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The Impact of Topical Knowledge on Students' Writing Performance

Case Study: First Year Master Students at the University of Mohammed Seddik Ben Yahia, Jijel.

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Dedication

In the Name of Allah, the Most Gracious the Most Merciful, all The praise Is due to Him Alone, the Sustainer of all The Worlds

This work would not have been accomplished without the help and the contributions of many individuals who supported me during my educational journey. So I would like

to dedicate this work to :

My beloved mother, my paradise, for her limitless support, encouragement, and love

My dear father, the one who makes my dreams real, for his undoubted belief in my success

My dearest sister Khaoula

My beloved brothers Islam, Yahia, and Ibrahim

My dear friends with whom I shared the University life with its lights and shadows

My relatives who prayed for me

My teachers

Norelhouda

Dedication

All my gratitude to Allah the Almighty

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My dear parents who encouraged, supported me all the time and expected the best of me,

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And to all my friends and teachers at Mohammed Seddik Ben Yahia University, jijel.

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Abstract

The present study investigated the effects of topical knowledge on first year master students' writing performance at Mohammed Seddik Ben Yahia University. The hypothesis on which this study was based was that topical knowledge would affect the students' written language performance in terms of complexity, accuracy, and fluency measures. The data were gathered through the use of two tests which were administrated to forty four (44) first year master students. The first test was a topical knowledge test which was used to evaluate the students' knowledge about a given topic. The scores of this test were classified in three performance classes (good, average and poor performance classes). The second test was a writing ability test; in which students were asked to write an essay about the given topic which required specific topic knowledge. Students' essays were examined through fluency, accuracy and complexity measures. The results revealed that there was a statistically significant relationship between topical knowledge test scores and students writing performance in terms of accuracy measures. More specifically, the higher students' topical knowledge test scores, the more they produced accurate words and sentences in the writing productions. Accordingly, there is some kind of relationship between the topical knowledge and student's writing performance.

Keywords: topical knowledge, writing performance, complexity, accuracy, fluency.

List of Abbreviations

Adjc: Adjectival clauses

Adj/S: total number of adjectives per total number of sentences

Adj/W: Total number of adjectives per total number of words

Advc: Adverbial clause

C: Clause

CAF: Complexity Accuracy Fluency

C/S: Clauses per total sentences

Conn: Connectors

CorrArt/Art: Correct articles per total articles

CorrS/S: Correct sentences per total sentences

CorrW/W: Correct words per total words

DC/C: Dependent clauses per total clauses

EFC: Error-free clauses

EFL: English as a foreign language

EFT/T: Error-free t-unit per total t-units

ESL: English as a second language

L2: Second language

LexE/C: Lexical errors per clause

LWT /LW: Lexical words type per total lexical words

NomC: Nominal clause

P: Page

Pass/C: Passives per clauses

Pass/S: Passives per Sentences

Passives/S: Passive sentences per total number of sentences

Pass/T: Passives per T-units

PP: prepositional phrase

P/S: Total number of prepositions per total number of sentences

Q: Question

S: Sentence

V: Verbs

V/S: Total number of verbs per total number of sentences

VT / V: Verb Type per total number of verbs

V/W: Total number of verbs per total number of words

 W: Words

W /C: Total number of words per total number of Clauses

W/S: Total number of words per total number of sentences

W/T: Total number of words per total number of T-units

%: Percentage

List of Figures

List of Tables

Contents

Chapter Two: Assessment of Students Writing Performance

References

Appendices

Résumé

الملخص

General Introduction

Introduction

1. Background of the Study

2. Statement of the Problem

3. Aim of the Study

4. Research Question

5. Hypothesis of the Study

6. Means of Research

7. Structure of the Study

Introduction

Writing is considered as one of the most essential language skills that foreign language learners need to develop. Writing in a foreign language is mainly thought to be a highly complex skill to master. Richards and Renandya (2002, p.303) argued that "there is no doubt that writing is the most difficult skill for L2 learners to master". Through writing, students can reflect their expressions into texts and express their feelings and thoughts. EFL students are required to develop their writing skills. They should be able to write coherent, well constructed, and meaningful compositions. Topical knowledge which is the knowledge about certain topics can help students to find and generate suitable ideas for the piece of writing being produced.

1. Background of the Study

The effect of topical knowledge on L2 learners' writing performance has been investigated in a number of studies:

Tedick (1990) investigated the effects of subject-matter knowledge on the writing performance of ESL graduate students. The participants in this study were 105 students representing three English proficiency levels: beginning, intermediate, and advanced. All students responded to two topics: one general and one field-related topic. The results of the study indicated that all students did better on the topic specific to their field than on the general topic because it allows them to use their background knowledge.

He and Shi's study (2012) investigated the impact of topical knowledge on ESL writing performance in a Canadian college. This study was administered to fifty (50) students with different levels of English proficiency (basic, intermediate and advanced). Each student wrote an essay about university studies which required general knowledge, and wrote a second essay about "federal politics" which required specific topical knowledge. The findings of the study showed that students

from all levels performed better on the general topic than they did on the specific topic. The students᾿ responses to the specific topic had lower content and ideas development, organization and weak conclusion. Therefore, background knowledge is an important factor that affects the performance of the writing task.

Jennings, Fox and Graves (1999) made a research about the choice of topic as an indication of background knowledge. This study investigated the effects of the topic on the Canadian academic English language assessment using choice and no choice conditions. The main aim of this research is to determine if students were given a choice of topic will perform differently from students who were not given a choice. The participants were 254 who were randomly assigned to no choice of topic or choice among five topics. The performances of participants were compared. The results obtained showed that the differences between the groups were not statistically significant.

2. Statement of the Problem

Writing is among the most important skills that foreign language learners need to improve. However, students face different problems that may reduce their ability to write. Thus, providing a piece of writing for readers is sometimes difficult because the writer has to gather suitable ideas related to the topic being dealt with. The current study aims to investigate whether topical knowledge is critical factor that influences students' writing performance.

3. Aim of the Study

The major aim of this study is to investigate the effects of topical knowledge on EFL students᾿ writing performance. More specifically; it aims to find out whether there is a relationship between the students᾿ topical knowledge and their writing production in terms of complexity, accuracy, and fluency measures (CAF).

4. Research Questions

The study is conducted to answer the following question:

Is topical knowledge related to foreign language writing performance in terms of CAF measures?

5. Hypothesis of the Study

It is hypothesized that topical knowledge would affect positively the students' written language performance in terms of CAF measures.

6. Means of Research

In order to reach the aim of the study, answer the research question, and test the hypothesis a quantitave method were implemented by using two tests: a writing ability test and a topical knowledge test. These tests were administered to forty four (44) first year master students at the University of Mohammed Seddik Ben Yahia Jijel.

7. Structure of the Study

This research is structured into three main chapters; the first two chapters are devoted to the theoretical part, while the third chapter deals with the field work.

The first chapter which, is devoted to topical knowledge, starts by its definitions and related concepts. In addition, it stresses types of prior knowledge, schema theory, and its types. Moreover, it sheds light on brainstorming strategy and its techniques for activating prior knowledge.

The second chapter provides an overview of the writing skill including its definitions, importance, the approaches, and the stages of the writing process. In addition, it moves to draw

attention to the types of writing, and the components of good writing. Moreover, it sheds light on some factors that affect the writing skill as well as the main difficulties faced by EFL learners while writing. At the end, it stresses writing assessment in terms of CAF measures.

The third chapter represents the field work of the study; it is devoted to the presentation of the results obtained from the analysis of the two means of research after describing both of them. Moreover, it provides an interpretation of the data collected by the research tools and discusses the obtained results.

Chapter One: Topical knowledge in the learning process

Introduction

1.1. Definition of Topical Knowledge

1.2. Types of Prior Knowledge

1.2.1. Declarative, Procedural, and Conditional Knowledge

1.2.1.1. Declarative Knowledge

1.2.1.2. Procedural Knowledge

1.2.1.3. Conditional Knowledge

1.2.2. Tacit and Explicit Knowledge

1.2.2.1. Tacit Knowledge

1.2.2.2. Explicit Knowledge

1.2.2.3. Knowledge Conversion

1.2.3. Factual, Conceptual, and Metacognitive Knowledge

1.2.3.1. Factual Knowledge

1.2.3.2. Conceptual Knowledge

1.2.3.3. Metacognitive Knowledge

1.3. Schema Theory

1.4. Types of Schemata

1.4.1. Formal Schemata

1.4.2. Content Schemata

1.5. Brainstorming Strategy and its Techniques for Activating Prior Knowledge

1.5.1. Definition of Brainstorming

1.5.2. Types of Brainstorming

1.5.2.1. Personal Brainstorming

1.5.2.2. Group Brainstorming

1.5.3. Brainstorming Techniques

1.5.3.1. Mind Mapping

1.5.3.1.1. How to create a mind map?

1.5.3.1.2. Mind Map Characteristics

1.5.3.2. Free Writing

1.5.3.3. Asking Questions

1.5.3.4. Listing

Conclusion

Introduction

The experiences that a learner has from his/her daily life assist to construct a store of knowledge that helps to start his/her future learning. Students rely on their knowledge and world experiences when trying to write on a certain topic task. This specific knowledge which is related to the topic is called topical knowledge. This chapter seeks to present an overview about topical knowledge, including its definitions, related terms, and types of prior knowledge. Moreover, it sheds light on schema theory, its support to the influence of prior knowledge on the learners' comprehension and production, and types of schema. This chapter ends by the brainstorming strategy and its techniques for activating prior knowledge.

1.1. Definition of Topical Knowledge

Aiming at defining the term topical knowledge is a difficult task. Many definitions of topical knowledge turn around the idea that it is what one already knows about a topic or a subject matter before aiming to know more. It is all what a human being has acquired since his/her birth no matter whether it is academic or every day's information. Alexander, Schallert, and Hare (1991) defined topical knowledge as "the intersection between one's prior knowledge and the content of a specific passage" (p. 334). In other words, it refers to the specific knowledge that an individual possesses about a particular passage content.

Crandall and Tucker (1990) stated that topical knowledge is the essential knowledge, either related to the content or academic subjects, which is specific to writing tasks or prompts (as cited in Meihami & Rashidi, 2018). Alexander, Kulikowich, and Schulze (1994) defined topical knowledge as "knowledge related to a specific body of discourse" (p. 314). Topical knowledge was also described by Bachman and Palmer (1996) as "the information base that enables [individuals] to use language with reference to the world in which they live" (p. 65). Moreover, they emphasized the

relationship between topical knowledge and individuals' writing performance. They claimed that it is difficult to evaluate students' performance on a writing task that requires cultural or topical knowledge they may not have while it may be easier for those who have that knowledge. Thus, when a learner is going to accomplish a learning task including writing, s/he must have an amount of relevant knowledge about the writing topic.

There is an extensive terminology to describe the knowledge that individuals possess. The term topic knowledge is used synonymously and interchangeably with other terms such as: prior knowledge, background knowledge, pre-existing knowledge, previous knowledge and schematic knowledge. In this research the terms topical knowledge, prior knowledge, background knowledge and schematic knowledge are used interchangeably. Dochy and Alexander (1995) defined prior knowledge as "the whole of a person's knowledge" (p. 227).

It is also defined by Alexander, Schallert, and Hare (1991) as "the sum of what an individual knows" (p. 333). The term prior knowledge refers to the available knowledge that an individual possesses before doing a learning task. It is a key factor that helps individuals to acquire new knowledge. Moreover, Biemans and Simons (1996) stated that prior knowledge is "all knowledge learners have when entering a learning environment that is potentially relevant for acquiring new knowledge" (p.158). The term background knowledge refers to the previously acquired knowledge experiences that an individual has. According to Stevens (1980), it is "what one already knows about a subject…" (p. 151). Background knowledge was also defined by McNeil (2011) as "the content area knowledge or topic familiarity learners' process regarding texts" (p. 884). Schema refers to the previous knowledge that exists in the human minds. According to Yule (2011), schema is "a pre-existing knowledge structure in memory" (p.85). Although, scholars' definitions of these terms are expressed in different words, they describe the same basic concept.

1.2. Types of Prior Knowledge

Aiming at determining the types of prior knowledge is a debatable issue because of different scholars' perceptions. According to Dochy, De Rijdt, and Dyck (2002) prior knowledge is the whole of persons' knowledge, existing in multiple states (declarative, procedural and conditional). It includes tacit, explicit dimensions, metacognitive, and conceptual knowledge. Based on this definition, three main distinctions will be determined. These distinctions are declarative, procedural, and conditional knowledge (Alexander and Judy, 1988), tacit and explicit knowledge (Polanyi, 1962; Brown & Duguid, 1991; Nonaka, 1994), and factual, conceptual, procedural, and metacognitive knowledge (Anderson et al., 2001).

1.2.1. Declarative, Procedural, and Conditional Knowledge

Alexander and Judy (1988) identified three main types of knowledge which are declarative, procedural, and conditional knowledge.

1.2.1.1. Declarative Knowledge

Declarative knowledge refers to "knowing that" (Anderson, 1995). For example, knowing that Madrid is the capital of Spain, knowing that the Second World War started in 1939. Declarative knowledge is the knowledge of facts, concepts, and meaning of symbols (Alexander & Judy, 1988). Paris, Lipson, and Wixon (1983) stated that declarative knowledge includes "propositional beliefs about the existence of task characteristics and personal abilities. It includes the kind of information that can help in setting goals and adjusting actions to changing task conditions" (p. 303).

1.2.1.2. Procedural Knowledge

Procedural knowledge refers to "knowing how" (Alexander, Schallert & Hare, 1991). For example, knowing how to drive a car. It is the knowledge of how to execute different actions to

solve problems. It is acquired directly from instructions and inducing from experiences (Paris, Lipson & Wixon, 1983). Alexander and Judy (1988) claimed that procedural knowledge is "the completion of declarative knowledge into functional units that incorporate domain specific strategies" (p.376).

1.2.1.3. Conditional Knowledge

Conditional knowledge is the knowledge of when and why several actions are applied, used, and not used. It describes the situations of the application of a procedure (Paris, Lipson & Wixon, 1983). Alexander and Judy (1988) argued that conditional knowledge "entails the understanding of when and where to access certain facts or employ particular procedures" (p. 376).

The three types of knowledge are related to each other. Thus, they provide insights to each other. Alexander, Schallert, and Hare (1991) claimed that one form of knowledge acquisition does not guarantee the others forms of knowledge. Consequently, it is impossible to know the what of thing without paying attention to the how and when of it.

1.2.2. Tacit and Explicit Knowledge

Knowledge can be classified in two different categories: tacit and explicit knowledge (Polanyi, 1962; Brown & Duguid, 1991; Nonaka, 1994).

1.2.2.1. Tacit Knowledge

The term tacit knowledge is introduced by Michael Polanyi in 1962 in his work "Tacit knowledge", he claimed that "we can know more than we can tell" (p. 4). Nonaka (1994) said that tacit knowledge has "personal quality which makes it hard to formalize and communicate. Tacit knowledge is deeply rooted in action, commitment, and involvement in a specific context" (p.16). Chugh (2015) goes further by claiming that tacit knowledge includes skills, ideas and experiences

that a person has in his mind but cannot be easily expressed or transferred to another person by writing it down. In other words, it is not codified.

1.2.2.2. Explicit Knowledge

Explicit knowledge is the codified knowledge; it is formalized and can be expressed in words and numbers. It is quickly transferred from person to another and it is organized systematically (Nonaka, 1994). Explicit knowledge can be found in databases, memos, documents, etc. (Botha, Kourie & Snyman, 2008).

1.2.2.3. Knowledge Conversion

Knowledge creation is a continuous and dynamic interaction between tacit and explicit knowledge, this interaction is called knowledge conversion. Nonaka (1994) proposed a model based on four modes to show how tacit and explicit knowledge can be combined and converted. These four modes are:

a) From tacit knowledge to tacit knowledge which is called socialization.

b) From tacit knowledge to explicit knowledge, or externalization.

c) From explicit knowledge to explicit knowledge or combination.

d) From explicit knowledge to tacit knowledge, or internalization.

