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Title:

Enhancing EFL Learners' Writing Competence through Online Peer Feedback: The Case of Second-Year English Students at the University of El Oued

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Defended on Thursday, February 16th, 2023

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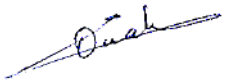

Dedication

First and foremost, this thesis is dedicated to the soul of my grandmother Mebarka, May Allah have mercy on her serene spirit.

I would also like to dedicate this thesis to:

my parents for their endless love and sacrifice,

my wife for nursing me with affection and hope,

my daughter Ranim and sons Mounib and Souhaib for being in my life,

my sisters and brothers for their incessant encouragement and support,

my respectable teachers for their instruction and guidance, and

my friends for being my comfort in hard times.

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Abstract

Algerian EFL students still encounter difficulties in improving their writing competence in terms of accuracy and quality. One of the solutions to this issue is the use of such strategies as online peer feedback. This study aims to investigate the impact of online peer feedback on Algerian students' writing competence in terms of accuracy and quality. Fifty second-year students from the University of El Oued participated in this study, forming an experimental group and a control group of twenty-five students each. A quasi-experimental research design employing a post-test only non-equivalent groups design has been adopted to collect quantitative data on the impact of the treatment. A semi-structured interview was also used to collect qualitative data about students' attitudes towards the use of peer feedback in EFL writing classes. Descriptive and inferential statistics were used to analyse quantitative data; whereas, qualitative data were analysed through an eclectic approach that combined the features of both thematic and content approaches to qualitative data analysis. The results revealed that online peer feedback had a positive impact on students' writing competence in terms of accuracy and quality and that students formed positive attitudes towards online per feedback. Based on these results, the study recommends the incorporation of peer feedback into EFL classes at the tertiary level and the conduction of further research that involves a wider population.

***Keywords*:** accuracy, enhancing, online peer feedback, quality, writing competence.

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List of Abbreviations, Acronyms, and Statistics Symbols

Abbreviations and Acronyms	
C	Content
EFL	English as a foreign language
ELT	English language teaching
ESL	English as a second language
FL	Foreign language
G	Grammar
M	Mechanics
L1	First language
L2	Second language
O	Organisation
Q	Question
Q-Q	Quantile-Quantile
R	Respondent
S	Student
SD	Standard deviation
SPSS	Statistical package for social sciences software
TDs	Tutorials/practical sessions (travaux dirigés, French word)
V	Vocabulary
WC & E	Written comprehension and expression
Statistics Symbols	
df	Degree of freedom
d	Cohen's value for effect size
H0	Null hypothesis
H1	Alternative hypothesis
n	Sample size
N	Population size
p	Probability
r	Pearson Correlation Coefficient
Sig.	Significance
t_{obs}	Observed t-value
t_{crit}	Critical t-value
α	Alpha
Σ	Sum
$\bar{x}$	Sample mean

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CHAPTER ONE:

Introduction to the Study

1.1. Background of the Study

Writing has always represented a great challenge to most EFL teachers and students alike. As for teachers, the search for an effective approach to adopt in their writing instruction is incessant; and concerning students, the ever-lasting question of how to improve their writing skills is not yet answered. Despite the shift to learner-centred instruction in many EFL contexts worldwide, the teacher-centred approach has remained dominant in higher education (Lak, Soleimani, & Parvaneh, 2017); and according to Baghoussi (2021), Algeria constitutes no exception.

With regard to teaching writing, many researchers claim that teacher-centred writing instruction goes against the current educational movement (Jeon, 2018) and deprives learners of gaining self-dependence over their own learning (Mak & Lee, 2014). For instance, Shokrpour, Keshavarz, and Jafari (2013) claim that in such traditional writing classes students remain passive and naturally feel uncomfortable with cooperative interaction methods that require them to engage in more active roles. Kim and Kim (2005) contend that sometimes the feedback which the students' get on writing from their teachers was found to yield discouraging results. According to Rollinson (2004), students receiving feedback from their teachers all the time causes them to write not for themselves, but for the teacher whom they perceive is their sole audience. Duckworth (2009) holds even stronger beliefs asserting that teacher-centred learning actually impedes students' educational growth. In a way, all these views assert that teacher feedback on learners' written production can be beneficial but is not enough alone for it needs to be supplemented by peer feedback.

In Algeria, the case of EFL writing instruction in higher education is even more critical due to the large number of students in the same writing class, which minimise the time devoted by teachers to read their students' written production, and provide appropriate timely one-to-

one feedback on them. This means that students neither receive adequate corrective feedback on their written production from their teachers nor do they benefit from engaging in collaborative tasks—such as peer feedback—to boost their learning. In this regard, Pearce, Mulder and Baik (2009) maintain that providing students with effective and appropriate feedback motivates them and improves their learning. These factors, among others like writing apprehension and the lack of interest on the part of learners (Simpson, 2006), have resulted in the low scores generally obtained by students in their writing assignments and exams at all graduation levels. This situation calls for re-thinking the way writing is taught at the tertiary level and necessitates adopting new techniques.

As researchers and practitioners have always admitted, writing is a complex process and a difficult skill for EFL and ESL students to learn and develop. Similarly, as teacher feedback has been associated with some demerits, there have been continuous attempts to develop appropriate instructional practices and techniques which may help EFL and ESL students improve their writing proficiency (Ferris, 2003).

Peer feedback—an interactive activity in which students receive comments about their writing from their classmates—is one of the pedagogic approaches that has been proposed to serve this very purpose. Peer feedback is considered a landmark of the shift away from teacher-fronted classes to learner-centred ones. Being a key feature of the process approach to writing, peer feedback offers students good opportunities to engage in effective collaborative learning, benefit from revision, and write for an audience (Ferris, 2003).

This approach has received much attention from researchers interested in learner-centred and collaborative learning studies (Yeh, Tseng, & Then, 2019). It has been widely used in many EFL and ESL writing classes and its multiple benefits have been reported in many studies. Lundstrom and Baker (2009) found in their study that the writing abilities and critical

thinking skills of both givers and receivers of feedback significantly improved. Li (2009) maintains that within peer feedback students can identify the strengths and weaknesses of their peers, which enables them to increase their self-confidence and reduce apprehension; hence, develop positive attitudes towards writing. Peer feedback could also assist students to share knowledge and develop metacognitive skills such as collaboration (Topping, 2009). Cho and MacArthur (2011) showed that students were able to improve their writing products through providing peer feedback.

On the other hand, the spread of web 2.0 technologies such as blogs, forums, wikis, and social networking and students' familiarity with various digital devices have offered students a new learning environment, where they can engage in useful interactive activities even beyond official class time. Facebook, as one of the most popular social networking platforms (Junco, Heiberger, & Loken, 2011), has been found to provide EFL/ESL learners with ample opportunities for online learning. According to Kabilan, Almad, and Zainol (2010), students consider Facebook a viable online environment that facilitates learning English as a foreign language. It also makes it easier for language learners to practise language with native speakers of their target language (Brick, 2013); additionally, it promotes language learning in meaningful, everyday contexts and can be a practical environment for conveying peer feedback (Akbari, Simons, Pilot, & Naderi, 2017).

Today, almost all students have at least one Facebook account and possess an electronic device such as a laptop, a smart phone, or a tablet with a connection to the Internet. This easy and frequent access to the virtual world can be beneficial to EFL students if it is managed and invested in the right way. One of the best investments in higher education in Algeria is to render the virtual world, like Facebook, a platform for enhancing Algerian university students' writing performance through interactive instruction, collaborative learning, and the exchange of experience and knowledge.

Therefore, it was perceived that combining these two approaches to EFL learning—peer feedback and online learning—would result in better students' written production, and would also positively affect their perceptions and attitudes towards the effectiveness of online peer feedback as a tool for enhancing their writing skills.

The need for such a type of learning clearly manifested itself during Covid-19, where regular classroom instruction time has been enormously reduced at the Algerian universities in favour of online learning. This situation stressed the role of online learning in providing decent instructional alternatives for teachers and students alike and ensuring the continuity of classroom activities outside the classroom. Therefore, the common e-learning platforms belonging to higher education institutions have been activated to their maximum potential and the use of online courses has become a common practice. In addition, social platforms, such as Facebook, played a decisive role in facilitating learning and bringing learning communities together; hence, accomplishing the task of e-learning platforms.

1.2. Statement of the Problem

There is a big concern among Algerian university teachers of English as a foreign language about their students' underachievement in writing at all levels of graduation. The scores they generally obtain in the different writing assignments, tests, and exams reflect a very low writing competence and indicate an insufficient mastery of the necessary writing skills for improving the accuracy and quality of their written production. This critical situation calls for adopting new instructional strategies, such as online peer feedback, that could help students enhance their writing. Starting from this concern, the researcher has found a great interest in determining the impact of incorporating online peer feedback strategy into EFL writing classes on students' writing competence in terms of accuracy and quality.

The researcher's choice of peer feedback as a strategy for enhancing students' writing was partly motivated by the various theoretical views that advocate the use of peer feedback and the experimental studies, conducted in other EFL contexts, that stress its utility in writing classes. Additionally, this research was driven by the absence of research studies investigating the same issue in the local context.

1.3. Aims of the Study

Based on the problem stated above, the present study aims to:

a- investigate the impact of online peer feedback on EFL students' writing competence in terms of accuracy and quality.

b- gauge students' attitudes towards the use of online peer feedback in EFL writing classes.

1.4. Research Questions and Hypotheses

In this study, the following questions are addressed:

a- To what extent would online peer feedback enhance EFL students' writing competence?

- Would online peer feedback have a positive effect on students' writing accuracy?
- Would online peer feedback have a positive effect on students' writing quality?

b- What are EFL students' attitudes towards online peer feedback in writing classes?

In light of the above-stated research questions, it is hypothesised that:

a- Online peer feedback would enhance EFL students' writing competence in terms of accuracy and quality.

b- EFL Students would have positive attitudes towards online peer feedback in writing classes.

Statistically, the null and alternative hypotheses run as follows:

H0: There is no statistically significant difference between the experimental group and control group in the results of the writing post-test in terms of accuracy and quality.

H1: There is a statistically significant difference between the experimental group and control group in the results of the writing post-test in terms of accuracy and quality.

1.5. Significance of the Study

This study seeks to determine the influence of online peer feedback on the writing accuracy and quality of Algerian EFL students. Findings from the study would reveal insights in terms of EFL writing pedagogical practices at the tertiary level. Thus, the study would contribute to the knowledge of writing teachers about the issue of students' weak writing competence and how certain strategies, like online peer feedback, can be used to help them enhance their writing skills. This study would draw teachers' attention to the efficacy of incorporating peer feedback into their writing classes. This would help them promote their instructional practices and provide ample opportunities for their students to maximise their learning. In other words, the results of the study would contribute to the improvement of teaching writing in the local EFL context and even abroad.

The findings might also have implications for students, in that, they might benefit from the experimental procedures carried out in the study to vary their sources of learning. Adopting more effective writing strategies and practices, such as peer feedback, would enable them to improve their writing abilities within learner-centred approach.

As far as the use of web 2.0 technologies is concerned, writing in an online environment would be an opportunity to train EFL students on asynchronous collaborative learning and to raise their awareness of the necessity of making use of the available technological tools. This is so necessary in an era marked with the spread of educational technologies and social media that proved through research their positive influence on EFL students' writing competence. Such tools even boost autonomous learning among learners and raise their sense of responsibility towards learning.

The significance of this study also lies in the contribution it will make in the field of educational research with regard to the rarity of similar studies conducted on EFL students in Algeria. Most of the studies that tackled the issue of the use of peer feedback for enhancing students' writing competence were qualitative studies that explored teachers' or students' perceptions, beliefs, and attitudes towards conventional face-to-face peer feedback. The researcher is aware of only one experimental study conducted by Achouri (2022) that investigated the effect of online peer feedback on students' writing performance at the university of Tebessa. This field of research is still under-investigated in Algeria; thus, the present study is intended to contribute to the existing body of knowledge and to partially fill in this research gap in the literature.

1.6. Methodology Overview

This study adopts a quasi-experimental research design employing a post-test only non-equivalent groups design. The sample of the study involves fifty second-year students majoring in English language and literature in the department of English at Hamma Lakhdar University of El Oued. The subjects, who belong to two intact regular groups out of four, are purposefully selected based on their scores in the first semester writing test. They are randomly assigned to two groups: the experimental group and the control group with twenty-five students each. Both

groups are homogenous since all students have received the same instruction from the same teacher, have a similar educational background, and display some equal level of writing competence.

This study is conducted throughout two phases: the treatment implementation phase, which mainly involves peer feedback training; and the data collection phase, which includes administering the post-test and conducting the interviews. Within the first phase, and following the procedures commonly applied in post-test only non-equivalent groups design, the experimental group receive peer feedback instruction throughout three weeks. The subjects are taught how to use the peer feedback checklist to provide constructive comments on peers' writing with regard to accuracy, including mechanics, grammar, and vocabulary; and quality, including content and organisation. Instruction also involves using Facebook to provide online peer feedback. Students are divided into five groups and each group creates a closed Facebook group where the subjects post their writings. Within the second phase of the experiment, the subjects are required to write three paragraphs in two drafts. The first draft is posted on the specific Facebook group to be read and commented on by group members. Based on the feedback received, students are asked to write and repost their final drafts on the same Facebook group. The control group receives no similar peer feedback training; participants are only given a self-assessment checklist and asked to use it to evaluate their paragraphs, which they send to the researcher via e-mail for evaluation. The paragraphs of both groups are evaluated by the researcher and the regular writing teacher of the subjects following the analytical scoring approach. This phase of the experiment will last for six weeks.

Two major research instruments are used to collect qualitative and quantitative data, namely, the post-test and the semi-structured interview respectively. Each instrument is employed to answer one of the two research questions of the study stated above. First, the post-test involves a writing achievement test that aims to answer the first research question, that is,

to examine the impact of online peer feedback on the accuracy and quality of EFL students' writing. Students are required to write three paragraphs on three different topics using three types of discourse: compare and /or contrast, cause/effect, and argumentative. The type of writing test used is a criterion-referenced test that aims to evaluate the subjects' writing achievement according to specific criteria based on a set of specifications prepared in advance. The quantitative data collected is analysed through descriptive and inferential statistics using the SPSS software.

Second, the semi-structured interview interrogates six students from the experimental group, who are purposefully selected based on their post-test scores. The interview schedule, which is constructed parallel to the second research question, aims to gauge students' perceptions and attitudes towards the use of online peer feedback in EFL writing classes. It includes five questions that cover three themes: a) overall perception and evaluation of online peer feedback experience, b) impact of online peer feedback on the accuracy and quality of students' writing and the difficulties associated with it, and c) future practices with regard to the use of online peer feedback in writing classes. Analysis of the qualitative data is conducted utilising an eclectic approach that takes advantage of two major qualitative data analysis formats, namely, thematic and content analyses.

1.7. Delimitations of the Study

Delimitations are the definitions the researcher sets as the boundaries of his/her study; they are in the researcher's control. To make the study more focused and manageable, the researcher made some delimitations. Firstly, with regard to the study design, the researcher did not use a pre-test to establish between-group equivalency and measure the dependent variable (writing competence) before the treatment to be sure that any difference between groups after the treatment would be the result of the treatment, not of other factors. Instead, the researcher

adopted the scores obtained by the subjects in the regular writing test of the first semester as a measure for establishing equivalency. This mid-term test was similar in format, content, length, and difficulty to the post-test of the study; in addition, both tests were designed by the same teacher. The students' scores were used to purposefully select subjects for the study who had similar writing performance to ensure they would start on equal basis. All subjects selected for the study had their marks range between eight and twelve out of twenty, which marked a medium-level competence.

Secondly, the researcher chose second-year students as a population for his study because the focus of the study is on paragraph writing. In the their second-year of Bachelor's degree, EFL students are introduced to the structure of paragraph and the different types of sentences involved in it, in addition to some basic rhetorical genres. Therefore, second-year students were perceived to be a convenient population for the study.

Thirdly, the researcher conducted the study in the second semester of the academic year 2021-2022. The researcher determined the period between the months of March and April as an appropriate period to conduct the study because it generally lies between the first and second semestrial exams to avoid any academic pressure that causes students to be distracted from their exams. In addition, by the second semester, the students would have covered all the content syllabus related to the first semester program which forms part of the curriculum to be tested in the study.

The fourth delimitation was the non-use of a pre-intervention survey that would provide background information about subjects and their likely previous experience with peer feedback whether online or conventional. The researcher preferred not to use a pre-intervention survey starting from the belief that students did not experience peer feedback before either at university or in secondary schools, starting from a general question posed in class prior to the experiment

in this regard. Being so, the researcher doubted that the subjects would provide inaccurate information about their peer feedback experience which would probably affect the study findings.

The last delimitation was the use of Facebook as a virtual platform for conducting online peer feedback among all possible and available tools. This is because Facebook is the cheapest and the most popularly used tool for connecting people together. Creating a Facebook account or group is a very easy process and its use represents no difficulty to students; in addition, it saves both the researcher and subjects a lot of time and effort.

1.8. Limitations of the Study

Limitations identify potential weaknesses of the study from sources that are outside of the control of the researcher but can influence the research findings. Any research study is likely to involve limitations and for the credibility of the research, these limitations need to be acknowledged by the researcher. The current study has the following limitations. Firstly, the study was conducted in one higher education institution–the Department of English Language and Literature at the University of El-Oued. Due to the researcher's professional duties as a teacher and the difficulty of moving between a number of institutions in different cities to conduct an experimental study of this kind, one contented himself with conducting the study in his work institution due to the presence of a set of facilities and ease of communication with students.

As the research was conducted on a relatively small number of second-year students at the university of EL Oued, the results obtained could not have been generalised to all students in other EFL contexts in Algeria. Therefore, the results of the study are limited to the text it was conducted in. This was the second limitation of the study

Another limitation was the absence of total randomisation. Despite the measures taken by the researcher to ensure homogeneity of the study groups through the random selection of two second-year groups out of the existing four groups, and the random assignment of these two groups to experimental and control groups, the study lacked total randomisation. This was because the subjects came from intact classes in the department which could never be changed for research purposes. So, the researcher had to assign the whole group to either the experimental group or control group.

The lack of previous research about the practice of online peer feedback at Algerian universities constituted another limitation of the study. On one hand, citing previous studies constitutes an integral part of the review of literature for any research project and gives researchers a clear picture of the problem under investigation. On the other hand, previous research generally provides reliable data that contributes to the broadening of the scope of the study, analysis and interpretation of the study findings, and the establishment of meaningful relationships and trends in research. Additionally, previous studies generally make suggestions about further research based on limitations. Hence, the rarity of such recommendations would influence subsequent research that is more likely to involve the same limitations.

The last and most important limitation of the study, in the researcher's view, was the probable threat to the internal validity of the study. Internal validity refers to the degree of confidence that the causal relationship being tested is trustworthy and not influenced by other factors. As the subjects wrote their post-test assignments (paragraphs) outside the classroom, there was no way to verify whether these assignments were the mere production of the subjects themselves without getting any assistance from other individuals. The paragraphs were supposed to reflect the actual writing competence of the study sample to obtain reliable data and make accurate assumptions about the effect of the treatment. So, any deviation from this rule might have affected the results of the study.

1.9. Operational Definitions

To avoid confusion or misunderstanding, researchers tend to clearly define terms that may have special meaning for the research study. For this purpose, the key terms used in this study are defined as follows:

- **Writing competence**: refers to writing in plain language, and producing a clear, concise, logically ordered, well-balanced, and grammatically and mechanically correct piece of writing in English. It also involves using a variety of writing styles, rhetorical genres, editing techniques and approaches that serve the purpose of writing and target a specific audience.
- **Accuracy**: refers to the learner's proper use of the language items related to the mechanical conventions of language, including spelling, punctuation, and capitalisation; the correct application of grammatical rules; and the appropriate choice of expressive and comprehensible vocabulary items. It is about the exactness and correctness of language at sentence-level.
- **Quality**: involves the features of writing related to content, including focus, unity, and clarity; and organisation, including cohesion and coherence. In this research, the term quality is inclusive of all the features of text construction that cannot be discussed within accuracy.
- **Online peer feedback**: a collaborative activity where a group of learners interactively exchange comments and suggestions on each other's writing in written formats via the Internet and using a specific platform, Facebook in the case of current research, for the purpose of enhancing the accuracy and quality of students' written material during the writing process.

1.10. Structure of the Thesis

The thesis structure is made up of five chapters. The first chapter has an introductory nature as it seeks to set up the boundaries and scope of the research study. It highlights the background of the study and states its research problem in two separate sections; then, moves to the statement of its aims. The research questions and the related hypotheses are also provided together with a brief overview of the research methodology. The significance and delimitations of the study are proclaimed, in addition to the operational definitions of variables of the study and some key constructs. The chapter concludes with a presentation of the structure of the thesis.

The second chapter represents the theoretical framework of the study. It surveys the nature of writing as a language skill, the notion of EFL writing, and the major approaches to writing. A whole section is devoted to describing the learner's writing competence in terms of accuracy and quality. Each of these two areas of writing is divided into components that this study seeks to investigate. These components are mechanics, grammar, and vocabulary for accuracy; and organisation and content for quality. The chapter also defines peer feedback, states its advantages and disadvantages, and stresses its importance in EFL writing classes. Online peer feedback is also defined and its requirements, relevant activities, and the issues reported on it are stated. Facebook as a web-based medium of instruction will be discussed to highlight its benefit as an E-learning tool and students' perception of it.

A thorough account of the research methodology is provided in chapter three. It starts with a comprehensive discussion of the research design and approach with a clear justification of the researcher's choices. The chapter also discusses the population of the study and the sampling strategies used and elaborates on the context of the study, which includes the setting of the experiment and the educational profile of the participants. The discussion also involves

the research instruments employed, the procedures for piloting and administering them, and the methods of data analysis. Enough space will also be devoted to the different measures taken by the researcher to implement the experiment.

The findings of the study are presented in the fourth chapter, which is as well concerned with the analysis of data and discussion of these findings. In this chapter, the researcher displays the quantitative and qualitative data collected through the post-test and the interview, links them to the previous studies, and then suggests his interpretations of the results obtained, from which inferences and conclusions are drawn. The results obtained will help the researcher confirm or refute his hypotheses.

The last chapter maintains a summary of the study and its main findings. The implications of the research undertaken are discussed and the limitations of the study are stated. Finally, some recommendations for further research will also be proposed.

CHAPTER TWO:

Review of the Literature

2.1. Introduction

As this study investigates the impact of online peer feedback on second-year students' writing competence at of El-Oued University, it is quite important to provide a sufficient review of the literature to set a context for considering the specific questions posed beforehand. This chapter addresses the nature of writing, considering its characteristics and how it relates to the other productive skill–speaking. The importance of EFL writing is also extensively discussed together with the issues associated with it. A survey of the different approaches to teaching writing is also provided with a special focus on the process approach and the stages it entails. The chapter ends with a thorough examination of the major components of learners' writing competence related to accuracy and quality. It is, therefore, a multidimensional review of literature, but will only consider the relevant aspects of each vane of research which serves to establish an appropriate context for the current study.

2.2. Nature of Writing

Writing is a major language skill and an indispensable means of communication too. This accounts for the increasing interest in this domain of language among teachers and practitioners worldwide, and the growing body of research accumulated about it on a daily basis by researchers. This latter, body of research, reveals that writing is a paramount component of literacy (reading and writing) that supports conveying thoughts, translating feelings, establishing mutual comprehension, and boosting critical and creative thinking across various content areas. The importance of writing is as well manifested through international interactions and opportunities to study abroad, and through the inclusion of writing as the main subject in standardised tests at all educational levels, including tertiary one, nationwide and even worldwide. The next section will survey the definitional issue of writing and explore its theoretical underpinnings thoroughly

2.2.1. Definition of Writing

As researchers view writing from different angles, their definitions come to highlight various writing-related issues from a good number of perspectives. For instance, Crystal (2006) claims that writing is "a way of communicating which uses a system of visual marks made on some kind of surface. It is one kind of graphic expression" (p. 257). This definition seems narrow in scope since it provides a restricted view of writing as a final product. This viewpoint is not greatly advocated by many researchers such as White and Arndt (1991) who contend that "Writing is far from being a simple matter of transcribing language into written symbols: it is a thinking process in its own right. It demands conscious intellectual effort which usually has to be sustained over a considerable effort of time." (p. 3). That is to say, writing is a complex cognitive process which is enhanced through systematic and enduring practice. Sokolik (2003) holds a closer view to that of White and Arndt, claiming that writing is more than a physical act; it is also "… the mental work of inventing ideas, thinking about how to express them, and organizing them into statements and paragraphs that will be clearer to the reader." (p. 88). That is, writing is both a process and a product: a process as it entails a series of interactive steps for effective writing; and a product as it targets a final audience—the reader. Brown (2001) states that the view that writing is graphic symbols is not valid anymore. Brown adds that writing is the result of thinking, drafting, and revising procedures that require specialised skills to produce an appropriate final product. The last three definitions imply that for writing to be expressive of our thoughts, opinions and feelings, it must be structured based on certain conventions and rules to create words and sentences that need to flow smoothly to form a coherent whole.

Considering another aspect of writing, Berninger et al. (2002) view writing as an active creation of text, which involves both lower-order writing skills such as punctuation, spelling, and handwriting; and higher-order thinking processes such as sequencing, planning, and expressing content. This definition builds upon the previous definitions in terms of the mental

processes that interfere with the writing skill and highlights much more the importance of the basic linguistic skills that a writer should possess for him/her to express one's thoughts adequately.

Another specific definition that deserves being mentioned is that framed by Clark (2014), who assumes that writing is:

> An instrument of thinking that allows students to express their thoughts and helps them understand and share their perceptions of the world around them. Teachers can give students power in their world by teaching them to write and to write well. (p. 6)

In addition to considering writing as a cognitive process and a means of communication and exchange of personal experience, the specificity in this definition is that Clark narrows the scope of writing to academic settings, which is manifested in the decisive role she assigned to teachers in providing learners with the necessary tools of good writing. This supports collaborative learning, which is considered essential in the whole process of learning.

As for the social constructivist approach to learning, it maintains that knowledge is a social act that can take place only within and for a specific context and audience (Kroll, 1994). That is, knowledge is mainly constructed through the systematic and permanent interaction of learners throughout their social context. Within the same line of thought, Hayes (1996) believes that as writing is conducted in a social context, it as a social artefact. This means that writing is not an inborn endowment, but a skill that can be taught and enhanced through systematic instruction and training. Tribble (1996) confirms the social aspect of writing by assuming that not to be given of the opportunity to learn writing is like "to be excluded from a wide range of social roles, including those which the majority of people in industrialised societies associate with power and prestige." (p. 12).

Byrne (1993), on his part, asserts that writing is not a spontaneous skill, but one that needs great mental efforts that lead the writer to be exposed to many problems during the process of writing. In this perspective, he divides these problems into three types: a) psychological problems which occur partly because the writer lacks interaction with his/her audience and does not receive instant feedback on one's writing, and partly because writing is a task which is often imposed on us, perhaps by circumstances; b) linguistic problems which refer to the absence of considerable devices and features which help us convey meaning such as gestures and facial expressions, which necessitates much more emphasis on the writing style per se; and 3) cognitive problems which result from the basic requirements of formal writing instruction and the process of organising ideas for effective communication in writing with a reader who is not present or is unknown.

2.2.2. Characteristics of Writing

Many characteristics associated with writing can be identified when compared with speaking as they both share the same mode–productive or expressive–despite their different channels–visual for writing and aural for speaking. When we engage in the process of writing, we get involved in a private and public activity at the same time both (Broughton, Brumfit, Flavell, Hill, & Pincas, 2003). It is private or personal because writing is by nature an individual act, but it is also public because most of the time we write for an intended audience.

An important concern connected with writing is the fact that we do not write for ourselves but for an audience, which, according to Byrne (1993), makes writing more difficult. In order to communicate our thoughts to a reader, who is absent or unknown, and affect him, we should lay all our effort into writing, the only means available to us, unlike speaking, wherein additional facilitators such as gestures and facial expressions which would do a lot for

us (Byrne, 1993). For this reason, we need to learn how to write skilfully and keep on developing this skill for better and more effective communication with others.

In this regard, teachers are required to play a major role in enabling their students to produce a fluent, accurate, and appropriate composition. According to Broughton et al., (2003), teachers need to consider the following aspects:

- All issues related to the mechanics of language like handwriting, punctuation, and capitalization;
- Aspects of accuracy in terms of grammar and lexis;
- A writing style that matches the writing situation; and
- Problems of developing ease and comfort in expressing what needs to be said.

On his part, Brown (1994) provides an expanded list of characteristics that distinguish writing from speaking (see Table 1.1).

Table 2.1

Difference between Writing and Speaking

Characteristics	Writing	Speaking
Permanence	written language can be read and reread many times	oral language is to be processed in real-time as it is transient
Production time	writers have enough time for planning and reviewing texts	speakers plan, structure, and communicate their words instantly
Distance	there is much space and time between the writer and the reader	speakers can connect to listeners face-to-face
Orthography	words are the only tool available for writers	speakers can use more tools to enhance messages (stress, pitch, intonation, volume, pausing, etc.)
Complexity	written language includes longer linguistic structures	spoken language includes shorter structures
Formality	writing is more formal due to the social and cultural uses	speaking is less formal
Vocabulary	written material is rich in terms of words	spoken utterances contain words frequently used

Note. Adapted from Brown, (1994).

In Table (2.1.), Brown (1994) maintains that as written language is documented, it remains with us for a longer time and people can read it at anytime, anywhere; whereas spoken language perishes very soon as it is processed at the time of speaking. In writing, writes have a plenty of time to plan and organise their ideas and; in speaking all these processes are conducted at the same time. Writers' sole tool is vocabulary, so, they use a wide range of words which may make the text more complex and more formal. Speakers have more tools than words to express their thoughts like gestures, tone, pitch, etc.; their words are more frequent, shorter and less complex. As for contact, writers have no direct contact with their audience; however, speakers communicate with their interlocutors face-to-face.

Weigle (2002) assumes that the above-stated differences made by Brown between writing and speaking are not limited to the surface features of texts. According to her, writing and speaking are different in the cognitive processes involved in both of them, which are utilised in distinct contexts for various reasons to serve numerous communicative goals.

2.3. EFL Writing

Writing is a language skill that constitutes a difficulty to learners and teachers because it is a demanding, subtle cognitive task that needs permanent and systematic practice and concentration on the part of the learner, and careful instruction and planning on the part of the teacher. Even native learners encounter substantial difficulties mastering this skill. However, this difficulty is doubled for non-native learners because they are expected to communicate effectively in a new language and demonstrate mastery of a number of the writing conventions and rules such as mechanics, vocabulary, spelling, punctuation, purpose, organisation, content, and audience (Baghzou, 2011).

In order to help EFL learners overcome many issues related to learning how to write and to motivate them to engage in this process more systematically, EFL teaching programmes

should devote sufficient space to teaching writing skills according to the most responding approaches. Teachers' instructional practices should follow the guidelines suggested by such approaches and be adapted to the learners' needs and interests. According to Broughton, Brumfit, Flavell, Hill, and Pincas (2003), various EFL writing classes are primarily concerned with reinforcing the teaching of particular structures than with developing writing skills. Such practices do not teach students how to write effectively in English because instruction has, undoubtedly, an impact on the writing abilities of learners and their perceptions and attitudes towards writing.

2.3.1. Benefits of Teaching Writing to EFL Learners

Pedagogically speaking, writing is more than a channel of communication; rather, it is a medium of learning and success in other academic subjects too. In comparison to listening, speaking, and reading, writing is considered the most complex language skill and the last one for students to learn and use. Alderson (2006) states that:

> Writing is the most difficult to develop, and one of the least often taught, at least, . . . particularly in universities, students whose first language is not that of the host institution usually need to be able to write in the language that is the medium of instruction, since much of the evidence for learning and achievement at university level is provided in written form. (p. 154)

This is why teachers need to have a clear purpose for teaching writing. In this respect, Harmer (1998) puts four pedagogical purposes for teaching writing that teachers and practitioners need to consider:

- **Reinforcement**: students acquire new language forms daily in either ways oral or aural. One of the pedagogical practices teachers can adopt to help students memorise what

they have learned is to teach them writing. Writing is a kind of visual demonstration that provides evidence of students' achievements. That is, writing activities provide learners with tangible proof that they are making progress in the language learning process. This serves an important psychological need.

- **Language development**: writing as a process necessitates engagement in various cognitive processes and mental activities, which boost students' learning experience. In other words, the process of writing helps learners produce proper texts as they go along the whole learning process.

- **Learning style**: students have different learning styles and those who do not learn well through oral practice alone, can feel more secure with writing practice. Therefore, writing is specifically suitable for those learners who are slow in writing texts and need much time to think about how to write.

- **Writing as a skill**: language skills complement one another; therefore, mastering the writing conventions would certainly enhance the other skills. In addition, students who demonstrate a good command of writing skills can tackle different writing genres, and hence, can communicate their thoughts more convincingly.

Byrne (1993), however, adds two other major purposes:

- **Variety**: writing breaks classroom routine as it engages learners in other types of activities than those related to oral work, which fuels their motivation to learn. In addition, it provides teachers with ample opportunities to assign tasks to their students out of class, which increases the amount of language contact.
- **Testing**: writing may serve as a tool for testing oral skills in times when we have a large number of students in class is very high and the time we have at our disposal is too

limited. For instance, taking notes while listening. Therefore, instead of asking questions and waiting for students' responses, teachers may examine students' written notes to check comprehension.

2.3.2. Issues Related to EFL Writing

Writing in EFL classes does not go without challenges. Broughton et al., (2003) say that "a great deal of the writing that occurs in the foreign language classroom is not primarily concerned so much with developing writing skills as with reinforcing the teaching of particular structures" p. 117). This almost involves transforming oral sentences to structural written patterns. Although this type of activities can be conducted for some acceptable reasons, the focus of teaching should be centred around how to write in English, and it is with this last activity that this chapter will be concerned.

An issue encountered by EFL/ESL students is their limited knowledge of the target language which may hamper their writing proficiency. Silva (1990) states that writing in a second language is in most cases more restricted and more complicated than writing in the first language although writing in the latter can be proficient to a great extent. He adds that due to constraints in language, first-language writers revise for content more and write more fluently and accurately than second-language writers. It must be noted here the language knowledge referred to by Silva involves linguistic knowledge, discourse knowledge, and sociolinguistic knowledge.

Students can also be handicapped by the social and cultural factors that affect their writing. Weigle (2000) stresses the importance for writers to be aware of the cultural and social uses of writing in a second/foreign language. She means the correct manners by which different functions can be expressed in writing considering the socio-cultural conventions that guide the society of any target language and what readers expect from EFL/ESL writers. Thus, part of the

success in writing is dependent on the knowledge of the social and cultural features that any language may entail.

Proficiency in writing is affected by motivational and affective factors as well. Many researchers studied the impact of motivation on learning a second language, which is undoubtedly applicable to writing. Peirce (1995) for instance, maintains that learners' investment in the target language culture is greatly governed by their belief that they may need to get integrated into that culture one day for better life opportunities, including studying for example. This belief may influence the efforts and time spent by learners on learning how to become proficient writers in a given language. Other motivators may involve, according to Grabe and Kaplan (1996), learning new information, future job/promotion, grades, and higher proficiency. Learners with different types of motivation (integrative or instrumental) may show a high amount of interaction inside the classroom and readiness to work on their outside of it for the sake of learning more.

Among the many affective factors that influence learners' writing, anxiety (writing apprehension) and self-esteem are widely discussed in the domain of foreign language. Students' writing apprehension due to the lack of writing skills, fear of being criticised, or even time constraints may unfavourably affect the quality of their written production and even motivation to write. Oxford (1990) states that learners who tend to have low levels of anxiety produce better texts in foreign languages than their peers who show higher levels of anxiety. Allwright and Bailey (2002) claim that learners' feeling of worry when they are asked to write in a foreign language is widely associated with their inability to represent themselves cognitively and emotionally in an appropriate way that would be convincing to readers. Belief in one's capacities and skills would significantly increase learners' self-esteem, and hence, their ability to develop and succeed in learning a foreign language. This is evidenced in a plethora of research: Napoli, Killbride, and Tebbs (1992) assert that a person with high self-esteem can

be more successful and better at writing than a person with low self-esteem; Fahim and Rad (2011) report the existence of a positive relationship between English language proficiency and paragraph writing and students' scores of self-esteem; and finally, Abdollahzadeh and Banan (2013) who confirm in their study that self-esteem was found to affect Iranian EFL learners' strategies in English writing. They view self-esteem as one of the affective factors that affect second language writing.

One more issue related to EFL writing is how to teach it to ELF learners and according to which approach. It is agreed upon by researchers that teachers who are more likely to achieve satisfactory results in teaching writing to their students are those who base their instruction on sound theoretical grounds and follow appropriate practical guidelines. Therefore, it is highly recommended that teachers of writing improve their theoretical and practical knowledge and relate their instructional decisions to it. In this regard, Hyland (2003) contends that "familiarity with what is known about writing, and about teaching writing, can therefore help us to reflect on our assumptions and enable us to approach current teaching methods with an informed and critical eye" (p.1).

2.4. Writing Approaches

Writing has always been viewed as vital means of communication and the transfer of knowledge and expertise over generations. This accounts for the researchers' incessant endeavours throughout the years to devise effective approaches that can best provide teachers and students alike with the necessary tools for improving the ways writing is taught and learnt. These efforts are reflected in the wide number of approaches available nowadays in the field of language learning, particularly English. This section discusses three major approaches to writing instruction: product, genre, and process.

2.4.1. Product Approach

The origins of the product approach go back to the audio-lingual method of second language teaching which appeared in the 1950s and early 1960s. The latter used writing mainly to consolidate the oral patterns and to verify learners' correct usage of grammatical rules (Ferris and Hedgcock, 2005). Based on the behaviourist view of language learning, the most common activity required under this approach was copying and imitating prescribed texts, models, or exemplars to produce similar proper written texts (Coffin et al. 2003). In the beginning, it used to be called the text-based approach, the guided approach, and the controlled-to-free (Silva, 1990).

The main focus of product approach is on the production of well-produced composition. Learners, who have specific needs, are exposed to model texts and engage in various exercises that enable them to master basic relevant features of that model text including grammar, punctuation, spelling, vocabulary, and rhetoric conventions. Exercises (rhetorical drills) vary between completing sets, combining sentences, adding logical connectors, etc., which all focus on form and syntax (accuracy of language). Likewise, mastery of writing abilities is the direct result of mastering the basic language structures of the different text models of the target language (Nunan, 1999).

The product approach to writing involves the production of grammatically intact texts, which can be encountered in educational, institutional, and/or personal contexts, via extensive reduplication of professional texts, therefore, the quality of the produced text is dependent on the quality of the text presented at the modelling stage. The writing process, the audience, and the purpose writing of do not occur in the focus of this approach, in other words, the final product is more important than the processes learners go through when composing. Grammatical skills and proper sentence structures are of paramount importance; the mechanical

skills, such as handwriting, capitalisation, and spelling, and vocabulary use are also taught (Badger & White, 2000). The teacher assumes the role of a proofreader and an editor (Nunan, 1999) and even the judge of the final work (McDonough, Shaw & Masuhara, 2013).

The product approach has been associated with many advantages in both L1/L2 writing classes. Hyland (2003) for instance, asserts that at low language proficiency levels, this type of writing is very beneficial in boosting vocabulary, scaffolding writing development, and increasing the writers' self-confidence. It improves lower-level students' grammatical accuracy and enhances their stock of vocabulary (McDonough, Shaw & Masuhara, 2013).

Teachers adopting product-oriented writing instruction generally use a four-stage strategy devised by Badger and White (2000) as follows:

a) familiarisation with texts: students are exposed to a model text with a focus on grammar and lexical points,

b) controlled writing: students practice the language points seen in stage one at the level of sentences,

c) guided writing: students write longer paragraphs and essays focusing on the same initial grammatical and lexical points, and

d) free writing: students now enjoy much freedom to write individual texts with maintaining the same focus and accuracy and vocabulary.

Despite the advantages evidenced by research, the product approach received much criticism. For instance, Badger & White (2000) assert that it does not consider the skills related to the process of writing such planning. Hyland (2003) contends that the product approach teaches learners how they can construct appropriate sentences but not how to generate adequate texts. In other words, students become all the time dependent on model texts and are not encouraged to write freely and creatively, which decreases their motivation to write. Yan

(2005), on his part, confirms that the product approach lays much attention on form and usage and ignores the actual process that students go through when they write.

2.4.2. Genre Approach

The genre approach appeared in the field of ELT after the process approach, but it will be discussed here before it for the simple reason that the focus of this study will be on peer feedback, which constitutes a major stage within the process approach to writing. Therefore, the process approach will be given a larger space and discussed much more extensively than the product and genre approaches.

Hyland (2007) believes that the genre approach is the descendent of the communicative approach to language teaching which appeared in the 1970s, and Swales (1990) views a genre as "a class of communicative events, the members of which share some set of communicative purposes" (p. 58). Badger and White (2000) claim that as the genre approach focuses on the final product and how this product is framed, it van be considered a supplement to the product approach. Being so, the genre approach puts the reader in a central position together with the most effective social aspects of the writing conventions that enhance readership.

