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**Exploring ChatGPT as a Writing Assistant in Algerian EFL  
Classrooms: Opportunities, Challenges and Perceptions: The Case  
Study of First Year University Students of Ain Temouchent**

*A Dissertation Submitted in Partial Fulfillment of the Requirement for a  
Master's Degree in Didactics and Applied Languages*

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## **Abstract**

In the recent years and with the increasing integration of technology in education, Artificial Intelligence tools such as ChatGPT, offer a substantial potential to support learners in language learning. However the implication of ChatGPT has sparked ongoing discussions about its educational efficiency particularly in reinforcing learners' writing skills. Thus, the present dissertation aims to investigate the effectiveness of ChatGPT, as a writing tool assistant for first year EFL students and explores its perceived benefits and limitations addressed by students and Writing Comprehension teachers. To accomplish the objectives of the present investigation, a mixed methods approach was used, employing writing tests, pre/post questionnaires with 40 students, and semi-structured interviews with three teachers from Belhadj Bouchaib University of Ain Temouchent, aiming to ensure the findings' credibility and authenticity. Likewise, the collected data were carefully examined both quantitatively and qualitatively to achieve the research purposes. The findings reveal that ChatGPT contributes positively to the development of students' writing skills, particularly in grammar, vocabulary, and coherence. Students reported improvements in their writing quality, while teachers acknowledged its usefulness in reinforcing classroom learning and learners' autonomy. However, concerns were raised regarding issues such as overreliance, academic dishonesty, and gaps in digital literacy. Together, these findings address the research objectives, confirming the potential of ChatGPT as an efficient writing assistant yet its integration requires the teacher's supervision, with clear pedagogical objectives and ethical considerations to prevent misuse.

**Keywords:** Writing Skills, EFL Students, ChatGPT, Artificial Intelligence, Writing Comprehension Teachers, Opportunities and Challenges, Students and Teachers Perceptions.

# Dedications

To my Mother, you have been the one constant thing in my life. Your belief in me never failed, even when mine did, but you were always there to pick me up and get me back on my two feet when I couldn't. Everything in my life from good to bad, you were always there, reminding me that I could get through it. This achievement is yours as much as it is mine.

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## **List of Acronyms and Abbreviations**

**AI:** Artificial Intelligence

**EFL:** English Foreign Language

**GPT:** Generative Pre-trained Transformer

**LLM:** Large Language Model

**NLP:** Natural Language Processing

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# **General Introduction**

### **1. Background of the Study**

Writing in a foreign language remains one of the most demanding skills, especially for EFL learners. It is considered as one of the most complex skills in learning a language, as many learners are required to express their ideas in a foreign language. However, learners often lack the linguistic resources to do so, highlighting the need of accurate language acquisition to write well in English. Moreover, students must consider several elements of writing, including purpose, audience, content; structural organization, vocabulary, and the proper use of spelling, punctuation, and capitalization. In addition to understanding these elements, students rely on various writing tools to progress from an initial blank draft of paper to a finalized draft in purpose of producing a compelling piece of writing for their academic need.

In today's world, technology continues to evolve national wide, becoming inseparable part of the world's population. This evolvement of technology has caused a significant transformation in Artificial Intelligence, giving rise to a wide range of innovative tools. One of these AI innovations is ChatGPT, developed by OpenAI, and released to the public in 2022. This tool has drastically grown in popularity among users as it holds the opportunities to change various industries, and education is no exception. It can play a crucial role in enhancing learners' language skills, especially writing. Thus, it is essential to understand the potentials and obstacles of integrating such tool in EFL classrooms.

### **2. Statement of the Problem**

Writing is an essential activity in EFL classrooms, students need to enhance their writing skills and build a solid foundation through the use of different tools such as ChatGPT as much as possible to increase their ability to craft a compelling piece of writing. Therefore, this study

investigates the effectiveness of AI tools such as ChatGPT, as a writing tool assistant for first year EFL students. It also explores the perceived benefits and limitations by students and Writing Comprehension teachers associated with its integration in EFL classrooms.

### **3. Significance of the Study**

While the role of Artificial Intelligence is increasingly growing in education, with many expressing both interest and concerns, the integration of AI tools such as ChatGPT in EFL classroom, particularly within the Algerian educational settings, is still emerging in research. There are limited comprehensive studies assessing the effectiveness and the unique challenges faced by the Algerian learners when using language learning, AI tools as well as the opportunities offered to them. In addition, previous literature often lacks studies that explored how learners' original written outputs (e.g., writing tests) can be enhanced by AI feedback, and how students perceive such changes. Additionally, the perceptions of both students and teachers towards ChatGPT integration in EFL writing instructions remain unexplored in the Algerian educational context. This study finding will provide insights into the reliability of ChatGPT in enhancing students' writing quality, the perceptions of both learners and teacher including benefits and concerns regarding its use and implementation in EFL instruction, such as over reliance and academic integrity, and digital literacy gaps. Moreover, offers guidance to an appropriate incorporation of ChatGPT in EFL classroom.

### **4. Aim of the Study**

The purpose of this study is to address the existing gap in knowledge regarding the effectiveness of AI tools such as ChatGPT as a writing assistant for first year EFL students, and to explore students' and teachers' perceptions of its opportunities and challenges. Therefore, this

research contributes to more comprehensive understanding of pedagogical strategies in language education.

The present research objectives are:

- Investigate the effectiveness of ChatGPT in improving writing skills among Algerian EFL university students.
- Assess the perceptions of students and teachers regarding the opportunities and challenges of using ChatGPT for writing focused language learning.

### **5. Research Questions**

To serve the aims of the study, the following research questions are raised:

1. How does ChatGPT support the development of writing skills for Algerian EFL university students?
2. What are the perceived opportunities and challenges of using ChatGPT for EFL learning, as identified by students and teachers?

### **6. Research Hypotheses**

To answer the consecutive research questions a number of Research hypotheses are proposed:

1. Students who use ChatGPT as a writing assistant are expected to show improvement in grammar, coherence, and vocabulary in their writing.
2. It is expected that both students and teachers will identify various opportunities in using ChatGPT as a writing assistant, including increased language exposure and personalized feedback.

3. Both students and teachers will also identify various challenges in using ChatGPT for EFL learning, such as technological limitations and concerns about the accuracy of language use.

### **7. Research Methodology**

The present research requires the use of both qualitative and quantitative methods. The data instruments included a writing test, where a forty first year EFL students were required to write an initial writing draft and then compare it to its ChatGPT corrected version; both versions were scored out of 15. Pre and post questionnaires were distributed to students in order to probe students' attitudes, expectations, and reflections on ChatGPT's corrections of their writing test. Semi structured interviews were conducted with three Writing Comprehension instructors; they reported their views on ChatGPT's pedagogical potential, ethical considerations, and implementation challenges.

### **8. Population of Sample**

The study involved a sample of forty (40) first year EFL students from two different groups enrolled in the Writing Comprehension module and Three (3) Writing Comprehension instructors from Belhadj Bouchaib University of Ain Temouchent. Students were selected purposely as they are in the early stages of developing academic writing skills, making them ideal for assessing the impact of ChatGPT as a writing assistant tool. Instructors were chosen based on their active role in shaping students' ability to master academic writing and their experiences in teaching the module of Writing Comprehension, offering guidance into the proper pedagogical integration of ChatGPT in EFL classrooms.

### **9. Organization of the Dissertation**

The present dissertation is divided into three main chapters where every single one trades a specific area of the study. The first chapter discusses a theoretical framework about the variables studied in this research, divided into two sections about Writing Skills and ChatGPT. The first section entitled foundations of EFL writing, mentioned the definition, importance, and elements of writing, then the different stages of writing process, and it explores writing challenges faced by EFL learners. Finally, it suggests strategies to improve writing skills. The second section investigates various aspects of ChatGPT in EFL writing. It begins with a definition and background of AI and ChatGPT, their application in education, followed by guidance on how to use the tool effectively, steps for writing a well-crafted ChatGPT prompt. It examines the advantages, as well as the limitations associated with ChatGPT's use in writing. Finally, it discusses ChatGPT teachers' and learners' perceptions regarding its application in classrooms.

The second chapter is concerned with the research methodology of this study. It begins with presenting the research aims, motivation, and details on the research design. Moreover, it describes the sample of population and the research settings, followed by instruments employed in this study where a mixed methods approach was used, utilizing various data collection instruments and procedures to achieve the research objectives, including questionnaires, writing test, and interviews. Finally, it presents the data analysis methods and the limitations of the study, followed by the ethical consideration.

Lastly, the third chapter embraces the most significant part of this study, focuses more on the analysis and interpretation of the data collected throughout the study. The quantitative findings are illustrated in tables and figures, while the qualitative results are categorized and

## General Introduction

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themed; it also discusses and interprets the findings of the study. Finally, the chapter concludes by citing the study's recommendations .In addition to the general conclusion that is based on the concluded findings of the study.

**Chapter one: Enhancing  
EFL Writing Through  
ChatGPT**

### Section One: The Nature and Development of Writing in EFL Contexts

#### 1.1 Introduction

Writing is crucial and mandatory skill in language learning, particularly EFL contexts. It allows learners to express themselves and engage with the language and its culture beyond the limited classroom setting. EFL students are required to develop their writing skills, and that includes mastery of grammar, structure, vocabulary and coherence, which are crucial for a good piece of writing. However, many learners struggle to develop their writing skill, they consider it the most complex in comparison to listening, speaking and reading. It demands continuous practice and feedback. This section introduces various aspects of writing skills in the EFL classroom, including the definition and importance of writing. Moreover, it explores the elements of writing, presents the different stages of writing process, and explores writing challenges faced by EFL learners. Finally, it suggests strategies to improve writing skills.

#### 1.2 Definition of Writing

According to Chastain (1988, p. 244), “writing is a basic communication skill and a unique asset in the process of learning a second language”, the process involves putting thoughts, emotions, and experiences into words. Writing goes beyond putting words on a blank paper, as stated by Murray and Moor (2009), writing is “a continuous process involving reflection, improvement, development, progress, and fulfillment of various types and in varying measures” (p. 5). Writing fluently is considered as one of the most crucial and difficult skills for all language users (Nunan, 1989), as it requires time and mental effort to master. As noted in Nunan (1989), “writing is an extremely complex cognitive activity, in which the writer is required to demonstrate control of a number of variables simultaneously”

(p. 36), Similarly, Richard and Renandya (2002, p. 303) states that “there is no doubt that writing is the most difficult skill for L2 learners to master”. In addition, writing involves control at two levels; the sentence level involves content, structure, format, vocabulary, and spelling and handwriting skills. The other requires a comprehension of information to incorporate it into cohesive and coherent text (Bell & Burnaby, 1984).