Tacit knowledge   To Explicit knowledge

	Tacit knowledge	To Explicit knowledge
Tacit knowledge	Socialization	Externalization
From		
Explicit knowledge	Internalization	Combination

Figure 1.1: Modes of Knowledge Creation. (Nonaka, 1994, p. 19)

The figure 1 illustrates the four modes of knowledge conversion, the first mode is socialization; it is how individuals' tacit knowledge is converted to tacit knowledge. Individuals can acquire tacit knowledge without language; they can acquire it through observation, imitation, and sharing experiences. The second mode is externalization in which tacit knowledge is converted to explicit knowledge. This knowledge is acquired from others and transmitted to the explicit knowledge using externalization mechanisms such as metaphor (i.e. word use). The third mode is combination; it is the conversion from explicit to explicit knowledge. It is the exchange and combination of codified knowledge by individuals through meetings and phone conversations to create new knowledge. The last mode is internalization, it converts explicit knowledge to the tacit one, in this mode the explicit knowledge is acquired, understood, and internalized.

1.2.3. Factual, Conceptual, Procedural, and Metacognitive Knowledge

These four types of knowledge are identified by Anderson et al., 2001. These types are factual, conceptual, and Metacognitive knowledge.

1.2.3.1. Factual Knowledge

It is the essential elements that students must know to be acquainted with a discipline or solve problems. There are two subtypes of factual knowledge: knowledge of terminology and knowledge of specific details and elements. The former includes labels and symbols (e.g. words, numbers, etc.) and the latter refers to the knowledge of elements, and locations (Anderson et al., 2001).

1.2.3.2. Conceptual Knowledge

According to Anderson et al (2001), conceptual knowledge is "the interrelationships among the basic elements within a larger structure that enable them to function together". In other words, it is the knowledge of classification, principles, and models.

1.2.3.3. Metacognitive Knowledge

Metacognitive knowledge is the awareness of one's own cognition and it includes strategic knowledge which refers to general strategies for learning how to think and how to solve problems, knowledge about cognitive tasks that refers to the knowledge of students about various types of cognitive tasks. This knowledge of cognitive tasks includes contextual and conditional knowledge. It also includes the self knowledge which refers to the different strategies and knowledge of cognitive tasks. (Anderson et al., 2001)

1.3. Schema Theory

Schema theory describes knowledge, how it is represented, and how it is used. It helps teachers and researchers to understand the role of individuals' background knowledge in comprehension.

The concept of schema (plural schemata) describes how knowledge is processed, organized, and stored in the human brain. Schema was firstly introduced by the psychologist

Bartlett (1932) in his book Remembering. According to him, schemata are cognitive structures to organize data. These schemata are composed of old knowledge; they are "masses of organized past experiences" (pp.197-198). Schemata are always changing; they are adapted by new experiences. Accordingly, he defined schema as "an active organization, or of past reactions, or past experiences, which must always be supposed to be operating in any well-adapted organic response" (p. 201).

After Bartlett, different researchers presented the concept of schema to refer to different meanings of previous knowledge. These meanings shared the same purpose for presenting background knowledge structure. Schemata for Alderson (2000) are "networks of information stored in the brain which act as filters for incoming information" (p. 17). Moreover, Rumelhart and Ortony (1977) defined schemata as "data structures for presenting the generic concepts stored in memory. They exist for generalized concepts underlying objects, situations, events, sequences of events, actions, and sequences of actions" (p. 101).

According to schema theory, all knowledge that individuals acquired during their lives is organized and stored in human memory (long-term memory) to be retrieved when needed. Individuals store all sorts of schemata for scenes, events, activities, etc. A restaurant schema for example, would contain information about different types of restaurants (fast food places, elegant French restaurants, Chinese restaurants, etc.) (Carrell, 1983).

Schema theory stated that the information that individuals possess as a pre-existing knowledge influence their interpretation of things to be learnt. In other words, schemata interfere and help individuals' comprehension. Thus, learners need to match this new information with the knowledge they already have.

1.4. Types of Schema

According to Carrell (1983), schemata that refer to the individuals' mental stores are divided into two main types. The former is termed formal schema and the latter is called content schema. Each type can affect the reading comprehension of texts and the writing production in return.

1.4.1. Formal Schema

Formal schema is claimed to be the background knowledge about the formal, rhetorical, organizational structures of types of texts and differences in genre (Carrell, 1983). In other words, it refers to the knowledge of different styles of discourse such as the differences between the types of writing, figures of speech, and the differences of structures, etc. The function of formal schema in the view of Carrell and Eisterhold (1983) is to store "background knowledge about, and expectations of, differences among rhetorical structures, such as differences in genre, differences in the structure of fables, simple stories, scientific texts, new paper articles, poetry" (p. 560). The reader needs to possess some formal knowledge, because his/her comprehension of a text is depending on his/her knowledge of how the text is structured and how it is organized. For example, an expository text or an argumentative one has different structures. The reader should have knowledge about these two types of writing or s/he will have problems in understanding the texts. Thus, the reader should acquire the features of different text kinds.

1.4.2. Content Schema

Content schema refers to the individual's background knowledge about the text's content. Carrell and Eisterhold (1983) stated that it is the "background knowledge about the content area of a text, such as a text about washing clothes, celebrating New Year's Eve in Hawaii or Halloween in Carbondale, or about the economy of Mexico, the history of Canada…" (p. 560). This type of

schema covers knowledge that a reader brings to a text. In addition, it refers to one's knowledge about the text's subject matter, every day's knowledge or cultural knowledge whether it is of the native or target language, and the world specialized knowledge (i.e. knowledge about a particular subject). The reader's information about themes and ideas conveyed through a text is important for text comprehension. If the reader has an adequate knowledge about the text topic, his/her chances of comprehension will increase. However, if s/he does not possess background knowledge about the topic, it will be difficult for him/her to understand the topic. For example, if the text is from a different culture that has different schema structures this may lead to misunderstanding.

Formal and content schemata have a crucial effect in the reader's comprehension. Thus, the lack of these schemata may hinder EFL students' understanding of texts or cause miscomprehension.

1.5. Brainstorming Strategy and its Techniques for Activating Prior Knowledge

During writing tasks, many students have problems related to content. They find difficulty in finding ideas and using their prior knowledge that is associated with the given topic. In addition, they do not know how to organize their ideas in order to make appropriate texts. To overcome these problems, it is advisable to utilize brainstorming strategy that has four main techniques. These strategies can help students to get started and develop their thoughts.

1.5.1. Definition of Brainstorming

Brainstorming is one of the most important strategies that stimulates students' thinking and helps them to generate many ideas and viewpoints about a topic. Duigu (2003) defined brainstorming as "jotting down any concept that comes into your head associated with the given topic, in note form, and in random order" (p. 14). Crème and Lea (2008) said that brainstorming is when "you simply note down as many ideas as possible about a topic, in words or phrases. As with

practice writing, it is important that you do not censor what you come up with; just note down anything you can, as quickly as possible" (p. 19)

Brainstorming usually takes about 5 to 10 minutes. In this technique, the student thinks about the ideas that are likely to be related to the topic task, writes down these ideas as quickly as s/he can. S/he can write anything that comes to his/her mind whether it is individual words, phrases, or sentences. The students do not need to worry about the worth of these ideas, whether it is appropriate, directly related to the topic, or pay attention to how it is organized.

Brainstorming can assist students to activate their prior knowledge and together a range of information they have about certain topics. Rao (2007) stated that it is "an absolutely necessary stage at which students activate prior knowledge and skills to apply to the writing task, and find out what information they already obtain and what they still need" (p. 104).

In a brainstorming session, the teacher first asks questions to stimulate the students' thinking about the topic. Then, s/he writes the title of the topic task in the middle of the board and provides a short period of time for students to think about their answers which they will include in their compositions later on. At the end, the teacher or a student writes the answer on the board. All answers should be recorded without evaluation even the repeated ones.

banking   Online shopping   email   chat-rooms

distance education   hacking   information for research

airline bookings   concert / theatre bookings   pornography

information for research   business communication

sharing information: for police etc. / and for terrorists   viruses

poor people have no access / left out
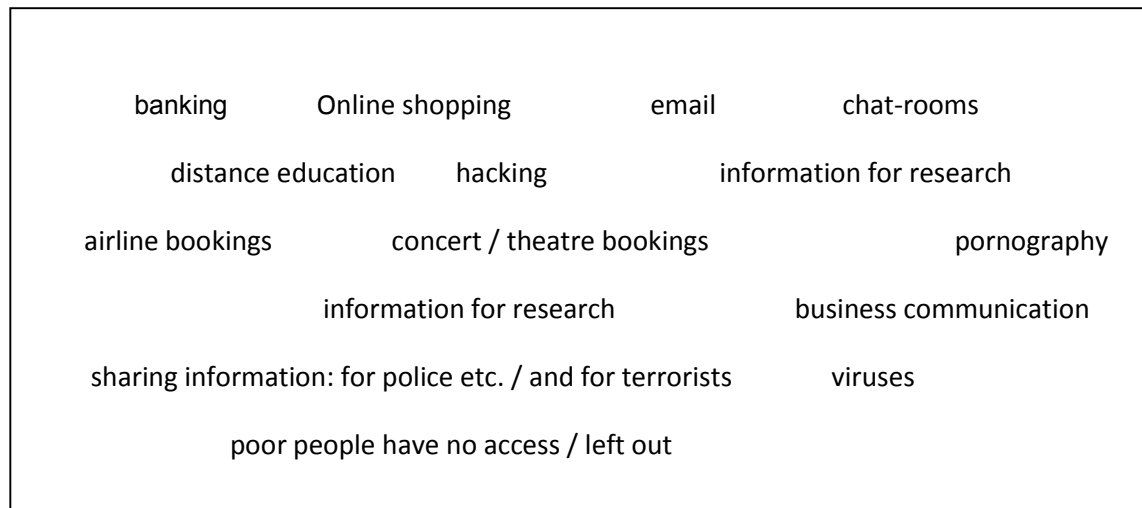
Figure 1.2: The Result of a Brainstorming Session about the Revolutionizing Effect of the Internet and its Problems. (Duigu, 2003, P. 14).

This figure illustrates words and sentences that are related to the internet. The student wrote these ideas without any order.

1.5.2. Types of Brainstorming

Junior Skill Builders (2008) divided two types of brainstorming which are personal brainstorming and group brainstorming. These types have critical role in the students' writing.

1.5.2.1. Personal Brainstorming

Personal brainstorming or mental self-inventory is when an individual finds ideas about the topic that s/he is writing about by asking himself a lot of questions. Later on, s/he can easily answer these questions with little thinking.

1.5.2.2. Group Brainstorming

Group brainstorming is a group of individuals who work together to come up with information in an allocated time without stopping to evaluate these ideas. It allows every participant

to speak openly about whatever idea that comes into his/her mind without worrying to be criticized from the other members of the group. One of the groups may record these ideas. At the end, the students read and organize their ideas to move forward.

1.5.3. Brainstorming Techniques

In the brainstorming strategy, there are many techniques that help students organize their writing compositions such as mapping, free writing, asking questions, and listing.

1.5.3.1. Mind Mapping

Mind mapping is also called clustering or webbing (Galko, 2001). Buzan and Buzan (1993) stated, "It is a powerful graphic technique which provides a universal key to unlocking the potential of the brain" (p. 59). Mind mapping is a helpful technique that assists writers to generate new ideas and relate them to one another. It allows students to translate their ideas and concepts into visual or graphical representation. In addition, it allows students to activate their prior knowledge to see the relationships between these words and ideas because in the mind map each word or phrase is connected to another and linked back to the original word or phrase by using lines.

1.5.3.1.1. How to Create a Mind Map?

To create a mind map, the writer first needs to write in the middle of the page a circled word or phrase that refers to the main idea of the topic. Usually it is bigger than the other circles. Then, s/he writes the subordinate ideas, circling them, and ordering them around the word and drawing lines to show the connection between them. If the students need to put more ideas or details, they may add under each circle another small circle. Finally, the writer needs to draw lines to show connections between the first word and the surrounding words and phrases.
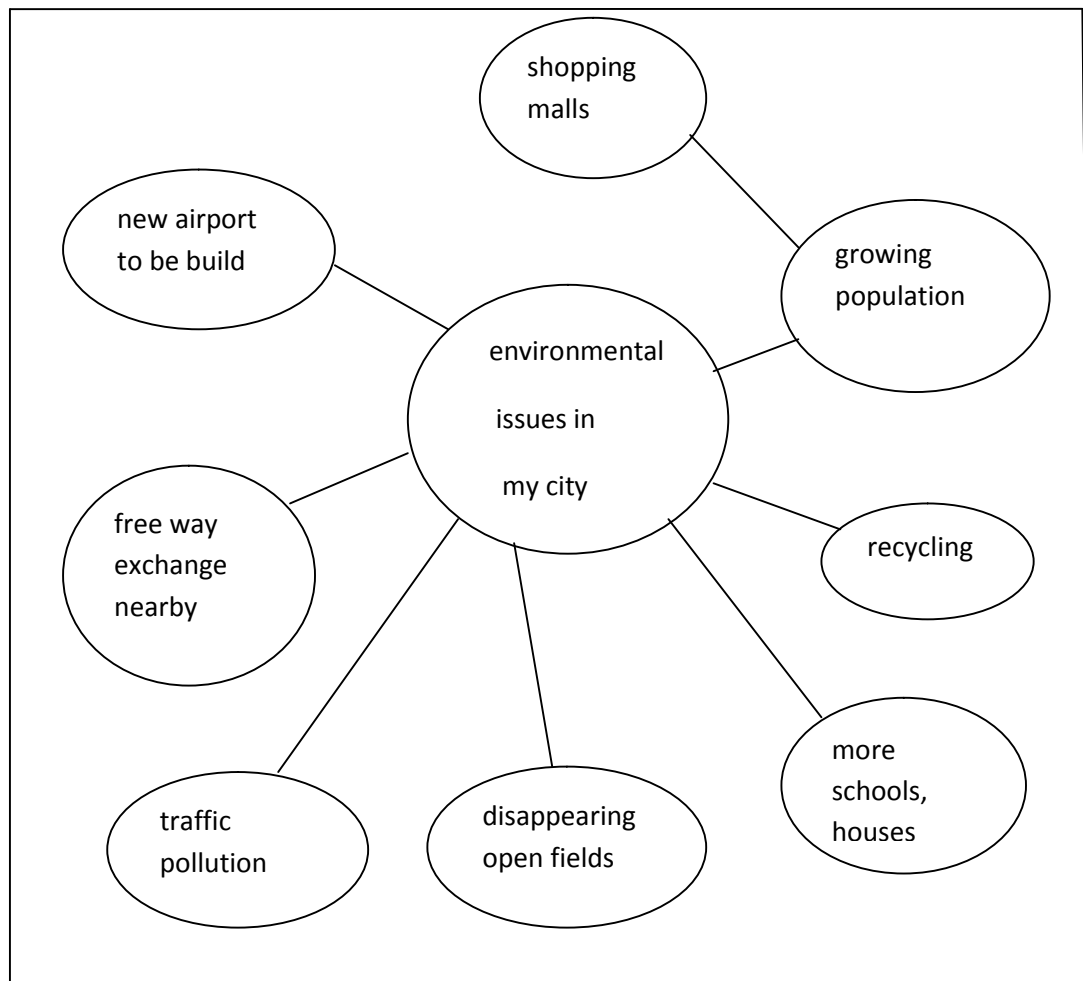
Figure 1.3: An Example of Mind Mapping. (Junior Skill Builders, 2008, p. 81)

1.5.3.1.2. Mind Map Characteristics

Buzan and Buzan (1993) explained that mind map has four characteristics, which includes the following points:

a) The key image or key word is placed in a central image.

b) The main ideas of the key word spread as branches.

c) Branches comprise a key image or key word printed on an associated line. Topics of lesser importance are also represented as branches attached to higher-level branches.

d) The branches form a connected nodal structure.