Within this regard, Dudley-Evans (1997) marks the similarities between the product and genre approaches and highlights the three main stages of the genre approach: a) students are exposed to a model of a particular genre to analyse and work on; b) students practise the relevant language to the genre studied; c) students produce the final text considering a targeted audience. This categorisation is close in notion to Hammond's (1992) model wheel of the teaching and learning cycle that encompasses text modelling, teacher-leaner text negotiation, and the learners' independent text writing.

The use of the genre-based approach to writing entails a social setting in which texts are written for a specific purpose. Therefore, different samples of text genres are introduced to

students such as research articles, letters of apology, reports etc., to discover their characteristic features and use them appropriately in their subsequent writings considering purpose and audience. That is, the genre approach combines the linguistic and social features of writing through the use of specific vocabulary and structure that suit a particular class of people serving a certain purpose.

Johns (2003) emphasises that writers who are acquainted with common genres are more likely to succeed in processing and writing texts, while Hyland (2007) sets seven main features that characterise the genre approach (see table 1.2).

Table 2.2.
Main Features of Genre Approach

Explicit	clarifies what to learnt to simplify the process of acquiring writing skills
Systematic	offers a consistent framework for focusing on language and contexts
Needs-based	assure that the objectives and content of the course are based on the needs of students
Supportive	assigns teacher the role of supporting students' learning and creativity
Empowering	gives leaners access to a large variety of text patterns
Critical	equips students with sufficient sources to understand and challenge valued discourses
Consciousness-raising	raises teachers' awareness of various texts to confidently guide them during writing

***Note*:** Adapted from "Genre pedagogy: Language, literacy and L2 writing instruction". by Hyland (2007).

Johns (2003) claims that what characterises the genre-approach is that it starts from the actual needs of the learners to set objectives and devise appropriate and clear content for

learning and improving the writing skills. It is guided by the teacher who is responsible for monitoring and assessing students' learning. The genre approach also introduces learners to various text genres and their relevant strategies and tools. This offers leaners the opportunity to get exposed to various texts to which they can compare their own production.

Although the genre approach proved its effectiveness in ESL or EFL writing classes, it has been marked with some drawbacks. Badger and White (2000) for example, believe that the genre-oriented writing approach underestimates the skills of writing required by students to write effectively, and may cause teachers to perceive their students as passive learners. Kay and Dudley-Evans (1998) maintain that this approach is too restrictive and limited in scope. They add that the genre approach, within the hands of unimaginative teachers, may turn into a source of boredom and demotivation among learners if overdone or done incorrectly. Hicks (1997) criticises the genre approach for returning to grammar instruction although it is at the level of text. She adds that the individual intentions of the writer are greatly affected by the model rhetorical patterns available to achieve specific social purposes.

2.4.3. Process Approach

The process approach gained its reputation and position in the field of writing instruction based on the criticism that its predecessor–the product approach–received owing to the strong emphasis it laid on the final product and its neglect of the underlying processes of writing. According to Dyson and Greedman (1990), there has been a shift over the past two decades from a focus on the ultimate product to the diverse phases that the writer undergoes in order to create this product. The process approach to writing has dominated the writing classes in the world, and since 1980, textbooks and syllabi in various parts countries–including ESL and EFL contexts–have adopted this approach as a basic part of teaching (White & Arndt, 1991). In

Algeria for instance, the process approach has been officially adopted and incorporated into secondary school textbooks after the educational reforms of 2003.

2.4.3.1. Nature of the Process Approach

The process approach, which dates back to the late 1970s, views writing essentially as the practice of the language skills and the development of writing and as a subconscious process that happens when teachers facilitate the practice of the skills of writing (Zhang, 1995). In other words, this approach allows practising linguistic skills such as pre-writing, brainstorming, drafting, revising, and editing, without much focus on the aspects of linguistic knowledge such as grammar, with the teacher assuming the role of a facilitator. According to White and Arndt (1991), these different activities (skills) are not linear, but typically recursive, allowing writers to move backwards and forwards between the stages when they feel it necessary and useful to do so. White and Arndt add that the process approach also includes the exploration and transformation of the author's ideas and the reader's reactions, as well as the necessary language tools to achieve the task of writing. This means that this approach teaches students many skills like editing, developing strategies to generate ideas, receiving feedback from readers throughout a dynamic process, and revising.

One of the main strengths of the process approach is that it helps students gain in control of the cognitive strategies employed in writing and increase audience awareness—readers. It also seeks to help students gain proficiency in writing through understanding and mastering the composing process, and through emphasising content, self-expression, and fluency rather than accuracy. That is why, within this approach, students' mistakes are tolerated because this is a sign that they are allowed to write what they want and express their thoughts freely (Byrne, 1991).

Talking about students' mistakes in writing leads the discussion to spotlight the connection between the process approach to writing and feedback in general, and peer feedback in particular. The relationship between peer feedback and the process approach is evident because many tasks included in peer feedback activities are in fact implementations of the process approach. Zhang (1995) argues that peer feedback is one of the components of the process approach to teaching writing, in addition to other forms of feedback. Zhang adds that "as a recursive model, the process approach focuses on how to revise in response to feedback from the reader, whether the reader is the instructor, an ESL peer, or the author him- or herself" (p. 209). According to Hyland and Hyland (2006), the process approach motivates students to work collaboratively in pairs or groups wherein students exchange drafts and provide comments on each other's writing.

As for teachers' role in process-oriented writing instruction, researchers agree that it is that of a guide and facilitator. Hyland (2003) confirms that teachers should guide their students along the stages of the writing process to avoid focusing on form and give more importance to content and the elaboration of ideas. In addition, teachers assume the role of feedback providers.

Just as any other approach in the field of ELT, the process approach has received much criticism. Reid (1992) argues that the designers of process approach have developed a wrong dichotomy between product and process in FL classrooms. Badger and White (2000) assert that the process approach does not provide students with sufficient linguistic knowledge necessary for them to write successfully. That is, this approach focuses more on the stages of the writing process and neglects the language items necessary for text accuracy and fluency. In addition, Ivanic (2004) stresses the difficulty of assessing the features and processes of writing, meaning that assessment of writing will usually be preserved for the final written product.

2.4.3.2. Stages of the Process Approach

Stages of the writing process are meant to help students gain control over each step in the course of writing and to be conscious about what they are precisely working on. Sundem (2007) views that the most recursive stages of the process approach to writing are prewriting, drafting, self-revising peer/adult revising, editing, and publishing

2.4.3.2.1. Prewriting

Prewriting is the stage at which students generate and organise their ideas. It includes all the operations they carry out before they get ready to write out the first version, and it usually takes even for experienced writers. There are three formats for prewriting: a) bubbling (mind web): this kind of brainstorming ideas involves writing the topic in a circle in the centre of the page and connecting related ideas like cartoon quote bubbles. The ideas directly related to the central topic represent paragraphs in a draft, and the bubbles attached to these ideas will probably become ideas which uphold the paragraphs; b) outlining: it refers to describing the contents and function of each single paragraph of the writing by organising ideas into topic sentences and supporting details. It is very helpful when students engage in expository, persuasive, or descriptive writing; and c) cartoon strip: which requires drawing/writing a captioned picture-by-picture comic strip. According to Sundem, this technique is useful for narrative writing, and it motivates students as they enjoy the process.

2.4.3.2.2. Drafting

Drafting or writing is the stage at which ideas are developed through sentences and paragraphs within a whole structure. At the drafting stage, students decide how to organise their ideas and what to include or exclude in their writing. Therefore, at this stage, the focus is on meaning and content rather than mechanics and conventions. White and Arndt (1991) say

that within drafting, writing moves from *writer based* to *reader based* wherein much emphasis is given to the reaction and needs of the audience. As starting writing is always difficult and frustrating even for knowledgeable writers, teachers are supposed to move around, give help to students if needed, and encourage them without distracting them or breaking their concentration.

2.4.3.2.3. Self-Revising

Revising represents great potential for learning because students learn techniques that enable them to improve their product. Thus, students will be able to see and compare “before” and “after” versions, and hence, decide what specific elements better fit the piece of writing. It is vital that students learn to first review their writing before getting comments from their peers or adults, and that revising is for content, and not conventions. It is the teachers' responsibility to teach students the mechanics of self-revising which may include how to add and delete material.

2.4.3.2.4. Peer/Adult Revising

This kind of revision guarantees the transfer of information from writer to reader—peer, teacher, parent, etc. This transfer of information is necessary for students to learn about their strengths and weaknesses. That is why the reader is viewed as the best barometer of success. In addition, by revising someone else’s product, students learn strategies they can use in their writing. Peer revision is preferred in educational contexts as it is easier to control in the format of writing classes, and as it engages students in collaborative problem-solving activities related to writing. As for the option of parent revision, teachers can bridge the gap between school and home by involving parents more closely in their child’s learning. For peer feedback (revision) to be successful, teachers have to train students on how to conduct such activities, which requires teachers to deepen their theoretical and practical knowledge of it primarily.

2.4.3.2.5. Editing

In editing, students make a final check to polish their draft. This allows them to proofread their text and find mistakes related to conventions that may affect the accuracy of the piece of writing, and hence impede the communication of thought. This stage involves checking for capitalization, punctuation, grammar, spelling, choice of words, etc. According to Coffin et al. (2003), "students may be encouraged to use computer spelling check programmes but not to limit their review of errors to those noted by the computer" (p.42). As in the revising stage, after students edit their work, they may get feedback from peers, teachers or other adult readers using editing checklists, which proved to be very useful, as they provide a guiding framework for collaborative work.

2.4.3.2.6. Publishing

Although publishing is the last stage in the writing process, it is by no means less important than its prior stages because it teaches students how to present their work appropriately—a skill they later need in life. It is the stage at which the writer (or student) meets his intended audience and shares with them his final version. There are different strategies for publishing one's writing as reading it aloud to an individual or a group, handing it to a teacher, printing it in a class newspaper, publishing it in an online magazine or journal, blogging, etc. Teachers are recommended to create class-publishing norms that will increase students' motivation to write with purpose.

2.4.3.3. Models of the Process Approach

Researchers' interest in the writing process gave birth to many models that portray the cognitive processes that underlie this process and the knowledge sources used by the writer. These cognitive models view writing as a problem-solving process and posit that, almost,

writing issues arise when writers try to map language onto their idaes and feelings as well as the expectations of the reader (McCutchen, Teske, & Bankston, 2008). This means, being a skilful writer involves using problem-solving strategies such as organising ideas, constructing correct grammatical sentences, and using the right punctuation.

Hayes and Flower's Model, Bereiter and Scardamalia's Model, Hayes's Model, and others have all served as theoretical platform on which the use of the process approach, in both native and non-native writing teaching, rests. Although apparently different, these models share many of the stages underlying the writing process.

2.4.3.3.1. Hayes and Flower Model

Hayes and Flower introduced their first model of the writing process in 1980. According to them, the writing process is a combination of three major complementary sets: the writer's long-term memory, task environment, and a number of cognitive processes (see Figure 2.1). They focus on the fact that writing is a recursive process and that providing learners with rhetorical models to be duplicated in their writing will not enhance students' writing abilities.

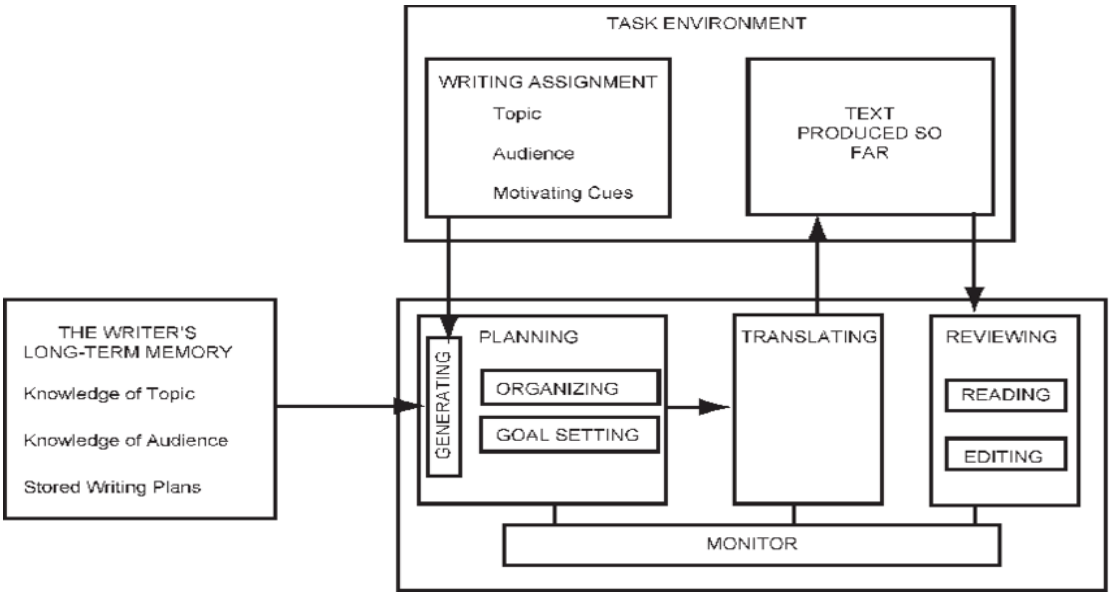

Figure 2.1. Hayes-Flower's (1980) model of writing (Weigle, 2002).

The model's first set, task environment, includes the writing assignment and the written text so far; the second set refers to the writer's long-term memory, involving the writer's knowledge of the topic, audience, and stored writing plans; the third set points to such cognitive processes undergone by the writer when engaged in the writing process as planning, translating thought into text, and reviewing.

To Hayes and Flower, writing consists of three major processes: a) planning, which encompasses setting goals and generating and organising the content in terms of the developing text. Plans can be prepared in advance or evolve during writing, and they can be general or local (Galbraith, 1996). b) translating (composing), which is the process of text production, or translating ideas into text, by means of transcription and generation. Transcription refers to the cognitive and physical acts of forming written text (spelling) and generation involves refining content, retrieving lexis, and formulating syntactic structures (Berninger & Swanson, 1994), and c) reviewing, which involves critical reading, text evaluation, and rewriting. That is, reading the actual text critically and comparing it to a representation of an idea text before the necessary changes are made to it (Limpo et al., 2013). All these writing processes operate under the executive control of the external task environment and the writer's long-term memory (De La Paz & McCutchen, 2016). Hayes and Flower refer to this process in their model as 'monitoring'. It is a meta-cognitive process that links and coordinates planning, translating, and reviewing. This allows the writer to manipulate the whole writing process and to shift the focus of attention between its sub-processes to ensure the writing progress and quality (Garner, 1994).

Among many other models proposed by researchers, two models–Bereiter and Scardamalia (1987) and Hayes (1996)–will be examined in the subsequent sections because they complement each other orienting their emphasis on two distindt issues in writing. While Bereiter and Scardamalia focus on the processes followed by expert versus novice writers;

Hayes stresses the key factors that influence the process of writing, including the writer (Weigle, 2002).

2.4.3.3.2. Bereiter and Scardamalia Model

Bereiter and Scardamalia's (1987) model distinguishes between expert writers who master the writing skills and novice ones. This is manifested in the clear-cut distinction they make between knowledge-telling and knowledge-transforming. The former (see Figure 2.2) is a kind of “natural” writing that everyone fluent speaker in a literate society can learn to do based on language knowledge. Thus, most children's and adolescents’ writings fall into this category.

According to Weigle (2002), this process helps beginning writers generate more content through the topic, discourse schema (knowledge of the different writing forms), and the written text itself. Hayes (2011) views knowledge-telling not as a unique process, but as a set of strategies that young writers can use including a topic-elaboration strategy, a fixed-topic strategy, or a flexible-focus strategy.

Within knowledge-telling, writers start from the writing assignment question to generate content knowledge about both the topic (topic identifiers) and the discourse forms (genre identifiers) necessary for engaging in that assignment. Writers look into their memories for relevant cues, which are subjected to a test of appropriateness (right or wrong content). If the cues are right, they are written down, starting a new cycle of the search for more content relying on the written text per se. When the writer fails to generate additional content, the writing process ends.

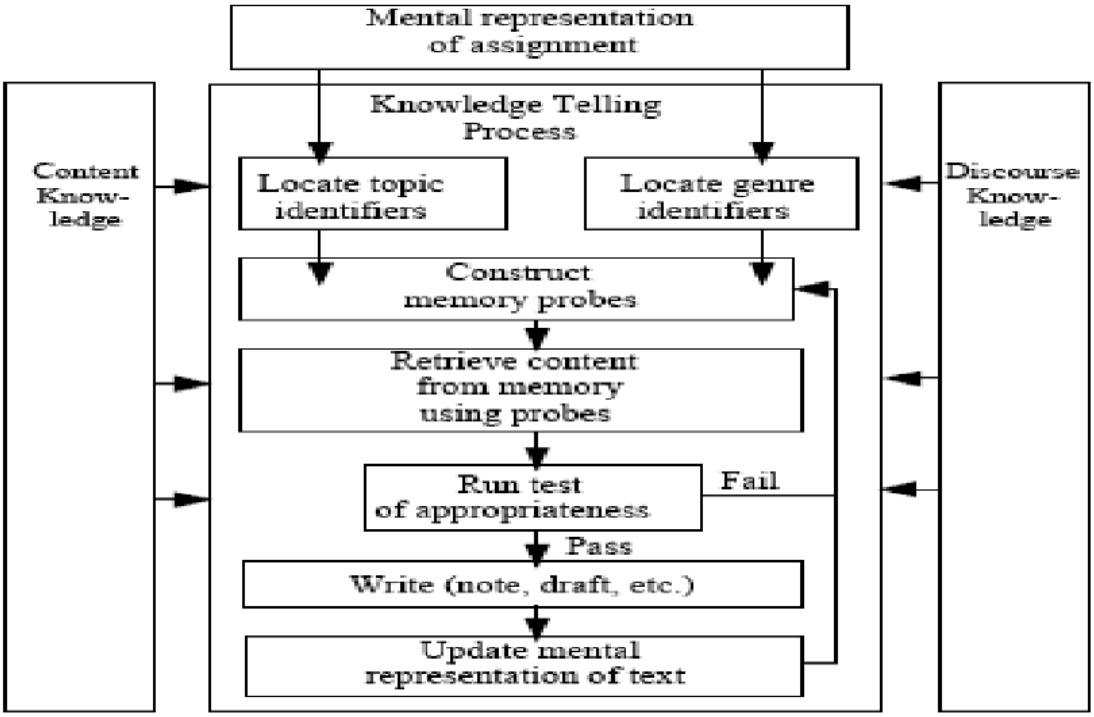

Figure 2.2. Bereiter and Scardamalia's (1987) knowledge-telling model of writing (Hayes, 2011).

As for knowledge-transforming, Bereiter and Scardamalia consider it more complex because it requires high skills that are gained through much practice and patience, a feature reserved for expert writers who use writing for creating new knowledge. That is, the writing process itself may motivate the writer to change the views he/she wants to communicate (Weigle, 2002).

In the knowledge-transforming model (see Figure 1.3), the writer analyses the problem and set the goal of the writing assignment. This should lead activate content problem space, where knowledge about the topic is generated, and rhetorical problem space, where discourse requirements are dealt with. Throughout the course of developing content knowledge and developing text, problems found in one space may lead to other problems in the second space. The solution to content and rhetorical conflict becomes the input for the process of knowledge-telling, a stage at which the actual written text is produced (Weigle, 2002).

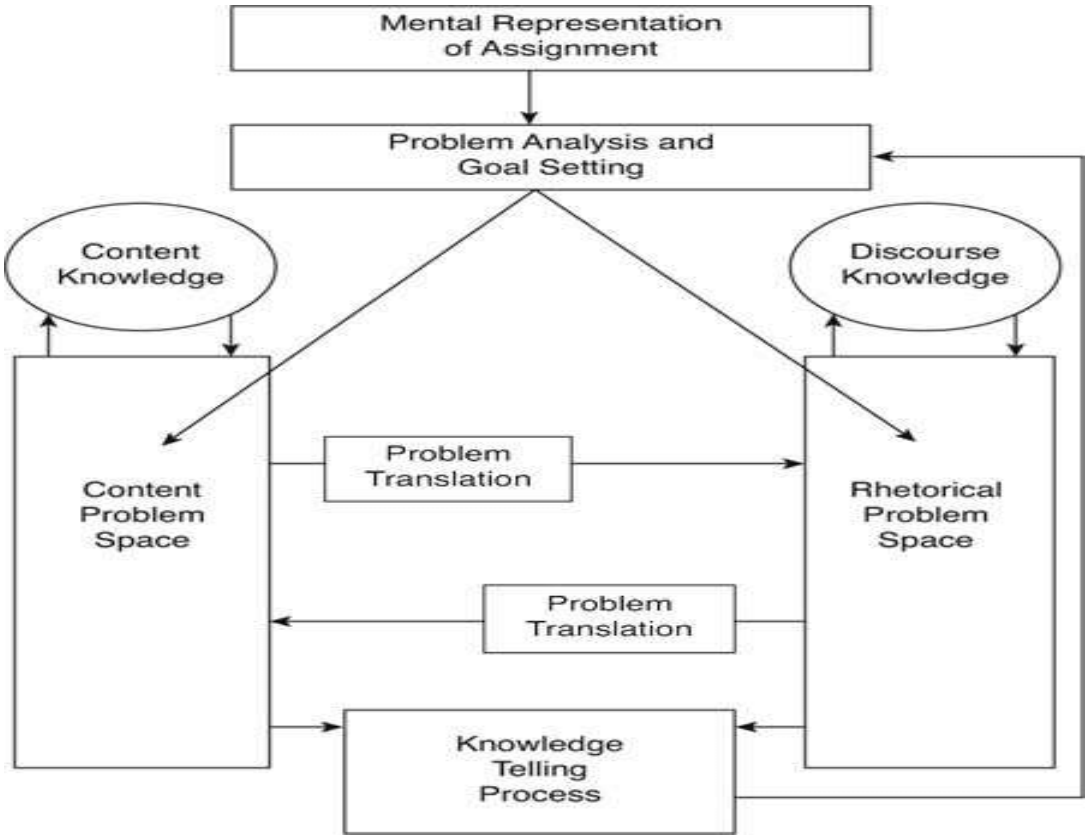

Figure 2.3. Bereiter and Scardamalia's (1987) knowledge-transforming model of writing (Galbraith, 2009).

Grape and Kaplan (1996) assert that although Bereiter and Scardamalia's two-model process failed to explain how writers move from knowledge-telling to knowledge-transforming, it clearly shows the distinction between skilled and unskilled writers concerning the strategies used and explains why the writing tasks have different levels of difficulty.

2.4.3.3.3. Hayes' Model

Hayes's (1996) model is a revision of Hayes and Flowers' original model. It divides the writing process into two major components: the task environment and the individual. This latter is the central part of the model focusing on its four components: motivation and affect, cognitive processes, working memory, and long-term memory with further sub-components for each of these four components (Weigle, 2002). As for working memory, the model specifies how phonological memory and visuo-spatial memory are included in the cognitive processes of

writing. As for long-term memory, Hayes distinguishes between topic knowledge, linguistic knowledge, genre knowledge, audience knowledge, and task schemas. To him, long-term memory is the storehouse of relevant knowledge to the writing task. He also removed the external distinctions based upon task (e.g., the difference between initial draft and editing) in favour of an analysis that assumes three basic cognitive processes: text production, text interpretation, and reflection. The writer's beliefs and attitudes, predispositions, goals, and cost/benefit estimate are all part of the fourth component–motivation and affect. These sub-components may favourably or unfavourably affect the writer's efforts in accomplishing the task of writing and he goes about it.

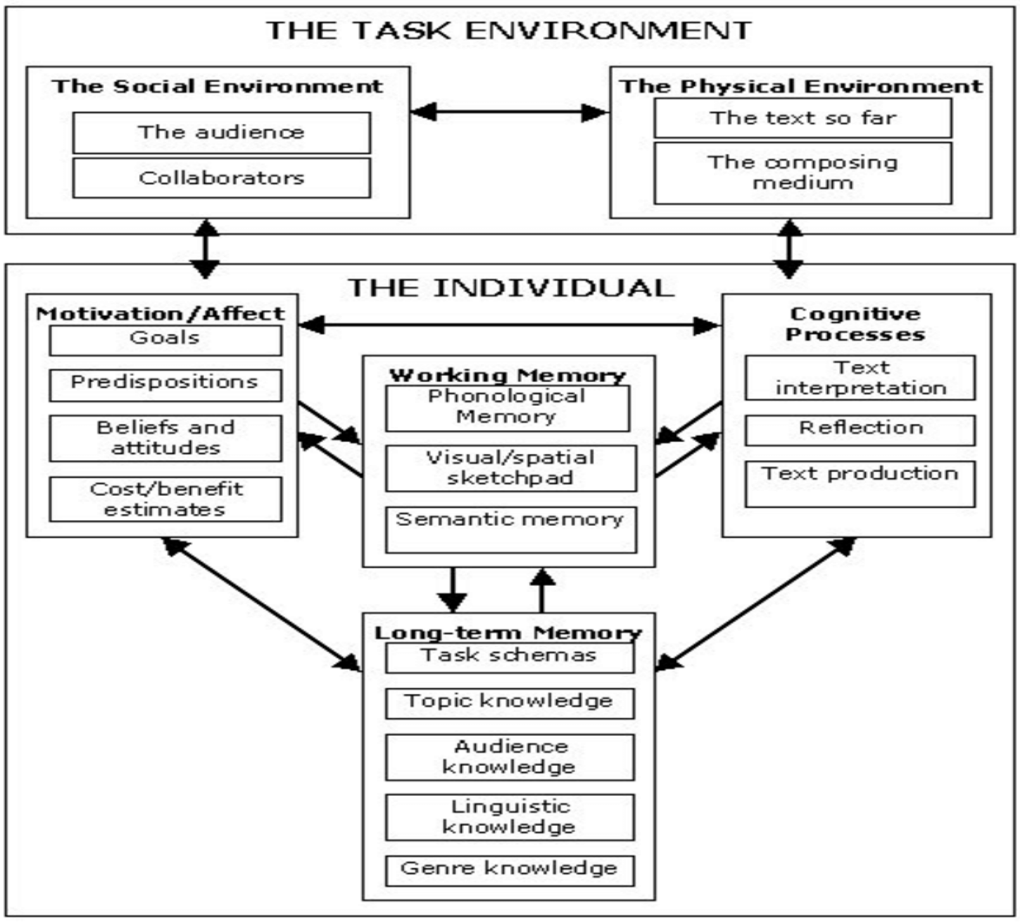

Figure 2.4. Hayes' (1996) model of writing (Hayes, 1996)

Despite the merits associated with Hayes' model, it did not go without criticism. Grape and Kaplan (1996) for example, claim that Hayes did not give much importance to the language knowledge within long-term memory as basic knowledge necessary for the writing process, particularly, as far as L2 writing is concerned. They assert that this component should include linguistic knowledge (basic language structures), discourse knowledge (text type), and sociolinguistic knowledge (appropriate social use of language).

2.5. Describing Learners' Writing Competence

It is now a common belief among researchers and practitioners that writing is a complex skill for EFL learners to learn and develop as it requires appropriate mastery of the writing conventions. These conventions are necessary for formal writing, particularly, academic writing such as essays and reports, in addition to the direct impact, they have on learners' scores in assignments and exams. More than that, acquiring good writing skills affects the communication of information and ideas via the global digital network (Hyland, 2003) and interferes with future employment opportunities (Brown, 2004). In other words, possessing effective writing skills is a key feature to success in study and at work. Aspects of these conventions are extensively discussed below within two major sub-sections: writing accuracy and writing quality. It is brought to the reader's knowledge that the words *writer(s), learner(s),* and *student(s)* are used interchangeably.

2.5.1. Writing Accuracy

Writing accuracy refers to "the extent to which the language produced conforms to the target language norms" (Skehan & Foster, 1996, p. 232). In other words, writing accuracy involves the learner's proper use of the language system in the written product, therefore, it shows the degree to which his/her usage follows the correct structures of a particular language. This feature is very important in writing as it affects meaning and demonstrates to what extent

the writer cares about his/her written text and how he/she relates to the reader. Accuracy can be improved through language manipulation activities in classrooms, including controlled practice, drills, grammar rules, etc. It encompasses the following components: mechanics, vocabulary, grammar, usage, and style.

2.5.1.1. Mechanics

Writing mechanics involves the use of the graphic (print) language conventions that make writing consistent and clear. According to Kane (2000), it involves such aspects as spelling, punctuation, and capitalisation. Stating it differently, mechanics refers to the appearance and arrangement of letters, words, sentences and paragraphs on paper. It is, therefore, of paramount importance for learners to know how to use these tools due to the strong impact they have on the readability of the written text and comprehensibility of the content. Kitao and Kitao (1996) call the ability to use punctuation, spelling, and capitalisation correctly the *mechanical ability*.

Spelling is regarded as the ability to select letters and put them in the correct order to make up words. Correct spelling makes a piece of writing easy to read and gives the writer credibility and shows to what extent he/she is careful about his/her work. But, according to Harmer (2007b), incorrect spelling does not always hinder comprehension although it may sometimes affect the reader's judgement. To Galko (2001), a writer's consistent misspelling reveals his/her carelessness, which may, in a way, make the reader uncertain even about the writer's facts in the text. Harmer (2007b) believes that learners may encounter many problems in spelling words correctly since there is no one-to-one correspondence between letters and phonemes. This accounts for why a single sound in English may have more than one spelling and one spelling may have various sounds. He adds that English varieties (American English and British English, for instance) also constitute a barrier for learners to spell words correctly

as these varieties spell many words differently. To him, frequent incorrect spelling can be a sign of a lack of education.

Teachers should be aware of the different issues related to spelling and of the need to devise classroom practical activities to help their students learn correct spelling by dragging their attention to the different rules of spelling English phonemes and the exceptions made to them. As a solution to the issue of spelling, Juzwiak (2009), for instance, recommends students keep a spelling log in which they write down their incorrect spelling of a word and its correct spelling, then, revise and use it in writing many times till full mastery. Kesselman-Turkel and Peterson (2004) contend that all learners ". . . need in order to spell correctly are (1) a good ear, (2) careful speech, and (3) an understanding of which letters stand for which sounds" (p. vii). Other strategies to avoid wrong spellings may, according to Harmer (2007b), involve the use of a reliable dictionary, focus on one English variety, and extensive reading.

When using word processing software, spelling mistakes can be reduced thanks to the use of word spell checker. Nevertheless, this tool should be handled with care because it cannot recognise all words used in a given text, and hence, cannot propose correct spellings (Juzwiak, 2009). Issues related to word formatting (such as using bold type or double-spacing) are also part of spelling. Other forms of written communication can be carried out electronically like emails and blogging.

Closely tied to spelling, is the issue of handwriting. For writers who use pen and paper, good handwriting permits them to convey their intended messages through the written code adequately. Ur (2009) believes that, in written communication, handwriting is still very important for personal letters, written assignments, and most exams despite the availability of the computer keyboard.

Unfortunately, many students have bad handwriting, which unfavourably may turn their written products into illegible scripts with unclear meanings, and this may ultimately affect their scores in exams, for instance. Harmer (2007a) recommends that FL students, especially, those from cultures not using the same script as English, need special training in orthography, involving training in the individual letter, when necessary. All in all, students need to understand the importance of having good handwriting and know about its major components including letter shape and direction, size, slant, spacing, alignment, etc. Posture and grip (pen handling) also greatly affect handwriting.

Some researchers and practitioners prefer to tackle punctuation and capitalisation separately, however, others consider capitalisation as part of the punctuation conventions. These two different views ultimately agree that both tools are major components of mechanics that allow readers to read a text in meaningful chunks and make sense of it. This belief is confirmed by Murray and Hughes (2008) in the following quotation:

> They [punctuation and capitalisation] indicate pauses and sentence boundaries and also eliminate ambiguity. A well-punctuated and capitalised piece of writing should make your work easier to read and understand and will therefore help it make a more favourable impression on your readers. (p. 185)

Punctuation marks are signposts that show how a text must be read or phrased. While Brown and Hood (1993) assert that punctuation allows the writer to keep track of what he/she has written and what he/she is going to write, and helps the reader understand what a writer means; Starkey (2004) views that correct punctuation enables the writer to convey his/her voice more directly as it polishes writing and makes it technically correct

Fowler (2006) classifies punctuation marks into three categories: a) stops (including comma, semicolon, colon, and full stop), b) tone markers (including question marks and

exclamation marks), and c) special function marks (including apostrophe, quotation mark, parentheses, square brackets, and dash). He insists that punctuation marks are not decorative tools, but vital elements for construction, clarification of meaning, and grammatical structure.

It is a common belief in the field of writing that "while some punctuation is cut-and-dried, much of it falls into the province of usage or style" (Kane, 2000 p. 15); a belief advocated by Williams (2003) saying that "punctuation is governed by convention, not rule" (p. 322), such as whether or not to insert a comma before the last item in a list. These two previous claims account for Harmer's (2007b) calls for learners to look at punctuation used by other writers if they are to learn its appropriate use. This does not, of course, eliminate the role of teachers to devise appropriate classroom activities to enable their students to learn the proper use of punctuation points deriving from the variety of approaches and resources available.

Capitalisation, which is generally regarded as part of the punctuation conventions, is the use of a capital letter (uppercase) at the head of a word. Starkey (2004) states that "capitalisation is necessary both for specific words and to start sentences and quotes" (p. 52). In fact, proper use of uppercase letters makes texts more readable and understandable. Conversely, using them randomly may confuse the reader. For instance, a famous rule in writing mechanics is that a sentence starts with a capital letter and ends with full-stop, a question mark, or an exclamation mark. In this regard, Starkey sets six categories that require capitalisation: 1) the first word of a sentence, 2) the first word of a complete quotation, 3) languages, 4) proper nouns, 5) the pronoun *I*, and 6) the first, last, and any other important words of a title.

Spelling, punctuation, and capitalisation are the mechanics of writing. They are not simply rules that one must memorise and apply in writing; they are specific signals to the readers as they interfere with the determination of meaning and clarification of intent. Let us, now, deal with another component of writing accuracy.

2.5.1.2. Vocabulary

In a broader sense, vocabulary refers to the number of words one knows. It is, hence, an important component of literacy simply because without which we cannot communicate our thoughts and feelings or understand what other people say to us. Vocabulary knowledge is by no means restricted to the meaning of a word but extends to other aspects. Stahl (2005), for instance, ascertains that word knowledge means knowing the definition of that word and how to correctly use it in context. Qian (2002), however, provides a more comprehensive description claiming that vocabulary knowledge involves deep knowledge of pronunciation, meaning, spelling, frequency, sound structure, syntax and collocation according to context. Qian's description seems broader in scope and covers more aspects of vocabulary knowledge from literal meaning to pragmatic use (within a particular social context).

Good choice of words (diction), especially in academic writing, necessitates being aware of all aspects of the vocabulary knowledge mentioned beforehand, in addition to the denotation and connotation of words. The denotative meaning of a word refers to its literal or dictionary meaning, whereas, the connotative one involves the implied meaning of a word and the emotions it evokes in the reader (Starkey, 2004). Knowledge of this kind boosts the clarity of meaning and portrays the writer's thoughts precisely. This should not eliminate the reader's role to understand implied meanings of a given text, intentionally embedded by the writer, through processing current, pragmatic background.

Researchers and educators classify English vocabulary differently based on some perspectives. Yates's (2006) functional view refers to vocabulary in terms of content words (verbs, adverbs, nouns, adjectives and) and function words (such as articles, modifiers and prepositions). Nation (2001) supports a skills-based approach that divides vocabulary into two types: productive (speaking and writing) and receptive (listening and reading). According to

Harmer (1991), vocabulary is two types: active vocabulary (which students know and can use in communication) and passive vocabulary (which students can recognise in context but will probably not able to use in communication). Moats (2004) categorises vocabulary into three primary types: oral vocabulary (words that are recognised and used in speaking), aural vocabulary (words understood when listening to others), and print vocabulary (words used in reading and writing).

Teachers' instruction should aim at developing students' vocabulary and providing them with effective strategies that help them raise word consciousness–the knowledge of and interest in words, considering that "it should not be a forced plant but should grow naturally with learning and experience" (Kane, 2000, p. 336). Teachers are required to adopt direct vocabulary teaching strategies and boost students' independent word learning as well. Direct (or overt) strategies may include, among others, explicit teaching of specific words, use of word-play activities, many exposures to similar words in different contexts, story retelling using key vocabulary from texts, use of concrete objects to explain vocabulary, working in pairs or groups to analyse words, teaching word-learning strategies that students can use independently, etc., (Sinatra, Zygouris-Coe, & Dasinger, 2011). Students' strategies for enhancing independent vocabulary learning and promoting word consciousness may involve extensive reading, efficient use of a dictionary (print, electronic, online, thesaurus, etc.), word analysis (roots, prefixes, and suffixes), use of context clues (definitions, examples, synonyms, antonyms, homonyms, homographs, mood etc.,), flashcards, podcasts, apps, semantic mapping, etc., (Baumann et al., 2003; Biemiller & Boote, 2006; Graves, 2004).

2.5.1.3. Grammar

Grammar is a central component of any language system that students should manipulate for more accurate communication, including writing. Kane (2000) defines grammar as "the rules which structure our language" (p. 13); according to Greenbaum and Nelson (2002),

it is “the set of rules that allow us to combine words in our language into larger units. Another term for grammar in this sense is *syntax*” (p.1). These rules determine how words are bound together to form sentences, and how sentences are tied together to form longer texts. These definitions confirm that grammatical knowledge is a vital constituent for promoting students’ writing proficiency.

In the same vein, Juzwiak (2009) considers good mastery of grammar rules as an important step towards academic success and even professional success at a later time and insists that students should have grammattitude–adopting and maintaining a positive and proactive attitude about their ability to master grammar. Samples of grammar knowledge that students need to acquire may include tenses, parts of speech, modifiers, participles, agreement (subject-verb, tense, and pronoun-antecedent), passive vs. active voice, sentence structure (complete sentences, sentence fragments, and run-on sentences), etc., (Starkey, 2004).

Although grammar is given much attention in EFL classes, considering all the textbooks and activities devoted to it, students’ writing accuracy does not reach the expected outcomes; a fact that is significantly apparent in students’ writing assignments and exams. According to Williams (2003), this failure is blamed on grammar instruction, i.e., the approaches adopted by teachers in teaching grammar. He claims that teachers’ instructional choices need to go beyond the direct instruction of grammar to adopting “bottom-up approaches, with grammar being the building block for sentences and paragraphs, just as the alphabet is the building block for words and reading” (p. 324-325). This means that teachers have to follow approaches that enable students to immerse in the language itself so that they can analyse their language and the language of other writers. It is also quite useful if teachers’ approaches are attached to such activities as reading, which has a great effect on students’ writing performance.

2.5.1.4. Usage

Usage is often confused with grammar by many people due to their ignorance of the difference between them. Kane (2000) provides a clear-cut distinction between grammar and usage saying that "grammar is what you must do as a user of English; usage, what you should do as a writer of more or less formal (or informal) English" (p. 24). This implies that usage is broader in scope and encompasses much of what is called grammar. Usage applies to all levels of purpose and strategy and should be thought of as the conventions related to language that determine how we use it in different situations and contexts–informal, colloquial, formal, and academic writing (referred to by Williams as formal standard English).

In many cases, problems of usage generally are not associated with issues of grammar, but with word choice and the conventions of spelling and mechanics; in other cases, "they result from transporting informal conventions of speech to the more formal arena of writing" (Williams, 2003, p. 332). This primarily happens because of the lack of experience with reading, which yields low reflection on the written word and the best linguistic ways to express meaning. Teachers need to differentiate between students' errors in grammar and mistakes in usage when assessing writing, and should draw their attention, through practical activities, to the importance of correct usage of language and its contribution to the clarity of meaning and economy of expression, serving varied purposes and employing various strategies. They also have to encourage students to engage in a more extensive reading process to gain the flexibility of language and to be more reflective.

2.5.1.5. Style

Another confusion made by people is between usage and style. According to Kane (2000), style is "what you elect to do to work out your strategies and realize your purposes" (p. 24). When we talk about style in writing, we refer to the different ways in which we write, that

is, the ways we select particular aspects of a topic to develop, choose words, and arrange them in sentences and longer units of discourse–strategy. Kali and Bowen (2003) define style as "the control of language that is appropriate to the purpose, audience, and context of the writing task" (p. 2). Both definitions maintain that starting with a clear *purpose* in mind, the writer can employ many *strategies* to convey meaning to a targeted *audience* within a determined *context* through a specific *style*. In other words, style is the result of strategy and is greatly affected by context (of the writing task), purpose, and audience. This means that a writer's style can vary depending on the context, purpose, and audience, thus, can be informal or formal involving technical, journalistic, and fictional styles. In addition to word choice and sentence arrangement (fluency), voice (also called tone) contributes to style as well. To Kali and Bowen (2003) voice is what "reveals the writer's personality" (p. 20). Personality characteristics are reflected through one's voice in writing like being serious or funny, objective or personal, authoritative or reflective, etc.

One difficulty associated with style is that it is open to argument because it is not governed by rules; it only depends on writers' perspectives and preferences. That is, a sentence may not break a rule of grammar or usage, but still may look not very effective according to some readers. Kane describes this aspect of language by saying that "Stylistic rules . . . are generalisations about what good writers do, not laws dictating what all writers must do" (p. 16).

