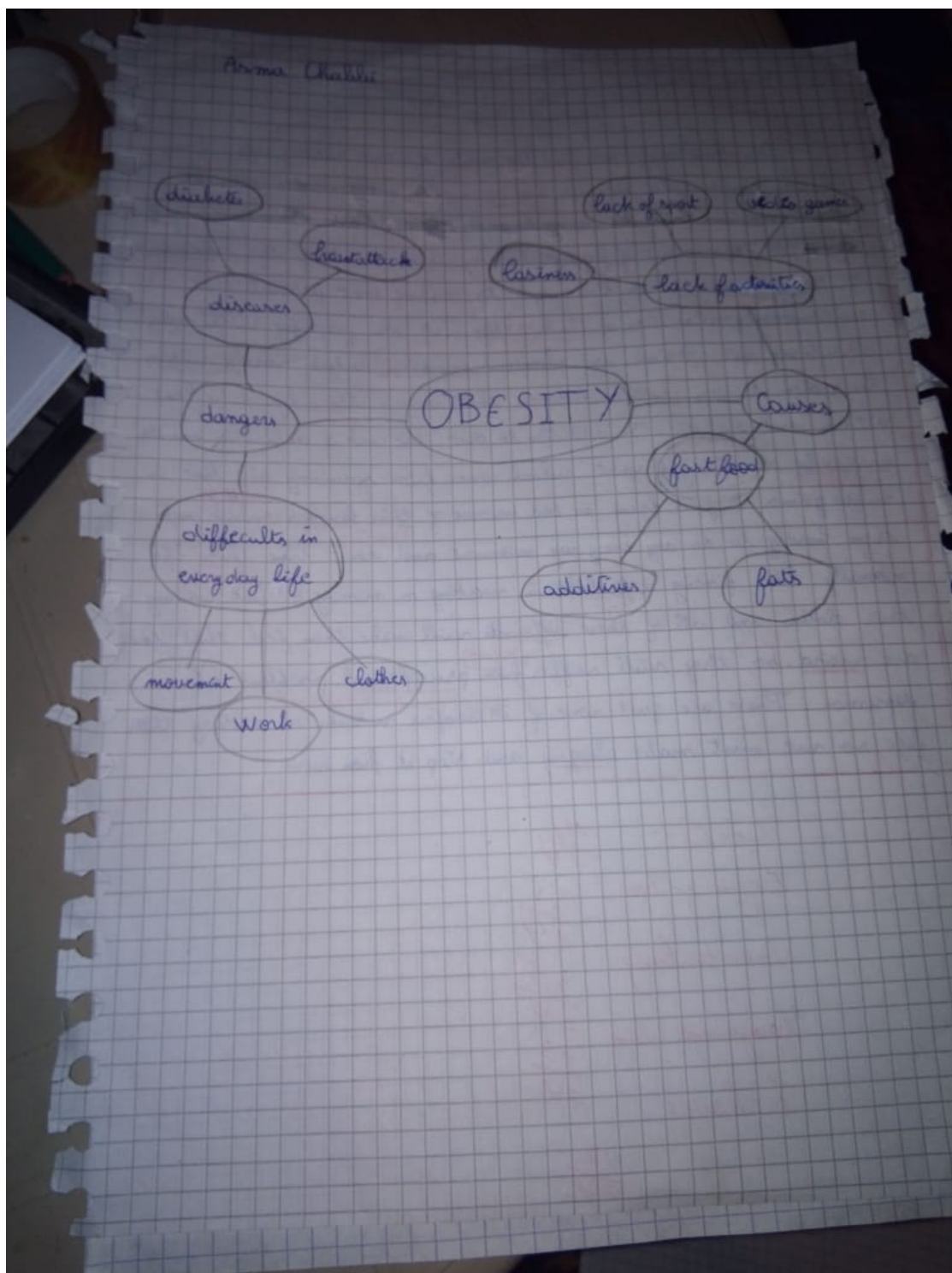


Appendix 04: Students' Pre-test and Post-test Paragraph Writing

Sample One: Pre-test



Sample One: Post-test



16
20

Obesity

In these days, we find the number of people ~~whom~~ ^{who} suffer from obesity continue to increase day by day.