1.5.3.2. Free Writing

Galko (2001) defined free writing as "writing down your thoughts as they come to you. When free writing, you let your sentences flow freely without thinking about whether the ideas are appropriate or the grammar is perfect. You just start writing" (p. 21). Free writing is when learners write freely anything that comes to their minds without hesitation, without stopping the flow of thoughts, without worrying about spelling, organization, and punctuation mistakes. Usually, free writing does not take too much time. It starts with taking a pen and writing down the ideas quickly. If the writer gets stuck and cannot think about more ideas, he can write such phrases as "I am stuck and can't think of anything else to write…and then oh, I thought of how I feel about…" (Junior skills builder, 2008)

I was very surprised by how many farms we saw when we landed. The next thing that impressed me most was the lack of people in such a large airport. This changed when we got to the airport exit which was jam-packed with people. The schedule board made a nice clicking noise. On the bus ride in we saw many billboards and it took 1 hour to get to the city. Check in at the dormitory was easy and we unpacked. Next, we went on a hunt for food as it was Sunday evening. We found an open kiosk and bought some peanuts and soda. Then back home to the dorm at 2 AM. The next day we immediately went to Red Square and checked out the Kremlin and St. Basil's. The department store GUM had a surprising selection of items. Paying $1 to go to the fancy French stores was quite a shock. We had pizza for lunch.

Figure 1.4: A Result of a Free Writing Session (Galko, 2001, p. 22)

The free writing figure shows that a student is writing about a travel experience. This student writes good ideas but the paragraph needs revision.

1.5.3.3. Asking Questions

In questioning technique, writers ask questions to gather ideas about the content of the topic. Students start by asking the six WH questions who, what, when, where, why, and how about

their topic. Then, they think freely and write down answers for these questions (Brandon & Brandon, 2011). The answers will provide information for developing the topic. This technique helps writers to generate more ideas, determine which ideas need to be developed more and how to organize the paper.

Who?	bad drivers; me as a cop
What?	driving badly, recklessly, unsafely; a cop's job
Where?	on every roadway
When?	all the time
Why?	hurried, disrespectful, self-centered, sick, addiction, hostile, irresponsible
How?	lane-changing, driving illegally in emergency lane, not signaling, passing on the shoulder, tailgating, turning left on red, rolling stop, speeding, driving while intoxicated

Figure 1.5: Questions about Bad Drivers. (Brandon & Brandon, 2011, p 36).

In this figure, the student's work is entitled "If I were a traffic cop". S/he applies the 6 WH questions in order to get different information to use them in his/her writing.

1.5.3.4. Listing

Galko (2001) stated that "When you list, you make a column of words and phrases" (p. 27) Listing strategy is useful for generating ideas, supporting details and examples that are required for devel²oping certain topics. The writer jots down any words or phrases that are likely to be related to a particular topic in a form of a list. Later, he may select items from that list to be used in

his piece of writing. This technique is useful because it gives students opportunities to think about the topic and to see their ideas down on paper before they start writing.

Unsafe lane changers

driving illegally in the emergency lane

not signaling

passing on the shoulder

tailgating

Turning left on red

turning right on red without stop

rolling stop

speeding

driving too slow in fast lane

Driving while intoxicated

driving while on cell phone

driving while reading road map

truck in car lanes

drivers dumping trash
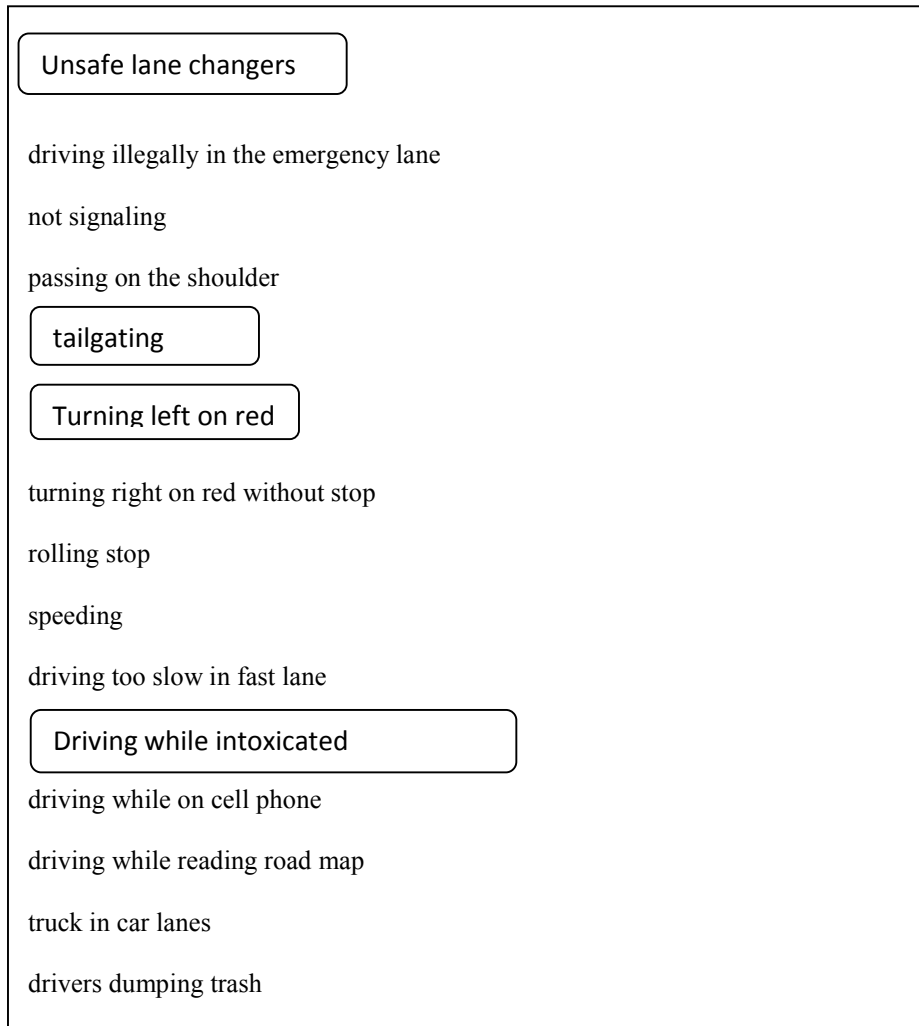
Figure 1.6: A List Showing What Drivers Do or how they Drive. (Brandon & Brandon, 2011, p. 36).

The list figure indicates that the writer makes a list about different ideas randomly. Then, s/he selects four ideas that are relevant to the topic.

Brainstorming techniques are helpful to engage students in thinking about the topic and to activate their prior knowledge in order to generate ideas. Consequently, the use of these strategies will assist students' writing and improve their compositions.

Conclusion

Involving topical knowledge in the learning process is known to positively impact the students' achievement. The chapter in hand dealt with definitions of the term topical knowledge, related concepts, the types of prior knowledge, schema theory, and its types. In addition, it focused on brainstorming strategy and its techniques for activating prior knowledge. The next chapter will deal with writing skill and its assessment using CAF measures.

Chapter Two: Assessment of Students Writing Performance

Introduction

2.1. Definition of Writing

2.2. The Importance of Writing

2.3. Approaches to Teaching Writing

2.3.1. Product Approach

2.3.2. Process Approach

2.3.3. Genre Approach

2.4. Stage of the Writing Process

2.4.1. Prewriting Stage

2.4.2. Drafting Stage

2.4.3. Revising Stage

2.4.4. Editing Stage

2.5. Types of Writing

2.5.1. Narrative Writing

2.5.2. Descriptive Writing

2.5.3. Expository Writing

2.5.4. Persuasive Writing

2.6. Components of Good Writing

2.6.1. Organization

2.6.2. Clarity

2.6.3. Word Choice

2.6.4. Coherence

2.6.5. Mechanics

2.7. Factors Affecting the Writing Skill

2.7.1. Motivation

2.7.2. Anxiety

2.7.3. Self-Esteem

2.7.4. Self-Confidence

2.8. Difficulties Faced by EFL Learners while Writing

2.8.1. Grammar

2.8.2. Vocabulary

2.8.3. Mechanics

2.8.4. Topics of Writing

1.9. Assessment of Complexity, Accuracy, and Fluency Measures

2.9.1. Complexity Measures

2.9.1.1. Grammatical Complexity

2.8.1.1.1. Complex Sentences

2.9.1.1.2. Clauses

2.9.1.1.3. Passive Sentences

2.9.1.1.4. Connecters

2.9.1.1.5. Prepositions

2.9.1.1.6. Holistic Ratings of Grammatical Complexity

2.9.1.2. Lexical Complexity Measures

 2.9.1.2.1. Variation Measures

2.9.1.2.1.1. Word Type

2.9.1.2.1.2. Verb Type

2.9.1.2.2. Lexical Density Measures

2.9.1.2.3. Lexical Sophistication Measures

2.9.1.2.4. Lexical Variation and holistic rating

2.9.2. Accuracy Measures

2.9.2.1. Error Free Frequency

2.9.2.2. Ratio of Errors

2.9.3. Fluency Measures

Conclusion

Introduction

Writing is one of the four language skills which is mainly observed as the most difficult skill to be learnt. Many foreign language learners need considerable effort and practice in order to reach an acceptable level of writing. This chapter is devoted to the writing skill starting by defining writing, determining its importance in the learning process and the main four approaches to teaching it (product, process, and genre). This chapter also embodies the different stages of the writing process, the types of writing as well as the components of good writing. Moreover, it sheds light on the main factors affecting the writing skill and the difficulties faced by English learners while writing. Finally, it ends by the assessment of writing in terms of complexity, accuracy and fluency measures (CAF measures).

2.1. Definition of Writing

Writing is a tool of communication between the writer and the reader. It is used by people to translate their thoughts and feelings into language and transmit it to others. Writing represents certain languages in visual forms; it is the symbolic representation of the human speech. Emig (1977) defined writing as "originating and creating a unique verbal construct that is graphically recorded" (p. 123). These graphic symbols should be combined together to represent words and sentences in order to produce written texts. According to Crème and Lea (2008), "writing consists of words and these words are put together in particular formations to make sentences. Sentences often grouped together into paragraphs" (p. 5). Moreover, the words and sentences that form particular written texts need to be organized by using certain rules in order to produce a good piece of writing. Accordingly, Hyland (2003) described writing as "marks on a page or screen, a coherent arrangement of words, clauses, and sentences, structured according to a system of rules" (p. 3). Brown (2001) stated that writing is a process in which the writer puts his ideas and thoughts on paper, defines his main ideas and structures them in coherent organization.

For other researchers, writing is not simply a way for translating ideas or speech into visual forms, but it is a complex skill that engages the writer in a mental effort. Nunan (1989) stated that "writing is an extremely complex, cognitive activity in which the writer is required to demonstrate control of a number of variables simultaneously" (p. 36). Similar view was given by Grami (2010). He said that writing in a "complicated cognitive task because it is an activity that demands careful thought, discipline, and concentration, and it is not just a simple direct production of what the brain knows or can do at a particular moment" (p. 9).

2.2. Importance of Writing

Writing is the most important skill that any learner has to master in order to learn the language successfully. It is the writers' efforts and capacities to express their feelings and ideas. Coffin et al., (2005) claimed that examination and laboratory reports assessment depend on writing. The understanding and disciplinary knowledge of the writer are valued through writing and that is important for students courses. In other words, writing is a tool used for evaluating the students' knowledge and linguistic competence since their exams always rely on their writing proficiency. In addition, writing is a good tool to shape the students thoughts and help them know how really language is used.

Writing is extremely important in today's society since communication is mostly transmitted through writing. It helps the writer to express his/her ideas, feelings or gives information and that makes him/her more understandable to what happens around him/her.

2.3. Approaches to Teaching Writing

In the last decades, the teaching of writing has been considered an important element of education. Raimes (1983) claimed that there are many ways to teach writing since there are many teachers with different teaching styles and many learners with different learning styles.

Accordingly, various approaches to teaching writing emerged such as: product approach, process approach, and genre approach and have been the concern of researchers of language teaching and learning.

2.3.1. Product Approach

Product approach is a traditional approach for writing instruction which has been dominated from the early 20th century to the mid 1960's. The product approach focuses mainly on the end product which may be linked to a model or essay normally provided by teachers. Nunan (1989, p. 36) stated that "the product approach to writing focuses on the end result of the act of composition, i.e. the letter, essay, story, and so on". In this approach learners are encouraged to imitate model texts for the purpose of acquiring certain grammar rules and vocabulary. In a typical product approach oriented classroom, the teacher provides learners with a model text to be used as a source of imitation. Then, learners read and analyze the model. The essential features of the target structures are highlighted. After that, the learners are asked to produce their own piece of writing using these structures. According to product approach, when learners imitate a model text, they can create coherent words, clauses, sentences, and paragraphs that are grammatically correct.

Product approach mostly focuses on accuracy. It gives more importance to grammar, syntax, and organization while gives little attention the purpose of writing. According to Badger and White (2000, p. 157), "product approaches ...recognize the need for learners to be given linguistic knowledge about texts, and they understand that imitation is one way in which people learn". On the other hand, product approach ignores the role of creativity, writers are not allowed to create their own ideas because they are restricted to imitate text models and they cannot express their thoughts freely.

2.3.2. Process Approach

During the 1980s, there has been a shift from the product approach to the process approach. The focus was no longer on the final product but, it was more on knowing how to write and what are the steps that the writer has to follow.

The process approach is mainly concerned with the act of writing. This approach helps learners to write better by aiding them with knowledge of how to prepare and carry out a writing task assisting them to produce and link ideas. It also makes the process of writing easily understood (Hyland, 2003). Sundem (2006) stated that process approach comprises the mechanics that learners use to create their production. This approach helps learners to generate ideas, choose and organize these ideas, write and revise their pieces of writing.

Process approach focuses more on the different stages that any piece of writing goes through before producing the final version. Nunan stated that "process approaches...focus more on the various classroom activities which are believed to promote the development of skilled language use" (p. 86). Tribble (1996) suggest that process approaches stress "... writing activities which more learners from the generation of ideas and the collocation of data through the publication of a finished text" (as cited in Badger & White, 2000, p. 154). Thus, the main aim of this approach is to make the process of writing clear and understandable. Tribble (1996) identified four stages for producing a piece of writing which are prewriting, drafting, revising, and editing. These stages of writing are done in a recursive way in which writers may return to the pre-writing activities. For example, after doing some editing or revision (as cited in Badger & White, 2000, p. 154).

The process approach emphasizes individual creativity. In this approach, learners perform the writing tasks individually without the help of the teacher, who just guides his students through the writing process. Hyland (2003, p. 10) stated that "process approach to writing teaching emphasizes the writer as an independent producer of texts".

2.3.3. Genre Approach

Genre approach is an approach that is used for teaching writing. It aims at teaching genres that students require in different situations. Martin (1992) defined genre as a goal-oriented, staged social process. Genres are social processes because members of a culture interact to achieve things; and staged because meanings are made in steps and it usually takes writers more than one step to reach their goals (as cited in Hyland, 2003, p. 19). Besides, Richards (2003) declared that "these abstract, socially recognized ways of using language for particular purpose are called genres" (p. 18). In other words, genres are social constructions representing a certain goal that a writer takes into account when s/he writes.

The main focus of the genre approach is on the interaction between the writer and the reader as well as how a form of a text can present the purpose that the writer wants to achieve by his/her writing. Richards (2003) argued that "the central belief here is that we do not just write, we write something to achieve some purposes: it is a way of getting something done" (p. 18). Then, he added "writing instruction begins with the purposes for communicating, then moves to the stages of a text which can express these purposes" (p. 20). Therefore, writing is a social process that integrates the students' knowledge of different text genres and their communicative purposes.

2.4. Stages of Writing Process

Writing process is a series of stages that the writer should go through in order to produce a good piece of writing. The writing process consists of four stages: pre-writing, drafting, revising, and editing.

2.4.1. Pre-Writing Stage

Pre-writing is the first stage of the writing process. This stage is also known as planning (Harmer, 2004). It helps the writer to decide what s/he wants to write about; he can think more

clearly about the topic that s/he is going to write about. The writer can also generate and gather ideas and information about the topic and writes them down on paper. This stage includes anything the writer does before he gets ready to write the first version of his/her piece of writing. Richards and Renandya (2002) stated that "pre-writing is any activity in the classroom that encourages students to write. It stimulates thoughts for getting started. In fact, it moves students away from having to face a blank page toward generating tentative ideas and gathering information for writing" (p. 316).