All in all, a writing style can be regarded as the proper and effective employment of all components of writing with a clear purpose and audience in mind. It enhances the effectiveness of the composition, establishes appropriate relationships between and among ideas, and engages the audience. It is also unique to a writer and can be developed through extensive reading and writing inside and outside the classroom.

2.5.2. Writing Quality

In this sub-section, we opted for using the term *quality* to refer to some writing components, which cannot be discussed within accuracy but complement each other to improve the quality of writing. Mainly, two essential components will be surveyed: content and organisation. It must be noted, however, that this is not an exclusive list, and that more aspects of writing quality will be implicitly discussed within each of these components.

2.5.2.1. Content

In addition to mastering the conventions of accuracy and identifying the context of the writing task, producing a well-balanced piece of written work also demands a good understanding of the content. In this piece of research, *content* is used as an umbrella term to refer to three characteristic properties of effective writing: focus, unity, and clarity.

2.5.2.1.1. Focus

Focus is a key feature of effective writing that should be given much consideration. It is defined by Kali and Bowen (2003) as the establishment of a clear topic in response to the task of writing. To them, focus answers the question "So what?" For a piece of writing to be effective, the writer has to emphasise one topic (main idea) and sustain that focus throughout the whole piece. That is, the writer should know what his/her topic should communicate to engage the reader. However, students not only need to know *what* they write but also *why* they write. In other words, students have to understand the reasons for which they want to write because this allows them to find significance in their writing, which ultimately enhances the quality of the written piece and provides the reader with new insight on the topic. Focus also allows the students to make early decisions about many aspects of writing like word choice,

sentence length, organisational structure, punctuation, and elaborative details. This means that focus is established before the start of writing.

Two factors are indispensable for establishing focus: setting a goal and knowing the audience. The processes of goal setting and audience identification should take place during the prewriting stage because they are part of the planning that effective writers should start with. Setting a goal for writing enables students to view the text as a whole, improves the quality of writing, and facilitates the process of revision; whereas determining the audience leads them to think about who will read their work, the possible prior knowledge of the readers on the topic, what could be their expectations, and how they would likely react. Teachers can guide students to establish focus and strengthen it by asking a number of questions which target the central topic, the reasons for writing, and the nature of the audience.

2.5.2.1.2. Unity

Unity within a paragraph reflects the strong connection standing between the topic sentence and its controlling idea on one part and all the supporting sentences on the other part. The fact that all the sentences in a paragraph are linked to the topic sentence is a key feature of unity. Lepionka (2008) defines unity as follows:

> Unity is the quality of centrality and relevance, or the belongingness. That is, all the paragraphs in a section relate to the purpose of that section, and all the sentences in a paragraph relate to the point set out in the paragraph's topic sentence or thesis statement. (p. 118)

Whether students are writing single paragraphs or full essays, there should be, in each paragraph, a central idea expressed through a topic sentence or thesis around which all the other sentences evolve. One of the techniques used by skilful writers to establish unity in the

paragraph is to write a purpose statement starting like this: “The purpose of this paragraph is to. . .”. Not only does this type of statement enables students to establish unity but also to check the connectivity of the subsequent supporting sentences to the topic sentence.

2.5.2.1.3. Clarity

The purpose of writing is to convey a message to the reader who is expected to decipher the written code to understand the message as intended by the writer. One of the necessary elements of the writing conventions that permit the reader to grasp the meaning of any piece of information is clarity. If readers fail to understand the very first sentences of a paragraph, for instance, they may simply stop reading. Thus, the message may not be transmitted, or simply may be incorrectly understood. In both cases, this is not what we want to happen. Therefore, students need to learn how to be clear and straightforward in their writing for more effective communication. Starkey (2004) sets three strategies to establish clarity in writing:

- **eliminate ambiguity:** ambiguity can happen at the level of words, phrases, or sentences. If a word has more than one possible meaning, it can mislead the reader; and if the word order is not accurate, the sentence will be unclear. So, to remove ambiguity and add meaning to writing, students need to avoid words with loose, vague meanings that can be misleading and consider a sound structure of a sentence with the right order of words.
- **use modifiers:** among the techniques that improve clarity is the use of powerful modifiers such as adjectives and adverbs. Such words provide a clear description of people, events, objects, etc., show the voice of the writer, and add originality to the piece.
- **be concise:** brevity saves time and effort and reflects the writer’s genuine ability to communicate effectively with the audience using fewer words. Wordiness makes the reader struggle to reach out to the intended message; therefore, students need to be concise and

go directly to the point through adopting such strategies as eliminating unnecessary words, avoiding repetition, and using passive constructions whenever possible**.**

2.5.2.2. Organisation

According to Cali and Bowen (2003), organisation refers to "the logical progression and completeness of ideas in a text" (p. 11). The writers' ideas should relate to one another and develop smoothly in a manner that enables the readers to follow the progression of ideas and fulfil their expectations for the text beyond any confusion. As organisation provides a framework for writing, writers are more likely to stay tuned to the pre-set outline which offers them guidance and direction, especially if they are limited by time (Starkey, 2014).

In a well-organised text, the logical relatedness between thoughts demonstrates the constancy of purpose throughout the whole composition forming an effective beginning, middle, and end. This objective can be realised by following some strategies that range from generating basic ideas for the topic to the final structure of the text.

Starkey (2004) insists that organisation starts before embarking on the physical act of writing through six prewriting strategies that aim at generating new ideas and clarifying the existing ones. These prewriting strategies include, among others, free-writing (writing full sentences or even phrases that reflect some thoughts on a specific topic without considering the writing conventions), brainstorming (eliciting thoughts on a topic and putting them in a list of items, not sentences), and concept mapping (connecting a central idea to sub-topics through visual organizers).

To Juzwiak (2009), organisation involves developing an effective outline for writing out of the ideas generated in the prewriting stage. He proposes three major mental strategies:

- ordering: arranging general and specific ideas in a logical way,

- grouping: recognising inter-related items and putting them in distinct groups, and
- eliminating: getting rid of isolated ideas that do not relate to the topic.

Kali and Bowen (2003) focus more on the organisation of the written text per se, referring to two areas: text structures and cohesive elements. To them, "A text structure is the framework of a text's beginning, middle, and end" (p. 11). A good introduction not only hooks the reader and orients him/her to the purpose of writing, genre, topic, thesis, etc., but also sets up expectations for mood and style. The main body of writing (middle) can have different genres depending on the purpose and audience. Every text genre requires a different structure. To them, there are five basic organisational structures (rhetorical genres) including compare and contrast, problem and solution, cause and effect, description, and sequence (spatial order, numerical, or time). The ending (conclusion) is always related to the purpose and should be strong enough to satisfy the audience. Restating the beginning is an effective way of making the reader loop back to the beginning so that they end where they began.

Cohesive elements function as the glue that holds the structure together–cohesion. This latter refers to "the connectivity of ideas in discourse and sentences to one another in text, thus creating the flow of information in a unified way" (Hinkel, 2004, p. 279). This connectivity is enhanced by cohesive elements which involve transitional words and phrases that determine the relationship between different ideas and sentences, tie sentences together, and ensure a smooth transition between them and between paragraphs. The use of transitional words varies according to the genre of writing, for instance, *before* and *after* for time sequence (narration), *because* and *thus* for cause and effect, *like* and *whereas* for compare and contrast, etc. Conjunctions (like *and, but,* and *or*) correlative conjunctions (like *either... or*), repetition of key lexical items, and substitution of key terms (through *pronouns* or *synonyms,* for instance) are also effective cohesive items (lexical or grammatical) that teachers should introduce to students for more cohesion in texts.

Coherence is another feature of effective writing that is always confounded with cohesion although they refer to different attributes of text. If cohesion involves connections between sentences and paragraphs, coherence is "the organisation of discourse with all elements present and fitting together logically" (Hinkel, 2004, p. 280). Elements of discourse meant by Hinkel include an introduction, a thesis, rhetorical support, and a conclusion. In other words, a text is coherent when all its elements are organised and its ideas are ordered logically from one another in a way that enables the reader to pursue the flow of ideas very easily. At this level, cohesion intersects with coherence providing the necessary cohesive elements to produce a logical sequence of sentences and paragraphs forming a coherent piece of writing with a proper flow of ideas. Accordingly, sentences and paragraphs should be harmonically arranged and tied to preserve the unity of the text and support its thesis. Thus, and despite the fact that cohesion and coherence refer to different qualities of writing, they complement each other to build a unified whole.

2.6. Conclusion

This chapter was devoted to discussing the writing skill from various perspectives. The review included some theoretical views on the nature of writing and its specific characteristics, especially, in comparison to speaking. As this research project is carried out in an EFL context, providing some key elements that relate to EFL writing and the issues associated with it, was more than important. In addition, a good amount of discussion was assigned to the different writing competences and conventions that EFL students should acquire to enhance their writing skills for more effective communication inside or outside the academic context, a role reserved for EFL teachers. The next chapter will discuss the methodology of research employed by the researcher to conduct this study.

CHAPTER THREE:

Research Methodology

3.1. Introduction

This chapter discusses the methodological procedures carried out by the researcher to answer the research questions of the study. It highlights the research design and justifies its use in the study. In addition, it provides necessary information on the research approach and the issues of population and sampling. The discussion also covers the research setting, data collection instruments, procedures of the experiment implementation, and the methods of data analysis.

3.2. Research Design

Research design is a set of procedures that tell what the researcher wants to do, starting from the formulation of the research questions to the analysis and interpretation of the data. According to Kumar (2011), a research design enables the researcher to conceptualise all the necessary procedures for carrying out the study and ensure the adequacy of these procedures for obtaining valid and accurate answers to the research questions. The main research question addressed by this study is: To what extent would online peer feedback enhance EFL students' writing competence?

Hence, the main objective of the study is to examine the impact of online peer feedback on EFL students' writing competence in terms of accuracy (mechanics, vocabulary, grammar) and quality (content and organisation). Starting from this overall objective, a quasi-experiment employing a post-test only non-equivalent groups design was adopted to answer the main research question.

Quasi-experimental design is one of the major experimental research designs that are widely used in educational research. In the field of education, experimentation involves the application and adaptation of the classical method of a laboratory to educational settings.

According to Singh (2006), experimentation in educational context is associated with many merits:

a) it enables researchers to determine and evaluate the adequacy and efficacy of educational aims and objectives through measuring outcomes,

b) it provides background information for formulating, executing, and modifying curricula and educational policies, and

c) it determines the impact of changes made to the exiting educational programmes and practices.

In line with the first advantage stated above, Gay and Airasian (2000) add that the experimental research aims at investigating the impact and effectiveness of a treatment. As for the current experimental study, the implementation of online peer feedback (the independent variable) for the experimental group was monitored and students' writing competence in terms of accuracy and quality (the dependent variable) was measured. Improvement of the students' writing competence in both groups was measured by means of the scores assigned by the assessors.

Regardless of the advantage of establishing causal relationship, conducting true experiments is in the field of education is often not feasible for many reasons, including the high cost of a true experiment (Check & Schutt, 2012); the difficulty to control for the impact of the confounding relationships on the experimentation (Joshi, 2019); and the inability to use randomisation (Cohen, Manion, & Morrison, 2018). In such cases, educational researchers opt for quasi-experimental designs. Campbell and Stanley (as cited in Leavy, 2017) contend that when no better designs are practical, quasi-experiments are convenient.

Campbell & Stanley (as cited in Cohen, Manion, & Morrison, 2018) claim that in cases where true experiments cannot be used for *practical* reasons like recruiting adequate number of subjects for the study and for *ethical* reasons like randomly assigning subjects to different conditions, quasi-experiments provide a practical alternative to conduct field research. According to them, this enables researchers to employ designs that relatively approximate those employed in true experiments, at least with regard to the when and to whom of measurement– the researcher's ability to schedule the data collection procedures. As quasi-experimental designs take advantage of natural groups or settings, participants are not randomly assigned (Leavy, 2017); this is a key characteristic of any quasi-experimental research design because randomisation is not feasible in real world environments. In the section of *Sampling*, the researcher provides additional information about the issue of randomisation and how it has been treated to minimise its effect on the study variables.

There are many types of quasi-experimental designs, and the process of selecting an appropriate design depends on the type of the study per se, the research questions, and the study objectives. In the case of the current study, the researcher used the post-test only non-equivalent groups design. This design involves experimental and control groups that are designed before the treatment takes place but the subjects are not randomly assigned (Check & Schutt, 2012). The main purpose of using this design is to measure the effectiveness of a treatment or programme given to a pre-existing treatment group (Gravetter & Forzano, 2012). Within this type of research design, the treatment (experimental) group receives the treatment while the non-equivalent (control) group does not, then both groups receive a post-test. The scores from the experimental group are compared to the scores from the control group. The effectiveness of the treatment or programme is demonstrated by the difference in the scores of both groups (Gravetter & Forzano, 2012). The schematic representation of this design is depicted as follows:

Figure 3.1. Diagram of the study design

Non-equivalent means that both the experimental group and control group have not been equated by randomisation (Cohen et al., 2018); that is, they may have different characteristics which are not evenly divided among groups. Nonetheless, researchers endeavour to limit the influence of any external factors on the variables other than the treatment and to make sure that groups would start out equal. For that reason, they can employ many strategies such as matching, homogeneous subgroups, and pretesting (Lodico, Spaulding, & Voegtle, 2010).

Other types of quasi-experimental designs use a pre-test to measure the dependent variable before the treatment and provide information on baseline with which the results of the post-test are compared. A pre-test also helps create comparable groups and reveals whether the differences between groups are due to some pre-existing factors or not. In this study, the researcher replaced the pre-test with the writing scores obtained by the students in the test of the first semester of the academic year 2022-2023. It is noteworthy that the format and content of this test resemble those employed in the post-test of the study.

Within this regard, Kumar (2011) admits that, in addition to pre-tests, information on baseline can be constructed from information available in existing records. That is, scores obtained from the available records, like students' transcript of records, can be used instead of the pre-test scores to establish homogeneity among groups and eliminate the influence of extraneous variables–double roles for which pre-tests are generally used in experimental studies. This means that the researcher's option was deeply rooted in theory as he substituted the record of students' scores obtained from the administration, for the pre-test. This seemed to be a practical choice as it saved him a lot of time and effort as well. After examining the writing

scores of the first semester test of all the subjects, the researcher managed to create homogenous groups for the study. This is further explained in the section of *Sampling*.

In sum, the quasi-experimental research design is a dominant research design in many fields of inquiry, including education. Despite some drawbacks associated with this research design like the disuse of randomisation, it proved to be a suitable research paradigm for examining the impact of and effectiveness of a treatment and providing accurate findings; in the case of this study, the impact of online peer feedback on students' writing competence. The next section discusses the research approach of the study.

3.3. Research Approach

To obtain accurate, comprehensive answers to the research questions posed, this study employed two data collection tools that provide both qualitative and quantitative data. There are various differences between qualitative and quantitative approaches to research, and the decision about which one to use is made by the researcher depending on the purpose of the study. The section below discusses these two approaches and their relevant scope and characteristics.

3.3.1. Qualitative Approach

Researchers believe that all types of research that provide data expressed in text form belong to the qualitative approach, which is used to comprehend experiences, thoughts, or concepts and collect in-depth insights on topics that are not clear. Hancock and Algozzine (2006) define qualitative approach as "any kind of research that produces findings not arrived at through statistical procedures or other means of quantification" (p. 86). Stating it differently, qualitative approach is expected to provide non-numerical data that is analysed by means of non-statistical procedures, for instance, thematically.

According to Lodico, Spaulding, and Voegtle (2010), "Qualitative researchers . . . use the inductive method of reasoning and strongly believe that there are multiple perspectives to be uncovered in their research" (p. 142). This characteristic atypical of qualitative approach reveals that researchers are able to synthesise their own experiences and observations, including those learned from others, to come up with general truth. In other words, deriving general principles (generalisations) from specific instances.

It is commonly assumed in the field of research that when little is known about an issue, a qualitative approach might be more useful. This is because the latter uses such research tools as interviews, observations, focus groups, etc., that provide a wealth of insightful information sufficient for a thorough understanding and analysis of the issue under investigation (Hancock & Algozzine, 2006).

Another advantage associated with the qualitative approach is that it allows the researcher to observe and study their subjects in a naturalistic context (Lodico et al., 2010); this helps understand better the human experience as the researcher is in a close contact with their participants. In the same line of thought, Denzin and Lincoln (2005) add that one of the strengths of the qualitative approach is the role of *observer* assumed by researchers which enables them to uncover reality and interpret the phenomena under investigation.

Despite the wide range of advantages reported on qualitative approach, some drawbacks can be identified. These include the fact that the qualitative approach, a) is a time-consuming approach, b) requires much efforts, c) requires considerable resources to represent the area being studied adequately, d) involves difficulty in accessing individuals, and e) may result in too huge and complex amount of data to analyse (Hancock & Algozzine, 2006).

As for the current study, the qualitative approach, represented in the use of a semi-structured interview, would enable the researcher to collect non-numerical, in-depth data that

allow for a deep understanding of students' attitudes towards the usefulness of online peer feedback as tool to boost their writing competence, and hence, establish a sound ground for explaining the factors that may underlie their future practices. The semi-structured interview is used to answer to the second research question which aims at gauging students' attitudes towards the usefulness of online peer feedback in enhancing their writing competence.

3.3.2. Quantitative Approach

The quantitative approach offers researchers a broader scope for inquiry based on the wide range of characteristics it displays and the instruments it employs. Hancock and Algozzine (2006) state that quantitative research is "an investigation that seeks causal determination, prediction, and generalisation of findings arrived at via statistical measures" (p. 86). That is, quantitative research seeks to establish cause-effect relationships between variables and make generalisations over the larger population from which the subjects of the study are taken.

The quantitative approach draws on accurate data gathered statistically using such tools as experiments, tests, scales, and closed-ended questionnaires. The results obtained are more accurate and representative of the investigated population; therefore, can provide a more elaborate understanding of the case under investigation. Moreover, these quantitative results are often expressed in numbers and graphs and are used to test or confirm theories and assumptions.

According to Dörnyei (2007), the quantitative approach is strongly affected by the scientific method used by natural sciences, which is associated with statistics and numerical values. Among the advantages of this method is that it reduces the researcher's bias and prejudice and provides data reliable enough to understand the phenomenon under investigation (Dörnyei, 2007) and it provides useful data in a short period of time (Hancock & Algozzine,

2006). Despite this fact, quantitative research is sometimes seen as an expensive type of research and not considering the meaning behind social phenomena (Lodico et al., 2010).

The quantitative aspect of this study is demonstrated by the use of one major research instrument, namely, the post-test. In educational research, post-tests provide accurate, numerical data that can be calculated statistically and represented in figures. Quantitative data obtained would enable the researcher to draw sound conclusions about the issue studied and provide valid answers to the questions posed at the onset of the research project.

The use of both quantitative and qualitative approaches in one piece of research offers a broad scope for researchers and gives strength to the data obtained. Given (2008) claims that combining both qualitative and quantitative approaches gives researchers different perspectives and provides them with a more complete understanding of the research problem under scrutiny than either using one approach alone. The next section is devoted to discussing the issues of population and sampling.

3.4. Population and Sampling

This section discusses the characteristics of the population under investigation and the sampling designs and techniques adopted for the selection of participants throughout all the phases of the study. Further information about the participants' educational background will be provided in a separate sub-section.

3.4.1. Population

The study involved second year English students belonging to the Department of English at Hamma Lakhdar University of El-Oued. The total number of the *realistic* population, from which the sample was taken, was 207 second year students. All students have been at

university for at least one year and a half; they have been accepted to the Department of English based on identical requirements, and have received the same courses in a number of modules.

The subjects who took part in the experimental phase of the study were fifty students (n=50), aged between eighteen and fifty-two. This sample represented 24.15% of the total number of realistic population (N=207). Participants formed two groups: the *experimental* group included twenty-five students, fifteen females and ten males; the *control* group also included twenty-five students, seventeen females and eight males. Table 3.1 provides more detailed background information about the subjects of the study.

Table 3.1

Background Information of the Study Participants

Characteristics of Participants		**Participants**	**Percentage**
Gender	Female	32	64%
	Male	18	36%
Age	18-21	22	44%
	22-25	21	42%
	26-29	04	8%
	30+	03	6%
Mean age	**23**		

Among all the subjects of the study, only six students from the experimental group (four females and two males) participated in the semi-structured interview.

3.4.2. Sampling

The process of selecting particular elements from a population to take part in a study is referred to as sampling, whereas the sample itself is "a smaller version of the population, the group to which the researcher would ultimately like to generalise or apply the results of the

study" (Lodico, Spaulding, & Voegtle, 2010, p. 25). Samples enable researchers to work with a smaller and more manageable group out of the realistic population.

In educational research, there are two key sampling designs: probability (random) sampling and non-probability (non-random) sampling; each design involves a number of sampling methods (techniques). The former involves the random selection of the elements by the researcher and that every element has an *equal* and *independent* chance of being selected for the study. Equal means that the probability of selection of each element in the population is similar; whereas independent implies that the selection or rejection of one element does not affect the inclusion or exclusion of another (Kumar, 2011). This sampling design is associated with two merits: it is free of bias and it provides the researcher with representative data that can be generalised to the sample population. In this study, probability sampling was used to randomly select two groups out of all the four groups of second year to participate in the experiment and randomly assign these two groups to both experimental and control groups.

In non-probability (non-random) sampling, every element of the study population does not have an equal chance of being selected for the study. In other words, the chances of the members of the wider population being selected for the study are indefinite. This implies the purposeful exclusion of some elements of the population from the study sample based on the researcher's objectives (Cohen, Manion, & Morrison, 2007). Unlike probability sampling, and because it demonstrates more bias, this sampling design does not seek representativeness of the wider population, but a particular section of it. Non-probability sampling design was used in the current study to purposefully select participants for the post-test and the interview.

Coming back to this study, the subjects who carried out the tests were fifty students. They were selected throughout two stages based on both sampling designs explained beforehand. First, two groups were *randomly* selected out of the four groups constituting second

year level; they were group one (G1) and group two (G2) with a total number of fifty and forty-eight students in each group respectively. Second, within each group, twenty-five students were *purposefully* selected based on their scores in Written Expression test during the first semester of the academic year 2022-2023 (see Appendix V). These scores were obtained from the administration of the English department.

The students' grades obtained from the test of the first semester were examined and used by the researcher to classify all the students of G1 and G2 independently in a descending order of merit–starting from the highest average, going down to the lowest one. Then, he selected twenty-five students whose scores ranged from 08/20 to 12/20 in each group. Twenty-five students from G1 were *randomly* assigned to the experimental group (50% of G1 elements); also, twenty-five students from G2 were *randomly* assigned to the control group (52.08% of G2 elements). Taking this step, the researcher aimed to select the students who seemed to have the same level of writing proficiency to ensure that both groups are comparable in terms of competence; an approach referred to as *homogeneous samples*. Creswell (2012) argues that homogeneous samples approach is widely used in experimental research; it helps researchers gain more control over *extraneous* factors (variables) that may affect the outcome by selecting individuals who vary little in their characteristics which they bring to the experiment such as their academic grade or average. He adds that the more similar the elements of both groups in their attributes, the more these attributes are controlled in the experiment. Kumar (2011) contends that when the subjects in both control and experimental groups share the same characteristics, attributes, or abilities, the researcher is certain that the effect of the extraneous variables becomes similar on both groups and that the independent variable–online peer feedback in this case–has the maximum opportunity to have its full impact on the dependent variable–students' writing competence.

Homogeneous samples approach enabled the researcher to make sure that the subjects in both groups had equal writing competence and that the differences between them would result from the treatment and not from some pre-existing factors. This would enhance the validity of the study and allow the researcher to obtain accurate data.

Randomisation is also a widely used approach in experimental research to control for extraneous variables; but in the field of education this is quite difficult, if not impossible because individuals already form intact groups, such as classrooms (Lodico et al., 2010). On that basis, and despite the use of random selection and assignment in some stages of the process of sampling, purposive selection was also used for practical reasons. Hence, we cannot pretend that the strategy of randomisation was fully applied in this study and that the results obtained could be generalised to all the population from which the study sample was taken. In quasi-experimental research, randomisation is generally limited owing to administrative considerations on one part, and to the nature of the study per se, on another part. This may constitute an threat to the internal and external validity of the study. However, this threat can be eliminated by such approaches as homogeneous groups, discussed above, in addition to the *control group* and *matching* (Lodico et al., 2010). Selecting students taught by the same teacher, using the same teaching strategies and contents would also contribute the minimisation of the impact of the external factors (extraneous variables) on the study variables, a measure already taken by the researcher. The subjects of the study were taught by the same teacher in their first year and the first semester of the second year; also, they received the same content using the similar instructional strategies.

According to Creswell (2012), the rule of thumb for determining the minimum sample size in a study is thirty cases per variable. With regard to experiments, Borg and Gall (as cited in Creswell, 2012) suggest that "causal-comparative and experimental methodologies require a sample size of no fewer than fifteen cases" (p. 102). Based on these views, and as the study

investigates only one variable–students' writing competence, the sample size of fifty students was perceived to be practical to carry out the study and obtain accurate data.

As mentioned in the previous section, participants for the qualitative stage of the data collection procedure, i.e., semi-structured interview, were selected according to the non-probability *purposive* (judgmental) sampling technique. Out of the twenty-five students of the experimental group, six students (four females and two males) were purposefully selected for the interview based on their scores in the post-test. Two of them got the highest marks, two students had the lowest marks, and the other two ranked in medial position between both categories. This selection strategy was justified by the researcher's aim to collect in-depth qualitative data from students who could have different views on online peer feedback based on their experience. This would enable the researcher to get deeper understanding of the impact of online peer feedback on students' writing competence and their attitude towards it. In this regard, Lodico et al. (2010) argue that the qualitative researcher uses the strategy of purposeful sampling to select the participants who are perceived to provide the essential information for the study. As it was purposefully selected, this sample might not be representative of the whole realistic population; the researcher's mere objective at this phase was to obtain insightful information about students' attitudes towards the use of peer feedback and its utility in enhancing their writing skills.

3.5. Study Context

Description of the research project context constitutes one of the major tasks to be accomplished by the researcher. This involves accurate definition of the research setting and the participants' background. Researchers need to highlight these two vital components since they greatly affect the experimental design, the kind of data that can be gathered, and the interpretation of results. Below is a thorough statement of both components.

3.5.1. Research Setting

Research setting refers to the physical, social, or experimental context where studies are run. According to Leavy (2017), experiments' settings may include natural (physical) environments, labs, and the Internet. As this experimental research investigated the impact of online peer feedback on students' writing competence, the study setting involved a physical environment and a virtual one. As for the physical (natural) environment, part of the study was conducted in the classroom. The researcher and the writing instructor of the subjects involved in the study, both permanent teachers in the Department of English at Hamma Lakhdar University of El Oued, used the classroom to instruct the students of the experimental on a number of issues related to the experimental phase of the study. This involved introducing peer feedback to students and the use of peer feedback checklist for evaluating writing. Instruction also included training on providing peer feedback via online means.

The main part of the experiment, the post-test, was carried out in the virtual world, that is, on Facebook; the online platform used by the researcher to conduct the study. Over the course of a month and a half, the students were required to write and post paragraphs on specific Facebook study groups created for that purpose. Facebook is an appropriate study space for students with regard to a number of characteristics that facilitate learning such as availability, accessibility, ease of use, and low cost. The post-test stage of the study aimed for collecting quantitative data on students' writing achievement after the treatment.

Research setting also involves time setting, i.e., the period during which the study was conducted and the timing of the different steps. The treatment programme, including the peer feedback workshop, the peer feedback checklist, the design of Facebook groups, in addition to the planning of the different procedures, and the interview schedule were all designed by the researcher during the first half of January 2022; whereas the post-tests (writing assignments)

were designed by the writing instructor in the second half of the same month. During the second and third weeks of February 2022, all these tools were subjected to the pilot study, the procedures of which will be extensively discussed in an upcoming section.

During the phase of treatment implementation, seven one-hour classroom sessions were held throughout three weeks; six sessions were devoted to the experimental group and one session was devoted to the control group. This period extended from March 8th to March 30th, 2022. The writing instructor and the researcher run these experiment's practical sessions during the regular class time of both experimental and control groups. The researcher asked for and received administrative consent.

The post-test phase of the study lasted for six weeks. It started on April 1st and ended on May 15th, 2022. The subjects were required to write two drafts–primary and final–on a specific topic every two weeks, then post them on the Facebook group for the case of the experimental group, or send them to the researcher via email for the case of the control group.

Having students write two drafts every two weeks throughout a period of six weeks was regarded very practical for conducting the research and obtaining reliable results. In that, students were neither overloaded with much work for a limited period of time that might cause them to feel exhausted, nor were they given more time than needed that may cause the occurrence of new learning due to the passage of time, not the treatment. These two factors are referred to by Dörnyei (2007) as fatigue effect (or participant fatigue) and maturation effect respectively. In the first case, participants' interest in the study diminishes in the course of the experiment and their performance lowers due to the prolonged or demanding nature of the research task; in the second case, participants' performance improves in the course of the experiment due to physical or mental change with the passage of time. In both cases,

participants could possibly provide results that do not reflect the impact of the treatment; hence, threatening the reliability of evaluation.

The process of evaluating and scoring the subjects' drafts was carried out immediately after receiving them at the end of each period allocated for each topic, which was two weeks. Collection of the interview-based qualitative data took place on May 17th 2022. The second component of the research context is the participants' educational background. Following is a full description of this component.

3.5.2. Participants' Educational Profile

This study involved fifty second year students majoring in English language and literature. These are still preparing to get a bachelor's degree in English language and literature; a degree which would enable them to teach English in the middle school according to the Algerian educational regulations. They have been at university for at least one year and a half; and for repetitive students, the period would even be extended to more than two years. As this study was conducted during the second semester of the academic year 2021-2022, students must have, then, received a number of courses in a number of modules as part of their English study, including Written Comprehension and Expression (WC & E).

According to the official syllabi designed for bachelor's degree in foreign languages stated in the ministerial decree No. 500 issued on July 28th, 2014 (see Appendix A), WC & E is a fundamental module studied in the form of TDs (tutorials/practical sessions) for four and a half hours per week. Considering the fifteen weeks studied every semester, students receive writing classes in sixty-seven and a half hours per semester in the first and second years. During these two academic years, students are introduced to the components and characteristics of sentence and paragraph. They are also taught four basic types of discourse, including compare and /or contrast, cause/effect, argumentative, and prescriptive. The coefficient of this

mandatory module is four and the number of credits is six. With regard to evaluation, the final term average of WC & E is obtained by the addition and averaging of the scores of the test and exam. However, in their third year of undergraduate course, the students receive instruction on writing in only twenty-one and a half hours per semester at an average of one hour and a half per week. At this level, students are introduced to essay writing.

Participants from both the experimental and control groups received regular instruction in Writing for three consecutive semesters; two semesters at the first-year level during the academic year 2020-2021; and one semester at the second year level during the academic year 2021-2022. During these three semesters, the students were introduced to the characteristics and components of *sentence* and *paragraph* in English, and received training on sentence and paragraph writing. With regard to discourse (rhetorical modes), they were trained to write on three basic types of discourse: cause/effect, compare and/contrast, and argumentative. This basic knowledge obtained by these students during this period, was thought to be sufficient for them to undergo this study, which involved writing three different paragraphs in two drafts, using the three types of discourse mentioned beforehand. This constituted a major reason for selecting this category of students for such an experiment.

Before joining the Department of English, these students had studied English language for seven years; four years in the middle school and later three years in the secondary school. They also must have successfully passed the final official Baccalaureate exam and obtained satisfactory marks in English language to be eligible to study English at the University.

3.6. Research Instruments

The selection of data collection instruments depends on the specific aims set by the researcher and the type of research questions posed. This study sought to examine the influence of online peer feedback on the writing competence of the second-year English learners studying

in the Department of English at Hamma Lakhdar University of El Oued. Hence, to meet the aims of the study and answer the research questions, the researcher opted for two major instruments, namely, a post-test and a semi-structured interview. These tools are comprehensively discussed below.

3.6.1. Post-test

The test is a widely used data collection method in educational research. According to Cohen et al. (2018), a test is a powerful tool for collecting numerical data; it can be used for measuring numerous components, such as achievement, performance, aptitude, proficiency, speed, etc. In experimental research, where the researcher wants to examine the impact of a treatment, a test administered before the treatment is called a pre-test; a test given after the treatment is referred to as a post-test. In the current study, the researcher used a writing achievement post-test to determine the effectiveness of online peer feedback on students' writing accuracy and quality and to measure their writing performance. This post-test adopted a summative testing approach; in other words, the data were collected on the outcome measure of the subjects of both groups after the treatment.

With regard to the purpose for which a test is administered, two types of tests are identified by language assessment specialists: norm-referenced tests and criterion-referenced tests (Brown, 2004). The test type used by the researcher in this study was the criterion-refenced test. The purpose of this test is to classify subjects according to their satisfactory performance of a task (Hughes, 2003). That is, this type of test enables researchers to evaluate the performance of test-takers on a certain task and assign them grades which help them determine the amount of improvement. In contrast to norm-referenced tests which compare the achievement of an individual student to the achievement of other students (Cohen et al., 2018),

criterion-referenced tests inform researchers about what an individual student can actually do in the language with regard to particular objectives of instruction (Singh, 2006).

One of the characteristics of a criterion-referenced test is that the subject's performance is evaluated according to specific criteria based on a set of specifications constructed in advance (Hughes, 2003). These criteria provide graders (or raters) flexibility in the evaluation process. The criteria adopted by the researcher for the writing post-test specifications were adapted from Jacob et al.'s (1981) scoring profile (as cited in Hughes, 2003). The original profile involved five components: organisation, content, mechanics, language use, and vocabulary (see Appendix B).

The specifications of the current study post-test were divided into two major areas: accuracy and quality. Each area included a number of components and each components included a number of aspects that precisely described the characteristics of the perceived performance. Figure 3.2 illustrates the above-stated specifications. The boxes in blue identify the five components to be scored during evaluation. The boxes in yellow identify the aspects involved within the aspects. It is to be stressed that the aspects mentioned in the diagram would be considered in evaluation but would not be given independent grades in the final process of scoring. Scores would only be assigned to the five components of writing.

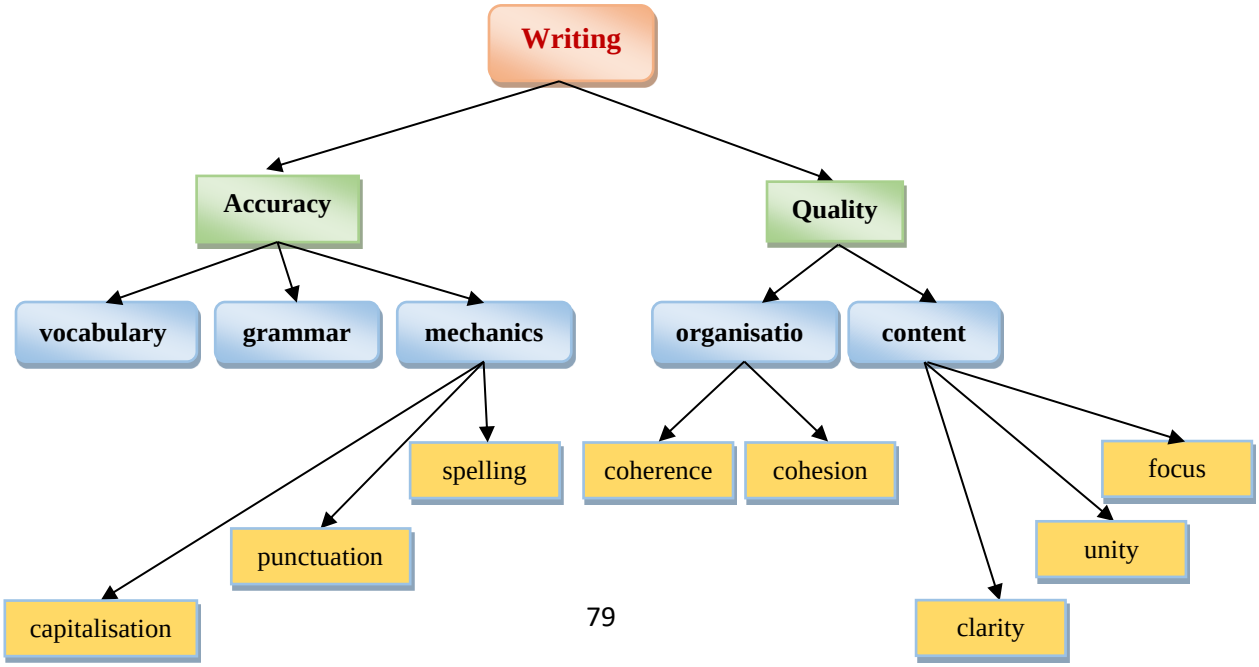

Figure 3.2. Areas, components, and aspects of the post-test evaluation criteria

With respect to the post-test format, the researcher employed direct questions followed by clear instructions that guided the subjects on what they were required to do in writing their paragraphs. Each paragraph had a specific question that was constructed, by the writing instructor, parallel to a specific type of discourse (see Appendix C). The researcher also made sure to use valid samples of writing that represented the subjects' ability. In that, the writing test should aim to test the subjects' writing ability and nothing else, such as imagination or intelligence as recommended by Hughes. Students in both groups were familiar with the post-test format as they were introduced to it by their writing teacher in many classroom-based writing activities as part of their curriculum. It was also the subject of some exams and homework assignments. The post-test instructions, length, and level of difficulty were also similar to the writing assignments studied beforehand so that that the participants would have no trouble with the test format.

The content of the post-test was also taken into consideration while designing the tests. Considering the specifications related to the accuracy and quality of writing discussed above, the subjects were asked to write three paragraphs on three different common-knowledge topics with which they would encounter no difficulty. The first topic dealt with the differences and similarities between American and British English (compare and/or contrast discourse); the second topic tackled the effects of smoking in public places on public health (cause/effect discourse); and the third topic discussed the issue of using animals in scientific experiments (argumentative discourse). As the selected topics were common ones and the rhetorical modes were studied in class, the subjects reported no problems with topical and rhetorical knowledge of the post-test. This measure would enhance the test validity and reliability.

3.6.1.1. Piloting the Post-test

For any research instrument to be valid and reliable, it must undergo a pilot study. The post-test was primarily designed by the writing instructor of the subjects with the collaboration of the researcher; then, it was piloted throughout four stages. First, and to check the validity of the post-test, it was electronically sent to two well-informed teachers in the department who were teaching written expression to first year and third year students. These were aware of the contents of the syllabi of writing for the three undergraduate classes, and hence, were perceived to effectively contribute to the improvement of the post-test contents. Both teachers checked the consistency of the test format and content, type of instructions, amount of difficulty, and length. The teachers authorised the use of the post-test with minor modifications, which were taken into account by the researcher. After implementing the suggestions made by both writing teachers, the post-test was sent to an expert teacher, who was the supervisor of the researcher. Again, the expert approved the post-test with very minor modifications typically made to it. All the procedures carried so far constituted what is called in research *pre-pilot* study.

The second stage of the pilot study involved conducting the post-test on a number of students who had the same level of proficiency and background knowledge as the actual subjects of the study. Twenty-five students from group three were purposefully selected for the pilot study according to the same criteria used for selecting the subjects of the experiment, that is, based on their average scores in the test of the first semester, which ranged between 08 and 12. They were assumed to have similar writing competence to the subjects of the study as they were taught by the same teacher and received the same instruction and training on paragraph writing, rhetorical modes, and stages of process approach. The post-test questions revised during the pre-pilot study were administered to the pilot test-takers for validation. Participants were explained the task and asked to write a paragraph on each one of the three post-test assignments in a 30-minute time each. Participants' drafts were evaluated by the researcher and

the writing instructor using the same scoring scale to be used for evaluating the drafts of the experiment's subjects. The results (see Appendix W) showed that the post-test was practical in terms of format, content, length, and level of difficulty as the participants encountered no difficulty accomplishing the task in the pre-set time. Hence, it was assumed that the post-test was valid.

The third measure taken by the researcher for piloting the post-test was to statistically check its content validity using the scores obtained from the subjects (see Appendix W). Running Pearson Correlation (*r)*, the researcher could examine the relationship between the score of each of the five components of the test and its global score (see Tables 3.2 and 3.3).

Pearson Correlation coefficient (*r)* shows whether there is a statistically significant linear relationship between two continuous variables and measures the direction and strength of this relationship (Bonett & Wright, 2000). Correlation coefficients are always between -1 and +1. The sign of the correlation coefficient indicates the *direction* of the relationship: +1 means a perfect positive correlation; -1 means a perfect negative correlation; and 0 means no correlation (Bonett & Wright, 2000). The *strength* of the correlation can be evaluated by means of these guidelines proposed by them:

- $0.1 < r < 0.3$ = there is a small / weak correlation
- $0.3 < r < 0.5$ = there is a medium / moderate correlation
- $0.5 < r$ = there is a large / strong correlation

Table 3.2

Post-test Content Validity Correlation Coefficient: Rater 1

Correlations

		TOTAL
M	Pearson Correlation	.784**
	Sig. (2-tailed)	.000
	N	25
V	Pearson Correlation	.691**
	Sig. (2-tailed)	.000
	N	25
G	Pearson Correlation	.819**
	Sig. (2-tailed)	.000
	N	25
O	Pearson Correlation	.798**
	Sig. (2-tailed)	.000
	N	25
C	Pearson Correlation	.877**
	Sig. (2-tailed)	.000
	N	25

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

For the first rater, the Pearson correlation coefficients of the five components (marked with two asterisks) were: *r* Mechanics=*0.784; r* Vocabulary=0.691, *r* Grammar= 0.819, *r* Organisation= 0.798, and *r* Content= 0.877. These values proved the existence of a strong linear relationship between every two continuous variables measured (the individual score of each component and the global score of the test). Compared with the guidelines above, each value represented a high-strength positive correlation. As for the level of significance, all correlations were statistically significant at alpha=0.01 as all p-values (Sig.) for all components were smaller than alpha=0.01 (p-value=0.000<α=0.01).