### **1.3 Importance of Writing**

In today’s world, it is mandatory for students to learn the art of good writing in order to excel at both academic and professional levels and communicate across time and space. According to the English author Bulwer-Lytton (1839, p. 89) “The pen is mightier than the sword”. This quote emphasizes the significance of writing and marks its enormous impact beyond its limited expectations. Researchers have agreed that writing also enhances thinking performance, forcing the brain to focus and connect thoughts into a text also understand ones’ own thoughts. Walsh (2010) emphasized the importance of writing in higher education and within workplace. Students who lack the skill may struggle, since most of professional communication with professors, employers, and peers or anyone else occur in a written form such as proposals, e-mails, applications, reports, preliminary interviews and more. Adding to that it is used to enhance language proficiency, as stated by Harmer (2004) “Writing has always been used as a means of reinforcing language that has been taught. In its simplest form, teachers often ask students to write sentences using recently learnt grammar.”(p. 32).

### **1.4 Elements of Writing**

A good piece of writing requires several key pillars that should be taken into consideration. Starkey (2004) highlighted five main elements to make a good writing, including: organization, language use, clarity, coherence, and mechanism. Students grasping and applying these elements in their writings can achieve a clear and a well-structured piece of writing. By understanding and applying these elements, students can produce written communication that is more compelling, persuasive, and impactful.

#### **1.4.1 Organization**

One of main elements of a well-crafted-writing is organization. It is related to the structure of the content, both logically and coherently. Organization involves achieving unity and cohesion in a paragraph, by planning before writing, stick to the theme, include transitional words to connect ideas, and follow logical order. Growet (1995) stated that the quality and the value of a written text depends on organizing ideas, which requires the writer to use appropriate and relevant vocabulary. It helps both organizer producing a well-written piece, and the reader in which Starkey (2004) declared that organization provides a clear direction for the reader to understand your idea and follow it eagerly. Moreover, organization not only facilitates reader comprehension but also reflects the writer's critical thinking and understanding of the subject matter.

#### **1.4.2 Word Choice**

Word selection reflects the writer's linguistic competence, and his ability to write clearly and effectively. As defined by Nickelsen (2001), word choice refers to the selection of

specific and precise words that facilitates effective communication between the writer and the reader. According to Starkey (2004), there are two essential features to take into consideration when choosing words to convey ideas. The first one is denotation, defined as “literal meaning of the word” (Starkey, 2004, p. 21). And the second one is connotation, referring to the suggested meaning beyond its literal definition. It is associated with emotions and cultural associations. Being aware of these two features when selecting words during the writing process will help the writer to avoid unwanted situations, such as being misunderstood by the readers.

### 1.4.3 Clarity

Clarity in writing involves expressing ideas in a simple, clear, and precise way, so it can be easy to understand. According to Murray and Hughes (2008) “clarity is essential, so you need to make your writing as easy to read and accessible to your readers as possible” (p. 86). And to achieve clarity in writing, Starkey (2004) suggested four key principles:

- a. **Exclude ambiguity:** words or phrases referring to two or more interpretations or carry various implications should be avoided, in order to convey the intended meaning by the writer to the reader.
- b. **Employ powerful, precise adjectives and adverbs:** being aware on how to effectively influence the reader’s point of view by using the right adjectives and adverbs can achieve clarity.
- c. **Be concise and use active voice:** Starkey (2004) argued that “wordiness is boring and takes up valuable time and space...There are two equally important approaches to more concise writing: eliminating unnecessary words and phrases, and using active (as

opposed to passive) voice.” (p. 15), highlighting the need of brevity for a high-quality written piece.

- d. **Avoid unnecessary repetition:** writing the same words, phrases or ideas for more than the required times can destroy the clarity of a written piece, decreasing its quality and making it confusing and dull.

### 1.4.5 Coherence

Coherence is the quality of a text in which ideas are logically organized and clearly connected, allowing the reader to easily understand the relationship between them. According to Murray and Hughes (2008), “Coherence is perhaps the single most important element in any kind of writing.” (p. 45). This highlights the role of coherence beside other elements in writing that cannot be neglected or missing. To make a coherent piece of writing, Gebhardt and Rodrigues (1989) mentioned four tools:

- Repetition of words, thoughts, phrases...etc.
- Synonyms.
- Pronoun reference.
- Transitional markers. ( Cited in Keshta & Harb, 2013, p. 210)

### 1.4.6 Mechanism

Mechanism is one of writing essential elements and “Writing, like any other skill, has its 'mechanical' components.” (Harmer, 2004. p .44). According to Starkey (2004), these mechanical components include grammar, punctuation, and capitalization. Mastering and paying attention to these elements is crucial in academic writing, as making errors at these areas can confuse the reader, decrease readability, and obscure the intended meaning.

### **1.4.6.1 Grammar**

Grammar is a key element in writing and language in general; it refers to the unconscious rules that direct individuals when using language. It can also refer to the conscious rules taught in formal study settings like classrooms. It is important for writers to know the different parts of speech such as nouns, verbs, pronouns, and other, as well as the arrangement of words (such as verb tense, subject- verb agreement, verb agreement, pronoun usage), sentence structure, phrases and clauses to ensure clear, coherent, and correct sentences

### **1.4.6.2 Punctuation**

According to Angelillo (2002), punctuation is an essential component of a strong writing repertoire. It consists of various marks; each of them has its function and impact on the sentence. For instance, the comma (,) separates elements, the period (.) indicates sentence endings, the colon (:) introduces explanations or examples, and the semicolon (;) separates complex items or connects related ideas, etc. It is crucial for the writer to know why and where to punctuate properly to produce a well-written letters and easy to grasp. The use of wrong mark of punctuation at the wrong place can make a drastic change of meaning or sometimes convert the sentence to a complete nonsense, for instance:

I like cooking my family and my pets.

I like cooking, my family, and my pets.

### **1.4.6.3 Capitalization**

Capitalization is very important in academic writing, in which the writer is supposed to follow up a set of rules. According to Starkey (2004), capitalization is only necessary in six situations:

1. The initial word in a sentence.
2. Proper nouns such as names of people, places, and things.
3. The initial word of a full quotation, but not a partial one.
4. The first, last, and other significant words in a title.
5. Languages.
6. The pronoun I and any contraction made with it.

Proper capitalization assists readers to recognize the different parts of a text, the beginning of a sentence, proper nouns such as names of countries or titles of movies. Additionally, it maintains the correct structure of sentences and completed quotations, all of which ensure clarity and readability in writing. It helps the reader to grasp the meaning a word or a phrase is referring to. This can be illustrated by two words: “Turkey” and “turkey”, the first one is capitalized and refers to a country while the second one is not capitalized and refers to a type of birds.

### **1.5 Writing as a Process**

Writing process refers to a series of stages that writers respect in developing thoughts and expressing them properly in a piece of written work, as Zemach and Rumisek (2003) states “ when we write, we do more than just put words together to make sentences. Good writers go through several steps to produce a piece of writing.” (p.3).

While writing stages may differ from one writing specialist to another, it mainly includes pre-writing, planning, drafting, revising, editing and finally publishing. Following these writing stages helps students improve their writing, making strong comprehensive thoughts, reduce mistakes and result in a high quality piece of writing.

### **1.5.1 Pre-writing**

Pre-writing is the first stage of the writing process, according to Zemach and Rumisek (2003), it involves three steps: choosing a topic, where the teacher provides the students with a particular topic and supporting ideas to develop and help student get started. Students may also choose their own topic. The second step is gather ideas, where the students reflect on the ideas regarding the selected topic. The final step is organizing, students should select the ideas they intend to use and organize them based on where they want to use it. This involves deciding which idea to present first, which one is next, and which one is last to talk about.

In this stage writers can use drawing, thinking, listening to records, discussion, brainstorming or mind-mapping to generate their ideas, and consult library materials and research, and so on.

### **1.5.2 Planning**

A proper writing begins with a good planning as stated by Lipson (2005), it helps writers develop a plan and organize their ideas preventing them from becoming distracted by irrelevant thoughts. Therefore, planning is one of the most essential stages in the writing process.

### **1.5.3 Drafting**

During this stage, the writers start to write and develop their topics on paper. They focus on creating a rough draft, without worrying about grammar, appropriateness, and spelling prioritizing quantity not quality to produce as many sentences as possible within a

limited timeframe. As the writing process continues, the rough draft can be revised and polished later.

### **1.5.4 Revising/ Reviewing**

This stage is before editing stage; the writers review, revise and reorganize the draft's content by adding, or deleting content to better convey their thoughts and achieve clarity, coherence and effectiveness. Hedges (1988) considers revising as the stage which distinguishes good writers from poor writers, as she mentions that, “ Good writers tend to concentrate on getting the content right first and leave details like correcting spelling, punctuation, and grammar until later” (p.23).

### **1.5.5 Editing**

Harmer (2004) explains that in the editing process, students read their drafts again to review their writing and identify any mistakes. In this stage, writers add finishing touches by paying attention to smaller details such as grammar, punctuation, capitalization, and handwriting. They carefully focus and correct errors to ensure their work is error-free and well-crafted.

### **1.5.6 Publishing**

Publishing is the last stage of the writing process; it refers to the submission of the writing to its intended audience. At this level, students present and share their final piece of writing to an audience of teachers, classmates, other students, friends, parents, and even AI tool.