The spread out of fast food every where because of the influence of the ~~advertis~~ ^{advertis} which lead people to consume more products that contain big quantities of ~~the~~ ^{un}healthy ~~fast~~ ^{fat} and ~~preparing~~ ^{preparing} with many additives ~~and~~ ^{and} coloring and chemical ~~ingrediet~~ ^{ingredients} which ~~surely~~ ^{surely} will lead them to very serious diseases that ~~menace~~ ^{menace} ~~their~~ ^{their} life like heart attack and diabetes. In addition to that, the lack of activities and the ~~unreguly~~ ^{unreguly} practicing of sport which comes from spending big time in ~~video~~ ^{video} games or just lying in bed because of ~~their~~ ^{their} ~~laziness~~ ^{laziness} which ~~make~~ ^{make} them hardly to do any everyday movement and don't live their life normally like finding ~~difficult~~ ^{difficult} in reaching or moving or just ~~raising~~ ^{raising} their clothes and all of these ~~difficult~~ ^{difficult} will make them feel that they are ~~mad~~ ^{mad}. So, they will suffer from ~~psycological~~ ^{psychological} problems like depression. These are just some of its ~~danger~~ ^{danger} which can destroy their life, so we must make ~~change~~ ^{change} and stop it from now.

Content	04
Organization	3.5
Vocabulary	3.5
Language Use	04
Mechanics	04
	02
	20

Sample Two: Pre-test

115
20

11

Child labour is one of types of corruption and it results of many causes. First, the poverty - can lead the child to get a work for help his family, and when a child was orphan, or he get and and get a job to help himself, then he has a and the jobless parents, failure at school. The child labour caused illiteracy, working at an early age, problems healthy problems and psychology, exploitation, and lose confidence on them selves, lost their age of infancy and child had in working their

Content $\frac{2.75}{0.4}$

Organization $\frac{2.5}{0.4}$

Vocabulary $\frac{2.5}{0.4}$

Language use $\frac{1.25}{0.4}$

Mechanics $\frac{0.8}{0.4}$

Sample Two: Post-test



Sudjehna Djedou

OBESITY (17)

Obesity is one of the problems which (who) threaten our society, due to several reasons. ^{verb}for example, bad habits ^{is} the principal reason cause obesity because of loving eating the delicious foods, with less practicing sport. Fast Food is one of the causes of obesity like cola and burger.

Obesity let bad consequences on people like diseases

for example, ^{spelling those} cancer (cancer).
^{spelling}

M
K
20

Content $\frac{03}{04}$

Organization $\frac{03}{04}$

Vocabulary $\frac{03}{04}$

Mechanics $\frac{02}{04}$

Language Use $\frac{2.5}{04}$

Sample Three: Pre-test

09
20

18

There are many bad phenomena in the world like child labour. This phenomenon is so dangerous to a society. There are many causes lead to child labour like poor families, orphan children, failure at school and jobless parents. This causes lead to many effects like illiteracy, working at an early age and exploitation.