During pre-writing stage, the writer can use a set of pre-writing activities. Galko (2001) put eight pre-writing strategies for developing topics which are:

- Brainstorming: Brainstorming is an activity that helps students to generate ideas. In this strategy, they let their ideas flow without any judgment. And when they finish, they can delete the ideas that are irrelevant to the topic.

- Free-writing: It is a way in which students write down any ideas that come to their minds without thinking about its correctness.

- Mind-mapping: It is a strategy that helps learners make a visual diagram of their ideas about the topic which is circled in the middle of the paper.

- Journaling: Students write their thoughts and ideas about the topic in a journal.

- Listing: Students make a list of their ideas and information about the topic.

- Visualizing: When the student imagines himself in another situation and describes the situation from his point of view

- Using charts: It is the strategy where the ideas are grouped together visually in a chart.

Pre-writing activities can help to generate ideas. They encourage students to free their thoughts and to discover what they want to say and how to say it. It also enables students to write down their ideas quickly without paying attention to the form, mistakes of grammar, spelling, and

punctuation. Moreover, there is no need to think about the order of ideas because the objective is to produce as many ideas as possible.

2.4.1. Drafting

Drafting is the second stage of the writing process where the writer puts his thoughts and ideas into complete sentences and paragraphs. Galko (2001) defined drafting stage as "writing a rough, or scratch, form of your paper. It's a time to really focus on the main ideas you want to get across in your paper" (p. 49). In drafting stage, the writer starts determining the ideas s/he needs to add to his/her writing and the ones that s/he needs to omit. The writer can also make initial decisions about how the ideas will be organized. Furthermore, during this stage, students have the opportunity to explain and support their ideas without paying attention to spelling, grammar, punctuation, and vocabulary because all the ideas that are related to the topic will be gathered.

2.4.3. Revising

In this stage the writer rethinks and reevaluates the ideas and information that he puts in his/her piece of writing. Brown and Hood (1989) claimed that revising stage is where writers check what they have said, what they want to say and to check if the content and the purpose are clear and appropriate for their readers in a particular learning situation. It is not just a matter of checking spelling, punctuation, and grammar, but it involves arranging, changing, adding, leaving out words and so on. The writer needs to check if the message is clearly conveyed. S/he also needs to make some changes that will help readers to understand the stated ideas; s/he can add any needed information or eliminate ambiguous ones. The writer can change the sentence structure, organization of writing and order of ideas and information. Sundem (2006) considered revising as the neglected stage in writing. Therefore, teachers should ask students to revise their work by themselves or asking others to revise their work.

2.4.4. Editing

Editing is the final stage of learning process, in which the writers make a careful examination of the writing paper. Richards and Renandya (2002) noted that "at this stage, students are engaged in tidying up their text as they prepare the final draft for evaluating by the teacher. They edit their own or their peer's work for grammar, spelling, punctuation, diction, sentence structure..." (p. 318). During this stage, the writer reads his/her piece of writing a number of times. S/he should pay attention to each word and sentence. In addition, he needs to check and give attention to mechanics such as punctuation, spelling, and grammar. Also, s/he needs to check if s/he uses appropriate and clear words and sentences and to correct errors when they are found.

2.5. Types of Writing

There are four main types of writing style depending on the purpose that the writer wants to achieve. Whether he wants to tell a story or to talk about an experience (narrative), describes something (descriptive), explains something or provides instructions (expository), convinces the reader with his/her points of view (persuasive).

2.5.1. Narrative Writing

In this stage of writing, the writer tells a story or talks about events or experiences. Kane (2000) defined narrative as "a meaningful sequence of events told in words. It is sequential in that the events are ordered, not merely random" (p. 366). Moreover, in narrative writing the order of the events is important. However in some cases the writer when s/he tells a story, s/he starts from the end of the story then a flash back to the preceding events (Kane, 2000). Generally speaking, in narrative writing the writer tells a story, the events of the story are chronologically ordered, reacts with the story s/he tells and gives vivid description in order to stimulate the reader's attention.

2.5.2. Descriptive writing

This type of writing focuses on describing a person, place, object, event, or emotions in highly detailed manner that enables the reader to see, smell, taste, hear, or feel what being described. Kane (2000) stated that "description is about sensory experience, how something looks, sounds, tastes. Mostly it is about visual experience, but description also deals with other kinds of perception" (p. 351). Two kinds of descriptive writing exist; objective and subjective. In objective writing the writer is concerned about facts and does not influenced by personal feeling, s/he must be objective in his/her description, it is "how the thing is" (p. 352). In the other kind which is subjective, the writer here uses his/her feelings and perceptions when s/he describes. It is "how the thing seems to one particular consciousness" (Kane, 2000, p. 352).

2.5.3. Expository writing

When a writer writes in an expository style; s/he tries to explain something or provides an instruction. The main purpose of this type of writing is to expose, to tell about a subject without including opinions and emotions. Kane (2000) stated that "expository paragraphs deal with facts, ideas, and beliefs. They explain, analyze, define, compromise, illustrate…they are the kinds of paragraph we write in reports or term papers or tests" (p. 89).

2.5.4. Persuasive Writing

Unlike the expository style, in persuasive writing the writer tries to convince the reader to agree with his/her opinions and beliefs. In this type of writing the writer uses arguments, justifications in order to make his/her point of view strong and convince the reader to perform an action or adopt a particular belief. S/he develops a topic which is debatable and may have more than one side.

2.6. Components of Good Writing

Good writing has several elements that writers should take into consideration while writing. According to Starkey (2004) a good writing should include organization, clarity, language use, coherence, and mechanics.

2.6.1. Organization

It is an essential element of a good writing. It refers to a specific format, structure, or the order of ideas. A well organized text makes the reader more comfortable and confident about the information that are represented. Starkey (2004) argued that an organization of an essay is a map for the reader. It shows him the direction from the first to the last sentence. So the reader can see how different ideas of the written essay work together.

2.6.2. Clarity

This fundamental element refers to the process of making the content clear, concise, and easy to understand. Murray and Hughes (2008) stated that "Clarity is essential, so you need to make your writing easy to read and accessible to your readers possible" (p. 86). The goal that a writer wants to achieve is to convey information that may include facts which are written in a good and a clear form. If this is not reached, the reader cannot understand what the writer exactly means (Starkey, 2004).

2.6.3. Word Choice

Word choice is a very important part in any type of writing. It is the matter of word selection; the writer chooses specific words that capture meaning and arranges them in sentences and paragraphs. Doing so increases the reader's understanding of what the writer wants to convey. Starkey (2004) claimed that there are two factors that should be determined while choosing words.

The first one is denotation which is the literary word meaning and the second one is connotation which involves feelings, and cultural assumptions.

2.6.4. Coherence

Coherence refers to the arrangement of ideas in a clear way that makes them easy to understand by the reader. It is not a matter of how much these ideas are original and insightful but is if the writer is be able to present them in a clear and a logical way (Murray & Hughes, 2008). Furthermore, coherence is combining words and sentences in a logical way by using grammatical devices to connect ideas in order to write a coherent piece of writing. Harmer (2004) stated that "we can use various grammatical devices to help the reader understand what is being referred to all times, even when words are left out" (p. 22).

2.6.5. Mechanics

According to Kane (2000), the word mechanics refers to "the appearance of words, to how they are spelled or arranged on paper" (p.15). Furthermore, Harmer (2004) claimed that the mechanical components of writing skill include handwriting, spelling, punctuation, and well-formed construction of sentences, paragraphs, and texts. Mechanics are important in the writing process .the first component is handwriting, if the writer's handwriting is not clear that makes what s/he writes vague and not clear as well. Thus, the writer's handwriting should be clear to achieve the writer's goal. In addition, another component of mechanics is punctuation; it includes comma, semicolon, dash, and full stop. Kane (2000) stated that "all punctuation exists, basically to help readers understand what you wish to say. Mostly marks of punctuation do this by signaling the grammatical or logical structure of a sentence" (p. 379). Furthermore, spelling is one of the most important components in mechanics. It helps the reader to understand clearly what the writer means exactly. Harmer (2004) claimed that "spelling make English relatively easy to read" (p. 46)

2.7. Factors Affecting the Writing Skill

Many learners consider writing as a difficult skill to master, and may face many problems while writing. The most of the factors that influence their compositions are psychological factors such as motivation, anxiety, self-esteem and self-confidence.

2.7.1. Motivation

Motivation is probably the most important factor that determines the success or failure of learners in the learning process. Dörnyei (2001) considered motivation as a vague concept and a broad umbrella that covers a variety of meanings. Harmer (2000) offered a definition of motivation. He said that "motivation is the extent to which you make choices about goals to pursue and the effect you will devote to that pursuit" (p. 72).

Motivation is an important variable that has a significant effect in language learning success. Brown (2000) stated that "it is easy in second language to claim that a learner will be successful with the proper motivation" (p. 160). Moreover, Gardner (1985) argued that motivation is "the combination of effort plus desire to achieve the goal of learning, the language plus favorable attitudes toward learning the language" (p. 10). Oxford (1990) highlighted the importance of motivation for influencing language learning as well as self- esteem, anxiety etc. She claimed that "the affective side of the learner is probably one of the very biggest influences on language learning success or failure" (p. 140)

Some students find difficulties to answer classroom tasks especially in writing because these tasks may not motivate them. Therefore, teachers are required to provide activities that maintain the interest in the classroom atmosphere. According to Davis (2009), "some students seem naturally enthusiastic about learning; but many need or expect their instructors to inspire, challenge, and stimulate them" (p. 278).

2.7.2. Anxiety

Anxiety generally refers to person's tendency to be anxious (Bailey, Onwuegbuzie, & Daley, 1999). Spielberger (1983) stated that anxiety is "the subjective feeling of tension, apprehension, nervousness, and worry associated with an arousal of the atomic nervous system" (as cited in Brown, 2006, p. 148).

Anxiety is an important factor that affects the acquisition of a language. According to Dörnyei (2005), "there is no doubt that anxiety affects L2 performance" (p. 198). In addition, Fontana (1995) claimed that in classroom settings, the learner's level of anxiety has different effects on the process of learning. A mild degree of anxiety can be useful aid to learning, but too much can have an inhibition effect. The degree of anxiety varies from one learner to another and from one task to another. The more challenging is the task, the more the learner is anxious.

The feeling of worry and fear affects how learners feel and behave. Many students experience a state of fear before accomplishing given tasks including writing, this feeling prevent them from being successful in their productions. Therefore, students need to reduce their fear when learning. Oxford (1990) argued that "good language learners are often those who know how to control their emotions and attitudes about learning" (p. 140). Some students avoid writing because they fear to be judged by the teacher, they do not understand the task or have difficulties with the type of writing.

2.7.3. Self-esteem

Coopersmith (1967) stated that self-esteem is "a personal judgment of worthiness that's expressed in the attitudes that individuals hold toward themselves" (as cited in Brown, 2006.p.154). Self-esteem is a critical factor that influences foreign language learning. Self-esteem refers to the way in which individuals evaluate themselves. Generally speaking, if a learner has high level of

self-esteem, this can be a useful aid to learning. According to Fontana (1995), high self-esteem can be due to many measures such as "parental attention, encouragement, affection, consistency, and democratic behavior" (p. 148). Learners with low self-esteem may face some difficulties in language learning in comparison with learners with high self-esteem. Coopersmith (1968) demonstrated that "children with high self-esteem consistently perform better than children of similar ability with low self-esteem" (as cited in Fontana, 1995, p. 148).

2.7.4. Self-confidence

Self-confidence refers to the individuals beliefs about their abilities to reach their goals successfully or to finish certain tasks. Dörnyei (2005) defined self-confidence as "the belief that a person has the ability to produce results, accomplish goals, or perform tasks competently" (p. 73)

Self-confidence is considered as an essential factor that affects the students' writing production. Many students find difficulties in writing because they lack self-confidence and have a low belief about their abilities. Crème and Lea (2008) stated that "there are many reasons for finding writing difficult, but probably a fundamental one is lack of confidence" (p. 8). Many students lose their confidence because they have bad experiences with writing. For example, if a student fails many times in producing a good piece of writing, s/he may have a negative belief about his/her capacities and may feel that he is unable to write.

2.8. Difficulties Faced by EFL Learners while Writing

Writing is the most difficult skill to acquire. According to Westwood (2008, p. 56) "developing clear and accurate expression through writing presents major problems for most students with learning difficulties". Producing a good piece of writing is a challenging task for EFL learners. Accordingly, many learners face difficulties in their writing. Difficulties in grammar, vocabulary, mechanics, and topics of writing are the most common areas of difficulty.

2.8.1. Grammar

Grammar is considered as the core of any foreign language. Therefore, it is necessary for EFL learners to be aware of grammar rules in order to form accurate structures and convey meanings successfully. However, many language learners still encounter difficulties in grammar when writing tasks. The most grammatical errors are related to the use of prepositions, articles, verb tense and form, the use of negative form, word order, and plurality. These grammar errors are mainly caused by over generalization of the rules or incomplete application of grammatical rules.

Lems, Miller and Soro (2010) stated that writing requires more formal grammar and relies more on the organization of the words. They explained how written language differs from oral language. These include the lack of gestures or expressive qualities of human speech. Written language avoids redundancies or repetitions found in the oral language which are replaced by complex sentences, punctuation marks, and function words. In addition, learners are writing in the absence of the reader/hearer which may cause difficulties for learners because s/he is not there to give immediate feedback. Thus, the writer needs to use an accurate grammar when writing tasks.

2.8.2. Vocabulary

Vocabulary is a critical part of learning a foreign language. Poor vocabulary is considered as one of the main causes of writing difficulties that is faced by EFL learners. According to Baba (2009), "language learners are aware of the significance of vocabulary, and they often consider a lack of knowledge of vocabulary to be the cause of deficiencies in their writing skills" (p. 192).

Having a good storage of vocabulary will help learners to generate more ideas for their writing compositions and to express their thoughts. However, many EFL learners have poor vocabulary knowledge. This may lead to difficulties in writing. For example, learners may use the same words repeatedly.

2.8.3. Mechanics

Harmer (2004) stated that writing as any other skill has its mechanical components which include handwriting, spelling, punctuation, and the construction of well-formed sentences, paragraphs, and texts.

Mechanics are important in achieving a good piece of writing. However, many EFL learners face difficulties in using these mechanics. For example, spelling is difficult for many language learners. Saddler (2006) stated that learning to spell in a language like English is not an easy task, and many students have difficulties in generating the correct spelling of the words they want to use in their writing (as cited in Westwood 2008).

According to Harmer (2004), English spelling is considered the most challenging task for writers because it has many irregularities and because of the lack of spelling-sound correspondence. That is to say, the same sounds can be spelt differently and the same spelling can be pronounced differently. These differences in English spelling cause confusions for language learners when writing and also may hinder their writing. Nation (2009) claimed that learners may refuse to do writing tasks or to use certain words which are difficult to spell. To quote his own words "if learners have poor spelling skills, they will typically avoid writing tasks, and when writing will avoid words that they find difficult to spell" (p. 18). Therefore, learners are required to have good spelling skills in order to have fluent and accurate pieces of writing.

2.8.4. Topics of Writing

Many researchers claimed that topics of writing have an important effect on the EFL writing performance. Lee (2008) examined the effects of task-related elements including topic familiarity which is perceived differently by writers on the students' writing performance. The results obtained indicate that the students writing performance is greatly affected by the topics of

writing. Another research made by Huang (2008) focused on the effects of essay topics on the writers' abilities. He claimed that essay topic is an important aspect that affects the students' ability to write. The research findings showed that the more students are familiar with the topic, the more they can succeed in their writing because they have more opportunity to use their previous knowledge to generate ideas that are adequate to essay topic. However if the topic is unfamiliar there would be a lack of ideas which will result in poor writing. Huang (2008) stated that the majority of writers said that whether an essay topic is easier or more difficult largely dependent upon the writers' knowledge of the topic of writing.