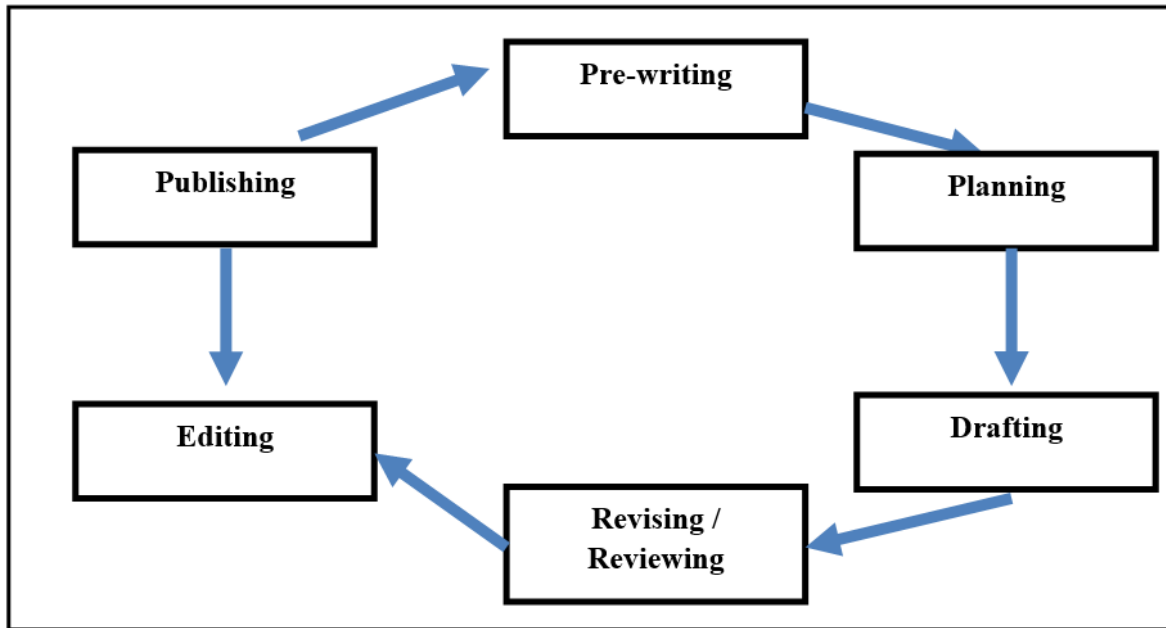


Figure 1.1. The Writing Process

### 1.6 Reasons for Teaching Writing

The ability to write effectively is highly important. It has a significant contribution to the students' success, not only academically and professionally but also personally and socially. Writing plays a main role in English as a Foreign Language (EFL) education, it enables students to express their ideas clearly, reflect on their understanding of a subject matter, and think critically using language.

According to Harmer (2001), there are three main reasons for teaching writing to students of EFL, including:

#### a. Reinforcement

After studying a new language, most students find it helpful to write what they learned to build a stronger writing ability. Harmer (2001) argues that “The majority of students

acquire language in a purely oral / aural way, most of us benefit greatly from seeing the language down. Therefore, written language can be traced greatly in the memory than the oral way. Students often find it useful to write sentences using new language shortly after they had studied it.” (p. 79).

### **b. Language Development**

The writing process supports students to learn while progressing, similar to how the speaking process develops students’ understanding. Harmer (2001) explains “The mental activity we have to go through in order to construct proper written texts is all part of the ongoing learning experience.” (p. 79).

### **c. Learning Style**

The learning style may differ from a learner to another as some are very quick at acquiring language just through listening and observing, while others may need a short additional time. Harmer (2001, p. 79) also notes that “For many learners, the time to think things through, to produce language in slower way, is invaluable. Writing is appropriate for such learners.”

### **d. Writing as a Skill**

Writing is a fundamental skill in language learning no less important than the other three language skills including listening, speaking, and reading. Students are required to know how to write different types of texts including formal and informal letters, essays, summaries, reports, research papers, and many more. It gives students an opportunity to excel academically and personally.

### **1.7 Errors in Writing English as a Foreign Language**

Writing is a key skill in language learning; however writing well is a difficult task for students, particularly those who learn English as a foreign language including EFL learners. English is often taught in school allowing learners to excel academically by developing critical thinking skills, and socially by improving their ability to communicate ideas easily. Errors are an integral aspect of writing process, especially in the EFL contexts. They are a reflection to the learners' progress, revealing what has been learned and what needs more attention. According to Brown's theory (1980), there are two sources of errors:

#### **1.7.1 Interlingual Errors**

Interlingual mistake is the most common reason of errors. As mentioned by Corder (1981), Interlingual errors take place when learner's established habits such as patterns, systems, or rules interfere or hinder the learning process of patterns and rules of the second language to a certain level. Students use the same rules of their first language and the second one. For example:

- "The car of John" instead of "John's car".
- "A diamond ring very expensive" instead of "A diamond ring is very expensive".

#### **1.7.2 Intralingual Errors**

It is the second type of errors, where students may make some mistakes in the process of acquiring a second or a foreign language as they are not familiar with it, finding it difficult to use. According to Richard (1974), intralingual interference refers to language produced by learners; that reflects the generalizations resulting from the limited exposure to the targeted

language, rather than the structure of the mother tongue. There are four main categories of intralingual mistakes:

### **1.7.2.1 Overgeneralization**

This type of error happens when language learners produce an incorrect form based on their knowledge of other patterns in the target language. For example, a learner may generalize the “ed” past form and write “eated” instead of “ate”. Another example, adding “s” to irregular plurals and write “childs” instead of “children”, and so on.

### **1.7.2.2 Ignorance of Rule Restrictions**

It is a result of learners’ failure to observe the restrictions of existing rules to eventually applying them in the wrong place. It can be due to analogy or memorizing rules without fully grasping their limits. As an example, a learner applies the rule of a verb following another verb should take “to”, ignoring the exceptions of verbs ( like “made”) and write “ He made me to lie” instead of “ He made me lie” .

### **1.7.2.3 Incomplete Application of the Rules**

It may occur when the language learners do not fully apply the grammatical rule of the targeted language, due to the lack of understanding sentence structure. For instance, a learner may not complete a conditional rule and omits the future auxiliary “will” and write “If I pass the exams, I travel” instead of “If I pass the exams, I will travel”.

### 1.7.2.4 False Concept Hypothesized

It results from the learners' mistaken knowledge about how a specific rule or structure works. To illustrate, a learner wrongfully assumes that adding the third person singular "s" is a must even after the modal verb "can" writing "She can cooks well" instead of "She can cook well".

Errors can serve as a tool and helps students learn. Moreover, addressing and analyzing errors helps identify learners' area of strengths and weaknesses. It also helps develop strategies and enhance accuracy and fluency.

### 1.8 Writing Strategies for Second Language Learners

Students should be reminded that writing is a process of continuous improvements, and their first draft does not have to be perfect and flawless but mistakes are lessons to learn from. The following writing strategies Identifies by Proficient Student Writers, who were undergraduate students in English as a Foreign Language (EFL) program (Abas & Abd Aziz, 2018) seek to help EFL learners avoid the errors discussed above, and build a high confidence in their writing capacities.

1. Focusing on mechanism of writing: during the editing phase, each participant carefully reviewed their work word by word, fixing any spelling, grammar, and punctuation mistakes as soon as they were noticed.
2. Relating the Topic to Past Experience and Knowledge: in the drafting and planning phases, participants related topic with their prior experiences and knowledge. Because of that, they were able to write smoothly and confidently.

3. Talk Writing: before writing, ideas were planned verbally and arranged. To prepare their structure, several participants outlines and spoke their ideas out loud
4. Free writing: in order to develop ideas, writers wrote continuously for a brief periods of time without worrying about the audiences or form. They were able create materials for every paragraph.
5. Outlining: it starts when writers list the main points they wish to address in their writing without worrying much about order (Williams, 2003).The outlining technique was employed in the planning and pre-writing stage. After receiving the topic, participants began the pre-writing stage by brainstorming ideas. In order to help them recall the ideas, they wrote all of them on a sheet of paper. Then they wrote outlines restating each paragraph in their writing.
6. Listing: a type of pre-writing strategy that allows writers test out their concepts is listing. A participant carried out listing by mapping her ideas. She created four categories, and then linked them to ideas or subcategories. They were four to five concepts in each area. She generated ideas based on the topic. The mind map helped her by examining the key points and supporting details. Listing is a step in the planning process.
7. Using Online Materials: whenever the participants encountered problems or ran out of ideas, they turned their devices which included a laptop, tablet and Smartphone. One participant was hesitated multiple times when he was not capable to locate a word in English; he searched for the right word using an online dictionary.
8. Seeking Help: the participants were engaged students. When they were stuck or ran out of ideas, they were unable to sit still. Only two participants asked the researchers when something was unclear and needed clarification. For example, a participant could not

recall the spelling of “surveillance”, “juvenile” and “delinquency” so she asked the researchers for the proper spelling.

9. Taking the Readers into Consideration: this method was used throughout the planning stage. The participants considered their readers as they were developing their work and ensured that the vocabulary they used would be understood by them and that they would find their piece interesting. To ensure that the writing matched their plan, they frequently reread the task.
10. Text Organization: by using separate sheets for planning, drafting, and final versions, participants were able to maintain the organization of their drafts. Second drafts were well-written and occasionally edited for improvements.

### **1.9 Conclusion**

As a conclusion, writing is a crucial yet challenging and complex skill for learners to master. This section has included its definition, importance, and core components. Moreover, it has discussed writing errors made by EFL learners and strategies ranging from traditional classroom techniques such as free writing and listing to the use of online resources. In the recent years, technology has become increasingly integrated in education. Artificial Intelligence tools such as ChatGPT offer new and significant opportunities to support learners with their writing process. The next section will present ChatGPT with a focus on its potentials as a writing assistant to EFL learners in developing their writing skills.

### Section two: Integrating ChatGPT in EFL Writing

#### 1.1 Introduction

In today's world and with the rapid development of Artificial Intelligence (AI), the latter has become an indispensable aspect of humane daily life. It significantly has impacted the field of education, presenting a variety of tools that enhance teaching and learning process. Among these tools, ChatGPT, developed by OpenAI, capable of generating human-like responses, is increasingly integrated into educational settings for various aspects. In the context of English as a Foreign Language (EFL), the implication of ChatGPT has sparked critical discussions questioning its perceived effectiveness, particularly its role as a writing assistant. This section investigates various aspects of ChatGPT in EFL writing. It begins with a definition and background of AI and ChatGPT, their application in education, followed by guidance on how to use the tool effectively, including steps for writing a well-crafted ChatGPT prompt. It examines the advantages, as well as the limitations associated with ChatGPT's use in writing. Finally, it discusses ChatGPT teachers' and learners' perceptions regarding its application in classrooms.