Content $\frac{02}{04}$

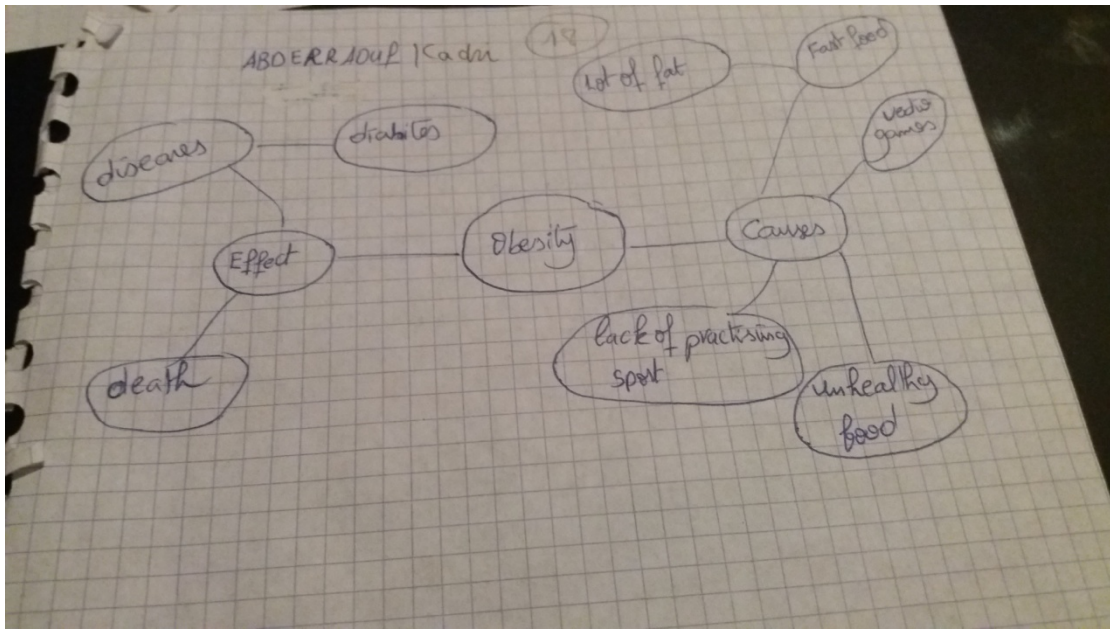
Organization $\frac{2.5}{04}$

Vocabulary $\frac{0.5}{04}$

Language Use $\frac{2.5}{04}$

Mechanics $\frac{0.5}{04}$

Sample Three: Post-test



~~18~~ ABDERRAOUF KADRI Obesity 18
 Obesity is big problem for young people. It has
 so many causes as fast food which it contains lot of fat,
 vegetables cause obesity because young people stay in home
 and don't go out and don't practise sport, so they become
 obese.

Content $\frac{09}{24}$
 Organization $\frac{09}{24}$
 Vocabulary $\frac{07}{24}$
 Language Use $\frac{05}{24}$
 Mechanics $\frac{04}{24}$

Sample Four: Pre-test

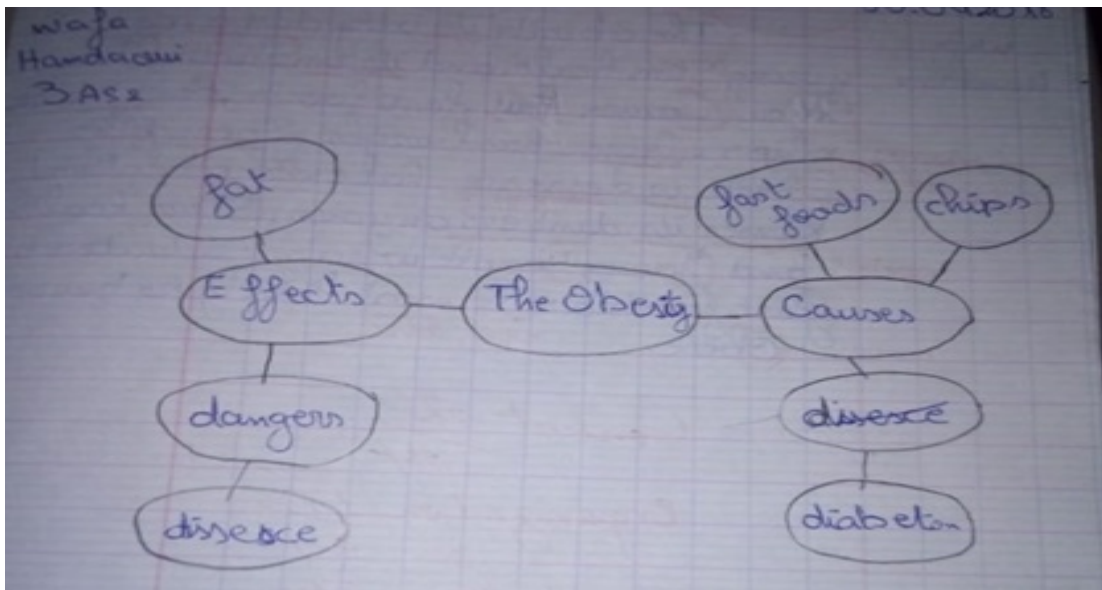
7/25
20

19

In Some Countries like China and India, many kids have to work to help their parents. First, the causes and effects of child labour. ^{for} in ^{are} ^{an} example, poor families, orphan children and jobless parents, failure at school. Finally, the effects ^{of} ^{the} child labour is illiteracy, ^{of} ^{the} working at an early age. ^{are}

Content	1.5
Organization	2.5
Vocabulary	1
Language Use	0.2
Mechanics	0.25
	0.4

Sample Four: Post-test



Wafa Handayani

8,25 / 20

19

The obesity is very dangerous on youngsters health and its in stating the main causes fast, fast foods; for example chips, pizza, hamburgers. So and the effects is lessence. For example fat and kameer its dangers on youngsters health and young people who are addicted to fast foods are the most likely to become obese.