1.9. Assessment of Complexity, Accuracy, and Fluency Measures

One important way to assess the learners writing development is by measuring the complexity, accuracy, and fluency of texts. The CAF aspects of writing development have been explored in various L2/EFL writing development studies (Larsen -Freeman, 2006; Wolf Quintero, 1998; Ishikawa, 1995). The aim is to find ways for teachers and researchers to measure the learners writing production and to describe the target language performance. Quintero, Inagaki and Kim (1998) argued that "the more proficient second language writers are more fluent, accurate, and complex in their writing than less proficient writers" (p. 4). These measures are labeled with a name and symbol which represents the method of calculation. For example, frequency counts the number of clauses (C), t-units (T) or error- free t-units (EFT) are referred to a symbol with no mathematical formula (Quintero, Inagaki & Kim, 1998). Complexity, accuracy, and fluency measures can be evaluated in terms of frequency or ratio. According to Quintero, Inagaki, and Kim (1998), frequency is the first type of calculation which is a "simple count of a particular feature, structure, or T-units" (p. 9). This developmental measure counts the number of words, clauses, or T- units in a writing sample in order to get a frequency score.

Ratio measure is another type of calculation in which the presence of one unit type is expressed as a percentage of another type of unit or one type of unit is divided by the total number of comparable units, for example errors-free units per total units of the same type. Ratio is also used to calculate the length of a given unit. For example, word per clause, sentence or t-unit, the rate of accuracy within the given unit (e.g. error or free-error units per clause, sentence or t-unit), or the complexity of a given unit (e.g. clauses per t-unit or t-units per sentences).

2.9.1. Complexity Measures

The concept complexity is definitely the most challenging and difficult dimension in CAF Triad (Palloti, 2009). According to Bulté and Housen (2012) complexity referred to as "(1) the number and the nature of the discrete components that an entity consists of, and (2) the number and the nature of the relationships between the constituent components" (p. 22). Besides, Quintero, Inagaki and Kim (1998) stated that "complexity reveals the scope of expanding or restructured second language knowledge" (p. 4). Furthermore, Lennon (1990) claimed that complexity refers to "using wide range of structures and vocabulary" (p. 4). In other words, it is the production of more complex and various structures and vocabulary. Quintero, Inagaki and Kim (1998) classified complexity measure into two types which are grammatical complexity and lexical complexity. (as cited in Quintero, Inagaki & Kim, 1998)

2.9.1.1. Grammatical Complexity

Quintero, Inagaki and Kim (1998) claimed that grammatical complexity measure is "a wide variety of both based and sophisticated structure are available and can be accessed" while a lack of complexity indicates that "only a narrow range of basic structures are available or can be accessed" (p. 69). Moreover, Iwashita, Brown, McNamara and O'Hagan (2008) argued that grammatical complexity refers to "characteristics of utterances at the level of clauses, relations, that is, the use of conjunctions and in particular, the presence of subordination" (p. 32).

In addition, Foster and Skehan (1996) stated that the development of grammatical complexity in writing identified as "progressively more elaborate language that may be used, as well as greater variety of syntactic patterning" (p. 303). This means that the development of grammatical complexity is related to the language elaboration and linguistic variation. That may be found in a piece of writing.

2.9.1.1.1. Complex Sentences

According to Bardovi-Harling and Bofman (1989), a complex sentence is "a multiclausal sentence exhibiting subordination" (p. 20). In other words, it is a sentence that consisted of one independent clause with one or more dependent clause.

Ishikawa (1995) counted the total number of clauses divided by the total number of sentences (C/S). The unit of analysis in the study was sentences. The study was conducted with three groups of beginning level writers over three months. One of the groups showed significant results because there is an increase in clause per sentence ratio.

2.9.1.1.2. Clauses

Hunt (1965) defined clause as "structure with a subject and a finite verb" (p. 15). There are two types of clauses. The first type is independent clause which may be considered as a simple sentence, it can stand alone. The second type is dependent clause which is a clause that cannot stand alone; it depends on an independent clause to make a complete thought. This type of clause has three types which are adverbial, adjectival, and nominal clause.

a) Adverbial Clauses (AdvC)

An adverbial clause is a dependent subordinate clause. It begins with a subordinate conjunction and other types of words function as adverb. For example, he failed in passing his

exams because he did not revise his lessons. The subordinate clause is (because he did not revise his lessons).

b) Relative / Adjectival Clause (AdjC)

A relative clause is a dependent clause that functions as an adjective; it describes the noun of the main clause. Moreover, relative clause starts with a relative pronoun or adverb such as who, whom, whose, which are relative pronouns and when, why, and where as relative adverbs. For example, she has a brother who is a teacher.

c) Nominal/ Noun Clause (NomC)

This type of clauses indicates a group of words that function as a noun that can be a subject, object, or a complement. It is usually starts with a relative pronoun and rarely with a subordinate conjunction. For example, do you know what the weather will be? The noun clause is (what the weather will be?) it acts as an object.

In grammatical complexity measure the dependent clauses ratios are counted by dividing the total number of dependent clauses by total number of clause (DC/C). Kameen (1979) found no significant difference in his comparison between two groups of good and poor writers based on holistic writing (as cited in Quintero, Inagaki, & Kim, 1998).

2.9.1.1.3. Passive sentences (PassS)

A passive sentence is a sentence that consists of a subject and a verb, in this sentence, the object performs the action and not the subject. It takes the subject place in the beginning of the sentence. Kameen (1979) counted the passive sentence using different ratios such as passives per t-unit (Pass/T), passives per clause (Pass/C), and passives per sentence (Pass/S). These measures are conducted with two groups that were classified into good and poor writers based on holistic rating.

In the passive per t-unit ratio, he found a significant difference with the good writers who had 20 passives per t-unit while poor writers group had 05. Furthermore, in the passive per clause measure, he found that good writers had 12 passives per clause and the poor writers 03 passives per clause. In the third ratio, he also found a significant difference between the two groups, for good writers they produced 24 passives per sentence while poor writers had 06 passives per sentence (as cited in Quintero Inagaki & Kim, 1998).

2.9.1.1.4. Connecters (Conn)

Another measure in grammatical complexity is connecters **(Conn**) or conjunctions. Conjunctions act as connecters to combine words in order to produce coherent texts. Moreover, this measure counts the total number of conjunctions that may be found in a written text. Homburg (1984) counted the total number of connecters in samples of different holistic levels of second language writers. He found no significant differences between the three levels.

2.9.1.1.5. Prepositions (p)

Prepositions are words that express a relationship between other words. They can be used with different parts of speech. This grammatical complexity measure counted the total number of prepositional phrases (PP). Sharma (1980) conducted this measure in a comparison between low intermediate and advanced learners using a rewriting task. No significant difference was found in the number of prepositional phrases (as cited in Quintero, Inagaki & Kim, 1998).

2.9.1.1.6. Holistic Ratings of Grammatical Complexity

According to Charney (1984), holistic rating is "a quick, impressionistic qualitative procedure for sorting or ranking samples of writing" (p. 67). Holistic rating or global grading is a method used to evaluate a piece of writing based on its overall quality. Kameen (1979) counted the total number of passives divided by the total number of sentences based on holistic rating. The

study was conducted with two different level groups. The results are significantly different in which the good writers had 24 passives per sentence and poor writers had 06 passives per sentence.

2.9.1.2. Lexical Complexity Measures

Lexical complexity refers to the lexical variations and sophistication of words or word types such as: nouns, verbs, adverbs, and adjectives. There are three types of ratio measures that are used to measure the lexical complexity: Type/token ratio or variation ratio (word type, verb type), lexical density or token/token ratio, and lexical sophistication ratio or type/type ratio (Quintero, Inagaki & Kim, 1998).

2.9.1.2.1. Variation Measures

The lexical variation measures include a word type per total words measure (WT/W), a verb type per total verbs measures (VT/ V), and the total number of lexical word type per lexical words measure (LWT/ LW) (Quintero, Inagaki & Kim, 1998).

2.9.1.2.1.1. Word Type

The first lexical variation measure is used to measure the word variation (WT/W). It counts the total number of different word types divided by the total number of words in a particular text. Cummins and Mellow (1996) measured the word variation with intermediate and advanced level of Japanese and French English learners. The French intermediate learners scored 47.3 word types per word whereas the advanced ones had 48.3. In the Japanese participants, the intermediate learners had 48.9 word types per word while the advanced level had 51.2 (as cited in Quintero, Inagaki & Kim, 1998).

2.9.1.2.1.2. Verb Type

The second lexical variation measure is verb variation. It is measured by dividing the total number of different verb types by the total number of verbs. Harling and King (1989) used the word type ratio in a comparison between native and second language sixth-grade students who were asked to write a narrative text and letters (as cited in Quintero, Inagaki, & Kim, 1998).

2.9.1.2.2. Lexical Density Measures

Lexical density or token/token ratio refers to the total number of lexical words or content words divided by the total number of words (LW/ W). Quintero, Inagaki, and Kim (1998) claimed that "dependent on the grammatical system of the language, which dictates how many high-frequency grammatical words must be used in proportion to lexical words" (p. 105). Linnarud (1986) viewed that native writers had a higher lexical density and produced more meaningful words while the second language writers had lower lexical density with little amount of lexical words (as cited in Quintero, Inagaki & Kim, 1998).

2.9.1.2.3. Lexical Sophistication Measures

The lexical sophistication measures include the sophisticated verb types per verbs measure which is a type/token ratio, sophisticated word types per word types' measure which is the type/type ratio, and lexical words per lexical words measure which is token/token ratio (Quintero, Inagaki & Kim, 1998).

2.9.1.2.4. Lexical Variation and Holistic Ratings

The third lexical variation measure is the lexical variation. It explores the ratio of the overall numbers of different lexical word types per total number of lexical words (LWT/LW). Engber (1995) claimed that there is a significant relationship between holistic ratings and lexical

variation at intermediate and advanced levels of students' proficiency. Accordingly, students at a higher proficiency level have the ability to produce a wide range of vocabulary and more lexical words unlike the students of low level. However, Nihalani (1981) argue that there is no relation between holistic scores and lexical variation measures (as cited in Quintero, Inagaki & Kim 1998).

2.9.2. Accuracy Measures

Palloti (2009) indentified accuracy as "the simplest and most internally coherent construct, referring to the degree of conformity to certain norms" (p. 59) (1992). Besides, Foster and Skehan (1996) defined accuracy as the writer's ability of being free from making errors through the writing process. According to Quintero, Inagaki, and Kim (1998), errors are considered as essential issues in second language development analysis. They assumed that it is easy for proficient writers to produce and increase the language accuracy. There are two developmental approaches that are used to measure the writers' accuracy.

2.9.2.1. Error Free Frequency

This approach focuses on whether a structured unit of some type (sentences, clauses, and t-unit) is error- free. Different measures are used in these approaches. One of these measures counts the number of error- free t-unit, Sharma (1980) found that the number of error-free t-unit decreased from low intermediate to high intermediate and also increased for the advanced learners. Additionally, there is another measure that calculates the number of error- free clauses (EFC). This measure is conducted by Ishikawa (1995). She found that only a group from two groups of beginning- level writers increasingly improved on this measure (as cited in Quintero, Inagaki & Kim, 1998).

2.9.2.2. Ratio of Errors

Second language writing development studies have used various accuracy ratios. Arnaud (1992) conducted a study used grammatical errors per word. He noticed that the grammatical errors per 100 words decreased from 2.43 to 1.75 for advanced level. Another ratio to be counted is lexical errors per clause (Lex E/C). Bardovi–Harling and Bofman (1989) counted the (Lex E/C). They noticed that lexical errors still exist in the advanced level group (as cited in Quintero, Inagaki, & Kim, 1998).

2.9.3. Fluency Measures

Fluency is the third index in CAF triad. According to Quintero, Inagaki, and Kim (1998) being fluent indicates that you" can produce written language rapidly, coherently, appropriately and creatively" (p.13). For them, fluency occurs when more words and more structures are accessed while a lack of fluency means small numbers of words are accessed. Additionally, Polio (2001) stated that fluency in writing is the matter of how a piece of writing is native like. Fluency is measured through counting the frequency (number), rate, and length of production units (Quintero, Inagaki, & Kim, 1998).

The frequency measure is referred to the occurrence of a particular production unit such as sentences, clauses, words, and t-unit. The number of words (W) is one of the main frequency measures; it counts the total number of words that a piece of writing may contain. Another frequency measure is the number of verbs; it calculates the total number of verbs (V) that are used in a text. Additionally, the number of sentences (S) is measured through counting the number of sentences per text (Quintero, Inagaki & Kim, 1998). Different studies conducted to investigate the effect of the words, verbs, and sentences or writing proficiency such as Homborg (1984) and Ishikawa (1995), they found no significant effects of the number of words and sentences on the students' writing proficiency.

The fluency ratio is the second fluency measure. It is more effective than the frequency one. The fluency ratio counts the length of a particular unit production such as the length of clause (W/C) which refers to the total number of words divided by the total number of clause, the t-unit length (W/T) which is counted by dividing the total number of words by the total number of t-units, and the sentence length or the total number of words per total number of sentences (W/S).

Conclusion

To sum up, this chapter clarifies the writing skill by defining it, determining its importance and different approaches for teaching it. Besides, it covers the different stages, types and the main components of a good writing. The focus has been also on factors affecting the students writing and difficulties that may face through the writing process. Moreover, this chapter highlights the assessment of writing through CAF measures. The following chapter will represent the methodology followed in the investigation of the impact of topical knowledge on students writing performance analysis of the data collection and discussion of the investigation findings.

Chapter Three: Field Work

Introduction

3.1. Population and Sampling

3.2. Research Instruments and Data Collection Procedures

3.3. Topical Knowledge Test

3.3.1. Description of topical Knowledge Test

3.3.2. Analysis of Topical Knowledge Test

3.3.3. Interpretation of Topical Knowledge Test

3.4. Assessment of CAF Measures of Writing Performance

3.4.1. Description of the Writing Ability Test

3.4.2. Fluency Measurements

3.4.3. Accuracy Measurements

3.4.4. Complexity Measurements

3.4.4.1. Grammatical Complexity

3.4.4.2. Lexical Complexity

3.4.5. The Analysis of the Relationship between Topical Knowledge Test Scores and CAF Measures

3.5. Summary of the Results

3.6. Overall Analysis of the Results

Conclusion

Introduction

The current study aims to investigate the impact of topical knowledge on the students' writing performance. The previous chapters focused on a review of literature about the role of topical knowledge on EFL writing performance. This third chapter deals with the field work; it identifies the population and the chosen sample of students who contributed in constructing this research work. Then, it highlights the procedures used for collecting data, analyzes and discusses the findings obtained from the research instruments. To accomplish the aim of this study, a topical knowledge test and a writing ability test were conducted with first master students of English at Mohammed Seddik Ben Yahia University, Jijel.

3.1. Population and Sampling

The population of this study was first year master students of English at Mohammed Seddik Ben Yahia university of Jijel. Since it is impossible to conduct this study on the whole population, a group of forty-four (44) students was chosen randomly in order to give chance to the whole population to participate in this research. The reason behind selecting first year master students is that their level serves significantly our study. Since they are supposed to have a good writing proficiency, this can help to see clearly the effect of topical knowledge on the writing performance.

3.2. Research Instruments and Data Collection Procedures

Data collection relies primary on information gathered from the participants by using two tools which were considered suitable: a writing ability test and a topic knowledge test.

First, the writing ability test was administered to the learners for the aim of shedding light on the effect of topic knowledge on the students writing ability. The test was in essay from which is based on the topic given by the researchers.

Second, the topic knowledge test was used to examine the students' knowledge about the given topic. The students' achievement was analyzed by collecting data from both tests.

3.3. Topical Knowledge Test

3.3.1. Description of the Topical Knowledge Test

The topic knowledge test aims at evaluating and capturing the degree of the students' knowledge. It was introduced by a short text indicating the aim of the study and giving instructions on how to fill the test. The test was made up by eleven questions which are divided into close-ended and open-ended questions. In the first type, students are asked either to choose the most appropriate answer from among the given choices (Q4,Q5,Q7,Q8) or to choose and give a further explanation for their choices (Q6,Q10,Q11) the second type provides opportunities for students to answer by using their own words (Q1,Q2,Q3).