#### 1.2 Definition of Artificial Intelligence

The term was first coined by the father of Artificial Intelligence John McCarthy (2007, p.2). He defines AI as "the science and engineering of making intelligent machines, especially intelligent computer programs". Artificial Intelligence has also been defined as "making a machine behaves in ways that would be called intelligent if a human were so behaving" (McCarthy & al., 1955, p12). When regarded as a discipline, it is defined as a branch of computer science that deals with the imitation of human-like intelligence behavior by

computers (Merriam-Webster Dictionary). Although AI is commonly associated with simple task, ChatGPT does not focus only on the development of human-like intelligence systems, but also aims to deepen the understanding of human intelligence and its connection to cognition and navigation of an extensive and dynamic world (Russel & Norvig, 2010). Coursera (2023) explains that AI, as computer systems is capable to perform sophisticated tasks traditionally associated with human intelligence, such as problem-solving, reasoning, and decision making.

In contrast with the previous definitions, Elon Musk, the software entrepreneur and CEO of Tesla and SpaceX (Twitter formally), defines AI as a major threat to the existence of human civilization (Musk, 2017). Also, Rich et al. (2009) define AI as “the study of how to make computers do things which, at the moment, people do better” (p.3).

### **1.3 AI in Education and Language Learning**

Artificial Intelligence (AI) has been applied and has shown its effectiveness in dealing with complex tasks in various fields including education. With the continuous evolvement of AI in the world, it can transform the way education is structured. According to Bojorquez and Vega (2023), AI has the potential to reshape education by enhancing learners’ experiences, assisting teachers, and offering more personalized learning opportunities. Therefore, the learning process has become easier and more convenient for students. They can adjust their learning based on their lacks, abilities, interests and needs. This shift is significantly notable in the context of foreign language learning. Wei (2023) supported this by stating that available AI-assisted language learning tools can assist language learners in their learning and enhance various language skills. It can provide learners with strategies that can help them master the

language easily and effectively. Moreover, AI can detect grammar and spelling errors (Alharbi, 2023; Park, 2019). It can also help learners with immediate feedback (Zaghlool & Khasawneh, 2023).

One prominent example of AI-assisted language learning tools is ChatGPT, which has reshaped how learners learn and practice language skills. According to Huang et al. (2022), chatbots such as ChatGPT can fulfill various functions in enhancing language learning.

### **1.4 Definition of ChatGPT**

ChatGPT or Conditional Generative Pre-Trained Transformer (Open AI, 2023), a large AI language platform developed by Open AI, It was released to the public between November 27<sup>th</sup>-30<sup>th</sup>, 2022.

Open AI is an American non-profit research company based in San Francisco, California, founded by Sam Atman and Elon Musk, two software entrepreneurs. ChatGPT's rapid spread has captured public attention, with over 100 million users registering within just two months of its launch.

ChatGPT is designed to generate human-like interactions by interpreting conversational context and providing appropriate responses (Deng & Lin, 2023). ChatGPT has several functions, including but not limited to translating languages, creating content and providing customer support. Furthermore, it can also assist in writing, generating codes, decision making, referencing and citation, and analyzing data.

### **1.5 ChatGPT in Education**

ChatGPT became a popular option for teaching and learning due to its notable ability to generate large volumes of text and content (Biadoo-Anu & Owusu Ansah, 2023). ChatGPT has significant advantages which are probably going to extend to a number of variables that influence the success of language acquisition, including level of motivation, strategy use, self-regulation, autonomy and culture (Murphy et al., 2023)

Atlas (2023) confirms that ChatGPT has the potential to support teachers in various aspects of their instructional design, including generating quizzes, exams and syllabi, Additionally, ChatGPT serves as a valuable tool for educators, not only in the area of education, but also in facilitating classroom management through the implementation of more effective pedagogical strategies, as claimed by Harini (2023). Next, Huang et al. (2022) reveal three technological advantages of using chatbots for language learning: timeliness, simple use and personalization, and report that the chatbots are helpful in promoting social presence among students through emotional, authentic and coherent discourse. Finally, ChatGPT has the ability to provide learners with personalized language practice, immediate feedback and a sense of self-sufficiency which can increase motivation and reduce anxiety (Murphy, 2023). It uses a large dataset to generate text responses to student inquiries, feedback, and prompts (Gilson et al., 2023).

### **1.6 How to use ChatGPT**

According to Bairel (2023), ChatGPT was described as the most rapidly growing consumer AI model in the current era, surpassing major tech platforms' timeframe for reach

## Chapter one: Enhancing EFL Writing Through ChatGPT

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one million users including Twitter (720 days), Facebook (300 days), and Instagram (75 days) (Firat, 2023). To use ChatGPT, follow these simple steps:

Go to the website <https://chat.openai.com/> and log in or sign up. (Use your email address or a Google or Microsoft account)

After you log in using the web version, the home page looks like this:

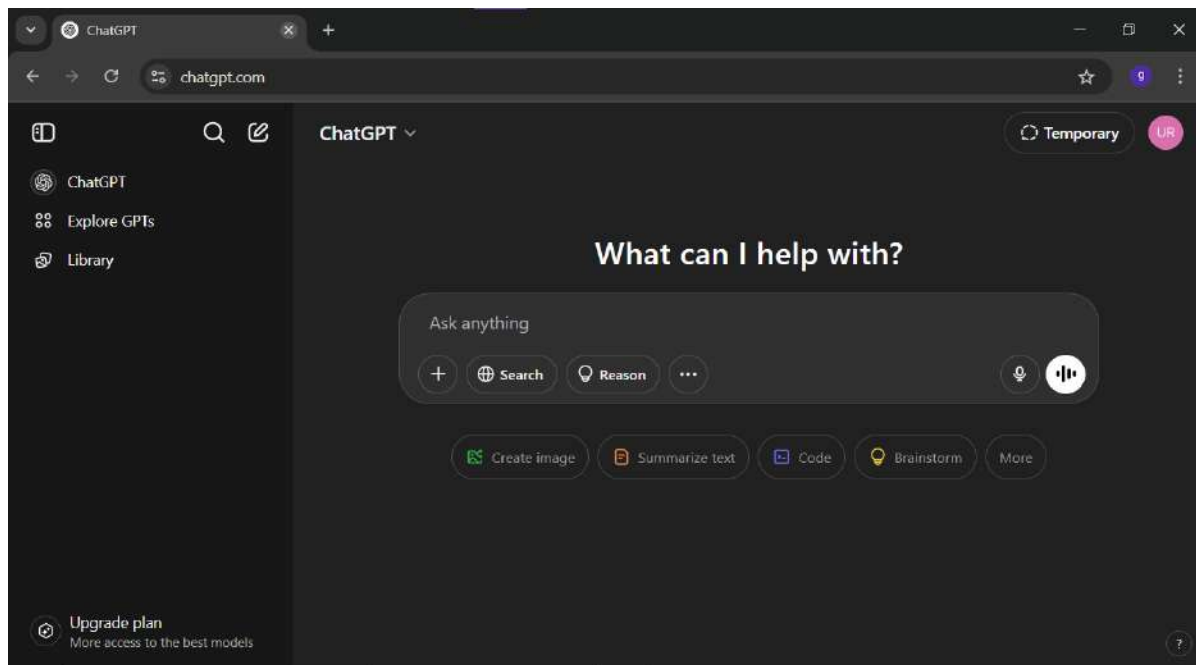


Figure 1.2 ChatGPT-4 Turbo model Homepage (April 2025)

- To select a ChatGPT model, at the top you can choose a model such as ChatPT-4 mini.
- Based on the model you are using, you can see the available options like Search (search online), or Reason (for detailed analysis). In addition, you will see a plus button (+) that allows you to upload media, such as images, files.
- Click on your profile and get more options, such as settings and regulate features to your preferences.

- You can share your work with others by clicking on the Share button on the top-right.
- Next to the chat box you can find a microphone icon to dictate and a voice mode icon allowing students to speak and listen to ChatGPT responses.
- Type in the chat box where it says “Ask anything”; make sure to be clear and specific when asking to help.
- Click on the right-pointing arrow and get a response in a few seconds.
- Read the response carefully and check if it makes sense as ChatGPT can make mistakes.
- The chat is saved in the left-hand menu. You can rename it or delete the chat. Clicking on the Temporary Chat button in the top-right, will prevent the chat from appearing in the history.
- You can use ChatGPT at anytime to learn, write, or just to chat. Do not copy using ChatGPT, and follow your intuition’s rules on using AI as an assistant.

### **1.7 ChatGPT Prompt designing**

A prompt is a particular instruction or input given to an AI model such as ChatGPT to generate desired response. Prompt ranges from simple short questions to complex analytical requests, guiding the AI model behavior and input. The quality of the generated response depends on the quality of the prompt as it plays a significant role in bridging the gap between user demand and model comprehension. The steps required for a good prompt are illustrated in figure2.2 (Durieux et al., 2024), there are five practical steps to follow, explained as follows:

- 1- First Step: you need to clearly mention the prompt aim, and use verbs such as ‘write’ or ‘generate’ for text creation or enhancement. In contrast, use verbs like ‘summarize’ or ‘extract’ for text extraction or analysis.
- 2- Second Step: begin with a simple prompt, this would help to assess the initial performance of ChatGPT. Starting from the initial attempt, the prompt can be re-defined to improve the outcomes.
- 3- Third Step: refine and specify the prompt , this includes the following:
  - a. Add Context
  - b. Provide ChatGPT with context, in which you employ phrases explaining the situation.
  - c. Specify Output Format: by specifying which format suits the task (for example bullet points, tables, or lists), you can help produce well organized outputs
  - d. Include Examples: illustrate the desired output format, and include it in the prompt with examples. Additionally, you can use example to guide ChatGPT’s performance on a particular task.
  - e. Adjust Prompt Length: the size of the input is a crucial aspect in prompt editing. For large input, it is better to break it down into smaller parts to improve performance.
- 4- Fourth Step: refine the prompt further, in order to achieve the desired output. Trial and error is an important part of prompt refinement, and even small phrasing changes affect the quality of the output significantly.