Content $\frac{02}{04}$

Organization $\frac{2,75}{04}$

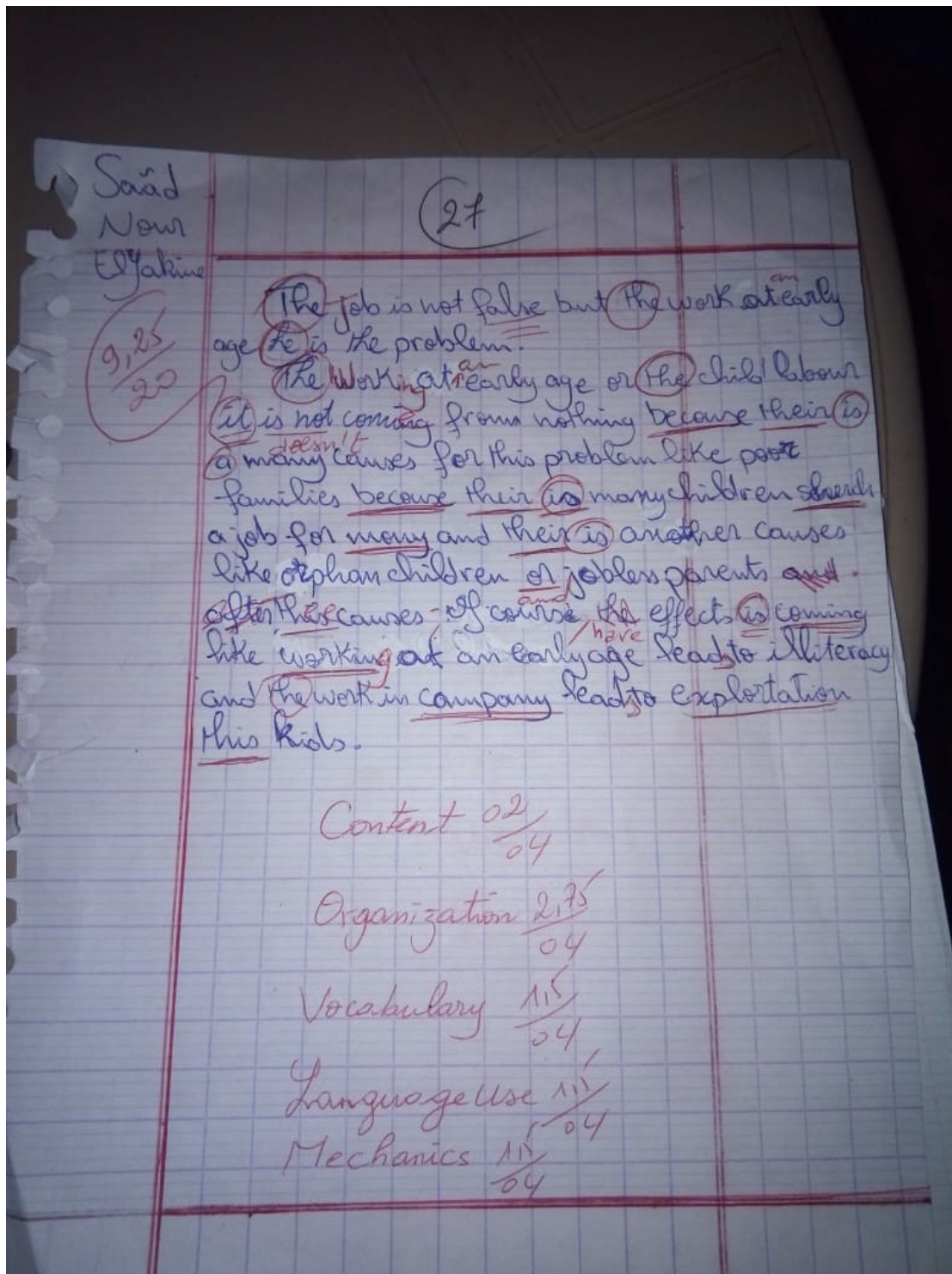
Vocabulary $\frac{02}{04}$

Language Use $\frac{0,5}{04}$

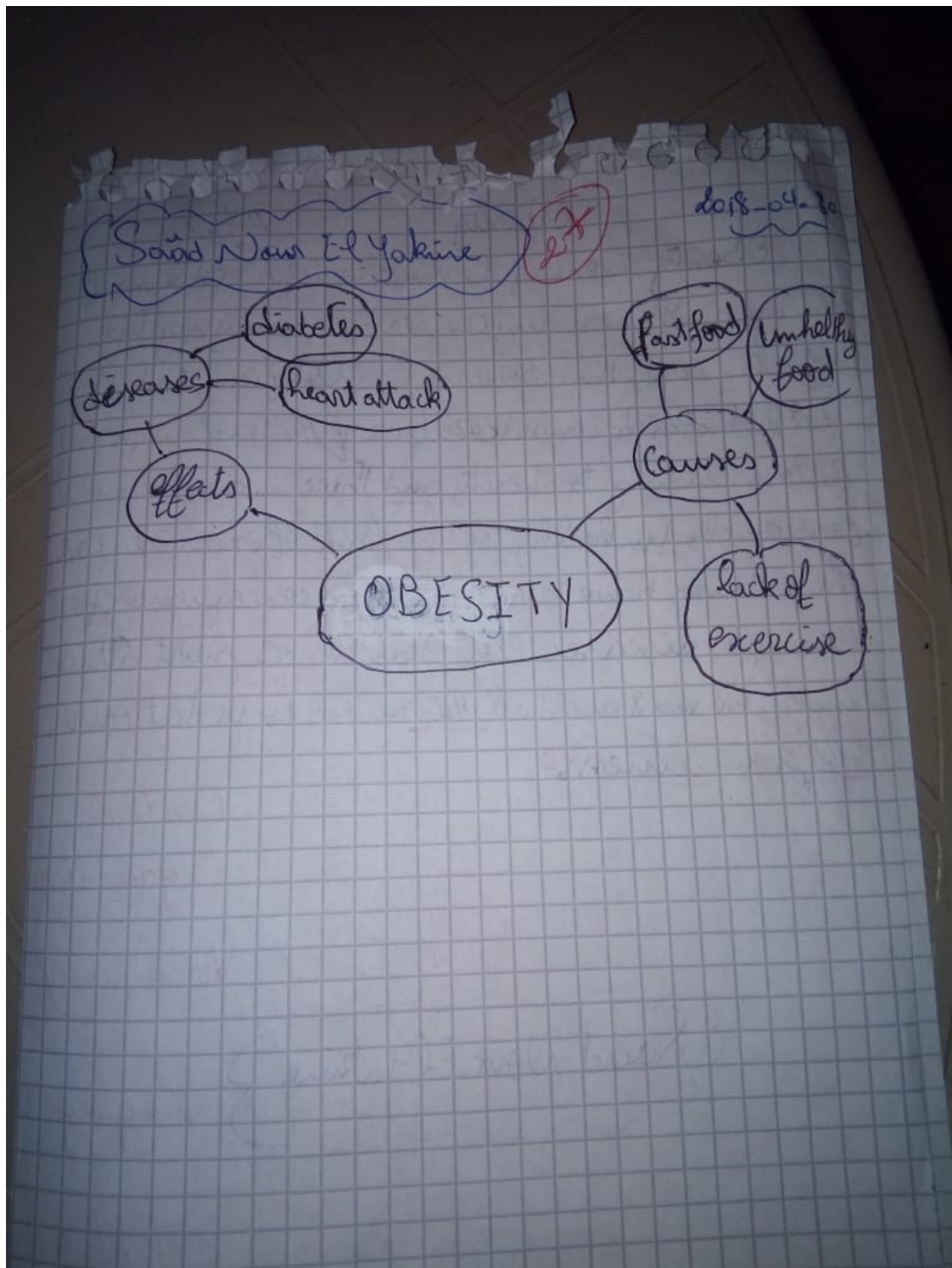
Mechanics $\frac{0,5}{04}$

$\frac{02}{04}$

Sample Five: Pre-test



Sample Five: Post-test



Oberity

(24)

Oberity is one of the most serious problems of the age and has many causes and many negative effects. First, this problem has a lot of causes like fast food as it is considered one of the most important factors leading to oberity and there is another cause for example, unhealthy food or lack of exercise. Next, these causes have several serious consequences, for example, diseases like diabetes or heart attack. Finally, we must avoid all these causes to protect our self from illness.