The first three questions are set to check the students' knowledge about autism, the symptoms that are considered as a sign of autism and its expected causes. In the fourth, the fifth and the sixth questions, we asked students about the age at which autism usually appears, whether boys or girls are more expected to have autism and whether it differs from one person to another. In the seventh, eighth and ninth questions, we asked students about the diagnosis of this disorder, whether autistic children can recover and if they are more likely to have mental health difficulties. In the last two questions, we asked students if enough work opportunities are assigned to autistic people and if those people should go to special schools.

3.3.2. Analysis of Topical Knowledge Test

Q1: What is autism?

Table 3.01

Students' Definitions of Autism

Answers	N	%
Correct	06	14
Approximate	16	36
Acceptable	08	18
Vague	11	25
False	03	07
Total	44	100

Autism can be defined as a neurological developmental disorder that affects how an individual communicates and behaves with other people and the environment around him/her. People with this mental condition are different in terms of behavior, social interaction, as well as language and communication (Autism Spectrum Australia, 2017).

Based on the results from the table above, 14% of students defined autism correctly, 36% gave approximate answers while 18% of them have acceptable answers. The rest of students fail to define autism (07%) or give vague answers (25%).

Q2: What are the symptoms of autism?

Table 3.02

Students' Answers about the Symptoms of Autism

Answers	N	%
Correct	10	23
Approximate	08	18
Acceptable	08	18
Vague	14	32
False	04	09
Total	44	100

The most common symptoms of autism are:

➢ Communication problems: people with autism have difficulties in communication. For example, they may start speaking at a delayed age. Also, they may speak in single words or

repeat certain phrases, and fail or be slow to respond to their names. Moreover, they rarely start conversations and have difficulty with maintaining conversations.

➢ Social interaction: many autistic people have troubles in engaging in every day social interactions. They may avoid eye contact with others. Besides, they may find difficulties in understanding feelings and emotions of others and expressing their own. Moreover, they rarely show interest and enjoyment with other people.

➢ Sensory problems: many autistic people are sensitive to lighting sudden, specific strong smells and load sounds. For example, they dislike or show pain from a ringing telephone.

➢ Repetitive behaviors: many autistic people perform repetitive body movements such as hand flapping. In addition, they may repeat the use of objects such as switching lights on and off or placing objects in a strict order (Autism Spectrum Australia, 2017).

The table above shows that ten students (23 %) answered the question correctly while eight students (18%) gave approximate answers. Also, the same number of students gave acceptable answers. However, the percentage of vague answers given by students is (32 %).

Q3: what are the expected causes of autism?

Table 3.03

Students' Answers about the Causes of Autism

Answers	N	%
Correct	02	04
Approximate	01	02
Acceptable	03	07
Vague	14	32
False	24	55
Total	44	100

There are probably many causes of autism but according researches, the most expected ones are genetic factors and environmental factors.

➢ Genetic factors: different genes can be involved in autism. For some autistic children, autism can be associated with a genetic disorder (e.g. Rett syndrome or fragile x syndrome), but for other children, genetic changes may increase the risk of autism.

➢ Environmental factors: for some researchers, autism caused by some environmental factors such as viral infections, medications, complications during pregnancy, and air pollution (Causes of autism, n.d).

The results displayed in the table 3 show that the majority of students failed in answering the question and 32% of them gave vague answers while the minority of students succeed in answering the question with the percentage of 4% for correct answers and 2% for approximate ones.

Q4: Autism usually appears at the age of:

1 year   ☐

3 years   ☐

5 years   ☐

9 years   ☐

Table 3.04

Students' Answers about the Age at Which the Symptoms of Autism Usually Start

Answers	N	%
Correct	24	55
Approximate	00	00
Acceptable	01	02
Vague	00	00
False	19	43
Total	44	100

The symptoms of autism are generally obvious at the age of 3

The table above indicates that 55% of students give the right answer while 43% of give wrong answers.

Q5: Who are more likely to have autism?

Boys ☐

Girls ☐

Both ☐

Table 3.05

Students' Answers about the Most Gender Affected by Autism.

Answers	N	%
Correct	37	84
Approximate	00	00
Acceptable	00	00
Vague	00	00
False	07	16
Total	44	100

Autism is more common in boys than in girls.

As indicated in the table, the majority of the students (84%) answers correctly on the question where as 16% of them give incorrect answers.

Q6: Does autism differ from one person to another?

Yes ☐

No ☐

Please, explain your choice ……………………………………………………………

Table 3.06

Students' Answers about the Difference of Autism among Individuals

Answers	N	%
Correct	09	20
Approximate	10	23
Acceptable	15	34
Vague	00	00
False	10	23
Total	44	100

Yes, autism differs from one person to another because the complexity and the symptoms of this disorder are different.

The table above shows that the highest percentage is for the students who gave acceptable answers followed by approximate answers (23 %) then, correct answers (20 %) while the percentage of the students who gave incorrect answers is 23 %.

Q7: How is autism diagnosed?

Biologically [   ]

Genetically [   ]

Clinically [   ]

Table 3.07

Students' Answers about the Diagnosis of Autism

Answers	N	%
Corrects	15	34
Approximate	00	00
Acceptable	00	02
Vague	00	00
False	29	66
Total	44	100

Autism is clinically diagnosed.

The table shows that the majority of the students (66%) do not know the answers of the question since they gave wrong answers while 34% of students gave right answers for this question.

Q8: Can children with autism recover?

Yes [   ]

No [   ]

Table3.08

Students' Answers about the Recovery of Autistic Children

Answers	N	%
Correct	11	25
False	33	75
Total	44	100

No, the recovery from Autism is not possible.

The table above shows that the majority of answers are wrong (75%) and the rest (25%) are correct.

Q9: Are autistic people more likely to have mental health difficulties?

Yes ☐

No ☐

Table3.09

Students' Answers about Mental Health Difficulties and Autistic People

Answers	N	%
Correct	35	80
False	09	20
Total	44	100

Yes, Autistic people are more likely to have mental health difficulties.

The indicated table display that the majority of the students (80%) answer the question correctly and (20%) of them fail to answer it.

Q10: Do autistic people have enough work opportunities?

Yes ☐

No ☐

Please, explain your choice…………………………………………………………

Table3.10

Students' Answers about Work Opportunities and Autistic People

Answers	N	%
Correct	04	09
Approximate	22	50
Acceptable	11	25
Vague	00	00
False	07	16
Total	44	100

No, Autistic people do not have enough work opportunities because the symptoms of this disorder make it hard for them to engage successfully with work teams. Moreover, they need to be supported in work places but the majority of people do not understand their case.

The table above indicates that the majority of students gave approximate answers to this question (9 %) gave correct answers and 25 % of them gave acceptable answers while 16 % give wrong answers.

Q11: Should autistic people go to special schools?

Yes ☐

No ☐

Please, explain your choice…………………………………………………………….

Table3.11

Students' Answers about Special Schools for Autistic People

Answers	N	%
Correct	14	32
Approximate	16	36
Acceptable	06	14
Vague	01	02
False	07	16
Total	44	100

Yes, autistic people should go to special schools because they usually provide appropriate educational and social setting for them like special and qualified teachers. Also, they provide the necessary level of support. Moreover, a new autistic child will enjoy to study because his/her classmates are similar to him/her.

The results displayed in table 11 show that 32 % of students gave correct answers, 36 % gave approximate answers and 14 % acceptable answers. While 2 % of them gave vague answers and 16 % failed to answer the question.

3.3.3. Interpretation of Topical Knowledge Test

Table 3.12

Students' Performance Classes

Performance classes	N	%
Poor performance class	10	23
Average performance class	26	59
Good performance	08	18
Total	44	100

As it is noticed from the analysis of topical Knowledge test, the students' performance varies from one question to another. After calculating the students' scores, the results obtained show that 23% of students got scores between 1 and4, 59 % of students got scores between 4 and 7 and 18% of students got scores between 7 and10. These scores have been classified respectively in three performance classes which are poor performance class, Average performance class, and good performance class.

3.4. Assessment of CAF Measures of Writing Performance

3.4.1. Description of the Writing Ability Test

As mentioned in the section of data collection procedure, a writing ability test is conducted with 44 first year master students who were selected randomly to investigate the effect of topic knowledge on the students' writing ability. The participants were asked to write an expository essay in which they were required to transfer their knowledge about autism (what is autism, how autistic

people behave, and how they are treated in society). The participants were given 10 minutes to think about the question in order to plan their works.

The writing test was completed under time limits in order to stimulate the testing environment. Moreover, both tests were carried out in order to make sure that the students did not use Internet or other sources and accomplished the task individually.

In this research, fluency, complexity and accuracy measures are used to assess the performance of the participants' written productions. This procedure is important to the extent that Lu (2001) asserted that "needless to say, a full picture of language development in L_2 writing can only be obtained by engaging fluency, accuracy, and complexity measures at various linguistic levels" (p. 38). For that reason, in this study the essays were analyzed for fluency, complexity and accuracy measures of writing assessment by making the sentence (S) as the production unit for analyzing the students' essays.

The writing essays were analyzed in terms of fluency which measures the total number of words (W), verbs (V) and sentences (S) used in the essays. Then, the researchers made calculations of the total number of verbs per the total number of words (V/W), total number of words per total number of sentences (W/S) and the total number of verbs per the total number of sentences (V/S).

Accuracy measure has been used to examine whether learner's essays are error-Free through the calculation of correct words (CorrW), articles (CorrArt) and sentences (CorrS) that were employed in the essays. For the correct word measure (CorrW), the researchers counted the number of words that were used correctly by the students. Then, this number was divided by the total number of words in the text (CorrW/W). In the correct article measure, the correct articles were counted per the total number articles used in the essays (CorrArt/Art). The last measure is correct sentences measure, in which the number of sentences that were used correctly by the students was divided by the total number of sentences used in the students' productions (CorrS/S).

Complexity measure is addressed to test the student written language production through counting lexical and grammatical measures. The lexical complexity counts lexical Density (lexical words) and words variation. Lexical density calculates the proportion of lexical words to the total number of words in an essay (the number of lexical words divided by the total number of words). The second measure in lexical complexity is word variation; which refers to the various categories of words such as nouns, verbs, adverbs, and adjectives. In this study adjectives are selected to be calculated through dividing the total number of words (Adj/W). Moreover, grammatical complexity counts two measures which are passive Sentences measure and prepositions to the overall number of sentences. The former measure calculates the total number of passive sentences per the total number of sentences (Pass/S) and the latter counts the total number of prepositions divided by total number of sentences.

3.4.2. Fluency Measurements

Table 3.13

The Relationship between Poor Performance and Fluency Measures

Participants	V	W	S	W/S	V/W	V/S
p1	40	245	13	18,85	0,16	3,08
p2	18	88	04	22	0,20	4,5
p3	17	102	06	17	0,17	2,83
p4	32	234	22	10,64	0,14	1,45
p5	24	158	10	15,80	0,15	2,4
p6	22	165	11	15	0,13	02
p7	13	92	08	11,50	0,14	1,63
p8	10	76	04	19	0,13	2,5
p9	49	311	11	28,27	0,16	4,45
p10	56	371	18	20,61	0,15	3,11
Total	281	1842	107	178,67	1,53	27,95
Mean	28,10	184,20	10,7	17,87	0,15	2,8
Standard deviation	15,66	102,43	5,83	5,18	0,02	1,05

The scores that are presented in the table show that the students' essays contain about 11 sentences, 184 words and 28 verbs as a mean of one single student in the group, on average. Each sentence contains about 18 words, and about 3 verbs. The ratio of verbs per total words is 0.15

meaning that one verb is used with more than 6 words. The standard deviation shows great differences between students' performance. For example, when considering the number of sentences being used, they ranged between 4 for P2, P8 and 18 for P10.

Table 3.14

The Relationship between Average Performance and Fluency Measures

Participants	V	W	S	w/s	v/w	v/s
p1	17	157	14	11,21	0,11	1,21
p2	33	224	20	11,20	0,15	1,65
p3	42	256	25	10,24	0,16	1,68
p4	36	289	18	16,06	0,12	0,2
p5	53	319	23	13,87	0,17	2,30
p6	41	219	18	12,17	0,19	2,28
p7	22	160	12	13,33	0,14	1,83
p8	43	237	09	26,33	0,18	4,78
p9	41	343	17	20,18	0,12	2,41
p10	13	104	07	14,86	0,13	1,86
p11	28	179	09	19,89	0,16	3,11
p12	19	188	11	17,09	0,10	1,73
p13	55	311	18	17,28	0,18	3,06
p14	51	314	14	22,43	0,16	3,64
p15	50	314	17	18,47	0,16	2,94
p16	29	150	09	16,67	0,19	3,22
p17	31	227	15	15,13	0,14	2,07
p18	37	232	12	19,33	0,16	3,08
p19	21	142	12	11,83	0,15	1,75
p20	38	264	16	16,5	0,14	2,38
p21	24	200	10	20	0,12	2,4
p22	37	295	18	16,39	0,13	2,06
p23	21	152	10	15,2	0,14	2,1
p24	54	364	24	15,17	0,15	2,25
p25	51	387	15	25,8	0,13	3,4
p26	33	199	11	18,09	0,17	3
Total	920	6226	384	434,72	3,85	64,19
Mean	35,38	239,46	14,77	16,72	0,15	2,47
Standard deviation	12,45	75,88	4,89	4,15	0,02	0,78

The scores in this table show that the essays produced by the students contain about 15 sentences, about 239 words and 35 verbs as a mean of one single student in the group, on average which means that a typical sentence contains about 17 words, and 2 verbs. The ratio of verbs per total words is 0.15 meaning that one verb is used with more than 6 words. The standard deviation

shows big difference between students' performance. For instance, when considering the number of verbs being used, they ranged between 55 for p13 and 13 for P10.

Table 3.15

The Relationship between Good Performance and Fluency Measures

Participants	V	W	S	W/S	V/W	V/S
P1	23	178	13	13,69	0,13	1,77
P2	3	142	09	15,78	0,16	2,56
P3	47	282	15	18,8	0,17	3,13
P4	29	209	12	17,42	0,14	2,42
P5	35	210	10	21	0,17	3,5
P6	5	165	10	16,5	0,15	2,5
P7	31	206	13	15,85	0,15	2,38
P8	25	220	10	22	0,11	2,5
Total	238	1612	92	141,04	1,18	20,76
Mean	29,75	201,5	11,5	17,63	0,15	2,60
Standard deviation	8,14	42,08	2,07	2,81	0,02	0,52

The scores in the table indicate that the students' compositions contain about 12 sentences, about 202words, and about 30 words on average. This means that a single sentence contains about 18 words and about 3 verbs. The ratio of verbs is 0.15 meaning that one verb is used more than 6 words. The standard deviation shows a significant difference in students' performance. For example, regarding the number of words, they ranged between 124 for P2 and 282 for P3.

The results of the three performance classes show that there is a slight difference in the fluency measures. In the word per sentence measure, poor and good performance classes produced 18 words per one sentence while in the average class; students produced 17 words in one sentence. In the second measure which is verb per word, the ratio is the same for the three classes (0.15). Moreover, in the third measure, the results show that poor and good performance classes are the most who used verbs (3 verbs in 1sentence) while in the average performance, they used 2 verbs per sentence.

3.4.3. Accuracy Measurements

Table 3.16

The Relationship between Poor Performance and Accuracy Measures

Participants	CorrW	CorrW/W	CorrS	CorrS/S	CorrArt	CorrArt/Art
P1	239	0,98	13	1	12	01
P2	60	0,68	03	0,75	09	01
P3	65	0,64	04	0,67	07	01
P4	230	0,98	13	0,59	12	0,80
P5	148	0,94	06	0,60	07	01
P6	160	0,97	07	0,64	09	01
P7	87	0,95	05	0,63	05	0,83
P8	66	0,87	01	0,25	01	01
P9	305	0,98	03	0,27	27	01
P10	353	0,95	07	0,39	15	0,83
Total	1713	8,94	62	5,79	104	9,46
Mean	171 ,30	0,89	6,20	0,58	10,4	0,95
Standard deviation	106 ,18	0,13	4,05	0,23	7,04	0,09

As noticed in the table above, students made few errors per the total words used in their essays which mean about 89% of the words are correct. Also, they wrote about six correct sentences per 11 sentences. This means that 58% of the sentences produced by students are error-free. In addition, students used 95% of articles correctly. The standard deviation shows a big difference in students' performance. Considering the correct sentences, they ranged 1 for P8 and 13 for P4.