Table 3.3

Post-test Content Validity Correlation Coefficient: Rater 2

Correlations

		TOTAL2
M2	Pearson Correlation	.820**
	Sig. (2-tailed)	.000
	N	25
V2	Pearson Correlation	.712**
	Sig. (2-tailed)	.000
	N	25
G2	Pearson Correlation	.839**
	Sig. (2-tailed)	.000
	N	25
O2	Pearson Correlation	.905**
	Sig. (2-tailed)	.000
	N	25
C2	Pearson Correlation	.849**
	Sig. (2-tailed)	.000
	N	25

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

With regard to the second rater, the correlation coefficients of the five components were: *r* Mechanics=*0.820; r* Vocabulary=0.712, *r* Grammar=0.839, *r* Organisation=0.905, and *r* Content= 0.849. These values indicated a linear relationship between every two continuous variables measured; it also marked a strong positive correlation between the variables. All p-values (Sig.) obtained were below alpha=0.01 (p-value=0.000<α=0.01), this revealed that the correlation coefficients for the second rater were statistically significant too. Based on the analysis of Pearson Correlation coefficients stated above for both raters, it was concluded that the post-test was valid in terms of content and could be safely used in the study.

The last stage for piloting the post-test was to calculate its internal consistency reliability coefficient based on the same scores. This type of reliability refers to the extent to which all parts of a test contribute equally to what is being measured, i.e., measure the same thing. To calculate the reliability of the post-test, the researcher used Cronbach's alpha (α). The results of this test are presented in Table 3.4 and Table 3.5.

Cronbach's alpha (α) is an estimate of reliability, basically internal consistency reliability. It is a coefficient that can range from 0.00 to 1.0; in that, α=0.00 means that there is no consistency in the measurement; α=1.0 means that there is a perfect consistency in the measurement (Tavakol & Dennick, 2011). To indicate an acceptable reliability, the coefficient should be greater than 0.70 (α>=0.70); if the coefficient is $0.8 \leq \alpha < 0.9$, the reliability is considered good; and if it is $\alpha \geq 0.9$ the reliability is considered excellent (Tavakol & Dennick, 2011). In sum, higher Cronbach's alpha values always indicate a higher agreement between items.

Table 3.4

Post-test Internal Consistency Reliability Coefficient: Rater 1

Reliability Statistics

Cronbach's Alpha	N of Items
.855	5

As shown in Table 3.4, Cronbach's alpha coefficient for the five items (writing components). was α=0.855. This high value indicated that 85.5 % of the variance in the scores was reliable variance, and only 14.5% was error variance. Thus, we could say the items of the post-test had a *good* internal consistency and were reliable.

Table 3.5

Post-test Internal Consistency Reliability Coefficient: Rater 2

Reliability Statistics

Cronbach's Alpha	N of Items
.882	5

As for the second rater, the reliability coefficient was α=0.882 for the five items. This high Cronbach's alpha value indicated a *good* internal consistency among the items as 88.2 % of the variance in the scores was reliable variance, and only 11.8% was error variance. In total, the results from the Tables 3.4 and 3.5 proved that the post-test was reliable and could be used in the study to collect reliable data.

3.6.1.2. Scoring the Post-test

Scoring a test means to assign scores for the test items which allow for valid assessment. Among the available scoring approaches, the researcher opted for the analytic approach. This approach is called so because it requires allocating independent scores for each item or sub-item of a test independently (Cohen et al., 2018). It is widely used by practitioners and researchers alike for the merits associated with it. Hughes (2003) lists a number of advantages to analytic scoring:

- it reduces scores inconsistency among raters,
- it enables scorers to consider all aspects of the writing performance, and
- it encourages the equal development of writing subskills in learners.

Despite these advantages reported on analytic scoring, it is regarded as a time-consuming method of scoring and that it diverts the scorers' attention from the overall effect of the written material due to the various aspects to be considered (Hughes, 2003).

As items in a test vary in their significance, they are assigned different scores which reflect the importance of these items. According to Cohen et al. (2018), the rule of thumb for scoring a test is to give the greatest weights–more marks–to the most difficult parts of it to avoid artificial inflation of students' results. Another important key characteristic to analytic scoring

is that it allows for the allocation of scores for the different test items based on well-defined criteria that relate to the purpose and objectives of the test (Hughes, 2003).

As was the case for the post-test instructions, the scoring scale employed for evaluating the post-tests was devised by the writing instructor with the collaboration of the researcher. They drew on the five components of writing illustrated in Figure 3.2 stated beforehand, which in turn, are adapted from Jacobs et al.'s (1981) scoring profile. These components identified the specifications of the test items which the researcher sought to measure within the subjects' writing performance.

The scoring scale adopted for the study rated the post-test paragraphs out of (20 marks) (see Appendix D). This global grade was equally divided between both areas of writing, that is, (10 marks) for accuracy and (10 marks) for quality. Both areas involved a number of components. Accuracy included three components: vocabulary, grammar, and mechanics; whereas, quality involved two components: content and organisation. Some components comprised additional sub-components or aspects. For instance, within accuracy, mechanics involved three aspects: spelling, punctuation, and capitalisation. With regard to quality, content involved three aspects: focus, clarity, and unity; whereas, organisation involved two aspects: cohesion and coherence. Each of the five components of writing has four rating levels of very poor, poor to fair, average to good, and very good to excellent. Additionally, every rating level, within each component, has clear descriptors of the writing proficiency for that particular level as well as a numerical scale. It is noteworthy that the four rating levels and the relevant descriptors of the original scale were maintained; whereas the numeral scale was adapted likewise: mechanics (3 marks), vocabulary (3 marks), grammar (4 marks), organisation (5 marks), and content (5 marks). The numerical scale is illustrated as follows:

Table 3.6

Grades and Rating Ranges of the Numerical Scale

Component	Assigned Grade	Minimum Rating	Maximum Rating
Mechanics	3	0.5	3
Vocabulary	3	0.5	3
Grammar	4	0.5	4
Organisation	5	1	5
Content	5	1	5

Before using the scoring scale in the process of evaluation, it was piloted by the same individuals who piloted the post-test; two written expression teachers and the researcher's supervisor. All three provided constructive feedback on the structure of the scale and the distribution of grades among the different areas and components. Their suggestions contributed to the improvement of the scale quality and validity. The new version of the scale was, hence, perceived to be eligible to yield reliable scores.

During the post-test stage of the study, the paragraphs of the experimental and control groups were graded by two raters: the writing instructor and the researcher. Each rater marked the drafts on separate marking sheets (see Appendix E) based on the analytic marking scale discussed above. Having the paragraphs assessed by two raters, would give the final results reliability, especially that both raters used the same scale discussed in detail and agreed upon earlier. Despite this measure, inconsistent scores could possibly be obtained from different assessors owing to many factors like tiresome, boredom, bad mood, or time of the day. This might affect the assumptions drawn from the scores and result in inaccurate conclusions. In research, one of the statistical solutions to this issue, is to compute the inter-rater reliability coefficient between raters. Inter-rater reliability refers to the degree of agreement between two raters who rate, code, or assess the same phenomenon (Cohen et al., 2018). It is a kind of

external reliability and is also called inter-rater concordance, inter-coder reliability, and inter-rater agreement.

According to Bell (2005), reliability should be checked at the stage of question wording and piloting of the instrument. Therefore, to avoid any inconsistency in the scores provided by both raters and to ensure the reliability of the results that would be obtained from the post-test, the researcher run Pearson correlations (see Table 3.7) between the sets of scores related to the areas of accuracy and quality provided by both raters on the paragraph written by pilot test-takers on the first topic (compare/contrast) to examine their consistency (see Appendix W).

Table 3.7

Post-test Inter-rater Rater Reliability Coefficient

Correlations

		RATER1	RATER2
RATER1	Pearson Correlation	1	.967**
	Sig. (2-tailed)		.000
	N	25	25
RATER2	Pearson Correlation	.967**	1
	Sig. (2-tailed)	.000	
	N	25	25

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

As indicated in Table 3.7, the correlation coefficient between both raters' scores was r=0.967, which indicated a strong positive correlation between the variables. The observed p-value (.000) was smaller than alpha 0.01 (p-value=0.000<α=0.01); therefore, the correlation was statistically significant. Hence, it was concluded that the post-test had a high level of inter-rater reliability and could yield reliable data.

Based on the results of the inter-rater reliability test, the final mean score of the writing performance in each component of the post-test for the subjects of the experimental and control groups was obtained from the mean of the two scores provided by both assessors.

3.6.1.3. Post-test Validity and Reliability

For any writing test to effectively assess students' achievement, it must be valid and reliable. These are two criteria that a researcher should examine critically while carrying out research as they are essential for the evaluation of the quality of any measurement procedure or measure.

In research, some variables are well-defined; therefore, they can be directly observed and easily measured. Unfortunately, some other variables are abstract attributes or entities that cannot be directly observed and the procedure of measuring them is complicated. These abstract entities–variables–are referred to by researchers as *hypothetical constructs* (Gravetter & Forzano, 2012). In fact, a hypothetical construct is the result of researchers' speculations and theories which they develop to help them describe, predict, measure, and explain the observable behaviour related to an abstract entity or concept, and hence, confirm or disconfirm a theory about a construct. Writing competence is an example of hypothetical construct as we believe it exists but we cannot directly observe and measure it only through external behaviour like conducting an achievement test and evaluating the results. In other words, examining the factors that influence a construct or studying the behaviours that result from it (Gravetter & Forzano, 2012).

3.6.1.3.1. Validity

Validity informs researchers whether an instrument measures and describes what it is intended to measure or describe (Bell, 2005). In other words, the extent to which a measurement

procedure, such as the test in the case of this study, manages to measure the variable it claims to measure–students' writing accuracy and quality. Validity comes in many forms depending on the purpose of the study and variables; below is a statement of content validity and face validity.

A measure should also have content validity. According to Huges (2003), a test can be valid in terms of content "if its content constitutes a sample of the language skills, structures, etc., with which it is meant to be concerned" (p. 26). The skills and structures mentioned in the statement above refer to the test specifications which reflect the students' knowledge to be assessed and measured. These specifications are to be identified before the construction of the test and should be judged by experts who compare them to the test content. Hence, a test is said to have content validity if the test specifications are represented in the test. The achievement post-test employed in the current study was assumed to have content validity as it was examined and evaluated by knowledgeable writing teachers and the supervisor who all confirmed, in the pilot study, that the test specifications diagrammed in Figure 3.2 above were all included in the test and could be accurately measured. These specifications, including mechanical skills, grammar, vocabulary, organisation, and content, were part of the writing instruction that took place before the experiment in regular writing classes according to the objectives of the teaching programme set for second year students. Therefore, they assumed that the test was valid as it covered the required knowledge and could measure what it was meant to measure.

The second measure for testing content validity was the calculation of Pearson correlation coefficients to check the relationship between the score of each individual component of the five components of the test and its global score. All values obtained showed a strong positive correlation between the variables as all values were greater than 0.05 (r >0.5); also, all correlations were statistically significant at alpha=0.01 as all p-values (Sig.) were below 0.01 (p-values=0.000<α=0.01).

Face validity is another form of validity. It involves the superficial appearance of a measurement procedure–face value (Gravetter & Forzano, 2012). This means that the instrument should superficially appear to test the variable it intends to test. This type of validity typically relates to the format of the test and, more specifically, to the type of questions and instructions employed in it; i.e., whether the question looks as if is measuring what it claims to measure. Instructions of the post-test involved no difficulty to the pilot test-takers as they were familiar to such type of instructions in class prior to the experiment. They could easily understand the instructions and achieve what was required from them. As the subjects of the experimental and control groups had similar educational background and equal writing competence to the pilot study participants, it was assumed that the post-test would not constitute any difficulty to the former the study subjects. It is also noteworthy that the test was designed by the writing instructor of the subjects who frequently engaged them in similar activities and introduced them to this kind of instructions in many writing classes. In addition, the examiners of the test, including the expert teacher, marked no reservations about the complexity or the length of the test instructions. Based on that, the researcher concluded that the test had a high level of face validity and could be used in the study to obtain reliable data.

3.6.1.3.2. Reliability

Reliability is the second criteria to be examined by researchers as it contributes the quality of any measure. Leavy (2017) states that "if a measure, a survey instrument, or an experimental intervention is reliable, it will yield consistent results" (p. 114). Namely, reliability refers to the ability of a measure, a test for instance, to produce identical results if it is used again with similar samples and under the same conditions. Consistency of the results is based on the assumption that the variable being measured is constant or stable.

Two types of reliability tests were carried out in this study: internal consistency reliability and inter-rater reliability. Internal consistency reliability refers to the extent to which all parts of a test contribute to measure the same thing. Cronbach's alpha (α) was α=0.855. for the first rater and α=0.882 for the second rater. These values indicated a good internal consistency between the five items of the post-test (components of writing). Therefore, it was assumed that the post-test was reliable.

The second reliability test was inter-rater reliability. This type of test refers to the degree of agreement between two assessors' scores. As stated in an earlier section, to ensure the reliability of the results that would be obtained from the post-test for the experimental and control groups, the researcher calculated the inter-rater reliability coefficient between the scores provided by both raters for the pilot study test-takers with regard to the five writing components. The results showed a high level of correlation between the two sets of scores provided by the assessors r=0.967; this correlation was statistically significant at α=0.01 (p-value=0.000<α=0.01). Thus, the mean of the scores of both raters for the experimental and control groups were adopted as final scores for the post-test.

3.6.2. Interview

The second data collection tool employed in this study, was the interview. Kothari (2004) states that the interview is a qualitative data collection tool that involves asking an oral question by the interviewer and receiving and an oral response from the interviewee. It is also defined as a managed verbal exchange that depends a lot on the communication skills of the interviewer (Ritchie & Lewis, 2003). In research, interviews are used to obtain rich, in-depth qualitative information about the phenomenon under investigation. In this regard, Easterbrook (2008) confirms that interviews enable researchers "to elicit opinions, feelings, attitudes,

descriptions of personal behaviours, and other elements related to the research problem" (p. 829).

According to Cohen et al. (2018), there are five major types of interviews that can be used as research tools: (a) structured interview; (b) semi-structured interview; (c) unstructured interview; (d) non-directive interview; and (e) focused interview. Each of these types has its own form and serves a particular aim. The type of interview employed in this study was the semi-structured interview. The latter is a kind of face-to-face conversation on a specific topic(s) known in advance. The semi-structured interview questions are open-ended and are worded, sequenced and tailored to each individual interviewee; the responses are given by the interviewees with *prompts* and *probes* (Cohen et al., 2018). Prompts enable the researcher to clarify topics or questions like rephrasing a question, and probes enable the researcher to ask the interviewee to provide more details to clarify his/her response like repeating the answer in a questioning tone.

The use of the semi-structured interview is associated with many merits. It is mainly characterised by its adaptability (Bell, 2005). In that, it is possible for researchers to ask additional questions to gather more information and elaborate on issues which cannot be elicited in questionnaires or in written responses. This type of interview is also marked by the advantage of gathering extensive, in-depth information using only a small number of participants (Lodico et al., 2010).

Despite the merits reported on it, semi-structured interview also has some disadvantages. Bell (2005) contends that it is a time-consuming and subjective data collection tool. That is, a researcher needs to spend much time wording questions, probing responses from respondents, and analysing the data obtained. Additionally, as interviews are somewhat

subjective, there is always the risk of bias. The lack of objectivity in research is a threat to the validity of the tool and the data gathered with it.

As for this research project, the rationale for using the semi-interview as a research instrument can be summarised as follows:

- to gauge students' attitudes towards the utility of online peer feedback in enhancing their writing accuracy and quality,
- to provide a holistic description and analysis of students' perceptions of the use of Facebook as a learning tool and its role in promoting study practices and habits,
- to collect research data that could be used by future researchers to carry out deeper empirical research to study the impact of implementing Facebook-mediated peer feedback into writing classes on students writing competence.

3.6.2.1. Description of the Interview

The interview schedule (see Appendix F) used in this study mainly aimed to collect qualitative data on students' perceptions and attitudes towards Facebook-mediated peer feedback and its utility in enhancing their writing competence in terms of accuracy and quality. It was constructed parallel to the second research question: What are students' attitudes towards the use of online peer feedback in EFL writing classes?

The schedule involved five questions that covered three basic themes: a) overall perception and evaluation of online peer feedback experience, b) impact of the use of Facebook-mediated peer feedback on students' writing and the difficulties associated with it, and c) future prospects and practices.

The first theme involved one question which sought to survey students' primary impression and evaluation of the use of online peer feedback as an authentic in-class experience and how they perceived it. The second theme investigated the effect of online peer feedback on the accuracy and quality of students' writing and the difficulties they encountered while using it. This section of the interview was made up of three questions that constituted the main part of the interview as it directly related to the research topic of this study. It aimed at identifying the amount of influence online peer feedback had on the different components of writing discussed beforehand. Additionally, it would allow the students to describe the difficulties they faced and the extent to which these difficulties impeded better achievement in their writing. Such feedback would certainly be taken into consideration in planning more accurate and practical future peer feedback activities. As for the third theme, it included one question which aimed to predict students' future practices with regard to peer feedback as learning tool and Facebook as a learning platform. It aimed to reveal to what extent students benefited from this experience and how this could be reflected in their future practices. The order of the interview questions in the schedule follows the order of themes described above. Full statement of the interview schedule questions is given in the *Appendices* section.

3.6.2.2. Piloting the Interview

Before officially used in the study, the interview questions were piloted through two stages. The questions were primarily written by the researcher who showed them to the three writing teachers of the first, second, and third-year classes in the department. The researcher explained the general aim of the interview, its three themes, and the individual aim of every theme. The instructors expressed their satisfaction with the wording, content, and clarity of the questions and suggested some modifications which were incorporated into the schedule before being sent to an expert for further evaluation. The expert teacher, who was the researcher's

supervisor, thoroughly examined the questions and approved them with minor modifications which were taken into consideration before moving to the second stage of piloting the interview.

The second pilot stage of the interview schedule involved conducting the interview with three second year students from the group of students who participated in the pilot study of the post-test mentioned in the sub-section 3.6.1.1. They were selected according to the same criteria used for selecting the six students from the experimental group who would conduct the study interview. That is, based on the scores they obtained in the pilot test. They were the students who got the highest, the average, and the lowest scores in the pilot test respectively. Hence, these three students had similar educational background and writing proficiency to the six students who would be involved in the post-test interview to collect qualitative data for the second research question. The data collected showed that the interview schedule was valid in terms of themes, questions wording, complexity, and content. Therefore, it was perceived that it could be used in the study and to yield reliable results.

3.7. Procedures of the Experiment and Data Collection

This section outlines the procedures of the current experimental research as implemented by the researcher. It is to be noted here that the study was conducted through two major phases: implementing the treatment and administering the data collection instruments. Each phase involved a number of stages. Table 3.2. summarises the procedures of the study.

Table 3.8

Procedures of the Experiment and Data Collection

Phase	Stage	Date/Time	Procedures
Implementation of the Treatment (3 weeks)	Peer Feedback Training	March 08th 2022 March 30th 2022	Introducing students to peer feedback and explaining the criteria of evaluation (checklist)
	Creation of Facebook Groups		Dividing students into groups of five, creating Facebook groups, and assigning administrators
	Online Peer Feedback Provision		Using Facebook platform to practice online peer feedback
Data collection Procedures (6 weeks)	Post-test	April 1st 2022 April 15th 2022	Writing the compare/contrast paragraphs (first and final drafts)
		April 16th 2022 April 30th 2022	Writing the cause/effect paragraphs (first and final drafts)
		May 1st 2022 May 15th 2022	Writing the argumentative paragraphs (first and final drafts)
	Interview	May 17th 2022	interviews with six subjects from the experimental group

3.7.1. Implementation of the Treatment

This section provides a thorough account of the measures taken by the researcher to conduct the first phase of the present study, namely, the implementation of the treatment, which involved introducing the concept of online peer feedback to the subjects of the experimental group, training them on using the peer feedback checklist for reviewing students' writing, and providing online peer feedback via Facebook. This phase also included a practical training of the students in the control group on how to carry out self-assessment process to revise and evaluate one's writing. The first phase of the study was conducted in seven one-hour sessions throughout a three-week period. The aim of this phase was to ensure proper use of the above-stated strategies for assessing and enhancing writing and to establish the technical platform for conducting the second phase of the study, namely, the post-test. Below, is a statement of the

three major stages that constituted the process of implementing the treatment: a) peer feedback training, b) creation of Facebook groups, and c) online peer feedback provision.

3.7.1.1. Peer Feedback Training

Before engaging the students in online peer feedback activities, it was of paramount importance to make them aware of the basics of such a strategy and how to use it effectively. This step aimed to raise students' awareness on the usefulness of peer feedback in enhancing their writing proficiency and motivate them to work collaboratively.

The researcher conducted the first interactive session with the experimental group instructing the students on the basics of peer feedback. Instruction involved the definition of peer feedback, its benefits, and the activities associated with it–like writing. Instruction also involved the use of a pre-set, self-designed peer feedback checklist for providing constructive comments on students' writing (see Appendix G). The checklist included three major stages: compliments, suggestions, and corrections. Using MS PowerPoint slides, the researcher explained and illustrated the components and aims of each stage. As for the first stage, the researcher called the students' attention that they should always start their comments with compliments to establish an engaging learning atmosphere, highlight the positive aspects of the written material, and foster writers' self-confidence. The second stage involved making suggestions about their peers' writing with regard to quality, which in turn, involved the content and organisation of the piece of writing. In the third stage, students were supposed to correct all possible mistakes that relate to the accuracy of language–mechanics, grammar, and word choice. During this session, students were set free to ask questions at any time, and answers were given instantly.

The session ended up with an illustrative activity on how to correct mistakes of accuracy. The researcher used the above-stated peer feedback checklist and a sample paragraph

containing various types of language mistakes to show students how to deal with them and how to use editing marks, such as symbols, to facilitate the process of correction. The task was accomplished collectively by all students with the researcher's guidance. At the end of the session, a model peer feedback checklist was distributed to be used in subsequent peer feedback sessions. The students were explained that in such type of activities they were required to assess others' writings for the sake of helping them improve their writing in terms of accuracy and quality. During this session, the researcher explained the nature and aim of the experiment to the subjects. He ensured them that they could withdraw from the experiment at any time without any negative consequences; and confirmed that their participation in the study would by no means affect their grades in the ordinary tests or exams. The students provided their oral informed consent.

As for the control group, a similar practical session was also carried out by the researcher to show the students how to use the evaluation rubrics contained in the self-assessment checklist (see Appendix H). It is worth mentioning that the rubrics contained in the self-assessment checklist were the same as those incorporated in the peer feedback checklist designed for the experimental group with necessary modifications. Students were told that after writing the first draft of a paragraph, they could use the rubrics related to corrections and suggestions to revise their own paragraphs and write final drafts. The students in this group did not receive any instruction on peer feedback provision as they were not required to use it in the experiment; they only had to use the self-assessment checklist to revise their own works in an elaborate manner to improve subsequent writings. At the end of the session, a sample paragraph was used to show them how to use the self-assessment checklist to fix some issues related language accuracy–mechanics, grammar, and word choice. Again, the researcher explained the nature and aim of the experiment to the control group and got the informed consent of the students.

A second practical session was held with the experimental group, but this time the session was monitored by the students' regular teacher of writing. In this session, the subjects were asked to write a 100-word paragraph on any topic of their own selection within thirty minutes. After the set time was over, the students of the experimental group, sitting in pairs, were asked to exchange their drafts and evaluate them using the peer feedback checklist given to them in the previous session. Then, the instructor set each pair to discuss the comments they made to each other; the processes of evaluating the paragraphs and discussing the comments lasted for twenty minutes. Based on the feedback received, the students were asked to revise the first draft and write a final one after class. Assessment of the paragraphs by the instructor was not necessary at this stage. The aim was to apply the knowledge gained in the first session, that is, how to use the checklist to evaluate a piece of writing and provide peer feedback on it. The students were asked to bring their first and final drafts the next session for further reflection and evaluation of this primary experience with peer feedback.

The class teacher met again the students of the experimental group and discussed with them different issues related to the process of peer feedback. He listened to the students' views and answered their questions. He asked the subjects to attentively read and reflect on both drafts to identify their strengths and weaknesses in relation to both features accuracy and quality. They were given chance to evaluate the amount and content of the feedback they received and the extent to which it helped them improve their second drafts. Discussion also involved the rubrics contained in the checklist, which yielded deeper comprehension of the components of evaluation criteria. This session helped establish a positive learning atmosphere among the group's members and enabled them to gain more familiarity with peer feedback.

The overall objective of the above-described stage was to train the students of the experimental on how to use specific evaluation rubrics to assess each other's writings. After the

introduction of peer feedback strategy to the experimental group, the researcher moved to the next step: creating peer feedback Facebook groups.

3.7.1.2. Creation of Facebook Groups

Facebook is one of the most influential social media tools that proved its usefulness in the field of education and in offering learners ample opportunities to work collaboratively and share knowledge and expertise. On the other hand, Facebook is a cost-efficient learning platform that enables learners to create learning communities in an economical way, saving a lot of time, effort, and money. These reasons, in addition to students' familiarity with Facebook and their easy access to it, led the researcher to choose Facebook among other media to carry out online peer feedback activities.

On this basis, the researcher met the students of the experimental group in a new session, wherein he divided them into five sub-groups and assigned a group leader who would create a closed Facebook group and manage the group's online work throughout the whole experiment. The five Facebook closed groups were given specific names: Peer Feedback Group A, Peer Feedback Group B, etc., until E. After the creation of the Facebook groups, all students joined their specific groups. It is worth mentioning that all students possessed either a smart phone or a laptop, an Internet connection, and a Facebook account; this gave flexibility to the processes of Facebook groups creation and membership. The researcher explained the procedures to be followed by the students in conveying online peer feedback via Facebook during the experiment. This involved writing and posting a primary draft of a paragraph on the Facebook group by each student, then the members of each group would read the primary paragraph, and assess it using the peer feedback checklist. Next, students had to write their feedback in the comment' section–below the post. Based on the comments received, the students would write a final draft of the paragraph and repost it on the Facebook group. The students were also

informed that the paragraph topic and the type of discourse to be considered would be announced to them on time.

Regarding the control group, no Facebook groups were needed as the students were required to work individually. The next stage was to train the students of the experimental group on providing peer feedback via online medium.

3.7.1.3. Online Peer Feedback Provision

After the introduction of peer feedback strategy and the creation of Facebook groups, the researcher assigned the conduction of the primary online peer feedback provision session to the teacher of the class who was in charge of the module of Written Expression and Comprehension. In a new session, the class teacher asked the students belonging to experimental group to write a small paragraph on a topic of their own selection and post it on their Facebook group to be reviewed and commented on by the group members. Authors were asked to go through their peers' comments and write a final draft of the paragraph, then repost it to the group. This work was to be completed after class.

The next session, the class teacher set each peer feedback group to sit together and discuss the comments they sent and received, and reflect on their primary experience with online peer feedback and the amount of improvement they identified within their writings. The teacher also discussed with students the difficulties encountered by them while using the platform. Further explanation of the components of the peer feedback checklist was provided by the teacher to ensure that the subjects understood how to use the different evaluation rubrics. At this stage, assessment of the paragraphs by the instructor or researcher was not required as this step solely aimed to ensure that the technical component of the study–Facebook group platform–was functioning well and that the students were ready to conduct the second phase of the study–the post-test.

After the two above-stated practical sessions on online peer feedback led by the class teacher, the researcher received positive reports from the former about the success of the primary online peer feedback provision session and the readiness of the technical component of the experiment. The students belonging to the experimental group attended six one-hour practical sessions for providing peer feedback, whereas the students in the control group attended one one-hour session where they were shown how to use the self-assessment checklist to evaluate one's writing. In total, the first phase of the experiment was applied in seven one-hour sessions that extended over three weeks. The next section discusses the data collection procedures followed by the researcher to administer the post-test and the interview.

3.7.2. Data Collection Procedures

After the implementation of the first phase of the study, which involved peer feedback training workshop, the researcher moved to the second phase of it; administering the post-tests and conducting the interviews. This section highlights the procedures followed by the researcher to collect data via the writing assignments and interview sessions.

3.7.2.1. Administering the Post-test

This phase of the project lasted for six weeks; it started on April 1st, 2022 and ended on May 15th, 2022. The subjects in both groups were assigned to write three paragraphs on three different topics designed by the writing teacher using the three types of discourse (rhetorical modes) studied so far: compare and/contrast, cause/effect, and argumentative. For each paragraph (topic), students were required to write two drafts: a first draft and a final draft, with a maximum length of 250 words each. The drafts were written based on a clear schedule of due dates set by the researcher. Every topic was covered in two weeks at an average of one draft each week; that is, the first draft was written in the first week and the final draft was written in the second week (see Table 3.2. for precise dates). This period was assumed to be sufficient for

the subjects of the experimental group to receive appropriate feedback on their first drafts, reflect on them, and then write final drafts. The aim of writing two drafts was to help track peer feedback subjects' progress and achievement in their writing, that is, to examine the impact of peer feedback on their writing competence between both drafts.

It is noteworthy to mention that before the experiment took place, the subjects had been regularly instructed by their teacher on the various aspects of paragraph writing, including the components of a paragraph: the topic sentence, the supporting sentences, and the concluding sentence. Instruction also included the three types of discourse mentioned beforehand and the stages of process approach to writing as part of their writing curriculum in the second and third semesters.

On April 1st, 2022, the writing teacher conducted a final session with the subjects of each group of the experiment to administer the post-test and explain the different procedures to be followed by each group and the due dates for submitting drafts. It is to be noted that despite regular instruction on paragraph writing and the related issues over the second and third semesters, the instructor used this session not only to administer the post-test, but also to review the components of a paragraph, the stages of writing within the process approach, and the three types of discourse studied so far. At the end of this session, the post-test was administered.

As for the experimental group, the writing teacher explained the experiment mechanisms, which required each individual student to write a primary paragraph on a specific topic within a specific rhetorical mode and posting it on his/her specific Facebook group during the first week of the two-week period set for every topic (see Table 3.2). Then, the members of each group would read the primary paragraph of each individual author, use the peer feedback checklist to assess it, and write their feedback in the comments' section–below the post. Reviewers' comments basically included making suggestions about the quality of writing with

regard to content and organisation, in addition to correcting the different mistakes related accuracy, including mechanics, grammar, and word choice. According to Hyland (2000), the use of the checklist in peer feedback activities is a common practice in ESL writing classrooms. Considering the number of subjects in each Facebook group–five, each student had to provide comments to the other four members and also receive comments from the same members. Cho and Schunn (2005) confirm that feedback from multi-peers could be more beneficial to students' written products than that received from a single peer.

However, the subjects were set free to use or discard some of their peers' comments in refining their final drafts. Based on the comments received, the subjects would revise their paragraphs, write final drafts, and repost them on the Facebook group during the second week of the same period. This means that the process of writing the first and final drafts for each paragraph would last for two weeks. This time no further comments were required and all posts and comments should not be deleted. This process of writing, posting and reposting drafts on Facebook groups was repeated in the same manner with the second and third topics. At the end of every two-week period, the researcher, who had primary access to the five closed Facebook groups, collected and double-printed the paragraphs for instant evaluation. As was proclaimed in the sub-section 3.6.1.2, the drafts would be rated by both the researcher and the writing instructor for more reliability of scores.

With regard to the control group, the same instructions were given about the sequence of paragraph writing, topics, rhetorical modes, and timing; but, instead of receiving feedback from peers, the subjects were asked to use the self-assessment checklist to revise their first drafts by themselves. Students were recommended to send the first draft to the researcher via email immediately after writing it. Later, they would revise this first draft using the checklist, write a second draft, then send it to the researcher again. Every two weeks they should have sent two drafts on a specific topic. After six weeks, 300 paragraphs from the experimental and

control groups were collected. After that, the proceeded to the second stage of data collection procedures: conducting the interview.

3.7.2.2. Conducting the Interview

Semi-structured interviews were conducted by the researcher with six participants from the experimental group on May 17th, 2022. Prior to conducting the interviews, the researcher sought for permission from the head of English Department, who gave consent and offered a room for that purpose. For ethical reasons, oral informed consent was also obtained from the interviewees before embarking on the interviews. They were comprehensively explained the scope of the research, the aim of the interview, the type of questions to be asked, the type of information required from them, and what would be done with it. Confidentiality, anonymity, non-identifiability and non-traceability had also been guaranteed. All six interviews were conducted in English and lasted for about fifteen to twenty minutes each.

As stated in the *Sampling* section, the six respondents were purposefully selected for the interview based on their post-test scores (see Table 3.5). Two of them had the highest mean scores, two of them had the lowest mean scores, and the other two had their mean scores range between the first class and the last class. The researcher's aim at this stage of research was to elicit students' attitudes towards the use of online peer feedback and its utility in enhancing their writing. He perceived that this sample of participants would be representative of the above-stated three levels of subjects in the experimental group, and hence, would be best able to provide the necessary information for the study.

Table 3.9

Background Information of the Interview Respondents

Variables	**R. 1**	**R. 2**	**R. 3**	**R. 4**	**R. 5**	**R. 6**
Gender	Female	Male	Female	Female	Female	Male
Age	39	29	19	25	21	19
Post-test Mean Score	18.25	18	14	13.5	09	09

The participants were required to answer five open-ended questions (see Appendix F), which were structured parallel to the second research question; that is, to explore the students' attitudes towards peer feedback strategy and its usefulness in enhancing the accuracy and quality of their writing. Among all interviewees, only one participant agreed to tape-record his answers. Therefore, the researcher decided to use the note-taking strategy to report respondents' answers and views.

The researcher started the interviews with a more general question about interviewees' evaluation and perception of peer feedback as a learning strategy in writing classes, then proceeded to more specific questions. The participants' answers inspired the researcher to probe with additional questions that were not part of the interview schedule; this would undoubtedly enable the him to gain more in-depth information about various issues. Participants could understand all questions and were able to provide satisfactory answers. In case any answers were ambiguous or incomplete, the researcher would ask for more clarification, and participants responded positively. After the collection of both the quantitative and qualitative data, the researcher started running the procedures of data analysis.

3.8. Data Analysis Methods

Data analysis is a vital part of any piece of research. It allows the researcher to determine the findings of the study so as to confirm or refute his/her hypotheses. The data collected from the post-test and the semi-structured interview are of a different nature, quantitative and

qualitative respectively, and should undergo different analytical procedures. Below is a thorough statement of the procedures of data analysis for both types of data.

3.8.1. Quantitative Data Analysis

After the administration of the post-test and the scoring of the subjects' final drafts, appropriate data analysis procedures were carried out in order to answer the first research question. The post-test scores obtained were used to compare the differences between the experimental and control groups to examine the impact of the treatment on the accuracy and quality of the subjects' writing.

In experimental research, it is a common practice that quantitative data are analysed by means of two statistical measures: descriptive statistics and inferential statistics (Leavy, 2017). These statistical procedures, especially inferential statistics, are conducted throughout specific statistical software. One of the widely used software for statistics is SPSS. This latter is a computer software package that performs statistical calculations; it enables researchers to manage, analyse, and document statistical data that relate to the social sciences. It is also used in many fields of research, including education (Gravetter & Forzano).

As its name suggests, descriptive statistics describe a set of data. The objective of this category of statistics is to enable researchers to summarise, organise, and simplify the results of the research study (Gravetter & Forzano). Descriptive statistics does not include theories, inferences, probabilities, or conclusions as this is the role of inferential statistics. There are three major types of descriptive statistics: a) frequencies (or frequency distributions), which include frequencies and percentages; b) measures of central tendency, which comprise the mean, the mode, and the median; and c) measures of dispersion (or variability), which entail the range, the variance, and the standard of deviation (Cohen et al., 2018).

The descriptive statistics of this study involved calculating the means and standard deviations of the post-test results for both groups regarding the five components of writing, including mechanics, grammar, vocabulary, organisation, and content. The results were presented in tables and graphs.

For the researcher to be able to make inferences and draw conclusions from the set of data of a study, he/she should use inferential statistics. The goal of inferential statistics is to help researchers answer research questions and make inferences about the population from which the sample was taken (Leavy, 2017). Inferential statistics involves various statistical tests and calculations depending on the objectives and variables of the study and what the researcher wants to learn from the data collected. For this study, the researcher used Independent Samples t-test. This test is used to determine whether there is a significant difference in sample means for a continuous variable for two independent groups. It involves calculating the mean for each group, and then using the difference between the means of both groups to compare the performance of both groups and test the hypothesis. Independent Samples t-test is used in this study to measure the significant difference between the post-test scores of the experimental and control groups in terms of the above-stated components. This test allows researcher to determine the effect of a treatment/programme on the subjects of the experimental group, hence to confirm or reject the null hypothesis.

When we run statistical tests, we need to compute the p-value, which is the probability value for the null hypothesis to be true, that is, the probability of obtaining the sample results due to chance and not due to the effect of the treatment. P-value is represented by decimal anywhere between 1.0 and 0.0001. In order to decide when to reject the null hypothesis we need to choose a level of significance, denoted by α. The level of significance is the probability of saying a result is significant, that is, not occurring due to chance. The commonly accepted level of the p-value for the results to be statistically significant is 0.05; this value can also be

represented as a percentage of 5%. For any results to be significant, the probability that the null hypothesis is true should be equal to or less than 5% ($p \leq 0.05$). In other words, the probability for the results to be random–obtained by chance and not due to the effect of the treatment–should be equal to or less than 5%. In this case the null hypothesis is rejected in favour of the alternative (research) hypothesis. If the p-value is bigger than 5% ($p > 0.05$), the results obtained will not be significant; hence, the null hypothesis is confirmed. In sum, if the p-value is more than the pre-set level of significance (p-value$>\alpha$), the null hypothesis is accepted; if the p-value is less than the pre-set level of significance (p-value$<\alpha$), the null hypothesis is rejected. In order to test the research hypothesis of the present study, the researcher set 0.05 (5%) as the level of significance. According to Cohen et al. (2018), Gravetter and Forzano (2012), and Kothari (2004), this is the most commonly accepted level of significance in research.

3.8.2. Qualitative Data Analysis

As the data collected from the semi-structured interview were qualitative in nature, qualitative modes of analysis were used. According to Taylor and Gibs (2010, as cited in Cohen et al. 2018), qualitative data analysis involves understanding, explaining, and interpreting the data which relate to the phenomenon under investigation. This type of data analysis focuses on in-depth, context-specific, rich, and subjective data provided by respondents. Qualitative research is basically interpretive and subjective because the assessment given by a researcher to a set of data may differ from that given by another researcher (Creswell, 2012).

Although qualitative data are rich in content, they constitute difficulties for researchers to analyse them and arrive to accurate conclusions. Cohen et al., (2018) and Creswell (2012) admit that there is no perfect method to analyse and present qualitative data because this type of data is not straightforward and may involve multiple interpretations. Nevertheless,

researchers tried to put forward practical guidelines that can be followed to provide accurate analysis and interpretation of qualitative data.

Creswell (2012) devises an elaborate six-step strategy for analysing qualitative data that basically adopts an eclectic approach. These steps include: a) preparing and organising data, b) coding data, c) developing descriptions and theme, d) representing the findings through narratives and visuals, e) interpreting the results, and e) validating the accuracy of findings. This strategy seems to employs features of both content and thematic approaches to analysing qualitative data.

As for the present study, the researcher adopted the above-mentioned guidelines within an eclectic approach to analyse the interview-based qualitative data in order to answer the second research question of the study. This question seeks to gauge second year students' attitudes towards the use of online feedback as a strategy to enhance their writing competence in terms of accuracy and quality. The rule of thumb for any qualitative data analysis method is to repeatedly read respondents' answers to establish themes and identify recurring patterns that enable the researcher to come up with accurate interpretations of the phenomenon under question in a way that leads to answering the original research questions of the study.

3.9. Conclusion

This chapter discussed the research methodology followed by the researcher to conduct the study. It included seven major sections which primarily dealt with the different components of the research design employed in the study and the research approaches with a sound justification of such methodological procedures. Discussion also provided a comprehensive description of the research population and the sample of the study, in addition to the context of the study, which involved the research setting and the educational profile of the participants. A special section elaborated on the research instruments used to collect data for the study, together

with another section that thoroughly covered the different measures taken to conduct the experiment and collect data. The chapter ended up with a final section that highlighted the methods of quantitative and qualitative data analysis. The next chapter will be devoted to the analysis of the data collected and the discussion of the results.