- 5- Fifth Step: re-evaluate and update prompts regularly: since AI models evolve continuously, you need to consider adjusting your prompts over time to maintain consistent performance.

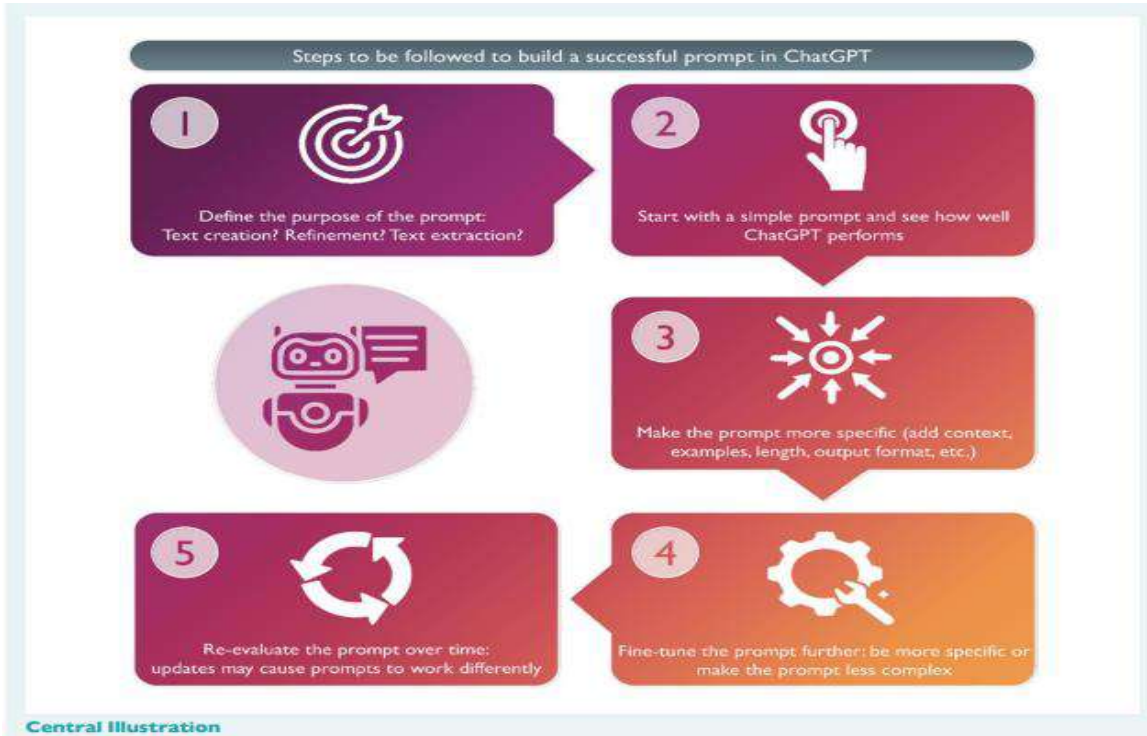


Figure 1.3 Steps for crafting an effective prompt in ChatGPT (Durieux et al., 2024)

### 1.8 Benefits and Limitations of ChatGPT implementation in Writing

According to Ajlouni et al. (2023), ChatGPT is a crucial and valuable learning tool that is available to nearly anyone with an internet connection. With ChatGPT in use, the knowledge gained can help to bring deep discussion and argumentation to every writing process and activity to be substantial and meaningful (Zuckerman et al. 2023; Huang and Tan 2023). Its implementation as a writing support tool offers a promising opportunity to enhance writing proficiency among EFL learners (Han et al., 2023).

ChatGPT has several benefits for EFL writing, which are outlined in the following section

### **1.8.1 Benefits of Using ChatGPT in EFL Writing**

In the context of English as a foreign language (EFL), ChatGPT offers several advantages that can improve students' writing skills, including:

#### **1.8.2 Providing Feedback**

This involves giving immediate feedback and guidance to each learner on their writing. According to Baskara (2023), AI tools such as ChatGPT guides learners by providing explanations of meaning and specific use of a vocabulary, offering examples of correct grammar and syntax, it also guides students in structuring sentences and paragraphs effectively. In addition, AI- powered feedback systems, such as ChatGPT, can analyze students' work and provide them with tailored suggestions, helping them improve their writing skill (Jaraah, Wardat, & Fidalgo, 2023), these suggestions and modifications provided by ChatGPT play a crucial role in enhancing vocabulary use and refining sentence structure, which in turn improves the overall quality of students' writing, as noted by Faiz et al. (2023).

#### **1.8.3 Generating Materials**

ChatGPT has the ability to generate a substantial amount of text in a wide range of genre that supports the development of writing skills, providing samples, exercises, or tasks. It has the ability to produce text tailored to various language proficiency levels and translate between different languages (Murphy, Wotley, & Minn, 2023). Additionally, ChatGPT can

generate targeted vocabulary lists or grammar focused exercises that reinforce learners' linguistic accuracy, eventually enhancing learners' writing skills.

### **1.8.4 Expanding Ideas**

According to Meniado, Rahman, and Watanobe (2023), Large Language Models (LLMs) are trained on vast datasets. Thus, ChatGPT has the knowledge required to respond effectively to the input entered by the user. It has the capacity to generate and adjust numerous ideas based on the submitted information (Fischer et al., 2023). Lingard (2023) adds "ChatGPT can be a good brainstorming resource" (p. 266), facilitating the comprehension of unfamiliar topics and structuring learners' titles and outlines.

## **1.9 Issues of Using ChatGPT in EFL Writing**

Despite ChatGPT's undeniable role in enhancing students' EFL writing skills, it is equally important to also consider its several drawbacks, including:

### **1.9.1 Plagiarism**

ChatGPT raises the concern of Plagiarism, the act of taking someone else's work, and adopts it as one's own work, without giving the appropriate credits. ChatGPT and other AI language models generate content from previous data and algorithms, where the EFL learners copy it, rather than writing an authentic work produced directly by themselves. Therefore, failing to attribute the generated content to its source can be considered as claiming it as one's original work (Jaraah, Wardat, & Fidalgo, 2023).

### **1.9.2 Overreliance**

Overreliance is a major threats posed by ChatGPT, as numerous teachers expressed concerns finding it difficult to differentiate between text written by human and an AI-generated text, as Shijaku and Canhasi (2023) state, “Generative models, such as ChatGPT, have gained significant attention in recent years for their ability to generate human-like text, it is still a challenge to automatically distinguish between text generated by a machine and text written by a human”. (p.1). Therefore, students may fully depend on ChatGPT and pass AI-text as their own written work, missing opportunities to enhance their writing skills.

### **1.9.3 Inaccurate feedback**

ChatGPT has a remarkable limitation, as the data and knowledge it provides are derived from anonymous and unreliable data sources (Jarrah, Wardat, & Fidalgo 2023). Therefore, the inaccurate feedback provided by ChatGPT can misguide learners and reinforce errors and poor writing strategies (Zakaria & Ningrum, 2023).

### **1.9.4 Biased Outputs**

As previously mentioned, ChatGPT is a LLM that has been trained on various domain data that may include biased or cultural discriminatory perspectives; their outputs could lead to unfair content. Baskara (2023) argues that AI and Natural Language Processing (NLP) tools such as ChatGPT may display bias, influencing the accuracy and reliability of the generated text. This, in turn, may hinder students’ learning and linguistic development. For example, an EFL learner asks ChatGPT to help write about family roles, but receives only response reflecting western ideas not recognizing other cultural family structures.

ChatGPT presents significant potential in EFL classrooms, as it enhances learners' writing skills. However, it also presents certain flaws that must be taken into consideration. Therefore, as long as ChatGPT is used properly and correctly to stimulate and strengthen learners' knowledge in writing, it is an appropriate and a valuable choice (Su, Lin, & Lai 2023; Zohery 2024).

### **1.10 Teachers' and Students' Perceptions of ChatGPT**

With the rapid diffusion of ChatGPT in educational context, reactions range from positive to negative as multiple broader studies, including Mahapatara's study (2024), found that students' perceptions were mostly positive. Similarly, another research by Ajlouni et al. (2023), indicates that students had a generally positive attitude on using ChatGPT as a valuable learning tool. Nguyen (2023), found that teachers are enthusiastic about using ChatGPT in writing lessons. Others suggest that it represents an extraordinary opportunity to improve student learning and access, especially students from underprivileged backgrounds (Sullivan et al., 2023). In contrast, educational institutions express reservations about the potential risks of ChatGPT, particularly concerning cheating (Willems, 2023). Also fear for the future of education, particularly writing instruction (Herman, 2022; Weissman, 2023). Therefore, many academicians advocate for regulations concerning the use and implications of AI tools in educational settings.

Overall, most attitudes towards AI in education are generally positive, as in the context of English as EFL instruction, ChatGPT, an advanced language generation model, has gained prominence for its potential to enhance language acquisition, especially in writing proficiency

However, concerns of over-reliance, cheating, plagiarism, and similar issues may cause many educational intuitions to hesitate before adopting ChatGPT. Therefore, many academicians advocate for regulations concerning the use and implications of AI tools in educational settings.

### **1.11 Conclusion**

To conclude, the role of Artificial Intelligence is increasingly growing in education, with many expressing interest, yet the integration of AI tools such as ChatGPT in EFL classroom, particularly within the Algerian educational settings, is still emerging in research. Previous broader studies have investigated the capabilities of AI in enhancing writing skills, including grammar, vocabulary, and coherence. However, there are limited comprehensive studies assessing and the unique challenges faced by the Algerian learners when using language learning AI tools as well as the opportunities offered to them. In addition, previous literature often lacks studies that explored how learners' original written outputs (e.g., writing tests) can be enhanced by AI feedback, and how students perceive such changes. Additionally, the perceptions of both students and teachers towards ChatGPT remain unexplored in the Algerian educational context.

With the previously mentioned gaps, this study aims to investigate how ChatGPT can be used as a writing development tool among first-year EFL university students. Through a combination of writing tests, pre and post student questionnaires, and teacher interviews, this research aim to explore the effectiveness of AI tools such as ChatGPT as a writing assistant for first year EFL students, and to explore students' and teachers' perceptions of its opportunities and challenges as a writing tool within Algerian EFL classrooms.