Table 3.17

The Relationship between Average Performance and Accuracy Measures

Participants	CorrW	CorrW/W	CorrS	CorrS/S	CorrArt	CorrArt/Art
P1	149	0.95	9	0.64	08	01
P2	218	0.97	16	0.80	07	01
P3	244	0.95	22	0.88	07	0.78
P4	285	0.99	15	0.83	14	0.61
P5	310	0.97	15	0.65	08	01
P6	208	0.95	15	0.83	14	01
P7	156	0.98	11	0.92	15	0.94
P8	235	0.99	08	0.89	16	1
P9	334	0.97	16	0.94	20	1
P10	96	0.92	06	0.86	04	1
P11	162	0.91	08	0.89	10	0.83
P12	187	0.99	10	0.91	05	1
P13	303	0.97	17	0.94	15	1

P14	302	0.96	13	0.93	08	0.80
P15	312	0.99	16	0.94	10	1
P16	146	0.97	06	0.67	08	0.89
P17	220	0.97	10	0.67	15	0.83
P18	219	0.94	09	0.75	20	0.91
P19	137	0.96	07	0.58	09	0.82
P20	260	0.98	11	0.69	11	0.73
P21	200	01	10	01	14	01
P22	289	0.98	14	0.78	12	01
P23	150	0.99	08	0.8	03	0.75
P24	356	0.98	17	0.71	12	01
P25	373	0.96	08	0.53	19	0.86
P26	190	0.95	05	0.45	12	0.92
Total	6041	25.14	302	20.48	296	23.67
Mean	232.35	0.97	11.62	0.79	11.38	0.91
Standard deviation	74.88	0.02	4.33	0.14	4.69	0.11

This table indicates that students made few errors among the total produced words which mean about 97% of their words are used correctly. Further to this, they produced an average of 12 correct sentences for every 15 sentences. Moreover, 91% of articles are error-free. The standard deviation shows that there is a big difference in students' production, with the regard of correct words, they ranged 96 for P10 and 373 for P25.

Table 3.18

The Relationship between Good Performance and Accuracy Measures

participants	CorrW	CorrW/W	CorrS	CorrS/S	CorrArt	CorrArt/ art
P1	173	0.97	10	0.77	17	01
P2	137	0.96	07	0.78	5	0.63
P3	266	0.94	12	0.80	16	0.80
P4	203	0.97	11	0.92	15	01
P5	204	0.97	06	0.60	09	01
P6	161	0.98	08	0.80	08	01
P07	205	0.99	12	0.92	08	01
P08	217	0.99	08	0.80	08	0.89
Total	1566	7.77	74	6.39	86	7.32
Mean	195.75	0.97	9.25	0.80	10.75	0.92
Standard deviation	39.22	0.02	2.32	0.10	4.53	0.14

The table above shows that students wrote 97 % correct words from the overall number of words. Besides, 80 % of all sentences produced by the students are error-free- then, students wrote 92 % correct articles. The standard deviation indicates That There is a significant difference in

students' performance. For instance, the number of correct sentences used by P5 is 6 and P3, P7 is 12.

A comparison between poor, average, and good performance classes is made. Students who have average and good performance used more correct words (0.97) while the ratio of students who have poor performance is 0.89. Moreover, the ratio of correct sentences in good performance and average performance is approximately the same (0.80 for good performance and 0.79 for average performance) whereas the ratio of correct sentences in poor performance is 0.58. In addition, the students who have poor performance used more correct articles (0.95) than the other two classes (0.91 for average performance class and 0.92 for good performance class).

3.4.4. Complexity Measurements

3.4.4.1. Grammatical Complexity Measures

Table 3.19

The Relationship between Poor Performance and Grammatical Complexity Measures

Participants	P	P/S	Passives	Passives/S
P1	28	2.15	02	0.15
P2	11	2.75	00	00
P3	16	2.67	00	00
P4	10	0.45	02	0.09
P5	14	1.4	02	0.2
P6	19	1.73	01	0.09
P7	07	0.88	00	00
P8	08	2	01	0.25
P9	32	2.91	03	0.27
P10	32	1.78	03	0.17
Total	177	18.72	14	1.22
Mean	17.7	1.87	1.4	0.12
Standard deviation	9.70	0.81	1.17	0.10

As noticed in the table above, the ratio of prepositions being used by students in their essays is 1.87 which means that they used approximately 2 prepositions per sentence while the ratio of passive sentences is 0.12, which means 12 % of sentences are passives.

Table 3.20

The Relationship between Average Performance and Grammatical Complexity Measures

participants	P	P/S	Passives	Passives /S
P1	13	0.93	01	0.07
P2	19	0.95	01	0.05
P3	19	0.76	02	0.08
P4	31	1.72	05	0.28
P5	18	0.78	01	0.04
P6	26	1.44	03	0.17
P7	17	1.42	00	00
P8	28	3.11	01	0.11
P9	43	2.53	01	0.06
P10	10	1.43	00	00
P11	17	1.89	02	0.22
P12	20	1.82	00	00
P13	25	1.39	00	00
P14	34	2.43	01	0.07
P15	33	1.94	03	0.18
P16	13	1.44	02	0.22
P17	19	1.27	00	00
P18	20	1.67	03	0.25
P19	09	0.75	00	00
P20	18	1.13	01	0.06
P21	20	02	03	0.3
P22	28	1.56	04	0.22
P23	13	1.3	07	0.7
P24	34	1.42	06	0.25
P25	38	2.53	01	0.07
P26	20	1.82	03	0.27
Total	585	41.43	51	3.67
Mean	22.5	1.59	1.96	0.14
Standard deviation	8.85	0.59	1.91	0.15

The table shows that students used approximately 2 prepositions per sentence, which means that the ratio of preposition is high (1.59) whereas, they did not use many passive sentences since 14% of their sentences are passives.

Table 3.21

The Relationship between Good Performance and Grammatical Complexity Measures

participants	P	P/S	Passives	Passives/S
P1	18	1.38	02	0.15
P2	25	2.78	00	00
P3	30	02	00	00
P4	23	1.92	03	0.25
P5	19	1.9	03	0.3
P6	11	1.1	00	00
P7	15	1.15	06	0.46
P8	28	2.8	03	0.3
Total	169	15.03	17	1.46
Mean	21.13	1.88	2.13	0.18
Standard deviation	6.53	0.66	2.10	0.17

The table indicates that the ratio of prepositions being used by students is 1.88 per sentence which means That They used approximately 2 prepositions per sentence while the ratio of passive sentences is 0.18 which mean that 18 % of produced sentences are passives.

Through comparing the findings of poor, average and good performance classes, we noticed that there is a significant difference between the results. The ratio of prepositions used by the students who have good performance is highest (1.88) followed by the ratio of poor performance (1.81) then, the average performance class. This means that students who have good performance used more prepositions. Besides, students who have good performance used more passives (0.18) in comparison to students who have average performance (0.14) and students who have poor performance (0.12).

3.4.4.2. Lexical Complexity Measures

Table 3.22

The Relationship between Poor Performance and Lexical Complexity Measures

participants	Lexical words	Density	Adjectives	Adj/W
P1	119	0.49	21	0.09
P2	35	0.40	03	0.03
P3	42	0.41	05	0.05

P4	99	0.42	17	0.07
P5	73	0.46	18	0.11
P6	75	0.45	12	0.07
P7	61	0.66	15	0.16
P8	40	0.53	10	0.13
P9	149	0.48	38	0.12
P10	166	0.45	63	0.17
Total	859	4.75	202	1
Mean	85.9	0.48	20.2	0.1
Standard deviation	46.18	0.08	17.92	0.05

The scores that are presented in the table above show that students used 859 lexical words in their essays which mean that 48 % of the total words are lexical words while they used one adjective in every 9 words. In other words 10 % of the total words are adjectives.

Table 3.23

The Relationship between Average Performance and Lexical Complexity Measures

participants	Lexical words	Density	Adjectives	Adj/w
P1	93	0.59	10	0.06
P2	90	0.40	20	0.09
P3	126	0.49	12	0.05
P4	147	0.51	22	0.08
P5	182	0.57	37	0.12
P6	121	0.55	19	0.09
P7	80	0.50	08	0.05
P8	126	0.53	21	0.09
P9	161	0.47	25	0.07
P10	55	0.53	03	0.03
P11	91	0.51	08	0.04
P12	104	0.55	13	0.07
P13	172	0.55	25	0.08
P14	158	0.50	19	0.06
P15	157	0.50	34	0.11
P16	68	0.45	17	0.11
P17	108	0.48	21	0.09
P18	134	0.58	31	0.13
P19	69	0.49	16	0.11
P20	137	0.52	37	0.14
P21	106	0.53	29	0.15
P22	152	0.52	29	0.10
P23	82	0.54	15	0.10
P24	183	0.50	39	0.11
P25	169	0.44	25	0.06
P26	109	0.55	13	0.07
Total	3180	13.35	548	2.26

Mean	122.31	0.51	21.08	0.09
Standard deviation	37.60	0.04	9.72	0.03

The table indicates that half of the words that students used in their essays are lexical (0.51). Besides, they used one adjective in every 11 words which means that 9 % of the overall words are adjectives.

Table 3.24

The Relationship between Good Performance and Lexical Complexity Measures

Participants	Lexical word	Density	Adjectives	Adj/w
P1	104	0,58	11	0,06
P2	77	0,54	09	0,06
P3	144	0,51	21	0,07
P4	111	0,53	14	0,07
P5	105	0,50	15	0,07
P6	86	0,52	12	0,07
P7	120	0,58	28	0,14
P8	102	0,46	20	0,09
Total	849	4,22	130	0,63
Mean	106,13	0,53	16,25	0,08
Standard deviation	20.45	0.04	6.32	0.03

The tabulated scores show that students used 849 Lexical words as the total number of lexical words in their essays in other words 53 % of the overall words are lexical words. While they used one adjective in every 12 words meaning that 8 % of the total words are adjectives.

The comparison between results of good, average and poor performance classes shows that there is a slightly significant difference between these results. The students with good performance produced more lexical words (0.53) then the other two classes (0.51 for average performance class and 0.48 for poor performance class). Whereas in the adjective per sentence ratios, the highest ratios is for poor performance class which means they used more adjectives in their essays.

3.4.5. The Analysis of the Relationship between Topical Knowledge Test Scores and CAF Measures.

In this study, the statistical package SPSS was used to determine whether there is a significant relationship between the topical knowledge test scores and the CAF measures. To investigate this relationship, the Pearson correlation was counted.

Table 3.25

The Pearson Coefficient between Topical Knowledge Test Scores and Fluency Measures

Test scores	Fluency measures	Person correlation coefficient (r)
Mean=5.32	Word per sentence	.038
	Verb per word	-.119
S.D=1.59	Verb per sentence	-.070

The results displayed in the table show that there is no statistically significant correlation between topical knowledge test scores and word per sentence (r =0.038), verb per word (r = -0.119) and verb per sentence (r = -0.070).

Table 3.26

The Pearson Coefficient between Topical Knowledge Test Scores and Accuracy Measures

Test scores	Accuracy	Person correlation coefficient (r)
Mean=5.32	Correct Word per word	.373*
	Correct sentence per sentence	.397*
S.D=1.59	Correct article per article	-.051

The indicated table shows that there is a statistically significant correlation between topical knowledge test scores and correct words per words measure at 0.05 level (2-tailed) while the correlation between the test scores and correct sentences per sentences is significant at 0.01 level (2-taled). In addition, the correct article per article measure has no significant with the test scores (r = -0.051).

Table 3.27

The Pearson Coefficient between Topical Knowledge Test and Lexical Complexity Measures

Test scores	Lexical complexity measure	Person correlation coefficient (r)
Mean=5.32	Density	.151
	Adjective per word	-.195
S.D=1.59		

The table above shows that. There is no statistically significant correlation between test scores and density (v = 0.151) and with adjective per word (r = -0.195).

Table 3.28

The Pearson Coefficient between Topical Knowledge Test Scores and Grammatical Complexity Measures

Test scores	Grammatical complexity measures	Pearson correlation coefficient (r)
Mean=5.32	Preposition per sentence	**.051**
S.D=1.59		
	Passive per sentence	**.098**

The table indicates that there is no statistically significant correlation between test scores and prepositions per sentence (r = 0.051) and passive per sentence (r = 0.098).

The statistics in general indicates that there is some kind of significant correlation between topical knowledge and writing performance. Consequently, the present study implies that the students who get high scores in the topical knowledge test are the more they produce correct words and sentences.

3.5. Summary of the Results

This study has been conducted to investigate the impact of topical knowledge on the students' written language performance in terms of CAF measures. To accomplish the aim of this research, a topical knowledge test and a writing ability test were administered to first year master

students. The topical knowledge test has been adopted in order to test the topical knowledge level of the students. The analysis of the students' scores indicates that the majority of students had an average knowledge level. The writing ability test has been conducted to measure the students writing performance in terms of CAF measures. The participants were asked to write an essay on the given topic. A comparison was made between the students' performance in the topical knowledge and the writing ability test in terms of CAF measures.

In fluency measures, the ratio of verbs per sentences indicate that the students with poor performance in the writing ability test used more verbs per sentences (2.80) while the students with good performance and students with average performance used less verbs per sentences (2.60 and 2.47 respectively).

Concerning accuracy measures, students with average and good performance produce more correct words than the students with poor performance (0.97 for good and average performance and 0.89 for poor performance).

In terms of lexical complexity, there was a significant difference between the results. The students with good performance produced more correct words (0.53), students with average performance used 0.51 and students with poor performance produced 0.48 correct words per words. For Grammatical complexity measures, there is a significant difference between poor, average and good performance classes in the use of passive sentences. The ratio of passive sentences per sentences for good performance students is 0.18, for average performance students is 0.14 and it is 0.12 for poor performance students.

3.6. Overall Analysis of the Results

The overall analysis of this research mainly concerns with the evaluation of students' topical knowledge test as well as measuring their performance in the writing ability test in terms of

CAF measures. In addition, a comparison was made between the students' performance in the topical knowledge test (good, average, and poor performance) and the results obtained by measuring the students' written production in the writing ability test. Consequently, the answer of the research question posed at the beginning is as the following:

The Research Question: Is Topical Knowledge Related to Foreign Writing Performance in Terms of CAF Measures?

According to the tables above there is a relationship between topical knowledge and writing performance. Concerning fluency, the tables show that there is no significant relationship between topical knowledge test scores of the three performance classes and fluency measures (words per sentences, verbs peer words, and verbs per sentences). However, in accuracy measures there is a significant relationship between topical knowledge test scores of the three performance classes and correct words per words measure (0,89 for poor classes, 0,97 for average and good classes). In addition, there is a significant relationship between topical knowledge scores of the three performance classes and correct sentences per sentences measure (0,58 for poor class, 0,79 for average class and 0,80 for good class). In grammatical complexity measures, there is a significant relationship between topical knowledge scores of the three performance classes and passive sentences per sentences measure (0,12 for poor class, 0,14 for average class, and 0,18 for good class). For lexical complexity, measures there is a relationship between topical knowledge test scores and density measures (0,48 for poor class, 0,51 for average class, and 0,53 for good class).

The results obtained from the statistical package SPSS show that there is some kind of relationship between topical knowledge and the students' writing performance in terms of accuracy which means that students who know more about a topic produce more correct words and sentences. However there is no relationship between topical knowledge and the students' writing performance in terms of complexity and fluency.

Conclusion

This practical part represents the results obtained from the topical knowledge test and the writing ability test. Both tests were administered to 44 first year master students. The chapter constitutes of the discussion of the results obtained through the comparison between the topical knowledge test scores and students performance in the writing ability test in terms of CAF measures. The findings of this research work revealed that there is some kind of relationship between topical knowledge and students' written language performance.