14, 25
20

Content

2, 3
04

Organization

03
4

Vocabulary

03
04

Said Nour Elgamine

Language Use

03
04

Mechanics

03
04

Appendix 05: The Students' Scores of Pre-test: Control Group

Students (N)	Writing Components					Total scores
	Content	Organization	Vocabulary	Language use	Mechanics	
1.	2.5	2.5	2	3	2	12
2.	2.5	2.5	2	1.5	1	9.5
3.	2	2.5	1.5	2	1	9
4.	2	1.5	1.5	1.75	1	7.75
5.	2	2	1.5	2	1	8.5
6.	2.5	2.5	2	1	0.5	8.5
7.	3.5	3.75	3	2	2.5	14.75
8.	2	2.5	2	2	0.5	9
9.	3	3.5	2.5	3	2	14
10.	1.5	2	0.5	0.5	0	4.5
11.	4	3.75	3.75	3	2	16.5
12.	2	2.5	1.5	0.5	0.5	7
13.	3	3	2.5	1	2	11.5
14.	1	1.5	1	1	0	4.5
15.	1	1	1	2	0	5
16.	0.5	0	1	0	0.5	2
17.	1.5	2	1.5	2	1	8
18.	1.5	2.5	1.5	2.5	1.5	9.5
19.	1.5	2	1.5	2	2	9
20.	1	2.5	1	2.5	2	9
21.	0.25	0	0	0.25	0.25	0.75
22.	1.5	0	1	0.25	0.25	3
23.	1.5	2	1	2	2	8.5
24.	2	2	2	2.5	2	10.5
25.	1.5	2	1.5	2	2	9
26.	1.5	1.5	1.5	2	1	7.5
27.	0.25	0.25	0.5	1	2.5	4.5

Appendix 06: The Students' Scores of Pre-test: Experimental Group

Students (N)	Writing Components					Total scores
	Content	Organization	Vocabulary	Language use	Mechanics	
1.	2	3.5	2.5	0.5	0.5	9
2.	0.5	1.5	0.5	1.5	0.5	4.5
3.	1.5	2.5	1.5	2.5	1.5	9.5
4.	3.5	3.5	3.5	2.5	1.5	14.5
5.	2	1.5	2	2	1	8.5
6.	1	1.5	1	0	0	3.5
7.	1.75	1	1	1	0	4.75
8.	2	2.5	2	1.5	0.25	8.25
9.	2	0.5	1	0	0	3.5
10.	2.5	2	2	1	1.5	9
11.	1.75	2	1.5	1.75	1	8
12.	1.5	1	1.5	0	0	4
13.	3	3.5	2.5	2	2	13
14.	0.75	0.5	0.75	0.5	0.5	3
15.	2.5	2.5	1.75	2	1	9.75
16.	1.75	0.5	1.75	0.5	0	4.5
17.	2.75	2.5	2.5	1.75	2	11.5
18.	2	2.5	1	2.25	1	9
19.	1.5	2.5	1	2	0.25	7.25
20.	1.5	1.5	1	0.5	0	4.5
21.	1	0.5	0.5	1	1	4
22.	1.5	1	1	0.5	0.5	4.5
23.	1.5	0.5	1.5	0.5	1	4
24.	1	1	1	0.25	0.5	3.75
25.	1	2	1	0.25	0	4.25
26.	1	0.75	1	0	1	3.75
27.	2	2.75	1.5	1.5	1.5	9.25
28.	3	3	2.75	3	2	13.75

Appendix 7: The Students' Scores of Post-test: Control Group

Students (N)	Writing Components					Total scores
	Content	Organization	Vocabulary	Language use	Mechanics	
1.	4	3.5	2.75	1.5	2	13.75
2.	2.5	2.5	1.75	2	1	9.75
3.	1.5	2.5	1	2.5	1.5	9
4.	1.5	3	1.5	1.5	0.5	8
5.	2	2.5	2	2	1.5	10
6.	2.5	2	2	2	2	10.5
7.	3.5	3.5	3.5	2.5	2.75	15.75
8.	2.5	2	1.5	1.5	2	9.5
9.	4	2.75	3	3.5	3	16.25
10.	1	1	1	2	1.5	6.5
11.	4	4	3	2.5	3.5	17
12.	2	1.5	1.5	1	1	7
13.	2.5	2.5	2.5	2.5	1.5	11.5
14.	1	1.5	1.5	1	0	5
15.	1.5	1.5	1	0.5	0.5	5
16.	0.5	0	1	0.75	0	2.25
17.	1.5	1.5	1.5	1.5	1.5	7.5
18.	2	2.5	2	1.5	1.5	9.5
19.	2	2	1.5	1.5	2	9
20.	2	1.5	2.5	2.5	0.5	9
21.	0.25	0	0.25	0.25	0.5	1.25
22.	1.5	1.5	1	0.5	1	5.5
23.	1.5	2	1.5	2.5	1.5	9
24.	1.5	2.5	1.75	2	2	9.75
25.	1.75	2	2.5	1.5	1.75	9.5
26.	2	0.5	2	2	1	7.5
27.	0.5	0.5	1	1	2	5