**Chapter two: Research  
Methodology and Data  
Collection**

### **2.1 Introduction**

This chapter is dedicated to the methodological framework of the present research. It provides a comprehensive overview of the research methodology employed to investigate the effectiveness of ChatGPT in improving the writing skills in Algerian EFL classrooms, particularly first year university students. It begins with presenting the research aims and motivation of the current research, in addition to the details on the research design. Moreover, this chapter describes the sample population and the research settings, followed by the main data collection instruments employed in this study, including questionnaires, writing test, and interviews with their objectives and details undertaken the data analysis methods. Finally, the section also presents the limitations of the study the methods and the ethical consideration to ensure privacy of the participants.

### **2.2 Research Aims and Motivation**

This study aims to investigate the effectiveness of ChatGPT as a writing assistant in enhancing the writing skills of Algerian first year EFL university students. Particularly, it aims to evaluate the effectiveness of ChatGPT's corrections and suggestions in improving key writing sub skills (such as grammar, spelling, coherence, punctuation, and word choice). It also aims to explore students' and teachers' perceptions of the opportunities and challenges offered by AI tools integration such as ChatGPT into EFL writing instruction.

Despite the global interest in AI assisting tools for language learning, limited empirical studies has been done within Algeria's large classes. Writing is a crucial skill but founded to be challenging by EFL students, and integrating AI is guided more by hype than by pedagogy. There

is a need to understand how AI tools such as ChatGPT can support EFL writing instruction by offering practical implications for EFL teachers and learners.

Ultimately, this research sought to existing knowledge in applied linguistics and didactics by demonstrating how ChatGPT can be integrated as a teaching tool to support and guide students' writing process, as students may not always get individualized feedback on their drafts. It also provides insights about ChatGPT's role in complementing Writing Comprehension instructors' teaching methods and eases their workload.

### **2.3 Research Design**

Understanding the nature of research is fundamental before discussing how it is structured. As Blaxter et al. (2006, p. 62) define it, "Research is a systematic investigation to find answers to a problem"; it is an inquiry that seeks to investigate a problem in order to provide a deeper insight. It serves as a necessary mechanism that shapes not only our perceptions of the world, but also the foundations of societal structure (Smith, 2006). In educational context, it influences the way knowledge is shared, received, and evaluated, overtime affecting learners' academic and personal growth.

When conducting an investigation, it is crucial for researchers to take the research design into consideration. A research design is a structured framework of methods and techniques selected by the researcher to integrate various components of a study systematically so that the research problem is professionally addressed. The current case study adopts a mix-method approach, combining quantitative and qualitative methods as it explores the effectiveness ("opportunities") and the barriers ("challenges"), as well as the attitudes ("perceptions") of ChatGPT integration in the EFL writing instruction, focusing on students' experiences and

## Chapter two: Research Methodology and Data Collection

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teachers' perceptions as well as students. Tashakkori and Creswell (2007) define mixed method research as "a research in which the investigator collects and analyses data, integrates the findings, and draws inferences using both qualitative and quantitative approaches in a single study or program of inquiry"(p.4). It allows the practice of combining different research approaches, including qualitative and quantitative methods, within a single study. According to Creswell (2014), "this mixing" or blending of data, it can be argued, provides a stronger understanding of the problem or question that either by itself" (p.215). Thus, researchers adopt the mix method approach employing both of the qualitative and quantitative approaches to enhance validity and reliability of the results.

The quantitative approach, defined by Alistair and Gunderson (2002) as the investigation of research questions or phenomena by gathering numerical data using mathematical techniques, particularly statistical analysis to interpret the results. In which the researcher computes the statistics and the quantity of responses provided by the participants employing questionnaires, polls, and online surveys. Creswell (2003) states that: "the quantitative research employs strategies of inquiry such as experimental and surveys, and collect data on predetermined instruments that yield statistical data." (p.18).The quantitative research is distinguished by its use of surveys and experiments, as it is constructed on existing theories (Leedy & Ormord, 2001). In this research, the quantitative strand is employed to produce clear, unbiased evidence regarding ChatGPT's effect on writing. Through the convention of students' tests into numerical scores, and quantify as well as compare students' writing performance with its ChatGPT correction via scores, the study could measure improvements in grammar, vocabulary, and coherence in a way that is reliable, comparable, and easily conveyed.

On the other hand, the qualitative approach works with non-statistical means but examines broader and profound insights into the real-world. Quantitative research aligns participants' experiences, perceptions, and behaviors. The researcher asks general questions such as 'how', 'why', and collects data in the form of words and analyses these words for themes. Ultimately, qualitative approaches are employed to collect participants' views by focusing on a particular concept or phenomenon, incorporating personal values to the research, examining the contexts or settings of participants, ensuring the accuracy of the results, interpreting data, and creating a framework for reform. (Bryman and Bell 2007; Creswell, 2009; Saunders et al., 2009). In this study qualitative stand is employed to explore the underlying experiences and perspectives of participants that lie behind numbers, providing an opportunity to understand not just that student improved, but how and why. Therefore, the study invited students and teachers to share their thoughts in their own words regarding the opportunities and challenges of using of ChatGPT in EFL writing instruction, allowing for reflective insights which cannot be purely captured through numerical data alone.

In this study, the researcher adopts ChatGPT as a research strategy, placing it at the center of intervention in the form of AI generated feedback on students' writing, and inquiry into students' and instructors' perceptions of its use. Under this approach, ChatGPT informs and shapes each phase of data generation from drafting to feedback to reflection. It starts with the researcher collecting the students' writing tests in class, then submitting their draft directly to ChatGPT, receiving immediate corrections, and then distributing them to the students to facilitate reflection on those corrections. By designing the investigation around ChatGPT's dual role as pedagogical agent and data source, this strategy ensures that this research design, data collection,

and analysis are explicitly aligned with evaluating and understanding the effectiveness of ChatGPT as a writing assistant in EFL writing.

### **2.4 Research Setting and Sample Population**

A sample refers to a portion of individuals selected from a larger population to represent information about that larger population (Shukla, 2020). It depends mainly on the case study research design. To effectively present conducted data collection instruments and procedures used in this research, it is essential to provide a concise, clear overview of the research setting and the target population.

#### **2.4.1 Students' Population**

This study sample consisted of 40 first year EFL students from the Department of English at Belhadj Bouchaib University of Ain Temouchent. They were part of two separate EFL classes from the academic year of 2024-2025, and they were all Arabic native speakers with different levels of proficiency in English, enrolled in the Writing Comprehension module. Initially, the number of participants was higher, but due to absences during data collection sessions, the final number of students participating was reduced to 40.

Students were selected purposely as they are in the early stages of developing academic writing skills, making them ideal for assessing the impact of ChatGPT as a writing assistant tool. Thus, they are more likely to benefit from scaffolding offered by ChatGPT.

#### **2.4.2 Teachers' Population**

Apart from students, three Writing Comprehension EFL teachers from the department of English at Belhadj Bouchaib University of Ain Temouchent agreed to take part in this research.

Those teachers have successfully participated in completing the interviews and handed back valuable responses.

The purpose behind this sample selection is that these instructors play a direct role in shaping students' ability to master academic writing and their experiences in teaching provide insights into how ChatGPT's corrective feedback enhances the pedagogical approaches that support the writing proficiency of students and proposing pedagogical integration of ChatGPT in EFL instructions.

### **2.5 Data Collection Instruments and Procedures**

In undertaking any research, it is essential to systemically select relevant research tools. According to Birmingham and Wilinkson (2003), "Research instruments are simply devices for obtaining information relevant to your research project, and there are many alternatives from which to choose" (p. 3). Thus, research instruments are the tools utilized by researchers in order to gather data during their research investigation, all these instruments are equally important. This study relies for the data collection on three instruments namely writing test comparing original and ChatGPT corrected versions, pre and post questionnaires and interviews. The three of the instruments play a crucial role in facilitating comprehensive and accurate data collection, providing both quantitative and qualitative data, which align with the study objectives of assessing the effectiveness of ChatGPT in enhancing EFL writing skills among Algerian first year EFL students and explores the perceptions of both students and teachers regarding its pedagogical benefits and challenges. It took about four to five weeks to collect data. The data collection was organized into several stages illustrated in the figure 2.1.

### 2.5.1 Students' Writing Test

In the first week and immediately following the pre-questionnaires, the students were asked to complete a writing task individually during a regular Writing Comprehension class in a period of 30 minutes; each participant was identified with a number (e.g., student number1) to ensure anonymity. The writing task was in a form of a small test, each participant was asked to write a paragraph under classroom supervision and without using any external resources such as AI tools. The choice of topic was optional, as well as other topics were suggested in order not to waste time. The aim of the original drafts was to serve as a baseline for a comparison with the corrected versions by ChatGPT. Moreover, it is done to evaluate the nature of changes and the notable improvements made to the students' writing samples in term of text' clarity, grammar, coherence, and word choice or others if there is any.

During the first week and into the second week , each student's original draft was entered by the researcher as an input into ChatGPT (version February 2025), as part of the research strategy to generate a corrected version using the same exact prompt "Correct the grammar, word choice and overall coherence in the following student's writing", then in the second week students were provided with their original writing drafts accompanied by ChatGPT's corrected versions without further edits to facilitate comparison. The aim of ChatGPT's corrected versions was to analyze and assess the potential improvements in writing performance made by AI assistance in terms of the grammar, spelling, punctuation, and word choice or others.

To sum up, this comparison had two purposes:

(1) It assisted students in reflecting their perceptions when answering the post-questionnaire.

(2) It provided the study with significant insights into the potential effectiveness of ChatGPT as writing assistant tool.

### **2.5.2 Students' Questionnaire**

According to brown (2001), questionnaire is defined as “ any written instruments that present respondents with series of questions or statements to which they are to react either by writing out their answers or selecting from among existing answers”(p. 6). Similarly, Macky and Gass (2005) define questionnaires as tools used to collect data which “allow researchers to gather information that learners are able to report about themselves, such as their beliefs and motivations about learning or their reactions to learning and classroom instruction” (pp.92-93). In this sense, the paper form of the questionnaires was distributed to first year EFL students from the Department of English at Belhadj Bouchaib University to gather data. The questionnaires were written in clear and simple English. Each questionnaire started with a brief introduction to explain the objectives of the study. Two questionnaires were employed in this study at different stages, pre-questionnaire and post questionnaire.