General Conclusion

1. **Putting all Together**

2. **Limitation of the Study**

3. **Pedagogical Recommendations**

4. **Suggestions for Further research**

1. Putting all Together

The present study is an attempt to investigate topical knowledge impact on students' writing performance. This dissertation is subdivided into three (3) chapters: two theoretical chapters sheds light on topical knowledge starting by its definitions, related terms, and prior knowledge types. Then it moves to draw attention to schema theory and its types, brainstorming strategy and it's techniques for activating prior knowledge. The second chapter is entirely concerned with the writing skill. First, different definitions of writing are presented. Next, the major approaches to teaching writing are described. Moreover, it mentions its different stages and types. This chapter also focuses on the components of good writing, factors affecting the writing skill as well as the difficulties that may face EFL learners through the writing process. This chapter ends by the assessment of writing in terms of CAF measures.

The third chapter stands for the fieldwork of this research; it highlights the research tools used to collected data in order to investigate the effects of topical knowledge on the students' writing performance.

The main findings of this research indicate that there is some kind of statistical significant relationship between topical knowledge and students' writing performance in terms of accuracy.

2. Limitations of the Study

The limitations of the current study are presented in the following points:

➢ The first limitation is the short period of time allocated for the completion of this research which prevents a deep exploration and development of the theme.

➢ The second limitation is the lack of relevant resources especially in the first chapter which leads to the use of second hand resources.

3. Pedagogical Recommendations

➢ Teachers are recommended to use brainstorming techniques in order to activate the students' prior knowledge before a writing task.

➢ Writing is the most difficult skill to master. Accordingly, students should read more and practice writing to improve their writing abilities.

➢ Teachers should select topics that require the students' topical knowledge.

4. Suggestions for Further Research

➢ An experimental research can be conducted to investigate the effect of topical knowledge on students' writing performance in which students will respond to two topics, a general topic and a more specific topic.

➢ A further research can be conducted using other measures such as organization, content, and coherence.

➢ The effects of topical knowledge can be investigated in other skills such as reading and speaking.

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TEST

Full name...

Write an essay in which you explain what autism is, how autistic people behave and how they are treated in society.

Autism is a phenomenon that can be seen in people from a small age. It is usually mistaken for a mental disease, but in fact this disorder has more to do with the psychological state of the child than this mental capacities. Autism affects people's lives; it affects their behaviour and how they are treated by the society.

Autism affects people's behaviour. Autistic people tend to stay alone, they do not like to interact with other people and any contact with others will cause them uneasiness, which can result in an aggresive reaction from their part. Autistic people are also easily (A) distracted, they lose their concentration quickly; any small action can grab their attention. However, most autistic children are considered as gifted children, they have greater mental capacities and memory than normal children.

People treat autistic people in a different way. People themselves refure to interact with autistic people

because they are (aff) afraid that the autistic people will be aggressive and because they do not know how to interact with them. even parents find many difficulties in educating their autistic children.

Autism affects people's life and how they are perceived by the society. Autistic people behave differently and so they face many difficulties and challenges in their lives.

Good luck

Topical Knowledge Test

FULL NAME:...

Dear students,

This is a test to collet data about the impact of topical knowledge on students' writing performance at the departement of English language in Jijel university.

Please, fill out the questions as thoughtfully and carefully as possible.

Will you please tick (✓) the corresponding answers or fill in with information where necessary. Thank you in advance for your contribution.

1. What is autism?

...Autism is a psychological disorder that affects children's behaviour...

2. What are the symptoms of autism?

...tendency to be alone...
...aggressive behaviour...

3. What are the expected causes of autism?

....
....
....
....

4. Autism usually appears at the age of:

1 year old ☐

3 years old ☑

5 years old ☐

9 years old ☐

5. Who are more likely to have autism?

.Boys ☑

.Girls ☐

. Both ☐

6. Does autism differ from one person to another?

.Yes ☑

.No ☐

Please, explain your choice...Because in psychological disorders, people will have different symptoms...

1 / 2

....
....
....

7. How is autism diagnosed?

.Biologically   ☐

.Genetically   ☐

.Clinically   ☑

8. Can children with autism recover?

.Yes   ☐

.No   ☑

9. Are autistic people more likely to have mental health difficulties?

.Yes   ☐

.No   ☑

10. Do autistic people have enough work opportunities?

.Yes   ☐

.No   ☑

Please, explain your choice .. Because people are afraid of their aggressive
...acts...
....

11.Should autistic people go to special schools?

.Yes   ☑

.No   ☐

Please, explain your choice.. Because their mental capacities are different,
..and the other kids may bully them for being different......
....

Thank you for your cooperation.

APPENDIX C

Participant	Test scores	Words per senteces	Verbs per words	Verbs per sentences
P1	3,00	18 ,85	,16	3,08
P2	3,00	22,00	,20	4,50
P3	3,75	17,00	,17	2,83
P4	3,50	10,64	,14	1,45
P5	E ?75	15,80	,15	2,40
P6	3,50	15,00	,13	2,00
P7	1,50	11,50	,14	1,63
P8	2,25	19,00	,13	2,50
P9	3,75	28,27	,16	4,45
P10	3,50	20 ,61	,15	3,11
P11	5,75	11 ,21	,10	1,21
P12	4,50	11,20	,15	1,65
P13	6,25	10 ,25	,16	1,68
P14	5,25	16,60	,12	2,00
P15	4,25	13,87	,17	2,30
P16	6,25	12 ,17	,19	2,28
P17	5,25	13,33	,14	1,83
P18	4,25	26,33	,18	4,78
P19	6,50	20,18	,12	2,41
P20	4,00	14 ,86	,13	1,86
P21	4,75	19,89	,16	3,11
P22	5,75	17 ,09	,10	1,73
P23	5,75	17,28	,18	3,06
P24	6,50	22,43	,16	3,64
P25	6,50	18,47	,16	2,94
P26	5,50	16,67	,19	3,22
P27	6,50	15,13	,14	2,07
P28	5,00	19,33	,16	3,08
P29	5,50	11,83	,15	1,75
P30	5,75	16,50	,14	2,38
P31	6,75	20,00	,12	2,40
P32	6,75	16,39	,13	2,06
P33	4,00	15,20	,14	2,10
P34	6,00	15,17	,15	2,25
P35	6,00	25,80	,13	3,40
P36	6,25	18,09	,17	3,00
P37	7,50	13,69	,13	1,77
P38	7,00	15,78	,16	2,56
P39	7,00	18,80	,17	3,13
P40	7,00	17,42	,14	2,42
P41	7,50	21,00	,17	3,50
P42	7,00	16,50	,15	2,50
P43	7,50	15,85	,15	2,38
P44	7,75	22,00	,11	2,50

APPENDIX D

Participant	Test scores	Correct words per words	Correct sentences per sentences	Correct articles per articles
P1	3,00	,98	1,00	1,00
P2	3,00	,68	,75	1,00
P3	3,75	,64	,67	1,00
P4	3,50	,98	,59	,80
P5	2,75	,94	,60	1,00
P6	3,50	,97	,64	1,00
P7	1,50	,95	,63	,83
P8	2,25	,87	,25	1,00
P9	3,75	,98	,27	1,00
P10	3,50	,95	,39	,83
P11	5,75	,95	,64	1,00
P12	4,50	,97	,80	1,00
P13	6,25	,95	,88	,78
P14	5,25	,99	,83	,61
P15	4,25	,97	,65	1,00
P16	6,25	,95	,83	1,00
P17	5,25	,98	,92	,94
P18	4,25	,99	,89	1,00
P19	6,50	,97	,94	1,00
P20	4,00	,92	,86	1,00
P21	4,75	,91	,89	,83
P22	5,75	,99	,91	1,00
P23	5,75	,97	,94	1,00
P24	6,50	,96	,93	,80
P25	6,50	,99	,94	1,00
P26	5,50	,97	,67	,89
P27	6,50	,97	,67	,83
P28	5,00	,94	,75	,91
P29	5,50	,96	,58	,82
P30	5,75	,98	,69	,73
P31	6,75	1,00	1,00	1,00
P32	6,75	,98	,78	1,00
P33	4,00	,99	,80	,75
P34	6,00	,98	,71	1,00
P35	6,00	,96	,53	,86
P36	6,25	,95	,45	,92
P37	7,50	,97	,77	1,00
P38	7,00	,96	,78	,63
P39	7,00	,94	,80	,80
P40	7,00	,97	,92	1,00
P41	7,50	,97	,60	1,00
P42	7,00	,98	,80	1,00
P43	7,50	,99	,92	1,00
P44	7,75	,99	,80	,89

APPENDIX E

Participant	Test scores	Prepositions per sentences	passives per sentences
P1	3,00	2,15	,15
P2	3,00	2,75	,00
P3	3,75	2,67	,00
P4	3,50	,45	,09
P5	2,75	1,40	,20
P6	3,50	1,73	,09
P7	1,50	,88	,00
P8	2,25	2,00	,25
P9	3,75	2,91	,27
P10	3,50	1,78	,17
P11	5,75	,93	,07
P12	4,50	,95	,05
P13	6,25	,76	,08
P14	5,25	1,72	,28
P15	4,25	,78	,04
P16	6,25	1,44	,17
P17	5,25	1,42	,00
P18	4,25	3,11	,11
P19	6,50	2,53	,06
P20	4,00	1,43	,00
P21	4,75	1,89	,22
P22	5,75	1,82	,00
P23	5,75	1,39	,00
P24	6,50	2,43	,07
P25	6,50	1,94	,18
P26	5,50	1,44	,22
P27	6,50	1,27	,00
P28	5,00	1,67	,25
P29	5,50	,75	,00
P30	5,75	1,13	,06
P31	6,75	2,00	,30
P32	6,75	1,56	,22
P33	4,00	1,30	,70
P34	6,00	1,42	,25
P35	6,00	2,53	,07
P36	6,25	1,82	,27
P37	7,50	1,38	,15
P38	7,00	2,78	,00
P39	7,00	2,00	,00
P40	7,00	1,92	,25
P41	7,50	1,90	,30
P42	7,00	1,10	,00
P43	7,50	1,15	,46
P44	7,75	2,80	,30

APPENDIX F

Participant	Test scores	Density	Adjectives per words
P1	3,00	,49	,09
P2	3,00	,40	,03
P3	3,75	,41	,05
P4	3,50	,42	,07
P5	2,75	,46	,11
P6	3,50	,45	,07
P7	1,50	,66	,16
P8	2,25	,53	,13
P9	3,75	,48	,12
P10	3,50	,45	,17
P11	5,75	,59	,06
P12	4,50	,40	,09
P13	6,25	,49	,05
P14	5,25	,51	,08
P15	4,25	,57	,12
P16	6,25	,55	,09
P17	5,25	,50	,05
P18	4,25	,53	,09
P19	6,50	,47	,07
P20	4,00	,53	,03
P21	4,75	,51	,04
P22	5,75	,55	,07
P23	5,75	,55	,08
P24	6,50	,50	,06
P25	6,50	,55	,11
P26	5,50	,45	,11
P27	6,50	,48	,09
P28	5,00	,58	,13
P29	5,50	,49	,11
P30	5,75	,52	,14
P31	6,75	,53	,15
P32	6,75	,52	,10
P33	4,00	,54	,10
P34	6,00	,50	,11
P35	6,00	,44	,06
P36	6,25	,55	,07
P37	7,50	,58	,06
P38	7,00	,54	,06
P39	7,00	,51	,07
P40	7,00	,53	,07
P41	7,50	,50	,07
P42	7,00	,52	,07
P43	7,50	,58	,14
P44	7,75	,46	,09

Results of Pearson Correlations for CAF Measures and Test Scores.
Fluency Measures

		Test scores
Test scores	Pearson Correlation	1
Words per sentences	Pearson Correlation	,038
Verbs per words	Pearson Correlation	-,119
Verbs per sentences	Pearson Correlation	-,070

Accuracy Measures

		Tests scores
Test scores	Pearson Correlation	1
Correct words per words	Pearson Correlation	,373[*]
Correct sentences per sentences	Pearson Correlation	,397[**]
Correct articles per articles	Pearson Correlation	-,051

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

Grammatical Complexity

		Tests score
Test scores	Pearson Correlation	1
Prepositions per sentence	Pearson Correlation	,051
Passives per sentences	Pearson Correlation	,098

Lexical Complexity

		Tests score
Test scores	Pearson Correlation	1
Density	Pearson Correlation	,151
Adjectives per words	Pearson Correlation	-,195

Résumé

L'étude présentée vise à étudier les effets des connaissances actuelles sur les performances des étudiants en première année de master à l'Université Mohammed Seddik Ben Yahia. En conséquence, l'hypothèse sur laquelle reposait cette étude était que la connaissance du sujet influerait sur les performances de l'écrit en langue écrite de l'élève en termes de complexité, précision, et fluidité. Les données ont été recueillies au moyen de deux tests administrés à quarante-quatre (44) étudiants en première année de master. Le premier test était un test de connaissances thématique utilisé pour évaluer les connaissances de l'élève sur un sujet donnée. Les scores de ce test ont été classés en trois classes de performances (bonne, moyenne et médiocre). Le deuxième test était un test d'aptitude à l'écriture. Dans ce test, il était demandé aux étudiants de rédiger un essai sur le sujet donné, qui nécessitait une connaissance spécifique du sujet. Les essais des étudiants ont été examinés au moyen de mesures de fluidité, de précision et de complexité. L'analyse statistiques de la relation entre les résultats des tests de connaissance et les performances en écriture a relevé qu'il extrait une relation statistiques significative entre eux en terme de mesures de précisons. Plus précisément, plus les élève obtiennent les résultats de leur tests de connaissances, plus ils produisent de mots et de phrases précis dans les productions écrites. Cependant, il n'y a pas de relation statistiquement significative entre les résultats des tests de connaissances et les productions écrites en mesures de complexité et de fluidité. En conséquent, il existe une sorte de relation entre la connaissance actuelles et la performance écrite de l'élève sur cette base, l'hypothèse de la recherche étant confirmée.

Mots-clés : connaissance actuelles, performances en écriture, complexité, précision, fluidité.

الملخص

يهدف هذا البحث إلى دراسة تأثير معرفة الموضوع على أداء الكتابة لدى طلبة سنة أولى ماستر في جامعة محمد الصديق بن يحي . ووفقا لهذا، اعتمدنا في هذه الدراسة على الفرضية التي مفادها أن معرفة الموضوع سيؤثر على الأداء الكتابي للطلبة من حيث مقياس الطلاقة ، الصحة و التعقيد. تم جمع البيانات عن طريق اختبارين وجها إلى أربعة و أربعين طالب سنة أولى ماستر . كان الاختبار الأول عبارة عن اختبار معرفة والذي تم استخدامه لتقييم معرفة الطلبة حول موضوع معين. بعد فحص مقالات الطلبة تم تصنيف درجات هذا الاختبار في ثلاث فصول أداء و هي أداء ضعيف، أداء متوسط، و أداء جيد. أما الاختبار الثاني فكان اختبار القدرة على الكتابة،أثناء هذا الاختبار طلب من الطلبة كتابة مقال حول موضوع معين يتطلب معرفة دقيقة به، وقد تم تصنيف مقالات الطلبة وفق مقاييس الطلاقة، الصحة و التعقيد. من خلال التحليل الإحصائي للعلاقة بين نتائج اختبار معرفة الموضوع ونتائج الأداء الكتابي، أسفرت النتائج عن وجود علاقة إحصائية بينهم من ناحية مقياس الصحة و تحديدا كلما كانت نتائج الطلبة مرتفعة كلما زاد استخدامهم للكلمات و الجمل الصحيحة. لكن و مع ذلك لا توجد دلالة إحصائية لوجود علاقة بين نتائج اختبار معرفة الموضوع و الأداء الكتابي للطلبة وعلى هذا تم تأكيد الفرضية.

الكلمات المفتاحية: معرفة الموضوع، الأداء الكتابي، التعقيد، الصحة، الطلاقة.