CHAPTER FOUR:

Data Analysis

4.1. Introduction

This chapter reports the study findings based on the analysis of the quantitative and qualitative data required to answer the research questions. It includes two major sections. The first section presents the analysis of the post-test findings and the second section displays the analysis of the semi-structured interview findings.

4.2. Analysis of the Post-test Findings

The quantitative data obtained through the post-test writing achievement were analysed through descriptive and inferential statistics using SPSS v. 22 to answer the first research question and its subsidiary questions and to test the null hypothesis. Concerning descriptive statistics, in each stage of analysis, each writing component was analysed to summarise and compare the scores of both groups with regard to their writing performance in all components of writing and overall post-test performance.

The study aimed to investigate the impact of online peer feedback on the writing competence of a sample of EFL Algerian students from El Oued University. The main research question of the study was: To what extent would online peer feedback enhance EFL students' writing competence? In this study, writing competence was divided and examined through two major areas: accuracy and quality. For this reason, two subsidiary questions were formulated to facilitate the task of examining each area of writing in isolation as each area was made up of different components. The components related to accuracy were mechanics, vocabulary, and grammar; whereas quality included organisation and content. Some components encompassed further sub-components or aspects (see figure 3.2). These two subsidiary questions were: a) Would online peer feedback have a positive effect on students' writing accuracy? And b) Would online peer feedback have a positive effect on students' writing quality?

In analysing the quantitative data descriptively, the researcher adopted an inductive (bottom-up) approach to analysis, starting from specific to general. That is, he started dealing with the data related to the first subsidiary question about accuracy; then, moved to the analysis of the data related to the second subsidiary question about quality; and finally, ended up with the data related to the main research question about the students' general writing competence to measure the total performance in the post-test as a whole. In each area of writing, every component was analysed independently within each group; then, the global scores related to the areas were compared among the experimental and control groups. This was followed by the comparison of the overall scores related to the subjects' performance in the post-test as a whole. The data were presented in tables and represented in graphic figures.

The descriptive analysis of the quantitative data obtained from the writing post-test involved calculating the means and standards of deviation of the subjects' scores. In addition, the minimum and maximum scores within the frequency distribution of the subjects' scores were all checked. It is necessary to remember that the post-test was rated out of 20 marks; 10 marks for accuracy of writing and 10 marks for quality. Statistical procedures followed by the researcher within inferential statistics to test the null hypothesis will be extensively dealt with in a subsequent section.

4.2.1. Analysis of the Control and Experimental Groups' Writing Accuracy

In this sub-section, the analysis of the data on accuracy seeks to find an answer to the first subsidiary research question: Would online peer feedback have a positive effect on students' writing accuracy? This question aimed to determine whether online peer feedback could help the subjects of the experimental group improve their writing accuracy in terms of mechanics, vocabulary, and grammar. The component of accuracy was rated out of 10 marks, including 3 marks for mechanics, 3 marks for vocabulary, and 4 marks for grammar.

4.2.1.1. Control Groups' Writing Accuracy

Analysis of the accuracy-based scores obtained by the control group in the writing achievement post-test will be conducted first. The data will be analysed descriptively by calculating the mean and standard deviation. Frequency distribution of scores will also be provided and the results will be presented in descriptive tables.

4.2.1.1.1. Control Groups' Achievement in Mechanics

Mechanics is the first component of accuracy to be explored. This component was rated out of 3 marks and it included three main sub-components (aspects): spelling, punctuation, and capitalisation. These sub-components were not scored in separation; they were all combined in one score for mechanics. Table 4.1 summarises the descriptives of this component.

Table 4.1

Descriptive Statistics of Control Groups' Scores in Mechanics

Group	N	Mean	Std. Deviation	Std. Error Mean
Control	25	1.53	.56	.11

Data in Table 4.1 show that the mean for the subjects of the control group's scores in mechanics is 1.53, indicating that the average (or central) score of the group sample (n=25) is 1.53. The standard deviation for the variable of mechanics is 0.56, which is a low value that indicates that data scores tend to be close to their mean. This is evidenced by the fact that the values are approximately similar. As the component of mechanics is rated out of 3 marks, this score can be considered an average score.

Table 4.2

Frequency Distribution of Control Groups' Scores in Mechanics

Score	Frequency	Percentage
0.75	4	(16%)
1	4	(16%)
1.25	1	(4%)
1.5	6	(24%)
1.75	2	(8%)
2	4	(16%)
2.25	2	(8%)
2.5	2	(8%)

As for the frequency of scores, Table 4.2 shows that there are eight categories of scores, wherein the minimum score is 0.75 and the maximum score is 2.5. Out of all the subjects, six students got 1.5 representing the score category with the highest rate of 24%. The score category with the lowest rate is 1; it was obtained by four students giving a percentage of 4%. In total, 64% of the subjects in the control group scored above the average score for the component of mechanics.

4.2.1.1.2. Control Groups' Achievement in Vocabulary

The second component of writing accuracy to be examined is vocabulary. It refers to the proper use of vocabulary items in the writing test. It was rated out of 3 marks and included no sub-components. Descriptives for this component are summarised in Table 4.3.

Table 4.3

Descriptive Statistics of Control Groups' Scores in Vocabulary

Group	N	Mean	Std. Deviation	Std. Error Mean
Control	25	1.67	.35	.07

For the scores obtained by the subjects of the control group (n=25) in the component of vocabulary, the mean is 1.67, which is slightly larger than the mean of mechanics as they are both evaluated out of three marks. This indicates that the subjects performed better in vocabulary than in mechanics. The standard deviation is 0.35, marking a lower value than that of mechanics and approximating zero– the smallest possible value for the standard deviation. This means that the scores obtained are more clustered around their mean, indicating a low amount of variability in the data set.

Table 4.4

Frequency Distribution of Control Groups' Scores in Vocabulary

Score	Frequency	Percentage
1	1	(4%)
1.25	4	(16%)
1.5	9	(36%)
1.75	1	(4%)
2	9	(36%)
2.5	1	(4%)

The results in Table 4.4 display six categories of scores ranging from 1 as a minimum score to 2.5 as a maximum score. These minimum and maximum scores were obtained once with a percentage of 4% each. The scores with the highest frequency are 1.5 and 2 with a rate of 36% for each score. 80% of subjects scored above the average score for the component of vocabulary.

4.2.1.1.3. Control Groups' Achievement in Grammar

Grammar is the third component of writing accuracy. It relates to the correctness of the syntactic structure of the piece of writing. It was rated out of 4 marks and it included no further sub-components. The results of this component are presented in Table 4.5.

Table 4.5

Descriptive Statistics of Control Groups' Scores in Grammar

Group	N	Mean	Std. Deviation	Std. Error Mean
Control	25	2.21	.60	.12

Looking at Table 4.5, we can determine that the mean for the scores related to grammar obtained by the control group sample (n=25) is 2.21. This value indicates a score that is slightly above the average. As for the standard deviation, the value is 0.60, which can be considered a small value that means that the data set are not significantly spread out from their mean. Therefore, the values in the dataset are relatively consistent.

Table 4.6

Frequency Distribution of Control Groups' Scores in Grammar

Score	Frequency	Percentage
1.5	6	(24%)
1.75	3	(12%)
2	4	(16%)
2.25	1	(4%)
2.5	5	(20%)
2.75	1	(4%)
3	4	(16%)
3.5	1	(4%)

Concerning the frequency distribution of grammar scores, eight categories can be identified. The minimum score is 1.5 and the maximum score is 3.5. Six students got the minimum score with a rate of 24%; this is also the score with the highest frequency. One student got the maximum score with a rate of 4%. The score with the second highest frequency is 2.5. Among all the control group subjects, five students obtained this score representing 20% of the sample.

4.2.1.2. Experimental Groups' Writing Accuracy

The second part of accuracy-based data analysis is conducted on the scores obtained by the experimental group in the writing achievement post-test. Data will also be analysed descriptively in a bid to formulate a thorough answer to the first subsidiary question which seeks to examine the impact of online peer feedback on students' writing accuracy.

4.2.1.2.1. Experimental Groups' Achievement in Mechanics

Data related to the component of mechanics are analysed below utilising descriptive statistics. This component was scored with regard to spelling, punctuation, and capitalisation. It was scored out of 3 marks. A summary of the data on mechanics for the experimental group is given in Table 4.7 and Table 4.8.

Table 4.7

Descriptive Statistics of Experimental Groups' Scores in Mechanics

Group	N	Mean	Std. Deviation	Std. Error Mean
Experimental	25	2.35	.48	.09

The results from Table 4.7 indicate that the mean for the experimental groups' (n=25) scores in mechanics is 2.35 with a standard deviation of 0.48. This mean value is high compared to the mark out of which the component of mechanics was evaluated, which was 3. The scores are almost centred around their mean as the value of standard deviation is not far from zero. 0.48 represents a slight amount of deviation from the central score, indicating that the majority of the scores are close to the mean.

Table 4.8

Frequency Distribution of Experimental Groups' Scores in Mechanics

Score	Frequency	Percentage
1	1	(4%)
1.5	2	(8%)
2	4	(16%)
2.25	1	(4%)
2.5	13	(52%)
3	4	(16%)

As displayed in Table 4.8, the distribution of the experimental group's scores obtained in mechanics range from 1 as a minimum score to 3 as a maximum score with a percentage of 4% and 16% for each of them respectively. The minimum score was obtained by one student and the maximum score was obtained by four students. The analysis yielded six score categories wherein the score with the highest rate is 2.5 representing 52%. As the component of mechanics was rated out of 3, we can deduce that the total percentage of the students who scored above the average is 96%. This is considered a very high rate.

4.2.1.2.2. Experimental Groups' Achievement in Vocabulary

Vocabulary is the second component of writing to be analysed within the area of accuracy for the experimental group. It involves word form mastery and appropriate choice and usage of vocabulary items. It was rated out of 3 marks and included no sub-components. Extensive descriptives for this component can be examined in Tables 4.9 and 4.10.

Table 4.9

Descriptive Statistics of Experimental Groups' Scores in Vocabulary

Group	N	Mean	Std. Deviation	Std. Error Mean
Experimental	25	2.18	.48	.09

The mean for the component of vocabulary is 2.18 with a standard deviation of 0.48. Again, this mean implies that the students in the experimental group (n=25) performed well in this component as this mean is above the average. The value of standard deviation also indicates that the scores are clustered around their mean with a low rate of variability.

Table 4.10

Frequency Distribution of Experimental Groups' Scores in Vocabulary

Score	Frequency	Percentage
1	1	(4%)
1.25	1	(4%)
1.5	3	(12%)
2	4	(16%)
2.25	3	(12%)
2.5	11	(44%)
2.75	2	(8%)

Seven score categories are provided by the frequency Table 4.10. The highest score is 2.75; it was obtained by two students giving it a percentage of 8%. The lowest score is 1; it was obtained by one student giving it a percentage of 4%. Eleven students got 2.5 which represents 44% of the group sample; this is the score with the highest rate. It can be noted that only two students scored below the average in this component with a total percentage of 8% for both score categories. 23 students got a score of 1.5 and higher in this component too.

4.2.1.2.3. Experimental Groups' Achievement in Grammar

The last component that constitutes part of the accuracy of writing is grammar. This component relates to the effective use of the structural language items with fewer errors that may affect the construction and comprehension of meaning. It was rated out of 4 marks and encompassed no further sub-components. Descriptive data on this component are displayed in Table 4.11 and Table 4.12.

Table 4.11

Descriptive Statistics of Experimental Groups' Scores in Grammar

Group	N	Mean	Std. Deviation	Std. Error Mean
Experimental	25	3.15	.59	.11

The mean for the scores obtained by subjects of the experimental group (n=25) in the component of grammar is 3.15. As grammar was assessed out of 4 marks, this mean can be considered high; it means that the subjects' performed well in this component. The standard deviation is 0.59, marking an acceptable deviation from the mean. Again, we can say that the scores obtained are not very spread out further from the central score (mean), indicating a low amount of variability in the data set.

Table 4.12

Frequency Distribution of Experimental Groups' Scores in Grammar

Value	Frequency	Percentage
1.75	2	(8%)
2	1	(4%)
2.25	1	(4%)
3	5	(20%)
3.25	2	(8%)
3.5	13	(52%)
4	1	(4%)

4.2.2. Analysis of the Control and Experimental Groups' Writing Quality

This sub-section is devoted to the analysis of the data on the quality of writing. It seeks to answer the second subsidiary research question: Would online peer feedback have a positive effect on students' writing quality? This question aimed to determine whether online peer feedback would enhance the writing quality of the experimental group's subjects. This area of writing included two components: organisation and content. It was rated out of 10 marks: 5 marks for organisation and 5 marks for content.

4.2.2.1. Control Groups' Writing Quality

The first part of quality-based data analysis is conducted on the scores obtained by the control group in the writing achievement post-test. Within descriptive statistics, the means and standards of deviation of the obtained scores will be calculated. Frequency distribution of scores will also be provided and the results will be presented in descriptive tables.

4.2.2.1.1. Control Groups' Achievement in Organisation

The first component of quality to be examined is organisation. It relates to fluent expression, clear statement of ideas, and logical sequencing. It was rated out of 5 marks and included two sub-components: cohesion and coherence. Evaluation of these two sub-components constituted the overall mark assigned to organisation. Descriptives of this component are surveyed in Table 4.13 and Table 4.14.

Table 4.13

Descriptive Statistics of Control Groups' Scores in Organisation

Group	N	Mean	Std. Deviation	Std. Error Mean
Control	25	2.42	.61	.12

The mean for the scores obtained by subjects of the control group (n=25) in the component of organisation is 2.42 with a standard deviation of 0.61 (see Table 4.13). As the component of organisation was scored out of 5 marks, this mean is below the average which is 2.5. This result reveals that the subjects' performance in this component was not good. As for the standard deviation, it can be said that it is an acceptable deviation from the mean. The scores obtained are not very far away from the mean, indicating a low amount of variability in the data set.

Table 4.14

Frequency Distribution of Control Groups' Scores in Organisation

Score	Frequency	Percentage
1.25	1	(4%)
1.5	3	(12%)
2	5	(20%)
2.25	2	(8%)
2.5	4	(16%)
2.75	2	(8%)
3	6	(24%)
3.25	1	(4%)
3.5	1	(4%)

The scores obtained by the students of the control group range between 1.25 as a minimum score and 3.5 as a maximum score (see 4.14). Nine score categories can be identified. The score category with the highest rate is 3 with a percentage of 24%. Three score categories received the lowest rate 1.25, 3.25, and 3.5 with a rate of 4% for each. 44% of the subjects scored below the average; 56% of them got scores above the average.

4.2.2.1.2. Control Groups' Achievement in Content

Content is the second component to be analysed within writing quality. It refers to the amount of knowledge embedded in the piece of writing and its relevance to the topic. It was rated out of 5 marks and included three sub-components: clarity, unity, and focus. These three sub-components were not scored independently; instead, they were all integrated into the overall mark assigned to content. The findings of this component are presented in Tables 4.15 and 4.16.

Table 4.15

Descriptive Statistics of Control Groups' Scores in Content

Group	N	Mean	Std. Deviation	Std. Error Mean
Control	25	2.67	.66	.13

Table 4.15 reveals a mean of 2.67 and a standard deviation of 0.66. This mean is higher than that for organisation; this means that subjects in this group (n= 25) performed better in this component as the mean of scores is above the average score which is 2.5 as content was scored out of 5 marks. With regard to the standard deviation, it is still within the range of acceptable deviation from the mean. The scores are approximately close to their mean.

Table 4.16

Frequency Distribution of Control Groups' Scores in Content

Score	Frequency	Percentage
1.5	1	(4%)
1.75	1	(4%)
2	4	(16%)
2.25	3	(12%)
2.5	5	(20%)
3	6	(24%)

3.25	1	(4%)
3.5	2	(8%)
4	2	(8%)

The frequency distribution of the scores obtained in this component shows that 16 students from the control group got scores above the average representing a percentage of 64% (Table 4.16). Nine score categories are observed ranging from 1.5 to 4. One student got the minimum score (4%) and two students got the maximum (8%). The score with the highest rate is 3 (24%) followed by 2.5 as the second score (20%). These results indicate the subjects' performance in content was above average.

4.2.2.2. Experimental Groups' Writing Quality

Analysis of the scores obtained by the experimental group in the writing achievement post-test constitutes the second part of quality-based data analysis. It is part of the endeavour to find an appropriate answer to the second subsidiary research question on the effect of online peer feedback on students' writing quality. This area of writing was rated out of 10 marks and included organisation and content components.

4.2.2.2.1. Experimental Groups' Achievement in Organisation

Analysis of the experimental groups' achievement in the component of organisation is the accomplishment of the analysis of data on the quality of writing. The aim is to determine whether online peer feedback helped students organise their writing. This component was rated out of 5 marks and was divided into two sub-components: cohesion and coherence. Findings on this component are displayed in Tables 4.17 and 4.18.

Table 4.17

Descriptive Statistics of Experimental Groups' Scores in Organisation

Group	N	Mean	Std. Deviation	Std. Error Mean
Experimental	25	3.58	.54	.10

We can observe in Table 4.17 that the mean for the scores related to organisation obtained by the experimental group sample (n=25) is 3.58. This value indicates a score that is high above the average score which is 2.5. As for the standard deviation, the value is 0.54, which can be considered a small value that means that the data set are not significantly spread out from their mean. Therefore, the values in the dataset are relatively consistent. These results show that the subjects' performed well in this component.

Table 4.18

Frequency Distribution of Experimental Groups' Scores in Organisation

Score	Frequency	Percentage
2.5	1	(4%)
3	5	(20%)
3.25	2	(8%)
3.5	9	(36%)
4	3	(12%)
4.25	2	(8%)
4.5	3	(12%)

The results in Table 4.18 mark six categories of scores ranging from 2.5 as a minimum score to 4.5 as a maximum score. The minimum score was obtained by just one student giving it a percentage of 4%; the maximum score was obtained by three students with a percentage of 12%. The score with the highest frequency is 3.5 with a rate of 36%; nine students got this

score. The interesting result in this component is that all subjects' scores are equal to or above average score which is 2.5. This indicates that their performance was high.

4.2.2.2.2. Experimental Groups' Achievement in Content

The last component to be explored within the descriptive analysis of the writing post-test components is content. The aim is to verify the influence of online peer feedback on the content of the experimental groups' writing. The raters scored this component out of 5 marks. This mark included clarity, unity, and focus. A summary of the descriptive results of this component is portrayed in Tables 4.19 and 4.20.

Table 4.19
Descriptive Statistics of Experimental Groups' Scores in Content

Group	N	Mean	Std. Deviation	Std. Error Mean
Experimental	25	3.69	.68	.13

The results from Table 4.19 indicate that the mean for the experimental groups' (n=25) scores in content is 3.69 with a standard deviation of 0.68. This mean value is high compared to the mark out of which the component of content was evaluated, which was 5. The scores are almost centred around their mean as the value of standard deviation is not far from the central score. A value of 0.68 represents a moderate amount of deviation from the central score that can be accepted, indicating less variance in scores.

Table 4.20
Frequency Distribution of Experimental Groups' Scores in Content

Score	Frequency	Percentage
2	1	(4%)
2.25	1	(4%)
2.75	1	(4%)

3	2	(8%)
3.5	7	(28%)
4	7	(28%)
4.25	1	(4%)
4.5	5	(20%)

Concerning the frequency distribution of content scores, eight categories can be observed. The minimum score is 2 and the maximum score is 4.5. One student got the minimum score with a rate of 4%; this is the score with the lowest percentage together with the scores 2.25, 2.75, and 4.5. Five students got the maximum score with a rate of 20%. Two scores got the highest frequency: 3.5 and 4 with a percentage of 28% for each. Two students scored below the average score representing a percentage of 8%. In sum, students performed well in content.

4.2.3. Analysis of the Control Groups' Total Post-test Achievement

Analysis of the writing components for both groups enabled the researcher to have a general overview of the scores obtained by the study participants and the different levels of performance in all components independently. The next stage of analysis is to determine the students' overall performance in the post-test as a whole. This is a vital measure that precedes the comparative analysis to be conducted on both groups' scores to check the impact of online peer feedback on students' writing competence and formulate an appropriate answer to the first research question and its subsidiary questions. It is necessary to remember that the post-test was rated out of 20 marks. This mark was divided among both areas of writing: accuracy 10 marks and quality 10 marks too.

Table 4.21

Descriptive Statistics of Control Groups' Post-test Scores

Group	N	Mean	Std. Deviation	Std. Error Mean
Control	25	10.50	2.22	.44

The findings in Table 4.21 reveal that the mean of the control group in the writing post-test is 10.50 with a standard deviation of 2.22. This mean value reflects an average performance as it is slightly above the average score of the post-test which is 10. As for the standard deviation, this value shows that the scores obtained by the control group (n=25) are a bit farther from their mean as the values that are considered by statisticians clustered around their mean should not be greater than plus or minus 2 standard deviation (±2 SD range). This accounts for the variation in scores displayed in Table 4.22.

Table 4.22

Frequency Distribution of Control Groups' Post-test Scores

Score	Frequency	Percentage
07	1	(4%)
07.25	1	(4%)
07.5	1	(4%)
08	2	(8%)
08.25	2	(8%)
09	2	(8%)
09.25	1	(4%)
09.5	1	(4%)
10	1	(4%)
10.75	1	(4%)
11.5	3	(12%)
11.75	1	(4%)
12	1	(4%)
12.5	2	(8%)
12.75	2	(8%)
13	1	(4%)
13.5	1	(4%)
15	1	(4%)

The frequency distribution in Table 4.22 reflects a range of 18 score categories starting from 7 as a minimum score to 15 as a maximum score which is two times greater than the former. Eleven students scored below the average with a percentage of 44% of the group sample and 56% of them got a score above the average. The score with the highest percentage is 11.5. Three students got this score at a rate of 12%. Twelve score categories were obtained once by students representing a rate of 4% for each score. In general, the control group students' performance can be classified as average.

4.2.4. Analysis of the Experimental Groups' Total Post-test Achievement

Findings for the experimental group's post-test performance are presented in Table 4.23 and Table 4.24.

Table 4.23

Descriptive Statistics of Experimental Groups' Post-test Scores

Group	N	Mean	Std. Deviation	Std. Error Mean
Experimental	25	14.95	2.40	.48

Table 4.23 shows a mean of 14.95 and a standard deviation of 2.40. This mean is approximately 5 grades above the average score for the post-test. This result reflects a level of performance on the part of the experimental group. As far as the standard deviation is concerned, this value is considered outside the range of the values that are centred around their mean (±2 SD range). The scores obtained reveal a high rate of variation in the distribution of values. However, it can be said that the subjects performed well in the post-test.

Table 4.24

Frequency Distribution of Experimental Groups' Post-test Scores

Score	Frequency	Percentage
9	1	(4%)
9.5	1	(4%)
11.5	1	(4%)
12.75	1	(4%)
13.5	1	(4%)
14	3	(12%)
14.5	1	(4%)
14.75	2	(8%)
15	2	(8%)
15.5	3	(12%)
16.5	3	(12%)
17	2	(8%)
17.25	1	(4%)
18	2	(8%)
18.25	1	(4%)

The scores obtained by the students of the experimental group in the post-test range between 9 as a minimum score and 18.25 as a maximum score (see 4.24). The minimum score occurred one time representing a rate of 4%; the same rate is marked for the maximum score. Fifteen score categories can be identified. Three score categories got the highest frequency: 14, 15.5, and 16.5; each score occurred three times showing a percentage of 12% for each. Two students only scored below the average with a rate of 8%; that is, 92 % of the subjects got scores above the average. The scores shown in this table corroborate the claim made about the scores in the previous table that the students in the experimental group performed well in the post-test.

4.2.5. Comparative Analysis of the Control and Experimental Groups' Results

After having examined the study participants' results in all components separately and formulated a general understanding of their writing achievement, we move to the comparison of their results to identify any difference between them in terms of performance to determine the impact of online peer feedback on their writing competence. Using the same descriptive analytical measures, we will conduct three sorts of comparison between the experimental and control groups: comparison of accuracy results, comparison of quality results, and comparison of the overall post-test results. The relative findings are summarised in Table 4.25 and represented in Figure 4.1.

Table 4.25
Comparison of Control and Experimental Groups' Results

	Group	N	Mean	Std. Deviation	Std. Error Mean
Accuracy	**Experimental**	25	7.68	1.32	.26
	Control		5.41	1.25	.25
	Difference		2.27	.07	.01
Quality	**Experimental**	25	7.27	1.17	.23
	Control		5.09	1.12	.22
	Difference		2.18	.05	.01
Post-test	**Experimental**	25	14.95	2.40	.48
	Control		10.5	2.22	.44
	Difference		4.45	.18	.04

Accuracy descriptives for both groups show a mean difference of 2.27 between them in the favour of the experimental group with a very low standard deviation of 0.07. In that, the experimental group had a mean of 7.68 and a standard deviation of 1.32; whereas, the control

group's mean is 5.41 with a standard deviation of 1.25. Based on these results, it can be said that the experimental group outperformed the control group in the area of writing accuracy. As both groups started equal in terms of competence. We can, therefore, conclude that online peer feedback enabled the experimental subjects to improve their writing accuracy. This conclusion answers the first subsidiary research question about whether online peer feedback would have a positive impact on students' writing accuracy.

As far as the quality of writing is concerned, the results obtained show that there is a mean difference of 2.18 between the experimental and control groups in the favour of the former with a value of 0.05 difference in standard deviation. The experimental group's mean is 7.27 with a standard deviation of 1.17; the control group's mean is 5.09 with a standard deviation of 1.12. It is observed that the achievement level of both groups was slightly higher in accuracy compared to quality. This can be referred to the complex nature of the components that make up the area of quality. However, it can be concluded that the experimental group's performance in the quality of writing was better than that of the control group. Since the subjects selected for the study formed two homogeneous groups, it is concluded that the improvement in the experimental group's performance in terms of writing quality was due to the manipulation of the independent variable–online peer feedback. This claim provides an obvious answer to the second subsidiary research question about the positive effect of online peer feedback on the writing quality of the students.

We conclude this comparative analysis with the overall post-test scores obtained by both groups. The experimental group had a mean of 14.95 and a standard deviation of 2.40; whereas, the control group had a mean of 10.5 and a standard deviation of 2.22. These results yielded a mean difference of 4.45 between both groups in the favour of the experimental one. This mean difference indicates that the experimental group outperformed the control group in the writing achievement post-test. As both groups were taught by the same teacher; received the same

instruction with regard to the syllabus of writing, and entered the experiment with approximately similar levels of writing competence, this difference in their post-test results can be explained in terms of the positive influence of online peer feedback on the performance of the experimental group. This final conclusion provides an accurate answer to the main research question which investigates the impact of online peer feedback on students' writing competence.

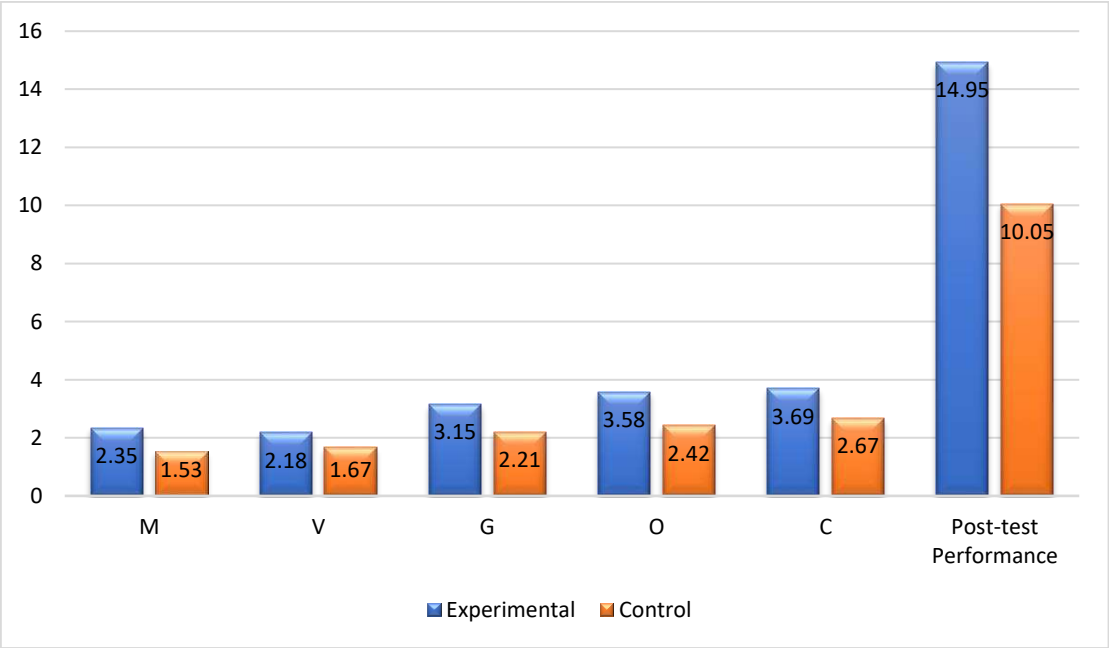

Figure 4.1. Comparison of Control and Experimental Groups' Results

This section marks the end of the descriptive analysis of the scores obtained by the subjects in the post-test. The results examined above show that the online peer feedback approach enabled the experimental group to improve their performance in terms of writing accuracy and quality; hence, in the post-test as a whole. This conclusion, which is based on the differences observed in the means of the scores obtained by both groups in the above-stated areas of writing and the post-test as a whole, enabled the researcher to answer the first research question of the study and its two subsidiary questions. The next step is to find evidence that the

observed difference between the groups' means is statistically significant, i.e., did not occur by chance. This will be conducted using inferential statistics within the procedures of testing the null hypothesis.

4.2.6 Hypothesis Testing

In hypothesis testing, the researcher should determine whether there is enough evidence from the study sample to reject or maintain the null hypothesis, that is, to determine the *statistical significance* between the sample means. Statistical significance is the likelihood that the difference between sample means is not due to random chance. The procedures for testing a hypothesis are conducted employing inferential statistics. There are many statistical tests within inferential statistics that researchers can use; each of which has its own requirements and serves a specific purpose. For the present study, the researcher employed Independent Samples t-test to verify statistical significance. This type of test output provides statistical values that can be used to reject or maintain the null hypothesis, mainly, a p-value and a t-value. These values, which can also be calculated manually, are used differently to determine statistical significance.

The observed (obtained) t-value is compared to a pre-defined critical t-value (see appendix I). When the observed t-value is greater than the critical t-value, the sample means are statistically significantly different; hence, the null hypothesis is rejected. When the observed t-value is smaller than the critical t-value, the null hypothesis is maintained. The second way is to compare the p-value of the t-test with a pre-specified alpha value (α), where α is the probability of rejecting H0 when H0 is true. This value is defined as the level of significance. The researcher set $\alpha=0.05$ as the level of significance for the current study. In educational research, this level of significance is considered very practical. The researcher adopted these two ways to verify the null hypothesis.

These two key procedures are followed by looking at the confidence interval provided by SPSS in the Independent Sample t-test output to check if it contains zero. If both upper and lower values are positive or both negative, they do not contain zero; therefore, there is a statistically significant difference between the sample means. If one value is positive and the other is negative, they contain zero; hence, there is no statistically significant difference.

After determining the statistical significance, it is necessary to evaluate the *practical significance.* While statistical significance reveals the existence of an effect in a study, practical significance evaluates the magnitude of that effect. This can be accomplished by calculating the *effect size*. This latter measures the strength of the relationship between two variables on a numeric scale. This is done manually using one of the mathematical calculations set for this purpose. For the current study, the researcher used Cohen's *d* to compute the effect size. Cohen's *d* is the most proper measure of effect size if the two groups compared have similar standard deviations and are of the same size (Cohen et al., 2018).

In statistics, for any parametric test, such as the Independent Samples t-test, to be conducted, three assumptions should be met: a) assumption of independence, b) assumption of normality, and c) assumption of homogeneity (equality) of variance. The first assumption refers to the existence of two independent groups that represent the independent variable. In the case of the current study, this assumption is realised as we have both experimental and control groups. The second assumption involves the normal distribution of scores in each sample (experimental and control groups). This assumption is checked by conducting a *test of normality*. The third assumption states that both samples (groups) must have an *equal variance* of the dependent variable. This assumption is verified through conducting a *test of equality* (homogeneity) of variance. As these assumptions are basic requirements for hypothesis testing, the researcher will start his data analysis with the tests of normality and homogeneity.

4.2.6.1. Test of Normality

As stated above, one of the most common requirements for hypothesis testing is that the data used should be approximately normally distributed. Data are normally distributed if the frequency distribution of data follows the classic bell-shaped curve. The normality test shows whether the dependent variable is approximately normally distributed for each category of an independent variable. Data do not have to be perfectly normally distributed, but approximately normally distributed. In our case, the subjects' scores in the post-test should be approximately distributed for the experimental and control groups. The normal distribution of data is verified by numerical and visual outputs. Numerical verification involves checking Skewness and Kurtosis z-values (see Table 4.26), Shapiro-Wilk test p-value and Kolmogorov-Smirnov test p-value (see Table 4.27); visual verification involves examining histograms (Figure 4.2), normal QQ plots (Figure 4.3.), and box plots (Figure 4.4).

Table 4.26

Skewness and Kurtosis Values of Post-test Scores

Descriptives

			Statistic	Std. Error
TOTAL	Mean		12.7250	.45391
	95% Confidence Interval for Mean	Lower Bound	11.8128	
		Upper Bound	13.6372	
	5% Trimmed Mean		12.7222	
	Median		12.7500	
	Variance		10.302	
	Std. Deviation		3.20962	
	Minimum		7.25	
	Maximum		18.25	
	Range		11.00	
	Interquartile Range		5.63	
	Skewness		-.089-	.337
	Kurtosis		-1.085-	.662

Table 4.26 shows that the Skewness value for the post-test is 0.89. Skewness is used to measure the level of asymmetry in the distribution curve of a dataset. If a distribution curve is bell-shaped, that is, looks similar to the left and right of the centre point, it is symmetric. A symmetrical distribution will have a skewness of 0. If it deviates from this norm, it is asymmetric and it can be positive or negative. The skewness value of 0.89 shows that the distribution is moderately positively skewed (to the right) as it falls within the range of +0.5 and +1 (a range reserved for moderately positively skewed data distribution).

Kurtosis value for the distribution of the post-test scores is 1.085. Kurtosis is used to measure the shape of the distribution curve to see whether it is normal (bell-shaped), flat, or peaked (heavy-tailed or light-tailed). A normal standard distribution has kurtosis exactly 3. However, very often *excess kurtosis* is used to verify distribution. Excess kurtosis is kurtosis-3; that is, excess kurtosis is exactly 0. This is observed in a symmetric distribution and it is called mesokurtic distribution. A kurtosis greater than 3 (excess kurtosis>0) indicates positive Kurtosis (leptokurtic); a Kurtosis less than 3 (excess kurtosis <0) indicates a negative kurtosis (platykurtic). Based on excess kurtosis, the value of positive kurtosis ranges from +1 to infinity; the value of negative kurtosis ranges from -1 to infinity. Kurtosis value of our data distribution is 1.085, this means that it is moderately leptokurtic (positive). In SPSS, Skewness and Kurtosis measures should be as close as possible to zero; in reality, data are often skewed and kurtotic.

Skewness and Kurtosis z-values are also used to verify the normal distribution of a dataset. They are obtained by dividing the measure by its standard error. The value obtained should be in the range of -1.95 to +1.96. Hence, Skewness z value is 0.26 and Kurtosis z-value is 1.63. These two values are within the accepted range. Skewness and Kurtosis can be better understood within a histogram.

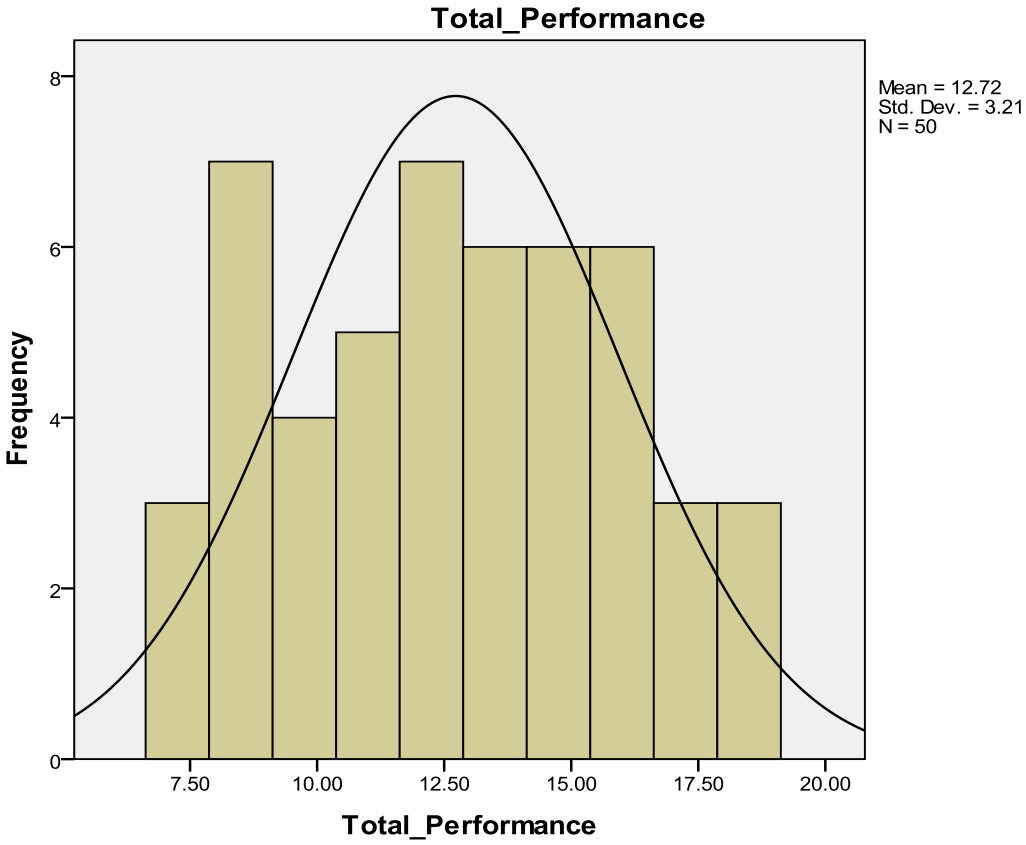

Figure 4.2. Histogram of Post-test Scores

Looking at the histogram in Figure 4.2, we can notice that the shape of the curve is approximately bell-shaped with a slightly sharp peak that does not constitute an issue of kurtosis. This is referred to as positive kurtosis (leptokurtic). As for skewness, the distribution of data is roughly skewed to the right (positive skewness); this is because data are slightly more pulled up towards the left. In other words, scores are roughly more concentrated on the left side of the graph (distribution). Based on the analysis of skewness and kurtosis and the visualisation of the histogram, we can say that the distribution of the post-test scores does not differ significantly from normality.

In addition to histograms, visual verification of normality also involves Normal Q-Q Plots (Figure 4.3.) and Box Plots (Figure 4.4).

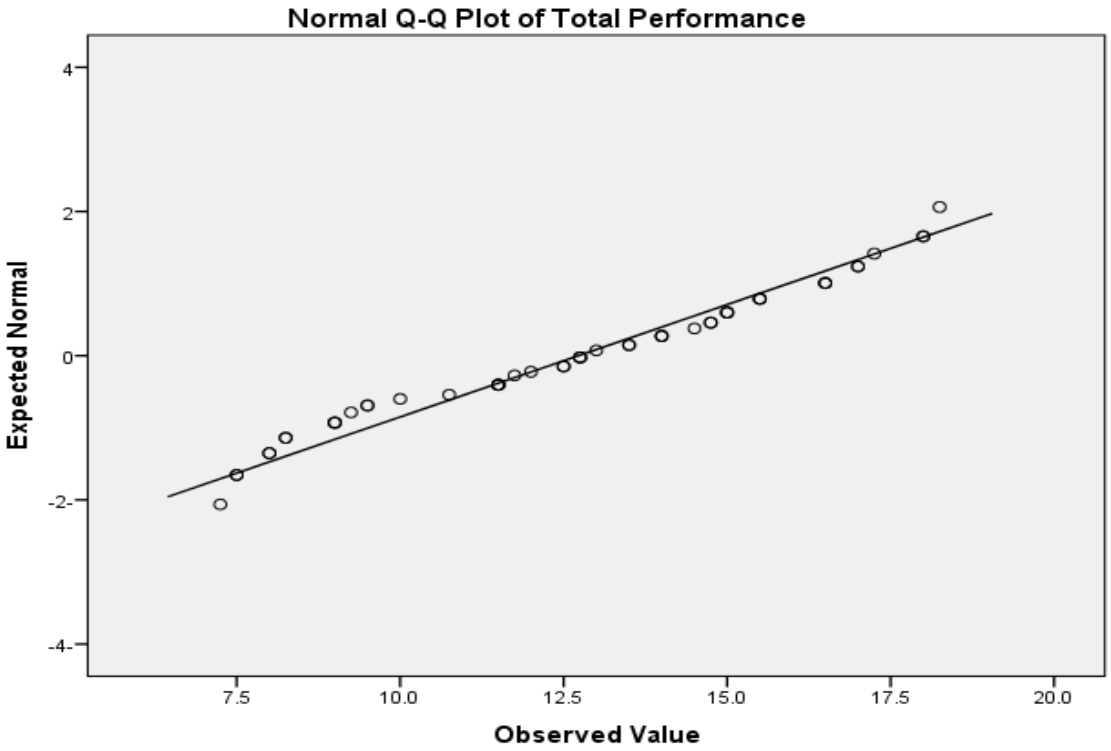

Figure 4.3. Q-Q Plots of Post-test Scores

The output of a normal Q-Q Plot is used to determine normal distribution graphically. If the data points are close to the diagonal line, the data are normally distributed. If the data points are obviously far from the diagonal line, the data are not normally distributed. As illustrated by the normal Q-Q Plots, the data are normally distributed as they lie close to the diagonal line, especially, between points 10.0 and 17.5. Therefore, we can assume that the post-test scores are approximately normally distributed in terms of Q-Q Plots.