Appendix 08: The Students' Scores of Post-test: Experimental Group

Students (N)	Writing Components					Total scores
	Content	Organization	Vocabulary	Language use	Mechanics	
1.	3	4	3.75	1.5	1.5	13.75
2.	2	1.5	2	1.5	1.5	8.5
3.	3	3	2.5	3	2	13.5
4.	4	3.5	3.5	3	2	16
5.	2.5	3	2.5	2	1.5	11.5
6.	1.5	1.5	1.5	2	1.5	8
7.	2	2	2	2	1	9
8.	3.5	3	3	2	1.5	13
9.	2	1	1	0.5	2.25	4.75
10.	3.5	3.5	2.5	2.5	1.5	13.5
11.	3	3	3	2	1	12
12.	2.5	2	1.75	1.5	2	9.75
13.	3	3	2.5	2.5	2	13
14.	1.5	2.5	1.5	1.5	1.75	8.75
15.	3.5	3	2.5	2	1.5	12.5
16.	2	2.5	2	2.5	1.5	10.5
17.	3	3	3	2.5	2	13.5
18.	2	2	2	1	1	8
19.	2	2.75	2	1	0.5	8.25
20.	2.75	2	2	1	2	9.75
21.	2	2.5	2	2	1	9.5
22.	1.5	1.5	1.5	2	2	8.5
23.	2.5	2.5	2	1.5	1	9.5
24.	1.5	1.75	1.5	2	1.5	8.25
25.	2.5	2	2	0.5	0.5	7.5
26.	1.5	1.75	2	2.5	1	8.75
27.	2.75	3	3	3	3	14.75
28.	4	3.75	3	2.75	2	15.5

Appendix 09: Critical Values of T for a One-Tailed Significance Tests

Significance Level (α)	Degrees of Freedom	Critical value (1-tailed)	Degrees of Freedom	Critical value (1-tailed)
0.05	1	6.314	28	1.701
0.05	2	2.92	29	1.699
0.05	3	2.353	30	1.697
0.05	4	2.132	31	1.696
0.05	5	2.015	32	1.694
0.05	6	1.943	33	1.692
0.05	7	1.895	34	1.691
0.05	8	1.86	35	1.69
0.05	9	1.833	36	1.688
0.05	10	1.812	37	1.687
0.05	11	1.796	38	1.686
0.05	12	1.782	39	1.685
0.05	13	1.771	40	1.684
0.05	14	1.761	41	1.683
0.05	15	1.753	42	1.682
0.05	16	1.746	43	1.681
0.05	17	1.74	44	1.68
0.05	18	1.734	45	1.679
0.05	19	1.729	46	1.679
0.05	20	1.725	47	1.678
0.05	21	1.721	48	1.677
0.05	22	1.717	49	1.677
0.05	23	1.714	50	1.676
0.05	24	1.711	51	1.675
0.05	25	1.708	52	1.675
0.05	26	1.706	53	1.674
0.05	27	1.703		

Appendix 10: Students' Post-Interview

- 1- Do you get now a clear idea about the expository paragraph?
- 2- Can you label its different components and features?
- 3- What elements should you know in the prewriting stage?
- 4- Did you use to apply the prewriting techniques to start writing easily? What are they?
- 5- Do you think it is necessary to use these prewriting strategies for good paragraph writing?
- 6- Did you use the clustering strategy before that time?
- 7- After having used the clustering technique many times, did you benefit from it? If yes, how is it useful?
- 8- What is your attitude towards the use of the clustering technique in writing?
- 9- Do you think that your writing performance is improved in:
 - a- Content
 - b- organization
 - c- vocabulary
 - c- Language use
 - d- mechanics?
- 10- Did you face difficulty while using this technique? Explain
- 11- What do you suggest to solve these problems?