#### **a. Pre-questionnaire**

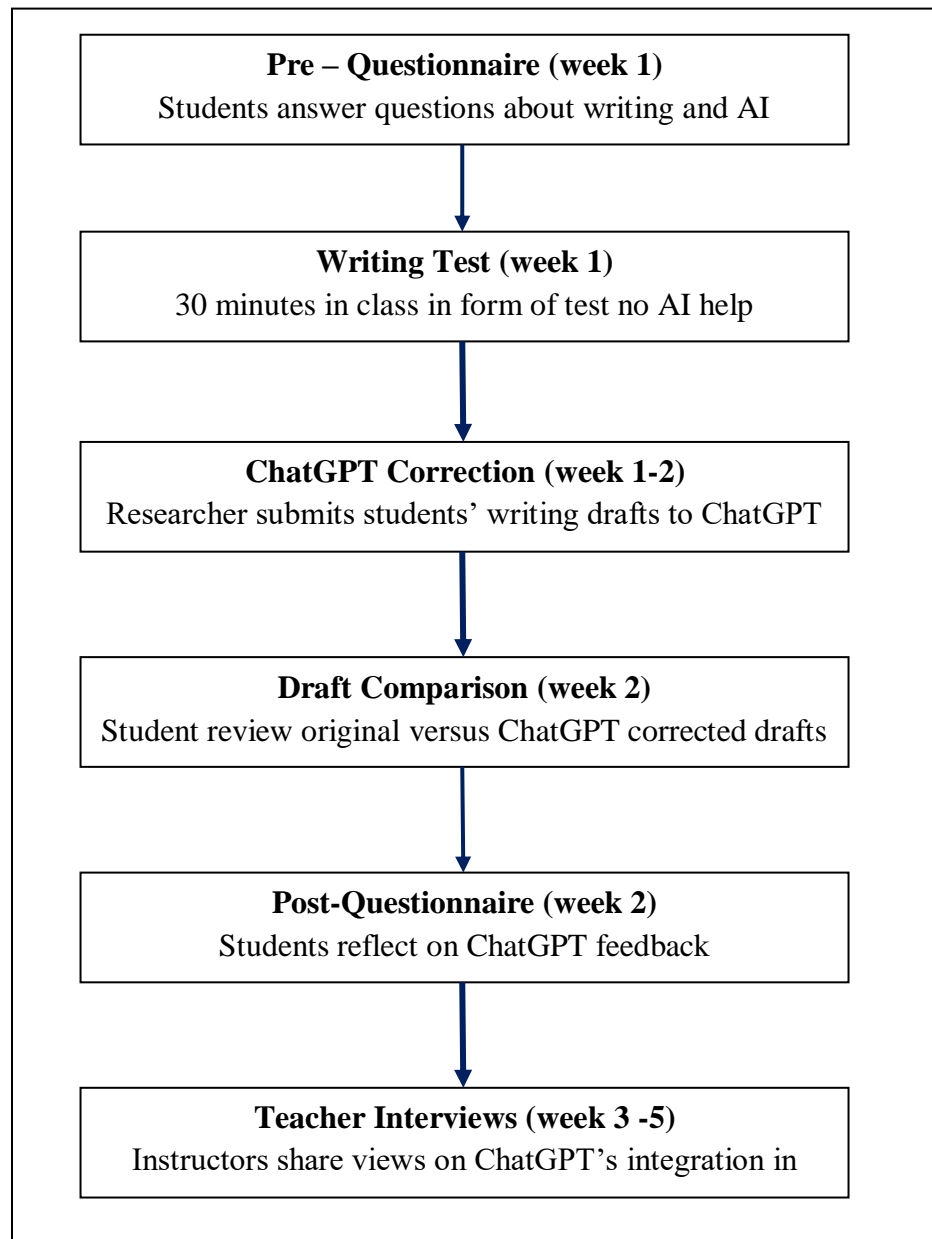
In the first week, a number of 40 first year EFL students from the Department of English at Belhadj Bouchaib University successfully completed a paper form of pre-questionnaire independently during Writing Comprehension class, spending about 15 minutes before taking the writing test. It consisted of yes/no question, open-ended questions, likert-scale items, and multiple-choice questions. It focused on students' writing habits and assessment of their own writing skills, the challenges they face when writing, and their prior personal experience with AI tools if there is any.

### **b. Post-questionnaire**

In the second week, post-questionnaires were administered to the same group of students immediately after they received their initial writing test with ChatGPT corrected version. They were asked to review and evaluate their original writing and AI-corrected drafts in Writing Comprehension class; the students spent about 20 minutes answering the questionnaire. The post-questionnaire consisted of questions, varying from Likert-scale questions, open ended questions, yes/no questions and WH questions. It was designed to reveal any changes in students' initial opinions, revealing their negative or positive perceptions of the ChatGPT corrected version and their perceived changes in their writing awareness.

### **2.5.3 Teachers' Interview**

A case-study of classroom requires the instructors' point of view. Thus, semi-structured interviews consisting of six open ended questions were conducted with three Writing Expression instructors from the department of English of Belhadj Bouchaib University between weeks three and five to gather insights into their perceptions on ChatGPT as writing assistant. As Paz-Soldanet al. (2014) explain, "the semi-structured interviews provided richer context and were easier to process...it was the only option for identifying locations retrospectively." (p. 2). The interview questions addressed teachers' Professional experience and their overall views on the use of AI tools in language learning, with particular emphasis on ChatGPT, and the integration of these tools in EFL classrooms given the options either participates facing to face interviews, submit audio-recorded responses, or send a written answer via email. It adds second perspectives, ensuring that conclusions are not one-sided.



**Figure 2.1 Data Collection Procedure of this study**

## **2.6 Data analysis methods**

Data analysis is the process of converting the collected data into meaningful insights or information. In this study a mix method approach was adopted in which both quantitative and

qualitative data were analyzed, allowing for a deeper understanding beyond simple measures of improvements, the study investigates the real world experiences and perceptions regarding the effectiveness of ChatGPT as a writing tool in EFL classrooms.

### **2.6.1 Writing tests**

Each of the students' writing tests was evaluated by using an internal analytic rubric, focusing on texts' clarity, grammar, vocabulary, and overall coherence. According to Brookhart (2013), a rubric is an organized set of criteria used to evaluate students' academic work. It was applied to allocate an overall score reflecting writing key components such as content, vocabulary, grammar, and overall coherence. Even though it will not be showcased in details, the same scoring method was applied on all students' writings. This study employed ChatGPT to generate standard response to the same writing prompts "Correct the grammar, word choice and overall coherence in the following student's writing"; due to ChatGPT's extensive training on the on diverse datasets, the produced outputs represented high quality content against which student writing can be compared to. Therefore, the students' writing tests scores were compared to the full score of ChatGPT writing Corrections using descriptive statistics. According to Kaur et al. (2018), descriptive statistics is concerned with summarizing and presenting data in a clear and meaningful way to describe its fundamental characteristics of a dataset using numerical measures, tables and graphical representations. It was selected in order to identify the scale of improvements, in a table contains students' writing tests scores and ChatGPT's corrected versions ideal scores and underscores the resulting gains. Certainly, the table was then followed by a descriptions and comments. This comparison aims to evaluate the effectiveness of ChatGPT as a writing assistant.

### **2.6.2 Students' Questionnaires**

Pre and post-questionnaires are used to capture the students' perceptions of ChatGPT as a writing assistant, also the specific benefits and challenges of ChatGPT in writing based on their experiences. The researcher adopted a descriptive statistics to compare responses before and after the intervention and to determine any changes in perceptions. The results achieved from the questionnaires were demonstrated in figures followed by a descriptions and comments.

### **2.6.3 Teachers' Interviews**

Semi structured interviews with Writing Expression module teachers were conducted to collect insights concerning their perceptions on the role and effectiveness of ChatGPT in students' writing improvement. All participating teachers opted to respond via email communication, which enabled them to answer the questions at their convenience in terms of time and location while also allowing for follow-up questions for clarifications or expansion.

The interviews questions were analyzed individually by the researcher using a thematic approach. It involved coding which is a core step to categorize the information and identify key words. Thus, responses of similar viewpoints were grouped reflecting experiences and challenges, perceived benefits of AI and implementation considerations.

## **2.7 Ethical Considerations**

Following the ethical guidelines, all the participants agreed to take part and were informed about the purpose of the study. As a proof of compliance, a brief introduction was included at the beginning of the questionnaires and interviews, it explains the nature of the questions and the

purpose of the research conducted. It emphasized the confidentiality, as participants' names were not included in any of the data collection instruments. Instead, participants were assigned unique identifiers (e.g., student number1) to match their writing tests with its corresponding ChatGPT corrections. The introduction also emphasized the anonymity, all data was used only for research purposes.

These steps were applied in order to gather authentic feedback from each participant, as it is important to highlight the significance of participants' valuable responses in this research with a sincere gratitude toward them for taking part into participating in this study.

### **2.8 Limitations of the Study**

The researcher encountered obstacles when attempting to conduct interviews with English Writing Comprehension instructors, as not all participants accepted to be interviewed due to their busy schedules which may limit the representativeness of instructor perspectives. Therefore, the study had only a small number of questioned teachers, limiting the generalizability of findings.

Despite the efforts made by the researcher to distribute the questionnaires and the tests to two large sized classes of first year EFL students, not all continued with the procedures due to absences which complicated the process of data collection, and limited the generalizability of findings to other students' populations, and educational levels.

Every student paper had to be entered into ChatGPT using the exact same prompt, copying letter by letter mistakes. This manual data entry process was extremely time consuming and may have produced fatigue related errors, affecting the consistency and reliability of the correction comparisons.

## Chapter two: Research Methodology and Data Collection

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ChatGPT was applied only to writing tests, resulting in a short term evaluation that captured only immediate improvements and did not track the long term retention of these gains. Furthermore, it should be acknowledge that ChatGPT is not fully reliable tool as it may produce inaccurate corrections despite its advanced language generating capabilities.