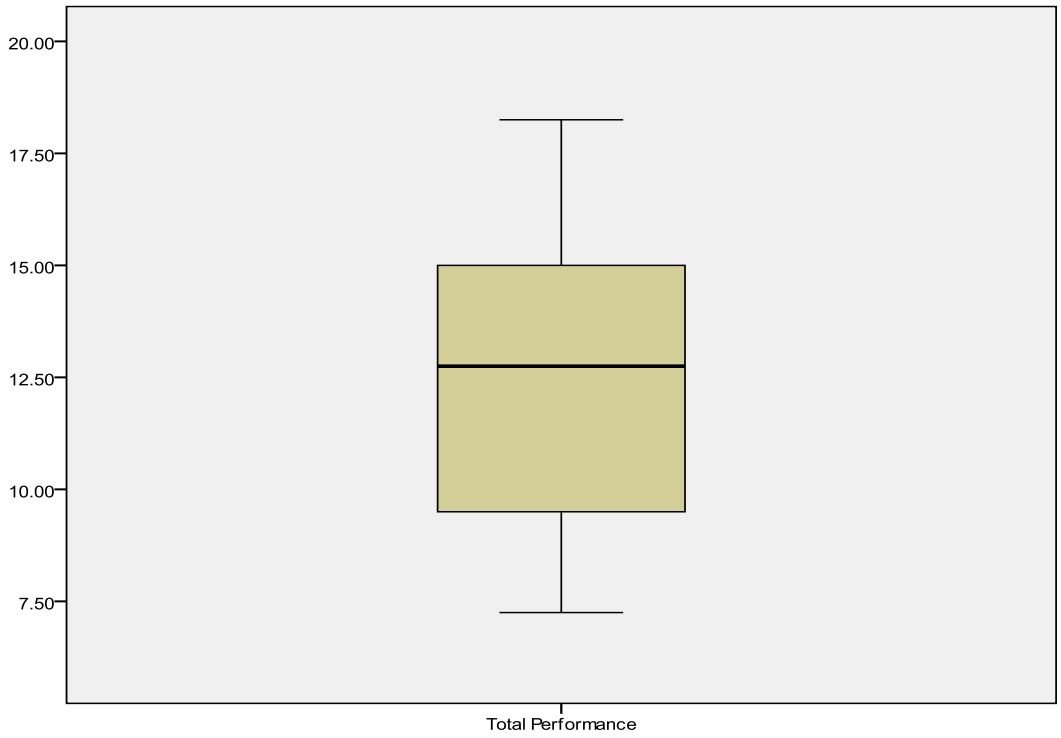

Figure 4.4. Box Plots of Post-test Scores

The Box Plots in Figure 4.4 show that the whiskers go up to the maximum score (18.25) and down to the minimum score (7.5) of data without outliers. They also seem to roughly have the same length. Concerning the interquartile range, the two boxes seem to have the same box length with a slight skewness. Again, the Box Plots reveal that the distribution of data does not deviate from the normal distribution. The last method to check normality is the use Shapiro-Wilk and Kolmogorov-Smirnov Normality tests (see Table 4.27).

Table 4.27

Shapiro-Wilk and Kolmogorov-Smirnov Normality Tests of Post-test Scores

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TOTAL	.103	50	.200*	.956	50	.061

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

The null hypothesis for Shapiro-Wilk and Kolmogorov-Smirnov tests is that data are normally distributed. If the p-value observed (Sig) in both tests is below alpha level 0.05 ($p< \alpha.05$), the null hypothesis is rejected; hence, data are not normally distributed. The p-value provided by Shapiro-Wilk test is 0.061, which is greater than alpha level ($p.061> \alpha.05$). Therefore, the null hypothesis is confirmed at $\alpha=0.05$, indicating that data are normally distributed. As for the p-value provided by Kolmogorov-Smirnov test, it is 0.200. This is a much bigger value than 0.05 ($p.200> \alpha.05$) which states that the null hypothesis is maintained at $\alpha=0.05$, assuming a normal distribution of data.

In sum, after the numerical and visual inspections conducted above, we conclude that the post-test scores are approximately normally distributed for the experimental and control groups. Therefore, the requirement of normality for conducting Independent Samples t-test to test the null hypothesis is realised. The next stage is to assess the equality of variance–the second requirement.

4.2.6.2. Test of Equality of Variance

To check the equality of variance, the researcher employed Levene's test. In statistics, Levene's test is an inferential statistic used to verify the equality of variances for a variable computed for two or more groups. Equal variances across samples are called homogeneity of variance. Table 4.28 presents the results of Leven's test.

Table 4.28
Levene's Test for Equality of Variance

		Levene's Test for Equality of Variance	
		F	Sig
Total Post-test	Equal variance assumed	.247	.622
	Equal variance not assumed		

Levene's test produces a p-value which should be greater than alpha level of significance to confirm the null hypothesis. The null hypothesis for Levene's test is that the variances are approximately equal across groups; the alternative hypothesis says that the variances are significantly different across groups. As the p-value for Levene's test 0.622 is greater than 0.05 ($p.622>\alpha.05$), the null hypothesis is accepted. This means that the variances across samples are not significantly different from each other. In other words, the distribution of the post-test scores for the experimental group is approximately similar in shape to the distribution of the post-test scores for the control group. Thus, it is assumed that the variances among both groups are approximately equal. This assumption is supported by the similar values of the standard deviation, which is the square root of the variance, for the experimental group 2.40009 and the control group 2.22673. The results of Levene's test dictate that the homogeneity assumption of the variance is met. After meeting the three assumptions for the Independent Samples t-test described beforehand, we move to the conduction of this test to verify the null hypothesis of the study.

4.2.6.1. Defining the Null and Alternative Hypotheses

This study aimed to determine the impact of online peer feedback on Algerian EFL students' writing competence in terms of accuracy and quality. For this reason, a key research question has been put forward: To what extent would online peer feedback enhance EFL students' writing competence? Out of this question, a research hypothesis has been derived: Online peer feedback would enhance EFL students' writing competence in terms of accuracy and quality. Then, this research hypothesis has been turned into a null hypothesis and alternative hypotheses that can be statistically tested:

- H0: There is no statistically significant difference between the experimental group and control group in the results of the writing post-test in terms of accuracy and quality.
    - Or (H0: $\mu 1 = \mu 2$)
- H1: There is a statistically significant difference between the experimental group and control group in the results of the writing post-test in terms of accuracy and quality.
    - Or (H1: $\mu 1 \neq \mu 2$)

A null hypothesis always assumes equality between samples or groups; it is the hypothesis that a researcher is usually interested in disproving. The alternative hypothesis assumes a difference between samples or groups; it is the hypothesis that a researcher is usually interested in proving. If the sample data are consistent with the null hypothesis, then we do not reject it. If the sample data are consistent with the alternative, then we reject the null hypothesis and conclude that the alternative hypothesis is true. Defining the null and alternative hypotheses are two basic requirements for hypothesis testing.

Another requirement for this kind of test is to decide on the level of significance and determine whether the test is one-tailed or two-tailed. As for the level of significance, it has been clearly stated in the methodology chapter that the researcher opted for 0.05 as a level of significance for the present study. As for the test's being one-tailed or two-tailed, this is dependent on the nature of the alternative hypothesis. An alternative hypothesis is one-tailed (or one-sided) when it provides the direction of the difference between the samples (directional); it is two-tailed (or two-sided) when it states that there is a difference between samples without determining its direction (non-directional). The two-tailed hypothesis is preferred to the one-tailed hypothesis because it requires more evidence against the null hypothesis to accept the alternative hypothesis.

Two other requirements for testing a hypothesis involve calculating the test statistic and the corresponding p-value. Calculation of the test statistic and the p-value will be carried out

through SPSS software. The last requirement for hypothesis testing is to draw a conclusion; to reject the null hypothesis or fail to reject it. Table 4.29 summarises the output results of the Independent Samples t-test. Descriptive statistics of the post-test scores for both groups were mentioned in Table 2.25. So, we move directly to the analysis of the Independent Samples t-test output.

Table 4.29

Independent Samples t-test of Experimental and Control Groups' Post-test Scores

t-test for Equality of Means						
					95% Confidence Interval of the Difference	
T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
6.796	48	.000	4.45000	.65479	3.13346	5.76654
6.796	47.733	.000	4.45000	.65479	3.13327	5.76673

It is noteworthy that Levene's test for equality of variance (Table 4.28) and t-test for equality of means (Table 4.29) are integrated into one statistical output table by SPSS (see Appendix J), but for reasons of practical analysis they were split into two independent tables. In Leven's test, when equal variance is assumed, we opt for the upper row of the t-test output and use it for analysis. If equal variance is not assumed in Levene's test, we opt for the lower row for analysis. Therefore, as equal variance is assumed for the present study as proclaimed in the sub-subsection of "Test of Equality of Variance", analysis will involve the upper row.

Table 4.29 reveals a level of significance of p-value=0.000 (Sig. 2-tailed). This p-value, which is lower than alpha 0.05 (p 0.000<α 0.05), tells us that it is very unlikely that the observed mean absolute difference of 4.45000 between the experimental and control groups was due to chance. This observed p-value of 0.000 is statistically significant at α 0.05 and a degree of freedom (df) of 48. We can state that there is a 0.000 probability the observed means difference

between the experimental group and control group was the result of chance. Therefore, we can reject H0.

Table 4.29 also shows that the observed t-value of 6.796 is much greater than its corresponding critical t-value at a degree of freedom (df) of 48, which is 2.011 (see Appendix I). When the observed t-value is greater than the critical t-value (t_{obs} =6.796> t_{crit} 2.011), the means are statistically significantly different. Therefore, the null hypothesis which claims that there is no statistically significant difference between the groups' means can be rejected.

Looking at the confidence interval, the lower bond value is 3.13346 and the upper bond interval is 5.76654. These two values are positive; hence, they do not contain zero. When the upper bond and lower bond values do not contain zero, this is an indicator of the existence of a significant difference between means. In addition, the calculated mean difference of 4.45000 is within this confidence interval. Based on all the results from the t-test, we conclude that there is a statistically significant difference between the means of the samples' scores in the writing post-test. Therefore, the H0 is rejected and the alternative hypothesis is maintained. After we have rejected the null hypothesis and proved that there is a statistically significant difference between the means of the experimental group and control group in the writing post-test, we need to determine the *practical significance* by calculating the *effect size*.

4.2.6.3. Determining the Effect Size

Effect size is an essential component when evaluating the strength of a statistical claim. It permits the researcher to determine the strength of the relationship between variables in a population. There are many types of effect size tests, which are either measured on correlation coefficient, on odd ratio, or on standardised mean difference. In this study, the researcher employed Cohen's *d* which is measured on mean difference. This type of effect size measure is appropriate for Independent Samples t-test when the groups compared have similar standard

deviations and are of the same size. The experimental group involves 25 subjects and has a standard deviation of 2.40009 in the post-test; the control group also involves 25 subjects and has a standard deviation of 2.22673 in the same test. It is quite apparent that both assumptions for applying Cohen's *d* are met. Whether calculated manually or by using software, Cohen's *d* is determined by calculating the mean difference between groups and then dividing the result by the pooled standard deviation. The researcher calculated Cohen's *d* manually using the following formula:

$$\text{Cohen's } d = (M_2 - M_1) / SD_{\text{pooled}}$$

Where: $SD_{\text{pooled}} = \sqrt{((SD_1^2 + SD_2^2) / 2)}$

Calculating the mean difference:

$$(M_2 - M_1) = 14.95\text{-}10.5 = 4.45$$

Calculating the pooled standard deviation:

$$SD_{\text{pooled}} = \sqrt{((2.40009^2 + 2.22673^2) / 2)} = 2.315033$$

Calculating Cohen's *d*:

$$4.45 / 2.315033 = 1.922219$$

To determine the size (magnitude) of the experimental effect, we compare the obtained Cohen's *d* statistic to the effect size guidelines stated in Table 4. 30. A large effect size means that the research outcomes have practical significance.

Table 4.30
Cohen's Effect Size Guidelines

Values	Effect size
0–0.20	weak effect
0.21–0.50	modest effect
0.51–1.00	moderate effect
>1.00	strong effect

Note. Adapted from (Cohen et al., 2018)

Based on the values range in the guidelines above, the calculated *d* value indicates a very strong effect size (*d*=1.922219>1.00). Hence, it can be concluded that the study outcomes have practical significance. In other words, online peer feedback effectively helped the experimental subjects enhance their writing competence in terms of accuracy and quality. This final result marks the end of the analysis of the quantitative post-test findings. The next stage involves the analysis of the interview-based qualitative data.

4.3. Analysis of the Interview Findings

A semi-structured interview was employed in this study to collect qualitative data on students' perceptions and attitudes towards Facebook-mediated peer feedback and its utility in enhancing their writing competence in terms of accuracy and quality. It aimed to answer the second research question: What are students' attitudes towards the use of online peer feedback in EFL writing classes?

The five questions of the interview provided data related to three basic themes: a) overall perception and evaluation of online peer feedback experience, b) impact of the use of Facebook-mediated peer feedback on students' writing and the difficulties associated with it, and c) future prospects and practices. The first theme included one question Q1; the second theme involved three questions: Q2, Q3, and Q4; and the third theme included one question Q5. Table 4.31 summarises the distribution of themes, subthemes, and their relevant questions.

As stated in Chapter Three, the interview-based qualitative data were analysed according to an eclectic approach that combined a number of methods applied in thematic and content approaches to qualitative data analysis. This typically involved reading the students' responses, coding them for recurrent themes and subthemes, representing the findings through narrative discussions or tabulation, and providing appropriate interpretation which could be

used for drawing assumptions and confirming or disconfirming the second hypothesis. Analysis of students' responses followed the order of the three themes highlighted beforehand.

Table 4.31

Distribution of Interview Themes, Subthemes, and Questions

Themes	Sub-themes	Questions
1. Overall evaluation of online peer feedback experience	**1.** Primary perception and evaluation of the incorporation of online peer feedback into EFL writing classes	**Q1.** How do you perceive and evaluate the use of online peer feedback in EFL writing classes?
2. Impact of Facebook-mediated peer feedback	**1.** Appropriateness of peers' commentary	**Q2.** Did you find your colleagues' suggestions and comments practical and useful? If yes, state some benefits.
	2. Direct impact of peers' commentary on the components of writing	**Q3.** Which components of writing were you able to improve more through the use of online peer feedback?
	3. Difficulties associated with the use of online peer feedback	**Q4.** Which difficulties did you encounter while giving or receiving online peer feedback?
3. Future prospects and practices	**1.** Students' willingness and intention to use online peer feedback in the future	**Q5.** Will you use online peer feedback in future writing activities? Why or why not?

4.3.1. Overall Evaluation of Online Peer Feedback Experience

By answering the first question of the interview, the researcher aimed at exploring respondents' perceptions and evaluation of this primary experience of providing and receiving online feedback on writing. This theme included one sub-theme.

Sub-theme 1: Primary perception and evaluation of the incorporation of online peer feedback into EFL writing classes

Q1. How do you perceive and evaluate the use of online peer feedback in EFL writing classes?

All informants (100 %) expressed their satisfaction with the online peer feedback experiment. They said that it was their first time engaging in an activity of this type. For them, it was a good opportunity to get introduced to a new approach to writing that involved collaboration and exchange of expertise. They liked working in small groups and discovered new dimensions of the use of Facebook. In this regard, the respondent (R.3) said:

> Well, I enjoyed to make Facebook as a way for learning and to exchange information. I always use to Facebook to see the posts of my friends and see funny things, etc. But now I learn of new things about Facebook which help me in my study and with friends about all the problems of the writing.

(R.4) held similar views:

> I think that experience of peer feedback was very good for three causes. First, I discover a new technique to write that is to be very useful. Second, I know of new uses of Facebook which will help me in my studies as an English student. Third, I understand that good team work help students to success in study writing and study generally because it gives many sources of learning.

(R. 5) made the following statement:

To me, this experiment was very successful experience and I liked it too much. I do not say this because you are here. I really mean what I say. I can say that when I write I think about my friends and how they can read my paragraph and correct the mistake which I do. That is, I always asked myself if I my paragraph is clear and friends can read it without problems. I also ask myself about the arguments if they defend very well what say. I can say that I always think about how my writing cab be accepted.

4.3.2. Impact of Facebook-Mediated Peer Feedback

The second theme involved three questions; hence, three sub-themes. It aimed at exploring the influence of online peer feedback on students' writing and the major difficulties they face while practising this activity.

Sub-theme 1: Appropriateness of peers' commentary

Q2. Did you find your colleagues' suggestions and comments practical and useful? If yes, state some benefits.

In answering this question, all respondents (100%) agreed that the comments they received from their peers on their paragraphs were very practical and helped them improve the quality and accuracy of their writing. Concerning the second part of the question, the interviewees provided some benefits that can be summarised as follows:

(R.1) said:

My classmates wrote good comments in Facebook about all my paragraphs. These comments, allowed me to change the structure of my paragraphs and write new topic

sentence, supporting sentences, and concluding sentence. I also was able to solve some problems about grammar and some words.

(R. 5) maintained that:

Honestly, the corrections of the students about my writing were very useful. I used these corrections to I improve my way of writing and make it similar to rhetorical mode I use in the writing because as the teacher of writing informed us that every rhetorical type has its own tools which must be respected to write a good text. In addition, I changed some parts in my paragraphs like the topic sentence in two paragraphs because I found them not clear.

(R. 2) stated that:

There are many advantages when we receive feedback from others. As far as I am concerned, the comments which my colleagues gave me helped to give them another comments about what they write. The comments taught me about the good parts and the bad parts in my own paragraphs. This helped me pay attention on some parts in my friends' texts as in the checklist which we have such unity and focus. The checklist was very clear and I used it very well to give comments about the paragraphs of other colleagues.

Sub-theme 2: Direct impact of peers' commentary on the components of writing

Q3. Which components of writing were you able to improve more through the use of online peer feedback?

Concerning this question, the interviewees provided different views. Four respondents (66.66 %) favoured the components included in accuracy and two of them (33.33%) were for

the components of quality. The former category of respondents claimed that the commentary they received on their paragraphs enabled them to improve more components related to accuracy than those related to quality. For instance, (R. 2) told the researcher that he managed to correct some mistakes related to spelling, particularly punctuation, in addition to grammar and the use of some terms. He added, "I prefer the comments about accuracy more than the comments about quality." "Do you mean that the comments you received on quality were not useful?" the researcher asked. "No, I don't," replied the respondent. "I mean that I benefited more from the comments about the accuracy like spelling and grammar." Similarly, (R. 4) maintained that the comments provided by her classmates on accuracy were more useful and practical. "I corrected many parts about the accuracy," said she. As the components of accuracy are to a great extent guided by definite rules, students can build on their understanding of such rules and provide reliable feedback that can be implemented in one's written production, she added. "What about your peers' comments on quality?" asked the researchers. (R. 4's) response was as follows:

> The teacher informed us in the class that we give comments about accuracy and quality. I benefited very little from some comments on the quality of my paragraphs, but I think the comments about quality need much knowledge about many things and to practice this knowledge in many texts so that we can write well at the same time and give good comments about as in the checklist. I think the comments of quality is more difficult than the comments of accuracy.

As for the second category of respondents, i.e., those who favoured the comments on quality, the arguments were that they had no big problems with language accuracy as they were so confident about their ability to correct their own mistakes if they were given the chance to do so. Therefore, their focus was more on quality. In this regard, (R. 1) told the researcher that

she greatly appreciated her classmates' comments on her paragraphs as she was able to rethink the structure of her drafts and established the logical flow of sentences within each paragraph. "I feel that my paragraphs are more clear and very organised; the information in them also became very rich," said she. (R. 1) added that at the deep level of any written material, having it reviewed by other people allows the writer to maintain clarity and unity of the topic which are two basic aspects of text comprehension.

Similar to these views, (R. 5) stressed the influence of peer feedback on his writing quality. This is what he reported:

> As far as I am concerned, I think that all comments of my friends which I received were useful, but I benefited more from the comments about quality. Honestly, I always have a problem with writing a nice topic sentence; I don't know why I find this difficult for me when I write any text. My colleagues' comments helped me to solve this problem and write a good topic sentence. I also benefited from comments in connecting the topic sentence with its supporting sentences and make clear ideas and clear examples.

Sub-theme 3: Difficulties associated with the use of online peer feedback

Q4. Which difficulties did you encounter while using online peer feedback?

Concerning the difficulties associated with online peer feedback, the interview respondents reported four major challenges. Some of them stressed the issue of the lack of in-person interaction. For instance, (R. 3) revealed that she sometimes met difficulties in understanding the idea made by some students in their comments and was, hence, obliged to call them by phone asking for more clarification of the comments provided. "Sometimes my colleague is not available on phone and had to wait for some time to arrange this issue. In my view this is one of the challenges of online education," she claimed.

Another difficulty stated by the respondents was related to some technical issues. (R. 1) revealed that internet connectivity in the area where she 'lives' was very bad due to the lack of network coverage. This constituted a challenge for her as she had to wait till she came to the university to be able to go online or moved to one of her relative's house which 'is' about three kilometres away from hers. She said:

> I live in a small village and the Internet is very bad and we suffer too much when we connect to the Internet. Sometimes there is internet but it is very slow, so we can't do the activity quickly. My colleagues always wait me to write my comments late. Therefore, I was ashamed for this. I always write the comments the last.

According to (R. 1), this type of technical issue would interrupt students' participation and affect how quickly and effectively they would interact, especially, when the task was guided by due dates. "I think this may spoil the activity in Facebook," she added.

The third challenge stated by some interviewees was their inability to stay focused on the task. In this regard, two respondents told the researcher that they had difficulty avoiding distractions and staying focused on the task of posting paragraphs and giving timely feedback. (R. 2) pronounced the following statement:

> To be honest, I am addict to Facebook. I spend many hours every day with Facebook. I am addict to social network sites and cannot stop using Facebook. The problem is that I benefit nothing from all this time. I rarely use the Facebook site as a method of learning to share lessons and information with my colleagues and when do this I find myself doing another thing like watching 'reels' or reading a post or writing a comment. This happened to me in the experiment of peer feedback. When I start reading the paragraphs I very quickly go to another thing. You may laugh on me, but this is the reality. I think this may even affect the work with colleagues and give good comments.

In the same vein, (R. 5) expressed similar worries about losing focus on the task at hand and getting distracted easily by the huge load of information presented. “I usually have distraction even from the notifications of Facebook,” he maintained. He meant he had constantly been seduced and distracted by the huge load of information presented by Facebook.

The last difficulty claimed by the respondents involved the lack of editing tools on Facebook. Unlike Word processing, for instance, comments on Facebook display very limited editing features that can help reviewers vary their feedback input. (R. 4) affirmed that the lack of some editing tools like highlighting, strikethrough, underlining, specific symbols, etc., prevented her from providing more authentic and illustrated comments or suggestions. (R. 3) expressed the same idea as she said, “Facebook is not like Word software but I think they can add some good tools for writing as in Word which help us be flexible in writing.” She believed that this would make the peer feedback experience more practical.

4.3.3. Future Prospects and Practices

The last theme intended to survey students’ future prospects and practices in relation to online peer feedback and likely intentions to incorporate it in future writing classes. This theme involved one sub-theme.

Sub-theme 1: Students’ willingness and intention to use online peer feedback in the future

Q5. Will you use online peer feedback in future writing activities? Why or why not?

All interviewees (100%) agreed on the necessity of adopting peer feedback in future writing classes as a complementary activity to in-class activities. (R. 2) strongly advocated the use of online peer feedback as an alternative to teacher feedback and a booster of collaborative learning. (R. 4) opined that online peer feedback as a learning strategy should become a regular practice in writing classes and teachers should support this trend in teaching writing regardless

of the type of online platform employed. She confirmed that whether on Facebook or other online learning tools, peer feedback could be an engaging and motivating activity that could help EFL learners enhance their writing skills. Therefore, peer feedback should be incorporated in future writing classes.

(R. 1) went far in her views claiming that peer feedback could be a practical learning strategy not only in writing but in other types of activities too. She said argued that as the essence of peer feedback was to give and receive comments on language production, it could be used in improving other language skills. When the researcher asked for some applications, the interviewee made the following suggestions:

> For example, in speaking, I can record myself by audio or video with my mobile when make a conversation or making a phone call in English then ask my colleagues to listen to the recording and give me their comments about grammar, vocabulary, pronunciation, intonation, etc. I use it in reading as well. I can record myself if I read a text send it to some colleagues to comment on my reading skills such as fluency, speed, tone, respect of punctuation marks, etc.

After surveying the views of the interview informants, it can be observed that they liked their being part of the experiment of Facebook-mediated peer feedback and appreciated the roles assigned to them as writers and reviewers This leads us to the conclusion that the experimental group students developed positive attitudes towards online peer feedback and regarded it as a useful strategy for EFL leaning, including writing. This conclusion provides a valid answer to the second research question.

4.4. Conclusion

This chapter was devoted to the analysis of the data collected using the post-test and the interview. The quantitative data obtained from writing post-test scores of the experimental and control groups were analysed descriptively and inferentially using SPSS. The quantitative data, which were represented through tables and figures, revealed that the students in the experimental group outperformed their counterparts in the control group in terms of writing quality and accuracy. The qualitative data obtained from the semi-structured interview were analysed using an eclectic approach that combined the features of the thematic and content methods. The qualitative data showed that the subjects who used Facebook-mediated peer feedback developed positive attitudes towards this strategy, assumed it of a great influence on the accuracy and quality of their writing, and proclaimed its integration in future writing classes.

CHAPTER FIVE:

Discussion, Implications, and Recommendations

5.1. Introduction

This chapter restates the purpose of the study and provides a brief summary of its main findings. This is followed by a thorough discussion and interpretation of the quantitative and qualitative results. The chapter also devotes a section to the pedagogical implications of the study. Based on the limitations of the study outlined in the first chapter, some suggestions for further research are also made.

5.2. Summary of the Main Findings

The primary aim of this study, which was conducted in the department of English at Hamma Lakhdar University of El Oued, was to determine the impact of online peer feedback on the writing accuracy and quality of a sample of second year English students; the second aim was to gauge their attitudes towards this strategy. To this end, two research tools were used within a quasi-experimental research design, namely, a writing achievement post-test and a semi-structured interview to collect data for the study.

The quantitative findings obtained from the post-test revealed that the students in the experimental group benefitted from the peer feedback training and were able to enhance their writing in terms of accuracy and quality. This was evidenced by the scores they obtained in the post-test which reflected better performance with regard to the components of writing compared to the students in the control group who did no benefit from peer feedback training.

As for accuracy, the mean of the experimental group was 7.68 with a standard deviation of 1.32 and the mean of the control group was 5.41 with a standard deviation of 1.25. This marked a mean difference of 2.27 between both groups with a standard deviation of 0.07. These findings revealed that the experimental group outperformed the control group as fa as the components of accuracy were concerned: mechanics, vocabulary, and grammar. As both groups

started the experiment with equal competence, it was concluded that the difference in their accuracy scores was due to the impact of the online peer feedback treatment.

Similarly, the scores obtained by the subjects in the experimental group in the components of quality revealed that they performed better than the subjects in control group. The mean of this latter was 7.27 with a standard deviation of 1.17; whereas, the control group had a mean of 5.09 and a standard deviation of 1.12. The mean difference between was 2.18 with a standard deviation of 0.05. These results brought evidence that the performance of the participants of the experimental group was higher than the performance of their counterparts in the control group with regard to the quality of writing: organisation and content. As sample homogeneity was established at the onset of the experiment, it was concluded that the difference between both groups means as fa as the quality of writing was concerned was due to the effect of the peer feedback intervention.

Based on the scores obtained in the components of accuracy and quality, the mean of the experimental group in the writing post-test was 14.95 with a standard deviation of 2.40 and the mean of the control group was 10.5 with a standard deviation of 2.22. Therefore, the mean difference between both groups was 4.45 and the standard deviation was 0.18.

The above-mentioned conclusions were supported by the statistical measures conducted by the researcher to determine the statistical significance between the sample means of the post-test scores. For this reason, the researcher used Independent Samples t-test; a test used within inferential statistics to verify statistical significance. In statistics, statistical significance refers to the probability that the difference between sample means is not due to random chance. The results of the Independent Samples t-test revealed a level of significance of p-value=0.000 which was lower than the alpha value of 0.05 set by the researcher as the level of significance for the study (p 0.000<α 0.05). Hence, the null hypothesis was rejected and it was concluded

that the mean difference of 4.45 between the experimental group and the control group in the post-test was significantly different. In other words, the mean difference between the groups was no due to random chance but to the treatment.

The statistical significance proved beforehand was further validated by calculating the effect size of the mean difference using Cohen's *d*. The calculated Cohen's *d* value was (d=1.922219>1.00). This value reflected a strong effect size; thus, it was concluded that the mean difference between the control groups had a practical significance.

Concerning the interview-based qualitative data, the views of the respondents revealed positive attitudes towards Facebook-mediated and its role in enhancing students' writing skills. All interviewees reported that the comments they received from their peers enabled them to improve the different components of their paragraphs related to writing accuracy and quality. The feedback they received also helped them provide constructive and more focused commentary on their peers' writing. The interview respondents also confirmed that the use of Facebook as a learning tool was an authentic experience that reflected the ample benefits that could be gained from such an approach to collaborative and autonomous learning. Additionally, they claimed that they would incorporate online peer feedback strategy into future writing classes.

5.3. Discussion of the Results

This section discusses the quantitative and qualitative results of the writing achievement post-test and the semi-structured interview respectively in a combined manner. It also compares the results of the study to other studies and shows whether the research questions have been answered and whether the aims of the study have been met. Discussion and interpretation of the results will be conducted according to the following three axes: impact of peer feedback on students' writing accuracy, impact of peer feedback on students' writing quality, and impact of

peer feedback on students' general writing performance. The qualitative results will be used to support the quantitative results.

5.3.1. Impact of Online Peer Feedback on Students' Writing Accuracy

The quantitative results obtained from the writing achievement post-test revealed that the participants' writing accuracy in the experimental group significantly increased after the intervention in comparison with the control group. Although both groups had an equal level of writing competence at the onset of the experiment, there was a significant difference between their means of writing accuracy in the post-test. Descriptive statistics revealed that the experimental group had a mean of 7.68 in the writing post-test accuracy; whereas the control group had a mean of 5.41. The mean difference between both groups was 2.27.

Looking at the three components of writing accuracy independently, the mean of the experimental group in mechanics, which was rated out of three marks, was 2.35 while the mean of the control group was 1.53 with a mean difference of 0.82. In vocabulary, which was also rated out of three marks, the experimental group had a mean of 2.18 and the control group had a mean of 1.67. The mean difference between them was 0.51. As for grammar, which was rated out of four marks, the experimental group's mean was 3.15, whereas the control group's mean was 2.21 with a mean difference of 0.94. These results show that the experimental group outperformed the control group in all components of accuracy.

Based on the mean difference of the three components, it can be observed that the component of grammar (0.94) marked the highest mean difference followed by mechanics (0.82) and vocabulary (0.51) respectively. This enhanced performance of the experimental group can be attributed to the quality of the students' comments with regard to the components of grammar and mechanics. Additionally, this can be referred to the nature of mechanics and grammar as they are more or less governed by clear and practical rules that provided more

guidance to students in applying their knowledge and giving appropriate comments on their peers' writing. In this regard, (Choi, 2013) reported that in peer feedback activity, students focused more on surface level errors, involving grammatical and spelling mistakes. Nevertheless, these results imply that the online peer feedback treatment conducted on the experimental group significantly enhanced the different components of the subjects' writing accuracy and that the subjects of the experimental group were able to provide constructive feedback on their peers' written texts which enabled them to improve the accuracy of their writing.

The above-stated result is not consistent with the study conducted by Jeon (2018), who claimed that the Korean students who participated in his study showed a lack of confidence and anxiety on giving feedback on local issues such as grammar, vocabulary, and punctuation because of their incompetence in English. Additionally, George and Mallery (2016) reported that there was no significant improvement in the experimental group's writing in vocabulary and language use.

On the other hand, many studies supported the positive effect of online peer feedback on students' writing accuracy. In their studies, Meletiadou (2021) and Yaghoubi and Mobin (2015) maintained that students who were engaged in peer feedback activities during the experimental phase were able to enhance the mechanics of their writing. Concerning grammar, the results of this study also confirm previous researchers like Meletiadou (2021) and Edwards and Liu (2018) who found in their studies that focus on form led to improvement in writing. As for vocabulary, Ebadi and Rahimi (2017) stressed that EFL students significantly enhanced their writing in vocabulary when using peer feedback on writing. This finding is in line with the results of this study.

This positive influence of online peer feedback on students' writing accuracy is corroborated by the qualitative results. In their answer to the third question of the interview, 66.66 % of the interviewees reported that they benefited from the comments they received on the different components of accuracy. They stated that they could correct some spelling, and punctuation mistakes, in addition to fixing some issues in grammar. They also stressed that peers' comments enabled them to include more appropriate vocabulary in their paragraphs. In sum, online peer feedback had a positive impact on students' writing accuracy and enabled them to enhance the three components that constituted the area of accuracy.

5.3.2. Impact of Online Peer Feedback on Students' Writing Quality

The post-test quantitative results gave evidence that the writing quality of the subjects of the experimental group also increased significantly after they participated in a training workshop on providing online peer feedback. Despite their equal writing level at the beginning of the experiment, the experimental and control groups had different means in the quality of writing. The mean of the experimental group was 7.27 and the mean of the control group was 5.09. The mean difference between both groups was 2.18.

Quality involved two components, organisation and content, and was rated out of ten marks. This mark was evenly divided between both components–five for each. The mean score of the experimental group in organisation was 3.58 and the mean score of the control group was 2.42 with a mean difference of 1.16. Concerning content, the experimental group had a mean of 3.69 and the control group had a mean of 2.67. The mean difference between them was 1.02. These results reflect a better performance of the experimental group compared with the control group in the quality of writing.

As organisation and content were rated out of five marks each, it can be observed that the mean difference of organisation (1.16) was slightly higher than the mean difference of

content. Despite this slight difference in means, these results demonstrate that the comments which the experimental students gave and received during the experiment helped them improve the quality of their writing in terms of organisation and content. This means that online peer feedback had a positive impact on students' writing quality.

The qualitative results mentioned beforehand are different from Saeed, Ghazali, Sahuri, and Abdulrab (2018) who claimed in their study that although some learners were able to address more global issues in writing through feedback, they failed to accurately fix these issues through text revisions. That is, students did not benefit from the comments they received to improve some global issues like organisation and content.

Conversely, the results that relate to the quality of writing in this study are consistent with other studies. Subaşı (2014) reported that trained students could provide focused and appropriate feedback on global features of writing which, in turn, resulted in enhancing the writing quality in their revised draft. Wanner and Palmer (2018) indicated in their study that the students who exchanged commentary within peer assessment sessions significantly improved the quality of their written product from draft to final version.

In the qualitative findings, the interviewees also reported their appreciation of the comments they received from peers and the influence of these comments on revising the quality of their writing. 33.33% of the respondents asserted that the feedback they received enabled them to revise the structure of their paragraphs to ensure smoother and logical flow of ideas. Additionally, they could enrich the content of their written production in terms of knowledge. They also managed to polish the topic sentence and boost it with appropriate supporting sentences.

5.3.3. Impact of Online Peer Feedback on Students' Writing Performance

The total post-test scores obtained by the subjects of the experimental group and control group indicated that the performance of the former group was higher than the latter. The mean of the experimental group was 14.95 and the mean of the control group was 10.5 with a mean difference of 4.45. As both groups stated the experiment equal, the difference in their writing performance is attributed to the comments they exchanged during the peer feedback experiment.

Looking at the scores obtained by the experimental and control subjects in the first semester test (see Appendix V), which were used to select the students from Group1 and Group 2 for the experiment respectively, it can be observed that experimental subjects improved their writing performance by 4.99 marks (out of 20) while the control subjects improved their writing performance by only a half mark (0.54 out of 20). Despite this small amount of improvement in the control group's performance, it is incomparable with that of the experimental group. This remarkable improvement in the performance of the experimental students could not be attained without the positive impact of the commentary given and received during the online peer feedback experiment.

Statistically, it has been proved by the Independent Sample t-test that the difference between both groups was significant as the observed p-value of 0.000 was statistically significant at α 0.05 and a degree of freedom (*df*) of 48. This means that the mean difference between groups was not due to random chance but due to the impact of online peer feedback. Statistical significance was confirmed by the practical significance computed by Cohen's *d,* which indicated *a* very strong effect size of d=1.922219>1.00.

The results of the writing achievement post-test of this study are conflicting with previously conducted studies. For instance, Berg, Admiraal and Pilot (2006) claimed that there

was no significant difference in the performance of the students' writing before and after the online peer feedback experiment despite the small amount of improvement they identified. Moradi (2012) also noticed that the mode of online writing instruction and peer feedback had no significant impact on students' performance. Choi (2014) found that a considerable amount of the feedback exchanged by the participants of his study was useless and did not lead to any successful revisions in most cases.

In contrast, these results are in light with many studies that advocate the positive influence of online peer feedback on students' writing performance. Villamil and Guerrero (1998) found that during the interaction process of peer feedback students' language developed in terms of the rhetorical and content aspects of the language. Cho and Schunn (2005) reported in their research that the writing performance of the subjects in the experimental group significantly improved after the experiment compared with the control group. Fan and Xu's (2020) study revealed that students could improve their writing ability by improving their writing awareness after cognitively and behaviourally engaging into peer feedback strategy. In Algeria, Achouri (2022) found out in a quasi-experimental study conducted on sample of EFL students at the University of Tebessa that the participants of the experimental group, who benefitted from an online peer feedback training, were able to improve their writing performance in terms of organisation, content, grammar, and mechanics.

The quantitative results, which ascertain that the improvement of the students' writing performance is due to the positive effect of online peer feedback, are fostered by the qualitative results. In addition to the interviewees' answers to the first four interview questions which confirmed their appreciation of the comments received and their positive influence on subsequent revisions of their drafts, their responses to the fifth question of the interview also confirmed the benefits they gained from using peer feedback strategy. All respondents (100%)

asserted that they would adopt peer feedback as a learning tool in future writing classes and even use it to consolidate other language skills like speaking and reading. They also reported that they would maintain the Facebook closed groups created for the experiment to interact with their partners and engage into more advantageous collaborative online learning. In sum, this positive attitude developed by the students towards online peer feedback was motivated by the progress they made in their writing performance. They believed that the comments they received from their partners in the Facebook groups allowed them to identify the strengths and weaknesses of their writing. Acting as reciprocal sources of information for one another helped them revise subsequent drafts and enhance their final written production.

This significant improvement in the experimental subjects' writing performance in terms of accuracy and quality after the experiment can have various interpretations. Firstly, the influence of the online peer feedback training which preceded the experiment. The subjects attended many practical sessions directed by their writing teacher on providing feedback on written texts. They learnt how to make suggestions, propose modifications, and what to focus on within the various components of writing. In this regard, Berg (1999) and Min (2006) stressed the influence of peer feedback training on the writing performance and quality revision of ESL and EFL students. Cui, Schunn, Gai, Jiang, and Wang (2021) maintained that for the practice of peer feedback to be beneficial it should be preceded by intensive in-class training which would enable the students to gain familiarity with this strategy and provide to constructive feedback.

Secondly, the improvement of students' writing performance can be also attributed to the appropriateness of the comments exchanged among the members of the Facebook closed groups. Equipped with an elaborate checklist, students managed to give focused comments on the various components of writing. This resulted in receiving feedback from multiple peers

within each closed group on Facebook. Cho and Schunn (2005) believed that receiving comments from multiple sources could reduce the negative impact of incorrect feedback. This made the feedback provided by partners more beneficial and students managed to enhance their writing in subsequent drafts.

The third reason behind the improvement of students' writing can be students' self-esteem. Students knew that their paragraphs would be posted on Facebook, hence, read by other partners. Therefore, and to avoid embarrassment in front of their partners, they did their best to post written material that would permit them to preserve their self-esteem. This interpretation is supported by the views of such researchers as Lin, Liu, and Yuan (2001) who stressed that the students' self-esteem could be a key factor in the improvement of students' writing performance. To them, the desire to protect one's self-esteem triggers learners' enthusiasm and drives them to work to their potential to prove that they are not inferior to their peers and that they are up to challenge.