Appendix 11: Students' Use of Clustering Technique



Résumé

Produire un paragraphe efficace en anglais constitue une tâche difficile pour les étudiants en raison de la nature complexe de la compétence rédactionnelle ainsi que de la manière de l'enseigner. La présente étude visait à vérifier si l'utilisation du clustering comme stratégie de pré-écriture améliorerait les paragraphes d'exposition des étudiants de la troisième année (filiale scientifique) à l'école secondaire Badi Mekki, Zeribet El-Oued, Biskra au niveau du contenu, de l'organisation, du vocabulaire, de l'utilisation de la langue et mécanique. Pour atteindre l'objectif susmentionné et tester les hypothèses, une recherche quasi expérimentale a été menée auprès d'un groupe témoin de 27 étudiants qui ont appris la technique conventionnelle du questionnement lors de la phase de pré-écriture et d'un groupe expérimental de 28 étudiants. Avant de commencer le traitement, un pré-questionnaire a été administré à 7 professeurs d'anglais des écoles secondaires de Zeribet El-Oued pour confirmer que des problèmes au niveau de tous les aspects de l'écriture existent dans les classes de troisième année scientifique. Après l'exposition du groupe expérimental au traitement pendant six mois, une comparaison a été faite entre les résultats du pré-test et du post-test des deux groupes et le calcul du test t a été fait pour remarquer s'il y a un changement dans les cinq aspects de l'écriture testés. De plus, un entretien postérieur a eu lieu avec le groupe expérimental pour connaître leurs attitudes envers la technique de clustering. Les résultats du post-test ont montré que ce dernier groupe fonctionnait positivement sur trois aspects seulement (contenu, organisation et vocabulaire), mais ils n'obtenaient pas de bons résultats pour les autres (utilisation de la langue et mécanique). Les résultats ont révélé l'utilisation significative de la stratégie de clustering (valeur du test $t = 10.75$), par rapport à la valeur critique (1.67), sur le développement des paragraphes des étudiants en plus des attitudes positives des étudiants à son égard.

Mots-clés: processus d'écriture, étape de pré-écriture, technique de clustering, paragraphes explicatifs, étudiants de la troisième année de filière scientifique, professeurs d'anglais.

ملخص

يشكل إنتاج فقرة فعالة باللغة الإنجليزية مهمة صعبة للطلاب بسبب الطبيعة المعقدة لمهارة الكتابة وكذلك طريقة تدريسها. تهدف الدراسة الحالية إلى التحقق مما إذا كان استخدام التجميع كإستراتيجية ما قبل الكتابة من شأنه أن يعزز الفقرات التفسيرية المكتوبة من طرف تلاميذ السنة الثالثة شعبة علوم بثانوية بادي مكي، زريبة الوادي، بسكرة على مستوى المحتوى، التنظيم، المفردات، استخدام اللغة و الميكانيكا. لتحقيق الهدف المذكور أعلاه واختبار الفرضيات، تم إجراء بحث شبه تجريبي مع مجموعة شاهدة مؤلفة من 27 تلميذا تم تدريسهم باستخدام أسلوب الاستجاب التقليدي أثناء مرحلة ما قبل الكتابة ومجموعة تجريبية مكونة من 28 تلميذا. قبل بدء العلاج، تم تقديم استبيان مسبق لسبع أساتذة لغة إنجليزية بثانويتي زريبة الوادي، حيث أكد وجود مشاكل في جميع مميزات الكتابة بين صفوف السنة الثالثة ثانوي علوم. بعد تعرض المجموعة التجريبية للعلاج مدة ستة أشهر، تم إجراء مقارنة بين نتائج الاختبار القبلي والبعدي لكلا المجموعتين وكذلك حساب اختبار "ت" لملاحظة وتسجيل ما إذا كان هناك أي تغيير في جميع مميزات الكتابة الخمس التي تم اختبارها. علاوة على ذلك، تم إجراء مقابلة بعدية مع المجموعة التجريبية لمعرفة مواقفهم تجاه تقنية التجميع. أظهرت نتائج الاختبار البعدي أن المجموعة الأخيرة عملت بشكل إيجابي في ثلاثة جوانب فقط (المحتوى، التنظيم والمفردات)، لكنهم لم يحرزوا نتائج جيدة في الجوانب المتبقية (استخدام اللغة والميكانيكا). بينت النتائج الاستعمال الفعال لإستراتيجية التجميع حيث (قيمة اختبار "ت" = 10.75)، إذا ما قورنت بالقيمة الحدية (1.67)، في تطوير فقرات التلاميذ بالإضافة إلى أرائهم الايجابية تجاهها.

الكلمات المفتاحية: عملية الكتابة، مرحلة ما قبل الكتابة، تقنية التجميع، فقرات تفسيرية، تلاميذ السنة الثالثة شعبة علوم،

أساتذة اللغة الإنجليزية.