In sum, the above-stated results enabled the researcher to reject the null hypothesis and maintain the alternative hypothesis which states that: There is a statistically significant difference between the experimental group and control group in the results of the writing post-test in terms of accuracy and quality. Therefore, the final conclusion is that online peer feedback helped the subjects of the experimental group in this study to enhance their writing performance in terms of accuracy and quality. This is evidenced by the statistical significance of the difference between the mean scores of both groups in the writing achievement post-test. This conclusion provides a clear-cut answer to the main research question of the study and its subsidiary questions. Arriving at this final stage of discussion, it can be claimed that the aims of the study have been met.

5.4. Implications of the Study

The results of the study indicate that online peer feedback can help students enhance their writing performance through revising their initial drafts based their peers' comments within a systematic approach to writing. Starting from these results, some practical implications for EFL writing pedagogy, adoption of peer feedback strategy, and the application of educational technologies in EFL writing classes are proclaimed.

As peer feedback constitutes an integral part of process approach to writing, one of the major implications of this study for university teachers is the possibility of incorporating process approach into their writing classes to enable students to benefit from the ample learning opportunities offered by this approach and engage into more effective collaborative work (Sun & Feng, 2009; Onozawa, 2010). Learner-centred approach to EFL teaching stresses the roles that learners should assume in the course of leaning, including writing. One of the manifestations of leaner-oriented trend in teaching is the use of process approach in teaching writing. This approach considers the processes students go through when they write more important than the final product of writing per se (White & Arndt, 1991). That is, the focus of teachers should be on how students write not what they write, assuming at the same time, the role of a facilitator (Zhang, 1995). In doing so, teachers are fostering learners' autonomous learning and guiding them towards assuming more responsibilities for improving their writing skills.

The results of this study also proved that the students could work together in collaborative learning groups and benefited from the exchange of comments to improve their writing within peer feedback approach. This outlines the second implication drawn from this study. Teachers and students can benefit from using peer feedback in teaching and learning writing as this has almost become a common practice in many EFL writing (Lee, Mak, & Burns,

2016). Teachers need to consider the use of peer feedback strategy in their writing classes as a tool of assessment for learning which can be used in combination with teacher feedback (Meletiadou, 2021). As it is difficult for teachers to provide timely face-to-face feedback on their students' writing due to such reasons as the size of class and the constraints of time, they can resort to other available assessment alternatives; peer assessment is one of them. So, introducing students to peer feedback and training them on how to provide comments appropriately (Sluijsmans, Brand-Gruwel, van Merriënboer, & Martens, 2004; van Zundert, Sluijsmans, & van Merriënboer, 2010; Kaya & Yaprak, 2020) can constitute a major shift towards learner-oriented approach wherein teachers assume the roles of a guide and facilitator of learning (Goodyear & Dudely, 2015; Anggraeni & Yusnita, 2017). This enhances students' motivation to write (Choi, 2014) and offers them opportunities to learn independently and benefit from interactive learning with their classmates (Milton, 2004; Hyland & Hyland, 2006).

Concerning students, the implication is that as they successfully experienced online peer feedback and discovered new ways to improve their learning in general and their writing in particular, their attitude towards this strategy is positive and their motivation to get engaged into more activities of this kind is high. Therefore, this positive atmosphere for learning writing created by the peer feedback experiment should be invested towards broadening the horizons of using peer feedback in future writing classes to foster students' writing self-efficacy and confidence in one's writing ability. These two components have been found to predict students' writing achievement (Woodrow, 2011; Han and Hiver, 2018). Additionally, enabling students to work collaboratively with their peers in a less anxious environment allows them to focus their attention more and more on the task of writing away from any kind of tension.

The use of online platforms such as Facebook as a medium of instruction and learning is another implication. Technology is in the service of education and both teachers and students can benefit from the technological innovations in the field of education to foster their practices

with regard teaching and learning writing. Considering the limited classroom time, Facebook, as many other social networking sites and e-learning platforms, provides ample opportunities for asynchronous peer feedback interaction beyond regular classroom time and can be an appropriate learning environment for students to give comments, respond to the comment they get from peers, and review their writing (Saeed, Ghazali, Sahuri, & Abdulrab, 2018).

The results of the study showed that the students were highly motivated during the experiment partly because they were experiencing a new approach to leaning writing and partly as they were using a common tool for learning, which they thought would only be useful for informal communication. It is, hence, a good idea for teachers and learners alike to benefit from the use of online learning tools to maintain students' motivation to write and willingness to employ available technologies for educational reasons. Teachers need to encourage their learners to opt for a wider utilisation of the available online learning tools (Moradi, 2012) such as blogs, forums, and wikis and discover the multiple gains they can get from them with regard to their language learning in general, and learning writing in particular. Today, these electronic resources make texts more comprehensible to students (Jones, 2000); therefore, they have the chance to focus on ways of improving the quality of these texts through online interaction.

5.5. Recommendations for Future Research

Although this research project yielded practical results relevant to the advantages of incorporating online peer feedback within process approach to writing into EFL writing classes at the university level, it entailed some limitations. Below is a statement of some directions for further research which relate to some of the study limitations mentioned in the first chapter.

This research was conducted in one higher education institution–the Department of English Language and Literature at the University of El-Oued–and employed a small-scale student sample from one level. This affects the generalisability of the results beyond the

participants of the study. Thus, to obtain more representatives results of a wider EFL population in the Algerian context, more research involving a larger number of students from different levels and different higher education institutions like universities, university centres, and superior teachers' schools should be carried out. This may constitute a challenge for a single researcher or a small group of researchers. However, if a larger number of researchers belonging to various institutions collaborate together, this study will be possible.

A second recommendation can be made about the possible threat to the internal validity of the study. There was no way for the researcher to get sure that the subjects wrote their paragraphs individually without getting any help because they wrote their paragraphs outside the classroom and away from the teacher's control. Students' paragraphs were expected to reflect their actual writing competence to the conclusions were drawn on that basis. Therefore, to avoid threats to the internal validity of the study, it is recommended that future research asks the students to write their paragraphs in the classroom, giving them enough time to accomplish their writing assignments. This may be too demanding in terms of time but it will yield reliable findings.

Leaners' attitudes towards new teaching-learning strategies play a decisive role in the effective implementation of such strategies, and so are teachers' attitudes. This study did not gauge the university teachers' attitudes towards online peer feedback before or after the experiment. Hence, surveying teachers' perceptions and attitudes towards online peer feedback through an attitudinal questionnaire or an interview is strongly recommended in future studies. Data of this type will provide more insight into teachers' practices and help raise their awareness of the importance of the teaching strategy under investigation.

This study employed Facebook as an online medium for the practising peer feedback and determine its impact on students' writing competence. Many other available educational

technologies such as blogs, forums, and wikis can alternatively be used to investigate their effect on the accuracy and quality of students' writing and familiarise students with more web 2.0 technologies which they can use to boost their leaning. Similarly, other language skills such as reading can also be explored using these technologies.

The writing areas which the researcher examined involved a number of components, which, in turn, included a number of aspects. Mechanics, vocabulary, and vocabulary constituted the component of accuracy; organisation and content formed the component of quality. Future studies may involve more components and aspects of writing like fluency and sentence complexity.

The students selected for the study were of equal writing competence and formed homogeneous groups. Therefore, the results obtained represented the impact of online peer feedback on students of the same writing abilities. To determine more impacts of online peer feedback, future studies may involve students with different writing abilities. This will allow researchers to understand how peer feedback among such category of students affects the processes of comments giving and receiving and the impact of these processes on text revision. The findings of such studies can be used to confirm or disconfirm previous studies that proclaim that both givers and receivers of feedback benefit this process.

5.6. Conclusion

This chapter presented a succinct summary of the major research findings of the study. This was followed by an extensive discussion and interpretation of the results combining the quantitative and qualitative results. Starting from the results obtained, the implications of the study were highlighted. These involved some practical implications for teaching writing in EFL classes, the use of peer feedback strategy, and the incorporation of technological innovations at the tertiary level. Finally, a whole section was devoted to some recommendations for further

research. Based on the limitations acknowledged in the first chapter, the researcher proposed some future studies which can help researchers overcome the obstacles encountered by the researcher in this study and suggest more accurate results.

General Conclusion

Looking for ways to improve students' writing competence has been the concern of researchers and practitioners alike. This accounts for the plethora of research conducted to investigate the most effective strategies and techniques which enable EFL and ESL learners to enhance their writing abilities. Peer feedback is one of the innovative solutions to serve this purpose. It has received much attention from researchers and has been the subject of numerous experimental studies in various EFL and ESL contexts. Despite the demerits and challenges associated with it, peer feedback has been found to have a positive impact on students' writing performance. This is why it has been incorporated in many EFL and ESL writing classes worldwide following the shift towards a learner-centred approach. With the availability of web 2.0 technologies, peer feedback has been practised even through online tools like wikis and Facebook.

Like many students in many EFL contexts, the students of English at the University of El Oued encounter great difficulties in improving their writing skills. This is manifested in the low scores they generally obtain in the writing tests and exams and in the quality of classroom interaction during the writing sessions. Starting from this situation, the researcher found a great interest in conducting this study to examine the impact of using online peer feedback on students' writing accuracy and quality and gauge their perceptions and attitudes towards it.

To answer the research questions, the research adopted a quasi-experimental research design employing a non-equivalent group design. The study involved fifty second-year English students from the department of English. They were purposefully selected from two intact classes and formed two homogeneous experimental and control groups of twenty-five students each. A writing achievement post-test and a semi-structured interview were the instruments used to collect data. The experimental group received online peer feedback training throughout six one-hour practical sessions that extended over three weeks and five Facebook groups were

created for this reason. The control group did not receive any similar training; they were only given a self-assessment checklist to be used for self-assessing their writing. During the post-test stage, which lasted for six weeks, the experimental subjects were required to write three paragraphs in two drafts on three topics, and then post them on their Facebook closed groups. The members of the groups would comment on the paragraphs and based on these comments the second drafts of the paragraphs were written. The control group students simply wrote first drafts, revised them, and then wrote final drafts. The students' paragraphs were rated by two raters and the means of the scores given by both raters were used as the final scores for the study sample. The quantitative results were analysed descriptively and inferentially using SPSS and the quantitative results were analysed by means of thematic and content approaches.

The quantitative results revealed that the experimental group outperformed the control group in the writing achievement post-test in terms of accuracy and quality. The post-test mean of the experimental group was 14.95 and that of the control group was 10.5. The mean difference between both groups was 4.45 with a standard deviation of 0.18. An Independent Sample t-test was used to measure the statistical significance between the sample means within the hypothesis testing approach. The researcher set $\alpha=0.05$ as the level of significance for the study and the result of the Independent Samples t-test showed that the observed p-value=0.000 was statistically significant at $\alpha=0.05$ and a *df* of 48, that is, (p 0.000<α 0.05). This result confirmed that the mean difference of 4.45000 between the experimental and control groups was not due to chance. It was, hence, concluded that this mean difference was due to the impact of online peer feedback. The statistical significance of the mean difference was further validated by the calculation of the effect size. Cohen's *d* test yielded a value of $d=1.922219>1.00$, which indicated a strong effect size of the mean difference between the study groups. These results enabled the researcher to reject H0 and maintain H1. The interview-based qualitative results consolidated the results yielded by the post-test. All respondents asserted that online peer

feedback helped them enhance the accuracy and quality of their writing. They benefitted from their peers' comments in locating local and global issues in their writing and reviewing their drafts. They also confirmed that they would use online peer feedback strategy in future writing classes and extend this use to other types of language learning activities such as speaking and reading. These views reflected positive attitudes towards online peer feedback.

The study implications involved the necessity for teachers to adopt the process approach and online peer feedback as two approaches to teaching writing at all levels. However, this should be preceded by appropriate training of students to ensure the proper application of the principles and techniques underlying these approaches. Students are encouraged to maintain the positive atmosphere created by the peer feedback experiment to engage in more effective online collaborative interaction to foster their learning, including writing. Similarly, teachers are advised to consider the use of the educational technologies available in their language classes to offer their learners broader opportunities for learning and boost their motivation and willingness to learn.

Based on the limitations of the study, some recommendations for further research were proposed. These involved conducting more research on a larger population scale, including students from different levels and different higher education institutions. Also, it was recommended that future studies would survey teachers' attitudes towards peer feedback as being the monitor of the process and the use of other web 2.0 tools to measure their practicality and impact on students' writing. Two other recommendations relate to the investigation of more writing components than the ones examined by the researcher in this study and the involvement of students with distinct writing abilities. The final recommendation was about giving students enough time to write their assignments inside the classroom to avoid any threats to the internal validity of the study in case they get help from others when they write outside the classroom.

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Appendices

Appendix A: Official Syllabus of Bachelor's Degree in Foreign Languages

REPUBLIQUE ALGERIENNE DEMOCRATIQUE ET POPULAIRE
MINISTERE DE L'ENSEIGNEMENT SUPERIEUR
ET DE LA RECHERCHE SCIENTIFIQUE

Arrêté n° 814 **du** 23 JUIL. 2014

Modifiant l'annexe de l'arrêté n°500 du 28 juillet 2013 fixant le programme des enseignements du socle commun de licences du domaine « Lettres et Langues Etrangères»

Le Ministre de l'Enseignement Supérieur et de la Recherche Scientifique,

- Vu la loi n°99-05 du 18 Dhou-El-Hidja 1419 correspondant au 04 avril 1999, modifiée et complétée, portant loi d'orientation sur l'enseignement supérieur ;
- Vu le décret présidentiel n° 14-154 du 5 Rajab 1435 correspondant au 05 mai 2014 portant nomination des membres du Gouvernement;
- Vu le décret exécutif n° 01-208 du 2 Joumada El Oula 1422 correspondant au 23 juillet 2001 fixant les attributions, la composition et le fonctionnement des organes régionaux et de la conférence nationale des universités;
- Vu le décret exécutif n° 03-279 du 24 Joumada Ethania 1424 correspondant au 23 Août 2003, modifié et complété, fixant les missions et les règles particulières d'organisation et de fonctionnement de l'université ;
- Vu le décret exécutif n°05-299 du 11 Rajab 1426 correspondant au 16 Août 2005, fixant les missions et les règles particulières d'organisation et de fonctionnement du centre universitaire ;
- Vu le décret exécutif n° 08-265 du 17 Chaâbane 1429 correspondant au 19 août 2008 portant régime des études en vue de l'obtention du diplôme de licence, du diplôme de master et du diplôme de doctorat ;
- Vu le décret exécutif n°13-77 du 18 Rabie El Aouel 1434 correspondant au 30 janvier 2013, fixant les attributions du ministre de l'enseignement supérieur et de la recherche scientifique ;
- Vu l'arrêté n°129 du 04 juin 2005 portant création, composition, attributions et fonctionnement de la Commission Nationale d'Habilitation ;
- Vu l'arrêté n°75 du 26 mars 2012 portant création, missions, composition, organisation et fonctionnement du Comité Pédagogique National de Domaine ;
- Vu l'arrêté n°129 du 06 mars 2013 portant création de la conférence des doyens par domaine ;
- Vu l'arrêté n°500 du 28 juillet 2013 fixant le programme des enseignements du socle commun de licences du domaine « Lettres et Langues Etrangères » ;
- Vu le procès verbal de la réunion mixte présidents de Comité Pédagogique National de Domaine et présidents de la Conférence des Doyens par Domaine, tenue au siège de la Conférence Régionale des Universités de l'Est, université Constantine 1, en date du 3 au 5 mai 2014.

ARRETE

Article 1er : Le présent arrêté a pour objet de modifier l'annexe de l'arrêté n°500 du 28 juillet 2013, susvisé, fixant le programme des enseignements du socle commun de licences du domaine « Lettres et Langues Etrangères » conformément à l'annexe du présent arrêté.

Art. 2: Le Directeur Général des Enseignements et de la Formation Supérieurs, les Présidents de Conférences Régionales des Universités et les Chefs d'établissement d'enseignement et de formation supérieurs, sont chargés, chacun en ce qui le concerne, de l'application du présent arrêté qui sera publié au bulletin officiel de l'Enseignement Supérieur et de la Recherche Scientifique.

Fait à Alger le : 23 JUIL. 2014

Le Ministre de l'enseignement supérieur et de la recherche scientifique

Annexe : Programme des enseignements du socle commun de Licence

Socle commun domaine "Lettres et Langues Etrangères"

Semestre 1

Unités d'enseignements	Matières	Crédits	Coefficient	Volume horaire hebdomadaire			VHS (15 semaines)	Autre*	Mode d'évaluation	
	Intitulé			Cours	TD	TP			Contrôle Continu	Examen
UE Fondamentale Code : UEF1.1 Crédits : 10 Coefficients : 6	Compréhension et expression écrite 1	6	4		4h30		67h30	45h00	50%	50%
	Compréhension et expression orale 1	4	2		3h00		45h00	45h00	50%	50%
UE Fondamentale Code : UEF1.1 Crédits : 8 Coefficients : 4	Grammaire de la langue d'étude 1	4	2		3h00		45h00	45h00	50%	50%
	Phonétique corrective et articulatoire 1	2	1		1h30		22h30	45h00	50%	50%
	Initiation à la linguistique 1 (concepts)	2	1		1h30		22h30	45h00	50%	50%
UE Fondamentale Code : UEF 1.1 Crédits : 4 Coefficients : 2	Initiation aux textes littéraires	2	1		1h30		22h30	45h00	50%	50%
	Culture (s)/ Civilisation(s) de la Langue 1	2	1		1h30		22h30	45h00	50%	50%
UE Méthodologique Code : UEM 1.1 Crédits : 4 Coefficients : 1	Techniques du travail universitaire 1	4	1		3h00		45h00	45h00	x	
UE Découverte Code : UED11 Crédits : 2 Coefficients : 1	Sciences sociales et humaines 1	2	1	1h30			22h30	45h00		x
UE Transversale Code : UET 1.1 Crédits : 2 Coefficients : 1	Langue(s) étrangère(s) 1	2	1		1h30		22h30	45h00	50%	50%
Total semestre 1		**30**	**15**	**1h30**	**21h00**		**337h30**	**450h00**		

* travail complémentaire en consultation semestrielle

Annexe : Programme des enseignements du socle commun de Licence

Socle commun domaine "Lettres et Langues Etrangères"

Semestre 2

Unités d'enseignements	Matières	Crédits	Coefficient	Volume horaire hebdomadaire			VHS (15 semaines)	Autre*	Mode d'évaluation	
	Intitulé			Cours	TD	TP			Contrôle Continu	Examen
UE Fondamentale Code : UEF 1.2 Crédits : 10 Coefficients : 6	Compréhension et expression écrite 2	6	4		3h00		67h30	45h00	50%	50%
	Compréhension et expression orale 2	4	2		4h30		45h00	45h00	50%	50%
UE Fondamentale Code : UEF 1.2 Crédits : 8 Coefficients : 4	Grammaire de la langue d'étude 2	4	2		3h00		45h00	45h00	50%	50%
	Phonétique corrective et articulatoire 2	2	1		1h30		22h30	45h00	50%	50%
	Initiation à la linguistique 2 (concepts)	2	1		1h30		22h30	45h00	50%	50%
UE Fondamentale Code : UEF 1.2 Crédits : 4 Coefficients : 2	Littératures de la langue d'étude 1	2	1		1h30		22h30	45h00	50%	50%
	Culture (s)/ Civilisation(s) de la Langue 2	2	1		1h30		22h30	45h00	50%	50%
UE Méthodologique Code : UEM 1.2 Crédits : 4 Coefficients : 1	Techniques du travail universitaire 2	4	1		3h00		45h00	45h00	x	
UE Découverte Code : UED 1.2 Crédits : 2 Coefficients : 1	Sciences sociales et humaines 2	2	1	1h30			22h30	45h00		x
UE Transversale Code : UET 1.2 Crédits : 2 Coefficients : 1	Langue(s) étrangère(s) 2	2	1		1h30		22h30	45h00	50%	50%
Total semestre 2		**30**	**15**	**1h30**	**21h00**		**337h00**	**450h00**		

* travail complémentaire en consultation semestrielle

Annexe : Programme des enseignements du socle commun de Licence

Socle commun domaine "Lettres et Langues Etrangères"

Semestre 3

Unités d'enseignements	Matières	Crédits	Coefficien	Volume horaire hebdomadaire			VHS (15 semaines)	Autre*	Mode d'évaluation	
	Intitulé			Cours	TD	TP			Contrôle Continu	Examen
UE Fondamentale Code : UEF 2.1 Crédits : 10 Coefficients : 6	Compréhension et expression écrite 3	6	4		4h30		67h30	45h00	50%	50%
	Compréhension et expression orale 3	4	2		3h00		45h00	45h00	50%	50%
UE Fondamentale Code : UEF 2.1 Crédits : 8 Coefficients : 4	Grammaire de la langue d'étude 3	4	2		3h00		45h00	45h00	50%	50%
	Phonétique corrective et articulatoire 3	2	1		1h30		22h30	45h00	50%	50%
	Introduction à la linguistique 1	2	1		1h30		22h30	45h00	50%	50%
UE Fondamentale Code : UEF 2.1 Crédits : 4 Coefficients : 2	Littératures de la langue d'étude 2	2	1		1h30		22h30	45h00	50%	50%
	Culture (s)/ Civilisation(s) de la Langue 3	2	1		1h30		22h30	45h00	50%	50%
UE Méthodologique Code : UEM 1.3. Crédits : 2 Coefficients : 1	Techniques du travail universitaire 3	2	1		1h30		22h30	45h00	x	
UE Découverte Code : UED 2.1 Crédits : 4 Coefficients : 1	Initiation à la traduction 1	4	1		3h00		45h00	45h00	50%	50%
UE Transversale Code : UET 2.1 Crédits : 2 Coefficients : 1	Langue(s) étrangère(s) 3	2	1		1h30		22h30	45h00	50%	50%
Total semestre 3		**30**	**15**		**22h30**		**315h00**	**450h00**		

* travail complémentaire en consultation semestrielle

Annexe : Programme des enseignements du socle commun de Licence

Socle commun domaine "Lettres et Langues Etrangères"

Unités d'enseignements	Matières	Crédits	Coefficient	Volume horaire hebdomadaire			VHS (15 semaines)	Autre*	Mode d'évaluation	
	Intitulé			Cours	TD	TP			Contrôle Continu	Examen
UE Fondamentale Code : UEF 2.2 Crédits : 10 Coefficients : 6	Compréhension et expression écrite 4	6	4		4h30		67h30	45h00	50%	50%
	Compréhension et expression orale 4	4	2		3h00		45h00	45h00	50%	50%
UE Fondamentale Code : UEF 2.2 Crédits : 8 Coefficients : 4	Grammaire de la langue d'étude 4	4	2		3h00		45h00	45h00	50%	50%
	Phonétique corrective et articulatoire 4	2	1		1h30		22h30	45h00	50%	50%
	Introduction à la linguistique 2	2	1		1h30		22h30	45h00	50%	50%
UE Fondamentale Code : UEF 2.2 Crédits : 4 Coefficients : 2	Littératures de la langue d'étude 2	2	1		1h30		22h30	45h00	50%	50%
	Culture (s)/ Civilisation(s) de la Langue 4	2	1		1h30		22h30	45h00	50%	50%
UE Méthodologique Code : UEM 2.2 Crédits : 2 Coefficients : 1	Techniques du travail universitaire 4	2	1		1h30		22h30	45h00	x	
UE Découverte Code : UED 2.2 Crédits : 4 Coefficients : 1	Initiation à la traduction 2	4	1		3h00		45h00	45h00	50%	50%
UE Transversale Code : UET 2.2 Crédits : 2 Coefficients : 2	Langue(s) étrangère(s) 4	1	1		1h30		22h30	45h00	50%	50%
	Technologies de l'information et de la communication 1	1	1		1h30		22h30	45h00	50%	50%
Total semestre 4		**30**	**16**		**22h30**		**360h00**	**450h00**		

* travail complémentaire en consultation semestrielle

Programme des enseignements du L3 domaine Lettres et Langues Etrangères

Semestre 5

Unités d'enseignement	Matières	Crédits	coefficients	Volume horaire hebdomadaire			VHS 15 semaines	Autre	Mode d'évaluation	
	Intitulés			cours	TD	TP			Contrôle continu	Examen
UE Fondamentale1 Code UEF3.1 Crédits : 12 Coefficients : 09	linguistique	04	03	1.30	1.30		45		50%	50%
	Etude de textes littéraires	04	03	1.30	1.30		45		50%	50%
	Etude de textes de civilisation	04	03	1.30	1.30		45		50%	50%
UE Fondamentale2 Code UEF3.1 Crédits : 06 Coefficients : 06	Compréhension & production écrite	02	02	-----	1.30		21.30		100%	----
	Compréhension & production orale	02	02	------	1.30		21.30		100%	----
	Traduction & interprétariat	02	02	------	1.30		21.30		100%	----
UE Fondamentale3 Code UEF3.1 Crédits : 04 Coefficients : 02	Introduction à la didactique	02	01	1.30	------		21.30		----	100%
	Introduction aux langues de spécialités	02	01	-----	1.30		21.30		100%	----
UE Méthodologie Code UEM3.1 Crédits : 04 Coefficients : 02	Techniques de recherche	04	02	-----	1.30		21.30		100%	----
UE Découverte Code UED3.1 Crédits : 02 Coefficients : 01	Psychologie cognitive/ Sciences de la communication	02	01	1.30	----		21.30		----	100%
UE Transversale Code UET3.1 Crédits : 02 Coefficients : 01	Langue(s) nationale(s)/ langues étrangères	02	01	1.30	----		21.30		----	100%

Programmedes enseignements du L3 domaine Lettres et Langues Etrangères

Semestre 6

Unités d'enseignement	Matières	Crédits	coefficients	Volume horaire hebdomadaire			VHS 15 semaines	Autre	Mode d'évaluation	
	Intitulés			cours	TD	TP			Contrôle continu	Examen
UE Fondamentale1 Code UEF3.2 Crédits : 12 Coefficients : 09	linguistique	04	03	1.30	1.30		45		50%	50%
	Etude de textes littéraires	04	03	1.30	1.30		45		50%	50%
	Etude de textes de civilisation	04	03	1.30	1.30		45		50%	50%
UE Fondamentale2 Code UEF3.2 Crédits : 06 Coefficients : 06	Compréhension & production écrite	02	02	------	1.30		21.30		100%	----
	Compréhension & production orale	02	02	------	1.30		21.30		100%	----
	Traduction & interprétariat	02	02	------	1.30		21.30		100%	----
UE Fondamentale3 Code UEF3.2 Crédits : 04 Coefficients : 02	Introduction à la didactique	02	01	1.30	------		21.30		----	100%
	Introduction aux langues de spécialités	02	01	-----	1.30		21.30		100%	----
UE Méthodologie Code UEM3.2 Crédits : 04 Coefficients : 02	Techniques de recherche	04	02	-----	1.30		21.30		100%	----
UE Découverte Code UED3.2 Crédits : 02 Coefficients : 01	Psychologie cognitive/ Sciences de la communication	02	01	1.30	----		21.30		----	100%
UE Transversale Code UET3.2 Crédits : 02 Coefficients : 01	Langue(s) nationale(s)/ langues étrangères	02	01	1.30	----		21.30		----	100%

Appendix B: Jacobs et al.'s (1981) Scoring Profile

ESL COMPOSITION PROFILE

STUDENT _____ DATE _____ TOPIC _____

	SCORE	LEVEL	CRITERIA	COMMENTS
CONTENT		30-27	EXCELLENT TO VERY GOOD: knowledgeable • substantive • thorough development of thesis • relevant to assigned topic	
		26-22	GOOD TO AVERAGE: some knowledge of subject • adequate range • limited development of thesis • mostly relevant to topic, but lacks detail	
		21-17	FAIR TO POOR: limited knowledge of subject • little substance • inadequate development of topic	
		16-13	VERY POOR: does not show knowledge of subject • non-substantive • not pertinent • OR not enough to evaluate	
ORGANIZATION		20-18	EXCELLENT TO VERY GOOD: fluent expression • ideas clearly stated/supported • succinct • well-organized • logical sequencing • cohesive	
		17-14	GOOD TO AVERAGE: somewhat choppy • loosely organized but main ideas stand out • limited support • logical but incomplete sequencing	
		13-10	FAIR TO POOR: non-fluent • ideas confused or disconnected • lacks logical sequencing and development	
		9-7	VERY POOR: does not communicate • no organization • OR not enough to evaluate	
VOCABULARY		20-18	EXCELLENT TO VERY GOOD: sophisticated range • effective word/idiom choice and usage • word form mastery • appropriate register	
		17-14	GOOD TO AVERAGE: adequate range • occasional errors of word/idiom form, choice, usage *but meaning not obscured*	
		13-10	FAIR TO POOR: limited range • frequent errors of word/idiom form, choice, usage • *meaning confused or obscured*	
		9-7	VERY POOR: essentially translation • little knowledge of English vocabulary, idioms, word form • OR not enough to evaluate	
LANGUAGE USE		25-22	EXCELLENT TO VERY GOOD: effective complex constructions • few errors of agreement, tense, number, word order/function, articles, pronouns, prepositions	
		21-18	GOOD TO AVERAGE: effective but simple constructions • minor problems in complex constructions • several errors of agreement, tense, number, word order/function, articles, pronouns, prepositions *but meaning seldom obscured*	
		17-11	FAIR TO POOR: major problems in simple/complex constructions • frequent errors of negation, agreement, tense, number, word order/function, articles, pronouns, prepositions and/or fragments, run-ons, deletions • *meaning confused or obscured*	
		10-5	VERY POOR: virtually no mastery of sentence construction rules • dominated by errors • does not communicate • OR not enough to evaluate	
MECHANICS		5	EXCELLENT TO VERY GOOD: demonstrates mastery of conventions • few errors of spelling, punctuation, capitalization, paragraphing	
		4	GOOD TO AVERAGE: occasional errors of spelling, punctuation, capitalization, paragraphing *but meaning not obscured*	
		3	FAIR TO POOR: frequent errors of spelling, punctuation, capitalization, paragraphing • poor handwriting • *meaning confused or obscured*	
		2	VERY POOR: no mastery of conventions • dominated by errors of spelling, punctuation, capitalization, paragraphing • handwriting illegible • OR not enough to evaluate	

TOTAL SCORE _____ READER _____ COMMENTS _____

Note: Jacobs et al.'s (1981) Scoring Profile (Hughes, 2003)

Appendix C: Post-test Topics and Questions

PARAGRAPH	DISCOURSE	QUESTION
1	**Compare / Contrast**	**Topic:** EFL learners differ in their preferences for American and British English. Each part reports what they like or dislike in a particular variety of English. **Instruction:** Write a well-developed paragraph to compare and/or contrast American and British English (main similarities /differences between them).
2	**Cause / Effect**	**Topic:** Although smoking is strictly prohibited in public places like transport, hospitals, and schools, many smokers still consider it a personal right to smoke everywhere, claiming that this behaviour does not affect public health. **Instruction:** Write a well-developed paragraph in which you state the effects of smoking in public places on public health.
3	**Argumentative**	**Topic:** Many people find the use of animals in research experiments very beneficial; others find it unethical. Are you for or against using animals in scientific research experiments? **Instruction:** Write a well-defended paragraph to justify your claim.

Appendix D: Scoring Scale of the Study

SCORING SCALE			
Components	**Levels**	**Marks**	**Criteria**
Content	**Excellent to very good**	**4–5**	Knowledgeable, substantive, thorough, development of thesis, relevant to assigned topic.
	Good to average	**3–3.75**	Some knowledge of subject, adequate range, limited development of thesis, mostly relevant to topic, but lacks detail.
	Fair to poor	**2–2.75**	Limited knowledge of subject, little substance, inadequate development of topic.
	Very poor	**1–1.75**	Does not show knowledge of subject, nom-substantive, not pertinent, or not enough to evaluate.
Organization	**Excellent to very good**	**4–5**	Fluent expression, ideas clearly stated supported, succinct well-organized, logical sequencing, cohesive.
	Good to average	**3–3.75**	Somewhat choppy loosely organized but main ideas stand out, limited support, logical but incomplete sequencing.
	Fair to poor	**2–2.75**	Nom-fluent, ideas confused or disconnected, lacks logical sequencing and development
	Very poor	**1–1.75**	Does not communicate, no organized, or not enough
Grammar	**Excellent to very good**	**3–4**	Effective complex constructions, few errors of agreement, tense, number, word order/function, articles, pronouns, prepositions.
	Good to average	**2–2.75**	Effective but simple constructions, minor problems in complex constructions, several errors of arrangement, tense, number, word order/function, articles, pronouns, prepositions but meaning seldom obscured.
	Fair to poor	**1.25–1.75**	Major problems in simple/complex construction, frequent errors of negation, agreement, tense, number, word order/function, articles, pronouns, prepositions and/or fragments, run-ons, deletion meaning confused or obscured.
	Very poor	**0.5–1**	Virtually no mastery of sentence construction rules, dominated by errors, does not communicate, or not enough to evaluate

Vocabulary	**Excellent to very good**	**2.75–3**	Sophisticated range, effective word/idiom, choice and usage, word form mastery, appropriate register.
	Good to average	**2–2.5**	adequate range. occasional errors of word/idiom from, choice, usage but meaning not obscured.
	Fair to poor	**1.25–1.75**	Limited range, frequent errors of word/idiom form, choice, usage, meaning confused or obscured
	Very poor	**0.5–1**	essentially translation, little knowledge of English vocabulary, idioms, word form. or not enough to evaluate.
Mechanics	**Excellent to very good**	**2.75–3**	Demonstrates mastery of conventions? few errors of spelling, punctuation, capitalizations, paragraphing.
	Good to average	**2–2.5**	Occasional errors of spelling, punctuation, capitalization, paragraphing but meaning not obscured.
	Fair to poor	**1.25–1.75**	Frequent errors of spelling, punctuation, capitalization, paragraphing, poor handwriting, meaning confused or obscured.
	Very poor	**0.5–1**	No mastery of conventions, dominated by errors of spelling, punctuation, capitalization, paragraphing, handwriting illegible, or not enough to evaluate,

Appendix E: Marking Sheet

MARKING SHEET	
Student's name:	**Reference number:**
Group:	**Date:**

COMPONENTS	SCORES	OBSERVATIONS
Mechanics		
Vocabulary		
Grammar		
Organisation		
Content		
Final score	**...../20**	

Appendix F: Students' Interview

Semi-Structured Interview Schedule for Second Year English Students

Respondent:	
Date:	
Time:	
Location:	

Please give full, honest answers to the following questions.

Q1. How do you perceive and evaluate the use of online peer feedback in EFL writing classes?

Q2. Did you find your colleagues' suggestions and comments practical and useful? If yes, state some benefits.

Q3. Which components of writing were you able to improve more through the use of online peer feedback?

Q4. Which difficulties did you encounter while using online peer feedback?

Q5. Will you use online peer feedback in future writing activities? Why or why not?

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Kasdi Merbah University of Ouargla

Appendix G: Peer Feedback Checklist

Author's name: ..... **Topic:** .....
Peer's name: ..... **Date:** .....

Peer Feedback Checklist 

Instructions: Read your partner's paragraph, then complete the form below with specific ***corrections*** and ***suggestions***. Remember to start with ***compliments***.

Compliments:

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

Accuracy (Corrections)	**Mechanics**	**Spelling**	Are there any spelling mistakes?
		Punctation	Are punctuation marks inserted correctly?
		Capitalisation	Is capitalisation properly used?
	Grammar		Are there any errors of agreement? Are there any issues related to word order? Are articles, pronouns, and prepositions used properly? Are there any issues regarding sentence construction (simple or complex)?
	Word choice		Does the author choose interesting, accurate words? Are some words improperly used? Are some words ambiguous or difficult to understand? Does the author use the correct word form?

Quality (Modifications)	**Content**	**Focus**	Does the author maintain a single topic (main idea) or talk about other things that do not really fit? Is the main point strong? Is the main topic developed effectively?
		Unity	Is there a strong relationship between the topic sentence and the supporting sentences? Does the author provide relevant supporting details to the main point? Are there any illustrative examples?
		Clarity	Are some parts (phrases or sentences…) ambiguous (having two or more possible meanings)? Is there any redundant information? Are some elements unimportant? Are there any gaps in knowledge?
	Organisation	**Cohesion**	Cohesion (structure): Is there a strong connection between sentences? Can you understand what the author is trying to say? Is sequencing complete and logical? Are the sentences too long or too short? Are there incomplete or run-on sentences? Are there any issues with the use of transitional words/expressions?
		Coherence	Is the form of the paragraph clear and correct? Are the elements of discourse present (thesis, supporting sentences, and conclusion)? Are the sentences of the text logically ordered? Are the ideas clearly stated and supported? Are the expressions used fluent?

Appendix H: Self-assessment Checklist

Topic: ..... **Date:**
.....

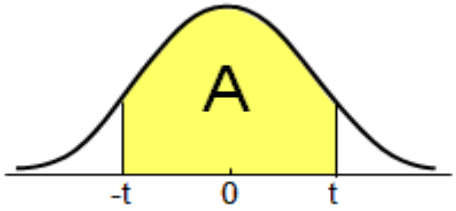
Self-Assessment Checklist 

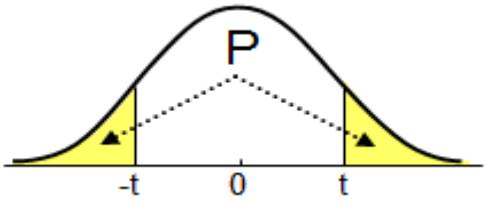
Instruction: Read your paragraph, then complete the form below.

Accuracy	**Mechanics**	**Spelling**	Are there any spelling mistakes?
		Punctation	Are punctuation marks inserted correctly?
		Capitalisation	Is capitalisation properly used?
	Grammar	Are there any errors of agreement? Are there any issues related to word order? Are articles, pronouns, and prepositions used properly? Are there any issues regarding sentence construction (simple or complex)?	
	Word choice	Does the author choose interesting, accurate words? Are some words improperly used? Are some words ambiguous or difficult to understand? Does the author use the correct word form?	

Quality	**Content**	**Focus**	Does the author maintain a single topic (main idea) or talk about other things that do not really fit? Is the main point strong? Is the main topic developed effectively?
		Unity	Is there a strong relationship between the topic sentence and the supporting sentences? Does the author provide relevant supporting details to the main point? Are there any illustrative examples?
		Clarity	Are some parts (phrases or sentences…) ambiguous (having two or more possible meanings)? Is there any redundant information? Are some elements unimportant? Are there any gaps in knowledge?
	Organisation	**Cohesion**	Cohesion (structure): Is there a strong connection between sentences? Can you understand what the author is trying to say? Is sequencing complete and logical? Are the sentences too long or too short? Are there incomplete or run-on sentences? Are there any issues with the use of transitional words/expressions?
		Coherence	Is the form of the paragraph clear and correct? Are the elements of discourse present (thesis, supporting sentences, and conclusion)? Are the sentences of the text logically ordered? Are the ideas clearly stated and supported? Are the expressions used fluent?

Appendix I: Critical Values for Student's *t*-Distribution (two-tailed tests)





DF	AP	0.80 0.20	0.90 0.10	0.95 0.05	0.98 0.02	0.99 0.01	0.995 0.005	0.998 0.002	0.999 0.001
1		3.078	6.314	12.706	31.820	63.657	127.321	318.309	636.619
2		1.886	2.920	4.303	6.965	9.925	14.089	22.327	31.599
3		1.638	2.353	3.182	4.541	5.841	7.453	10.215	12.924
4		1.533	2.132	2.776	3.747	4.604	5.598	7.173	8.610
5		1.476	2.015	2.571	3.365	4.032	4.773	5.893	6.869
6		1.440	1.943	2.447	3.143	3.707	4.317	5.208	5.959
7		1.415	1.895	2.365	2.998	3.499	4.029	4.785	5.408
8		1.397	1.860	2.306	2.897	3.355	3.833	4.501	5.041
9		1.383	1.833	2.262	2.821	3.250	3.690	4.297	4.781
10		1.372	1.812	2.228	2.764	3.169	3.581	4.144	4.587
11		1.363	1.796	2.201	2.718	3.106	3.497	4.025	4.437
12		1.356	1.782	2.179	2.681	3.055	3.428	3.930	4.318
13		1.350	1.771	2.160	2.650	3.012	3.372	3.852	4.221
14		1.345	1.761	2.145	2.625	2.977	3.326	3.787	4.140
15		1.341	1.753	2.131	2.602	2.947	3.286	3.733	4.073
16		1.337	1.746	2.120	2.584	2.921	3.252	3.686	4.015
17		1.333	1.740	2.110	2.567	2.898	3.222	3.646	3.965
18		1.330	1.734	2.101	2.552	2.878	3.197	3.610	3.922
19		1.328	1.729	2.093	2.539	2.861	3.174	3.579	3.883
20		1.325	1.725	2.086	2.528	2.845	3.153	3.552	3.850
21		1.323	1.721	2.080	2.518	2.831	3.135	3.527	3.819
22		1.321	1.717	2.074	2.508	2.819	3.119	3.505	3.792
23		1.319	1.714	2.069	2.500	2.807	3.104	3.485	3.768
24		1.318	1.711	2.064	2.492	2.797	3.090	3.467	3.745
25		1.316	1.708	2.060	2.485	2.787	3.078	3.450	3.725
26		1.315	1.706	2.056	2.479	2.779	3.067	3.435	3.707
27		1.314	1.703	2.052	2.473	2.771	3.057	3.421	3.690
28		1.313	1.701	2.048	2.467	2.763	3.047	3.408	3.674
29		1.311	1.699	2.045	2.462	2.756	3.038	3.396	3.659
30		1.310	1.697	2.042	2.457	2.750	3.030	3.385	3.646

31		1.309	1.695	2.040	2.453	2.744	3.022	3.375	3.633
32		1.309	1.694	2.037	2.449	2.738	3.015	3.365	3.622
33		1.308	1.692	2.035	2.445	2.733	3.008	3.356	3.611
34		1.307	1.691	2.032	2.441	2.728	3.002	3.348	3.601
35		1.306	1.690	2.030	2.438	2.724	2.996	3.340	3.591
36		1.306	1.688	2.028	2.434	2.719	2.991	3.333	3.582
37		1.305	1.687	2.026	2.431	2.715	2.985	3.326	3.574
38		1.304	1.686	2.024	2.429	2.712	2.980	3.319	3.566
39		1.304	1.685	2.023	2.426	2.708	2.976	3.313	3.558
40		1.303	1.684	2.021	2.423	2.704	2.971	3.307	3.551
42		1.302	1.682	2.018	2.418	2.698	2.963	3.296	3.538
44		1.301	1.680	2.015	2.414	2.692	2.956	3.286	3.526
46		1.300	1.679	2.013	2.410	2.687	2.949	3.277	3.515
48		1.299	1.677	2.011	2.407	2.682	2.943	3.269	3.505
50		1.299	1.676	2.009	2.403	2.678	2.937	3.261	3.496
60		1.296	1.671	2.000	2.390	2.660	2.915	3.232	3.460
70		1.294	1.667	1.994	2.381	2.648	2.899	3.211	3.435
80		1.292	1.664	1.990	2.374	2.639	2.887	3.195	3.416
90		1.291	1.662	1.987	2.369	2.632	2.878	3.183	3.402
100		1.290	1.660	1.984	2.364	2.626	2.871	3.174	3.391
120		1.289	1.658	1.980	2.358	2.617	2.860	3.160	3.373
150		1.287	1.655	1.976	2.351	2.609	2.849	3.145	3.357
200		1.286	1.652	1.972	2.345	2.601	2.839	3.131	3.340
300		1.284	1.650	1.968	2.339	2.592	2.828	3.118	3.323
500		1.283	1.648	1.965	2.334	2.586	2.820	3.107	3.310
∞		1.282	1.645	1.960	2.326	2.576	2.807	3.090	3.291

Source: https://www.medcalc.org/manual/t-distribution-table.php

Appendix J: Independent Samples t-test (Integrated version of Leven's test and t-test)

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
TOTAL	Equal variances assumed	.247	.622	6.796	48	.000	4.45000	.65479	3.13346	5.76654
	Equal variances not assumed			6.796	47.733	.000	4.45000	.65479	3.13327	5.76673

Appendix K: Descriptive Statistics for Overall Post-test Scores

Statistics

		M	V	G	O	C	TOTALACCURACY	TOTALQUALITY	TOTAL
N	Valid	50	50	50	50	50	50	50	50
	Missing	0	0	0	0	0	0	0	0
Mean		1.9400	1.9250	2.6800	3.0000	3.1800	6.5450	6.1800	12.7250
Std. Error of Mean		.09410	.06971	.10739	.11584	.11932	.24261	.22384	.45391
Median		2.0000	2.0000	3.0000	3.0000	3.1250	6.8750	6.0000	12.7500
Mode		2.50	2.00	3.50	3.00	3.50[a]	7.00[a]	6.00[a]	11.50
Std. Deviation		.66540	.49293	.75936	.81910	.84370	1.71554	1.58278	3.20962
Variance		.443	.243	.577	.671	.712	2.943	2.505	10.302
Skewness		-.320-	-.095-	-.241-	-.141-	-.100-	-.227-	-.011-	-.089-
Std. Error of Skewness		.337	.337	.337	.337	.337	.337	.337	.337
Kurtosis		-.956-	-1.174-	-1.376-	-.414-	-1.071-	-1.041-	-.784-	-1.085-
Std. Error of Kurtosis		.662	.662	.662	.662	.662	.662	.662	.662
Range		2.25	1.75	2.50	3.25	3.00	6.50	5.75	11.00
Minimum		.75	1.00	1.50	1.25	1.50	3.25	3.25	7.25
Maximum		3.00	2.75	4.00	4.50	4.50	9.75	9.00	18.25
Sum		97.00	96.25	134.00	150.00	159.00	327.25	309.00	636.25

a. Multiple modes exist. The smallest value is shown

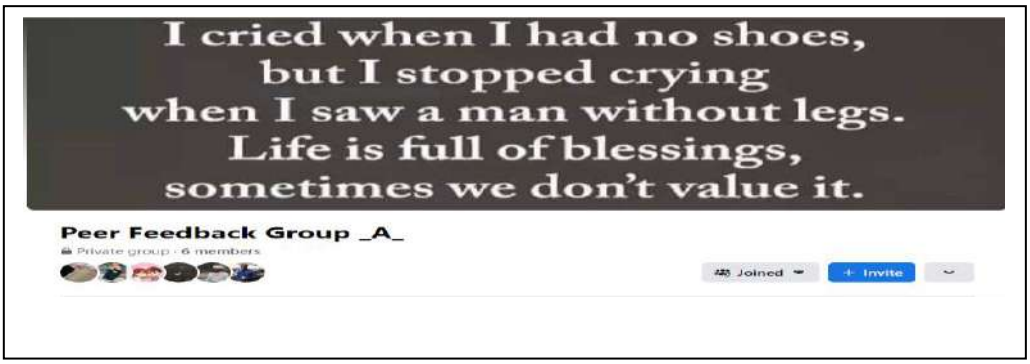
Appendix L: Descriptive Statistics for Overall Post-test Scores Per Group

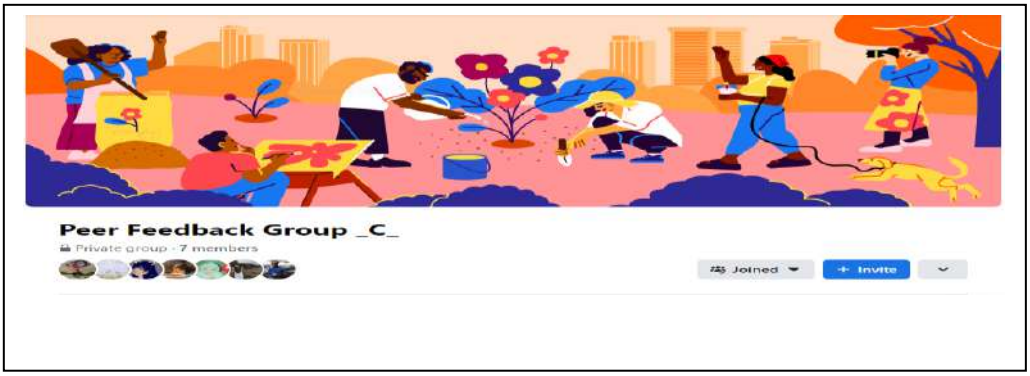
Statistics

GROUP			M	V	G	O	C	TOTAL	TOTALACCURACY	TOTALQUALITY
EXPERIMENTAL	N	Valid	25	25	25	25	25	25	25	25
		Missing	0	0	0	0	0	0	0	0
	Mean		2.3500	2.1800	3.1500	3.5800	3.6900	14.9500	7.6800	7.2700
	Std. Error of Mean		.09789	.09631	.11902	.10870	.13714	.48002	.26439	.23449
	Median		2.5000	2.5000	3.5000	3.5000	4.0000	15.0000	8.0000	7.5000
	Mode		2.50	2.50	3.50	3.50	3.50[a]	14.00[a]	8.00[a]	7.50[a]
	Std. Deviation		.48947	.48153	.59512	.54352	.68572	2.40009	1.32193	1.17243
	Variance		.240	.232	.354	.295	.470	5.760	1.747	1.375
	Skewness		-1.050-	-1.088-	-1.414-	.239	-.886-	-.970-	-1.287-	-.358-
	Std. Error of Skewness		.464	.464	.464	.464	.464	.464	.464	.464
	Kurtosis		1.384	.228	1.197	-.596-	.462	.908	1.742	-.267-
	Std. Error of Kurtosis		.902	.902	.902	.902	.902	.902	.902	.902
	Range		2.00	1.75	2.25	2.00	2.50	9.25	5.50	4.25
	Minimum		1.00	1.00	1.75	2.50	2.00	9.00	4.25	4.75
	Maximum		3.00	2.75	4.00	4.50	4.50	18.25	9.75	9.00
	Sum		58.75	54.50	78.75	89.50	92.25	373.75	192.00	181.75
CONTROL	N	Valid	25	25	25	25	25	25	25	25
		Missing	0	0	0	0	0	0	0	0
	Mean		1.5300	1.6700	2.2100	2.4200	2.6700	10.5000	5.4100	5.0900
	Std. Error of Mean		.11210	.07176	.12049	.12224	.13285	.44535	.25120	.22494
	Median		1.5000	1.5000	2.0000	2.5000	2.5000	10.7500	5.5000	5.0000
	Mode		1.50	1.50[a]	1.50	3.00	3.00	11.50	5.00[a]	6.00
	Std. Deviation		.56051	.35882	.60243	.61118	.66427	2.22673	1.25599	1.12472
	Variance		.314	.129	.363	.374	.441	4.958	1.578	1.265
	Skewness		.127	.249	.398	-.246-	.375	.118	-.048-	.065
	Std. Error of Skewness		.464	.464	.464	.464	.464	.464	.464	.464
	Kurtosis		-1.078-	-.461-	-.930-	-.838-	-.423-	-1.150-	-1.212-	-.522-
	Std. Error of Kurtosis		.902	.902	.902	.902	.902	.902	.902	.902
	Range		1.75	1.50	2.00	2.25	2.50	7.75	4.25	4.25
	Minimum		.75	1.00	1.50	1.25	1.50	7.25	3.25	3.25
	Maximum		2.50	2.50	3.50	3.50	4.00	15.00	7.50	7.50
	Sum		38.25	41.75	55.25	60.50	66.75	262.50	135.25	127.25

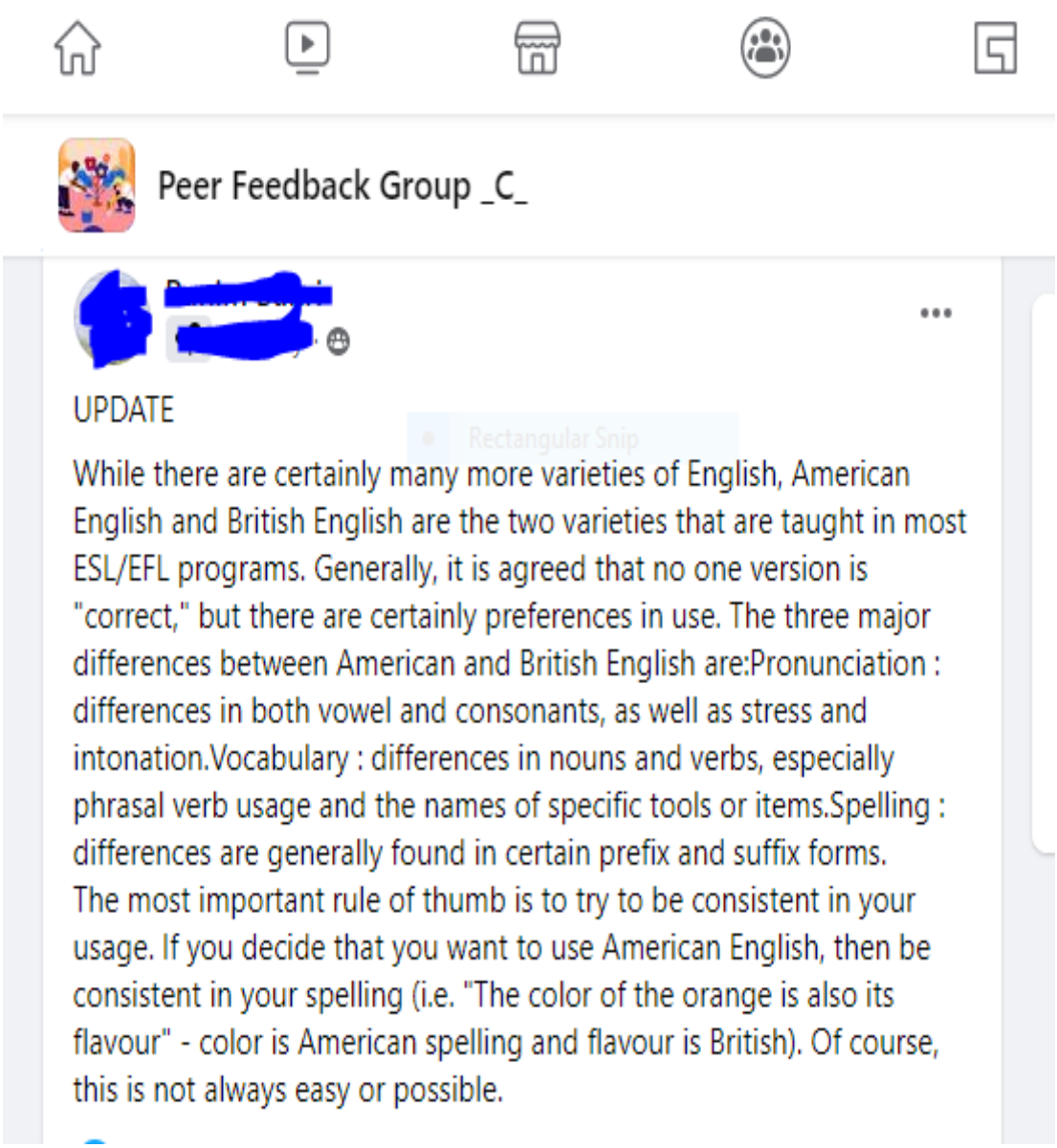
a. Multiple modes exist. The smallest value is shown

Appendix M: Screenshots of the Five Facebook Closed Groups of the Study

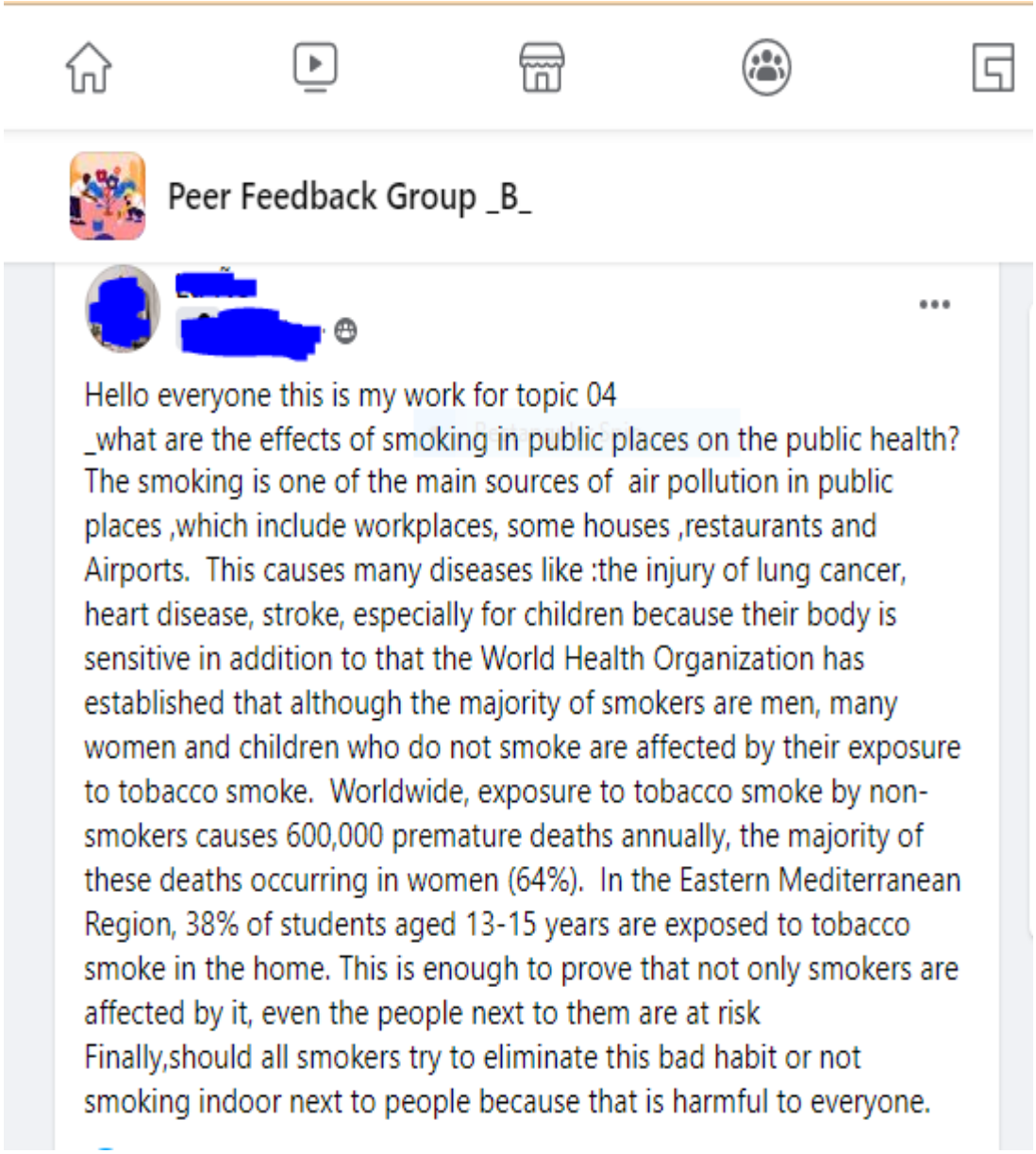




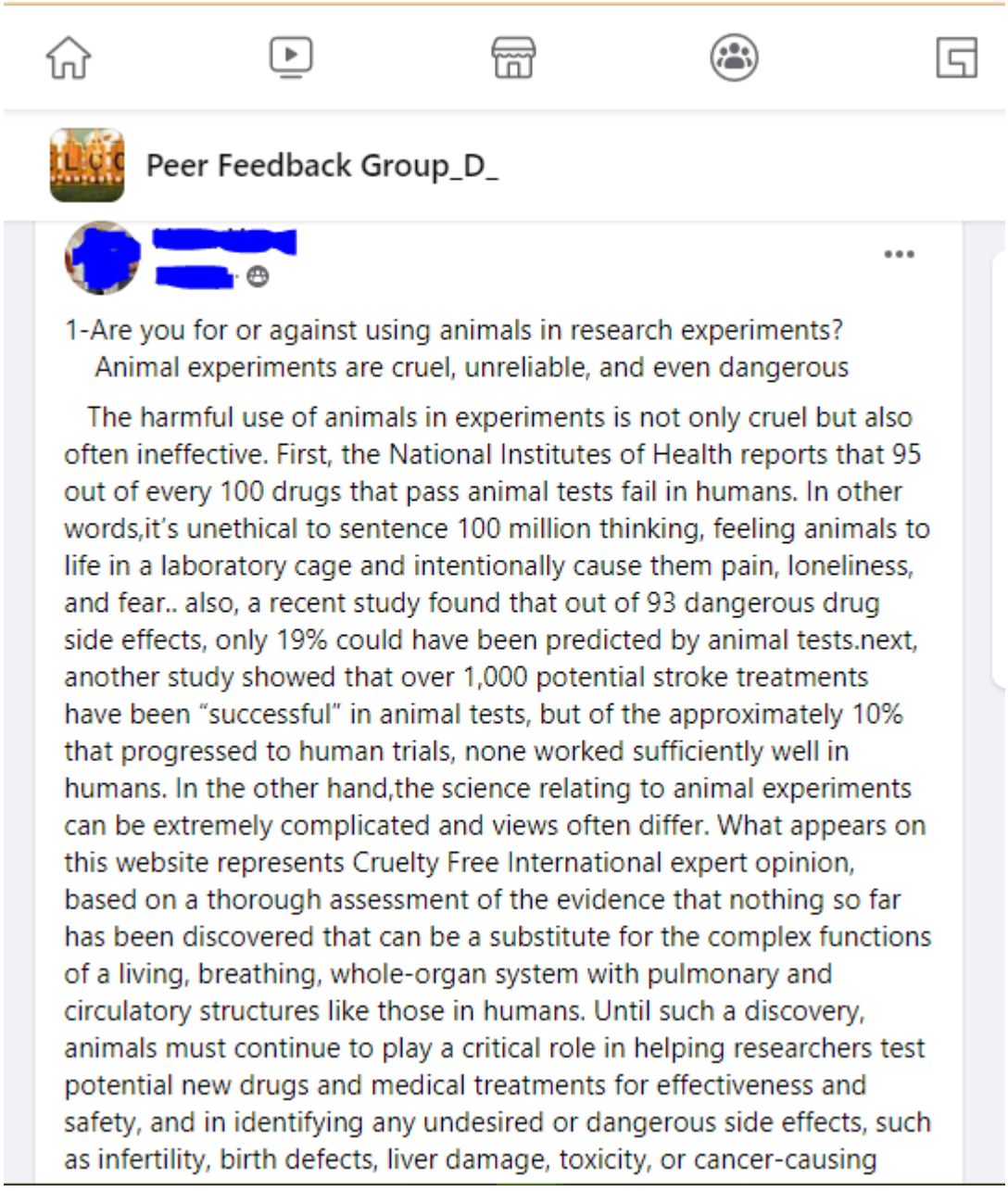
Appendix N: Sample Paragraph on Topic 1 (compare_contrast)



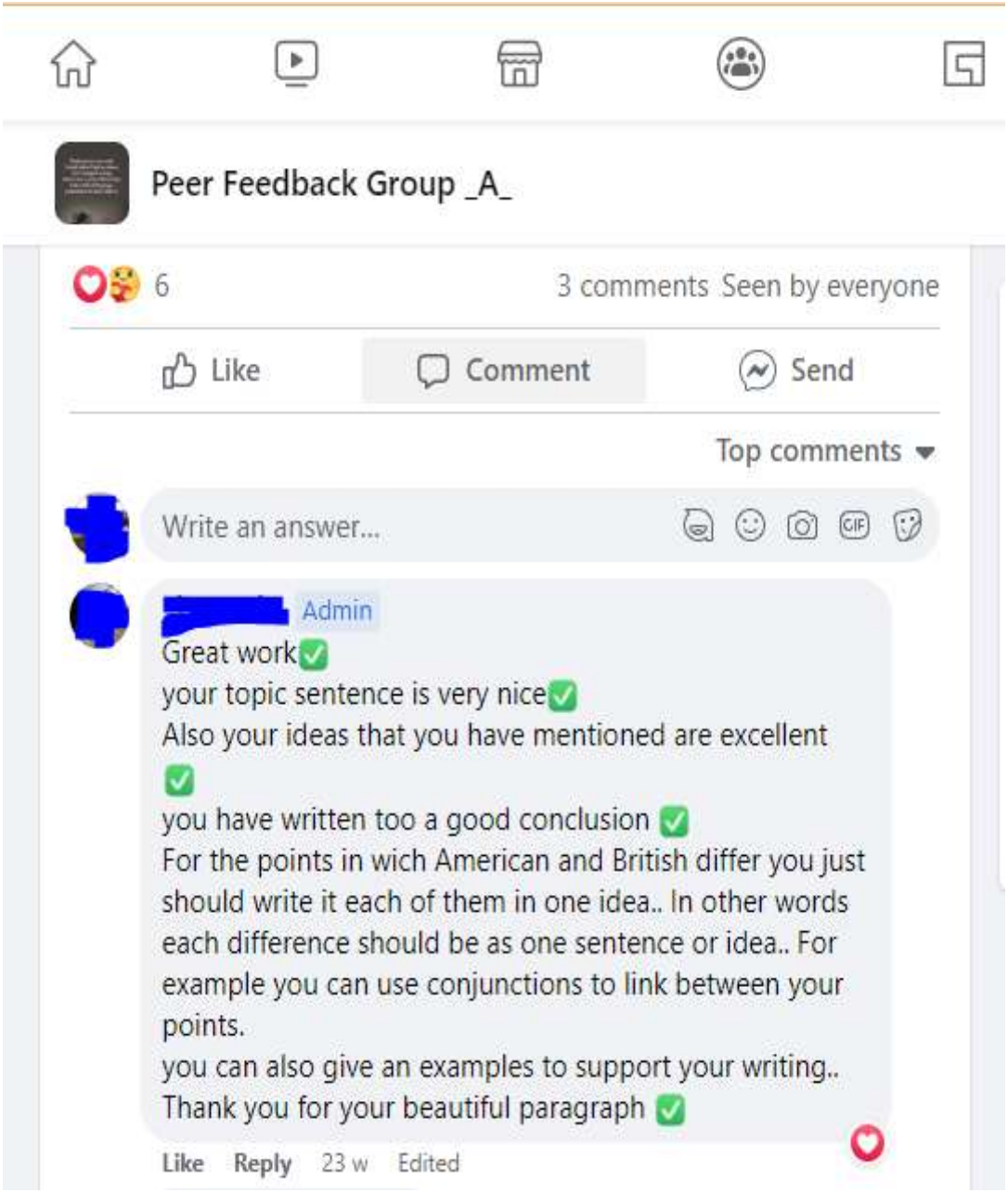
Appendix O: Sample Paragraph on Topic 2 (cause/effect)



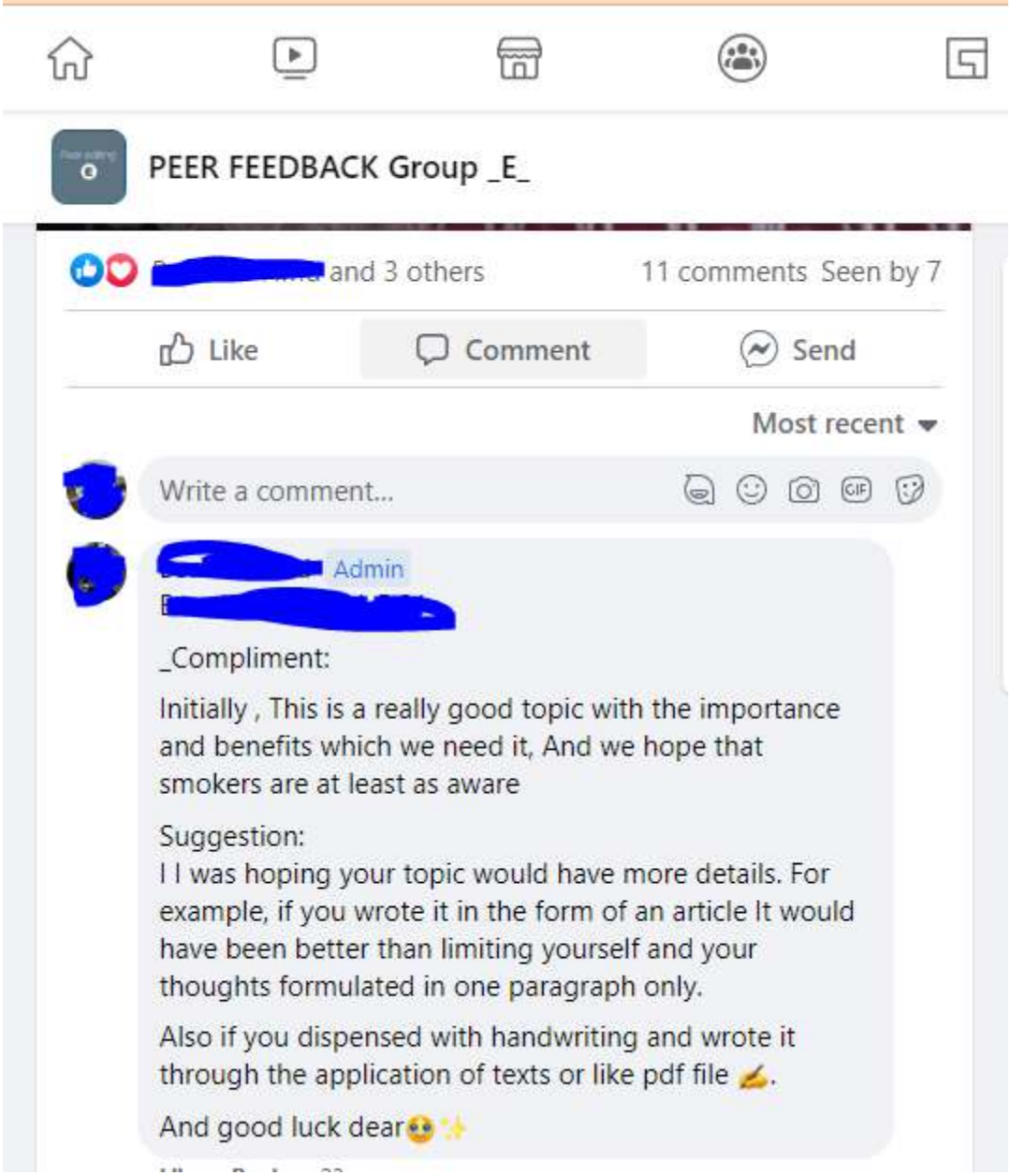
Appendix P: Sample Paragraph on Topic 3 (argumantative)



Appendix Q: Sample Student's Feedback on Topic 1 (compare/contrast)



Appendix R: Sample Student's Feedback on Topic 2 (cause/effect)



Appendix S: Sample Student's Feedback on Topic 3 (argumentative)

Appendix T: Post-test Scores of the Experimental Group

Experimental Group						
Subjects	**Accuracy**			**Quality**		**Total**
	M	**V**	**G**	**O**	**C**	
1	2	2.25	3.5	3.5	3.5	**14.75**
2	2.5	1.5	3.5	3	3.5	**14**
3	2.5	2.5	3.5	4	4	**16.5**
4	3	2.5	3.5	4.5	4.5	**18**
5	2.5	1.5	3.5	3	3.5	**14**
6	2	2.25	3.25	3.5	4	**15**
7	2.5	1	2	3	3	**11.5**
8	1	1.5	1.75	2.5	2.25	**9**
9	2.5	2.5	3	3.25	3.5	**14.75**
10	2.5	2.5	3	3.5	3.5	**15**
11	1.5	1.25	1.75	3	2	**9.5**
12	2.5	2.5	3	3.5	4	**15.5**
13	2	2	3	3.5	4	**14.5**
14	3	2.5	3.5	4	4	**17**
15	2.5	2.5	3	4.5	4.5	**17**
16	2.5	2.5	3.5	3.5	3.5	**15.5**
17	2.25	2.25	3.5	3.5	4	**15.5**
18	1.5	2	3.5	3	2.75	**12.75**
19	2.5	2	2.25	3.25	3.5	**13.5**
20	3	2.5	3.5	4.5	4.5	**18**
21	2	2	3.5	3.5	3	**14**
22	2.5	2.5	3.5	3.5	4.5	**16.5**
23	2.5	2.75	3.25	4.25	4.5	**17.25**
24	3	2.75	4	4.25	4.25	**18.25**
25	2.5	2.5	3.5	4	4	**16.5**
Σ	**58.75**	**54.5**	**78.75**	**89.5**	**92.25**	**373.75**
$\bar{x}$	**2.35**	**2.18**	**3.15**	**3.58**	**3.69**	
$\bar{x}$	**7.68**			**7.27**		**14.95**

Appendix U: Post-test Scores of the Control Group

Control Group						
Subjects	**Accuracy**			**Quality**		**Total**
	M	**V**	**G**	**O**	**C**	
1	1.75	1.5	2.5	3	2	**10.75**
2	2	2.5	3	3.5	4	**15**
3	1.5	1.5	2	3	3.5	**11.5**
4	2.5	2	2	2.5	3	**12**
5	1.5	2	2.5	2.5	3.25	**11.75**
6	0.75	1.25	1.5	2	2.5	**08**
7	1	1.5	1.75	2.5	2.25	**09**
8	2.25	2	2.5	3.25	3.5	**13.5**
9	1	1.25	1.75	2	1.5	**07.5**
10	0.75	1.25	2	1.5	2.5	**08**
11	2	1.5	1.5	1.25	2	**8.25**
12	1.5	2	3.5	2.75	3	**12.75**
13	1.5	1.5	1.75	2.25	2.5	**09.5**
14	2	1.5	2	2	4	**11.5**
15	0.75	1	1.5	2	2.25	**07**
16	1	1.25	2.5	2.25	2.25	**09.25**
17	1.5	2	2.5	3	2.5	**11.5**
18	1.5	2	1.5	1.5	1.75	**08.25**
19	1.25	2	2.25	2	2.5	**10**
20	2	1.5	3	3	3	**12.5**
21	1	1.75	1.5	2.75	2	**09**
22	2.5	1.5	3	2.5	3	**12.5**
23	1.75	2	3	3	3	**12.75**
24	2.25	2	2.75	3	3	**13**
25	0.75	1.5	1.5	1.5	2	**07.25**
Σ	**38.25**	**41.75**	**55.25**	**60.5**	**66.75**	**262.5**
$\bar{x}$	**1.53**	**1.67**	**2.21**	**2.42**	**2.67**	
$\bar{x}$	**5.41**			**5.09**		**10.5**

Appendix V: First Semester Test Marks of the Students Selected for the Experiment (8-12)

Group 1			Group 2	
Students	**Mark**		**Students**	**Mark**
1	11.5		**1**	11
2	09.5		**2**	08
3	08		**3**	10
4	08.5		**4**	08.5
5	08		**5**	08
6	10.5		**6**	12
7	10.5		**7**	10.5
8	11		**8**	11.5
9	09		**9**	10
10	11.5		**10**	12
11	8.5		**11**	09
12	12		**12**	10.5
13	08.5		**13**	08.5
14	09		**14**	09
15	10.5		**15**	11.5
16	11.5		**16**	11
17	11		**17**	09.5
18	09		**18**	10.5
19	12		**19**	12
20	09.5		**20**	10
21	08		**21**	09
22	09		**22**	11
23	12		**23**	08.5
24	09.5		**24**	09.5
25	10		**25**	08.5
Σ	**248**		**Σ**	**249.5**
$\bar{x}$	**09.92**		**$\bar{x}$**	**09.96**

Appendix W: Marks of Both Raters for the Pilot Study Group

Rater 1						
S	**Accuracy**			**Quality**		**Total**
	M	**V**	**G**	**O**	**C**	
1	1.25	2	2.25	2.5	2.5	10.5
2	1.5	2	1.5	2	1.75	8.75
3	2.5	2	2	2.5	3	12
4	1.5	1.5	1.5	2.5	2.5	9.5
5	2.25	2	2.25	3.25	3	12.75
6	1.25	1.25	1.5	2	1.75	7.75
7	2	2	2	2.75	2.5	11.25
8	1.5	2	1.5	2	2	9
9	1.5	1.75	2	2.5	2.5	10.25
10	2.5	2.5	2.5	2.5	2.25	12.25
11	1.5	1.5	1.25	2.75	2.25	9.25
12	1.75	1.5	2.5	3	2.25	11
13	2.5	2.5	2.5	2.75	2.75	13
14	1.5	1.5	2	1.5	1.5	8
15	2	2.5	2	2.5	2.5	11.5
16	2.5	2.5	2.25	3	2.75	13
17	2	2	1.75	2	2	9.75
18	1.5	1.5	1.5	1.75	1.25	7.5
19	2	2.5	2.25	2.75	2.5	12
20	2.25	2.25	2	2	2	10.5
21	2	2	1.25	2	1.75	9
22	2	2	1.5	1.75	1.25	8.5
23	2.5	2	3	2.5	2.5	12.5
24	2.5	2.5	2.75	2.5	2.75	13
25	1.75	2	1.5	1.25	1.25	7.75
Σ	48	49.75	49	58.75	55.25	260.25
x̄	**1.92**	**1.99**	**1.96**	**2.34**	**2.2**	
x̄	**5.87**			**4.54**		**10.41**

Rater 2						
S	**Accuracy**			**Quality**		**Total**
	M	**V**	**G**	**O**	**C**	
1	1.5	2	2.5	2.25	2.25	10.5
2	1.5	2.25	1.75	2	1.5	9
3	2.25	2	2	2.5	2.5	11.25
4	1.5	1.75	1.75	2.5	2.5	10
5	2.5	2.5	2.5	3	3	13.5
6	1.5	1.5	1.5	1.75	2	8.25
7	2	2	2	2.5	2.5	11
8	2	1.5	1.5	2	2	9
9	1.5	1.5	2	2.5	2.5	10
10	2.5	2.5	2.5	2.75	2.25	12.5
11	1.75	1.5	1.75	2.5	2.5	10
12	2	1.5	2.75	3	2.25	11.5
13	2.5	2.5	2.5	3	3	13.5
14	1.5	1.25	2.25	2	1.5	8.5
15	2	2.5	2	2.5	2.25	11.25
16	2.5	2.5	2.25	2.5	2.25	12
17	2	2	2	2.25	2	10.25
18	1.75	1.5	1.5	2	1.25	8
19	2.25	2	2.5	2.75	2.75	12.25
20	2.5	2.5	2	2	2	11
21	2	2	1.5	2	1.75	9.25
22	1.75	2	1.5	1.75	1.25	8.25
23	2.5	2	2.5	2.5	2.5	12
24	2.5	2.5	2.75	3	2.75	13.5
25	1.5	1.5	1.5	1.5	1.5	7.5
Σ	49.75	49.25	51.25	59	54.5	263.75
x̄	**1.99**	**1.97**	**2.05**	**2.36**	**2.18**	
x̄	**6.01**			**4.54**		**10.55**

Résumé

Les étudiants algériens d'anglais comme langue étrangère rencontrent encore des difficultés pour améliorer leurs compétences écrites en termes de précision et de qualité. Une solution à ce problème consiste à utiliser des stratégies efficaces telles que la rétroaction des pairs en ligne. Cette étude vise à étudier l'effet de la rétroaction des pairs en ligne sur la compétence en rédaction des élèves en termes de précision et de qualité. Cinquante étudiants de deuxième année de l'Université d'El-Oued ont participé à cette étude, qui ont formé un groupe expérimental et un groupe témoin de vingt-cinq étudiants chacun. Une conception de recherche quasi-expérimentale qui utilise une conception de groupe inégal avec post-test a été adoptée pour recueillir des données quantitatives sur l'effet de l'expérience. L'entretien semi-structuré a également été utilisé pour collecter des données qualitatives sur les attitudes des étudiants à l'égard de l'utilisation de l'évaluation par les pairs en ligne dans les cours d'écriture en anglais langue étrangère. Des statistiques descriptives et inférentielles ont été utilisées pour analyser les données quantitatives, tandis que les données qualitatives ont été analysées en fonction de la classification par sujets. Les résultats ont montré que la stratégie d'évaluation par les pairs en ligne avait un fort effet positif sur les compétences en écriture des élèves en termes de précision et de qualité et que les élèves formaient des attitudes positives à l'égard de cette technique. L'étude recommande l'adoption de la rétroaction des pairs en ligne dans les cours d'écriture en anglais langue étrangère à différents niveaux d'enseignement à l'université, et d'autres recherches empiriques sur un plus grand segment d'étudiants.

Mots-clés : précision, amélioration, rétroaction en ligne des pairs, qualité, compétence rédactionnelle.

ملخص

لا يزال الطلاب الجزائريون للغة الإنجليزية كلغة أجنبية يواجهون صعوبات في تحسين كفاءتهم الكتابية من حيث الدقة والجودة. أحد الحلول لهذه المشكلة هو استخدام استراتيجيات فعالة مثل تقويم الأقران عبر الإنترنت. تهدف هذه الدراسة إلى التحقيق في تأثير تقويم الأقران عبر الإنترنت على كفاءة الطلاب الكتابية من حيث الدقة والجودة. شارك في هذه الدراسة خمسون طالبًا من السنة الثانية من جامعة الوادي، حيث شكلوا مجموعة تجريبية ومجموعة ضابطة من 25 طالبًا لكل منهما. تم اعتماد تصميم بحث شبه تجريبي يستخدم تصميم مجموعات غير متكافئة بالاختبار البعدي لجمع البيانات الكمية حول تأثير التجربة. كما تم أيضًا استخدام المقابلة شبه المنظمة لجمع البيانات النوعية عن مواقف الطلاب تجاه استخدام تقويم الأقران عبر الإنترنت في فصول التعبير الكتابي للغة الإنجليزية كلغة أجنبية. تم استخدام الإحصاء الوصفي والاستدلالي لتحليل البيانات الكمية، بينما تم تحليل البيانات النوعية بالاعتماد على التصنيف حسب المواضيع. أظهرت النتائج أن استراتيجية تقويم الأقران عبر الإنترنت كان لها تأثير إيجابي على كفاءة الطلاب الكتابية من حيث الدقة والجودة وأن الطلاب شكلوا مواقف إيجابية تجاه هذه التقنية. توصي الدراسة باستخدام تقويم الأقران عبر الإنترنت في فصول الكتابة للغة الإنجليزية كلغة أجنبية على المستوى العالي وإجراء مزيد من البحوث على شريحة أكبر من الطلبة.

كلمات مفتاحية: دقة، تحسين، تقويم الاقران عبر الانترنت، الجودة، الكفاءة الكتابية.