### **2.9 Conclusion**

The chapter offered an overall comprehensive account of the research methodologies, offering insights into the rational objectives behind conducting this study, the methodological approaches employed in the research, a portrayal of the study's selected population, research environment along with instruments used namely pre-questionnaire, writing test, post-questionnaire and semi structured interview. Furthermore, it provided the methods used to analyze data and the ethical considerations taking into account to ensure the participants rights. Finally, it presented the limitations encountered during the study

The upcoming chapter will delve into the analysis and interpretation of these data collection tools obtained from the students and teachers responses.

**Chapter three:**

**Analysis & Discussion**

### **3.1 Introduction**

After providing an overview of the study's research methodology previously, this final chapter focuses more on the analysis and interpretation of the data collected throughout the study. The main aim of this study is to assess the effectiveness of ChatGPT in supporting the development of EFL learners' writing, as well as to examine both students' and teachers' perceptions regarding its use. Data were gathered using multiple instruments, namely pre and post questionnaires administered to first year EFL students from the Department of English at Belhadj Bouchaib University of Ain Temouchent, a writing test comparing original and ChatGPT corrected versions, and interviews conducted with Writing Comprehension teachers from the same University. Ultimately, this chapter seeks to answer the study's questions regarding the effectiveness, opportunities and challenges associated with the integration of ChatGPT in EFL writing instruction within the Algerian University context.

### **3.2 Analysis of Students' Pre-Questionnaire**

The first questionnaire (see Appendice A) in this research was addressed to first year EFL students. It was held in the department of English at Belhadj Bouchaib University of Ain Temouchent. The gathered data from this pre-questionnaire reveal the following:

### Section one: Students' Demographic Information

**Q1:** How old are you?

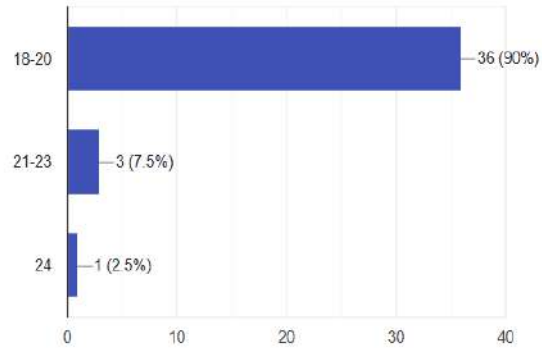


Figure 3.1 Students' Age

Figure 3.1 presents students' ages. The sample of the study consists of 40 students. From the result above, a greater portion of students' age is between the ages of 18 years old to 20 years old that represents the rate of (90%); the second category is the students who are 21-23 years old representing (7.4%), while the rest are above 23 years old representing (2.5%). Learners' age helped identify any differences in students' perceptions and experiences with ChatGPT as a writing tool. Moreover, it was necessary to know student's age in order to incorporate suitable future instruction.

**Section 2: Students Writing Habits**

**Q2:** How often do you write in English outside the class?

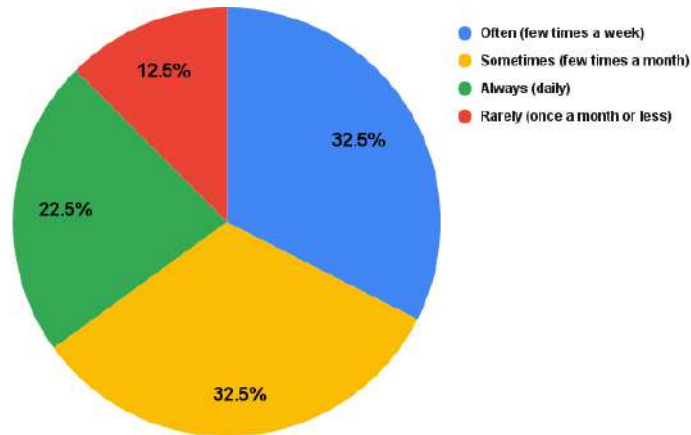


Figure 3.2 Students' frequency in using English outside the Class

Figure 3.2 presents students' frequency in using English outside the class. According to the data presented in the pie chart, it is evident that all of the students write in English even outside the class. An equal number of students from two categories reported that they use English often and sometimes outside the class, with (32.5%) each. On the other hand, (22.5%) stated that they always write in English. The remaining (12.5%) responded with rarely. This highlights a needed encouragement for students to use English more frequently and purposefully outside the academic settings to support writing fluency.

**Q3:** How confident are you in your English writing skills?

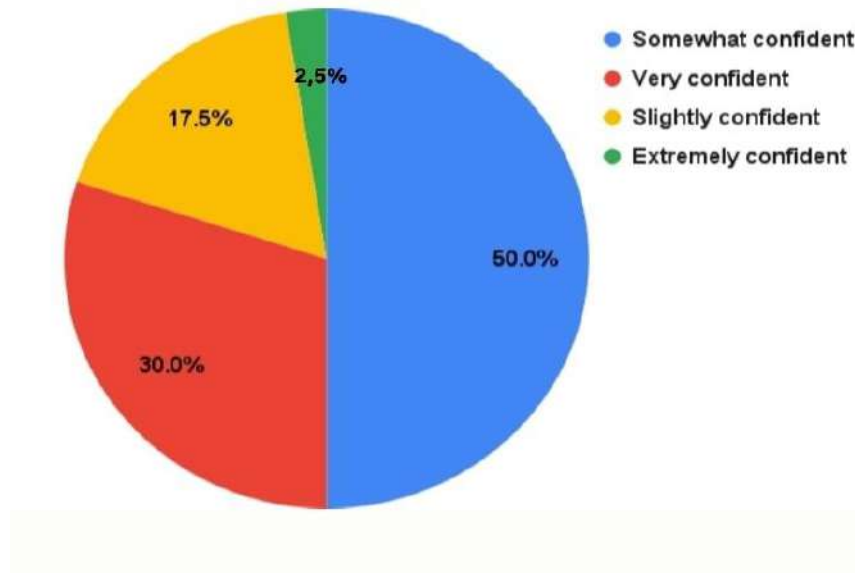


Figure 3.3 Students' Confidence in Writing English

Figure 3.3 presents Students' confidence in writing English. The data obtained from the above pie chart reveal that half of students (50%) reported feeling somewhat confident in writing English, indicating while students may be comfortable with basic writing tasks they may still struggle with grammar or vocabulary and others. While (30%) are very confident, (17.5%) are slightly confident in writing English. Furthermore, only (2.5%) of students declared that they are extremely confident. The data reveal that the majority of students (97.5%) fall between slight and high confidence level. This support the need for integrating AI tools such as ChatGPT not only correct errors but build students' confidence by providing personalized feedback, push students move from somewhat confident to higher level of self-assurance and proficiency.

**Q4:** What do you find most challenging about writing in English?

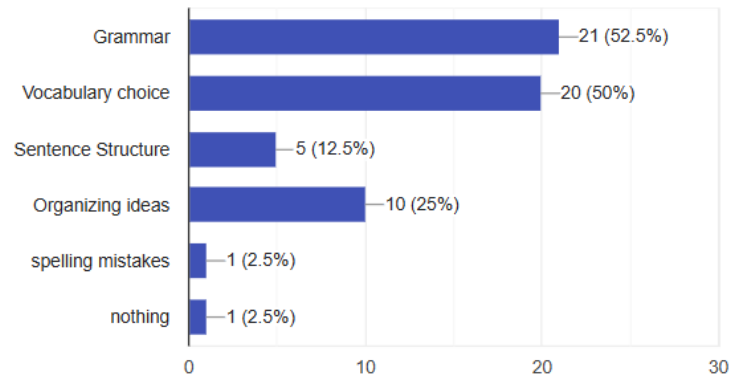


Figure 3.4 Students' Writing Difficulties

Figure 3.4 presents the main difficulties that students faced in writing English. The bar chart above reveals that students chose more than one option related to the difficulty they face during writing. Students selected grammar (52.5%) and vocabulary (50%) as major writing challenges, highlighting a need for support in language accuracy and word choice. Organizing ideas was also a notable concern, selected by (25%) of students, suggesting some issues with idea connection and logical flow. Sentence structure was mentioned by (12.5%), where students face difficulties in forming clear and correct sentences. In contrast, spelling mistakes was the least selected challenge, receiving only (2.5%), and another (2.6 %) reported having no difficulty at all. Tools like ChatGPT may assist students in areas where they struggle, particularly in grammar, vocabulary, and organizing ideas.

**Q5:** Have you ever used ChatGPT or any other AI tool(s) before?

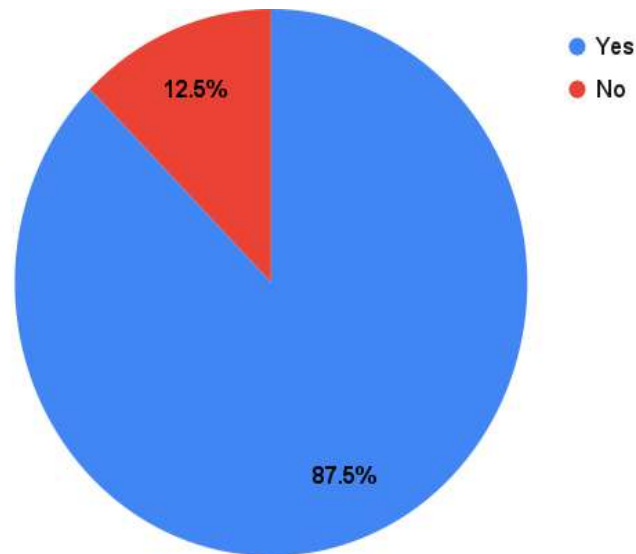


Figure 3.5 Students' AI tool(s) usage

Figure 3.5 presents students' AI tool(s) usage. The pie chart above reveals that a vast majority of participants (87.5%) indicate their use of AI tool(s) like ChatGPT before, while the remaining students (12.5%) revealed that they had not. This suggests that those who agreed and are familiar with AI tool(s) may have some previous experience integrating them into their learning process. However, for those who have never used AI tool(s), the results may suggest that students are not equally exposed or comfortable in using this intelligent technology. This difference in experience may influence how students perceive and respond to the use of ChatGPT in their writing within the present study.

**Q6:** if yes, how would you rate your experience using ChatGPT?

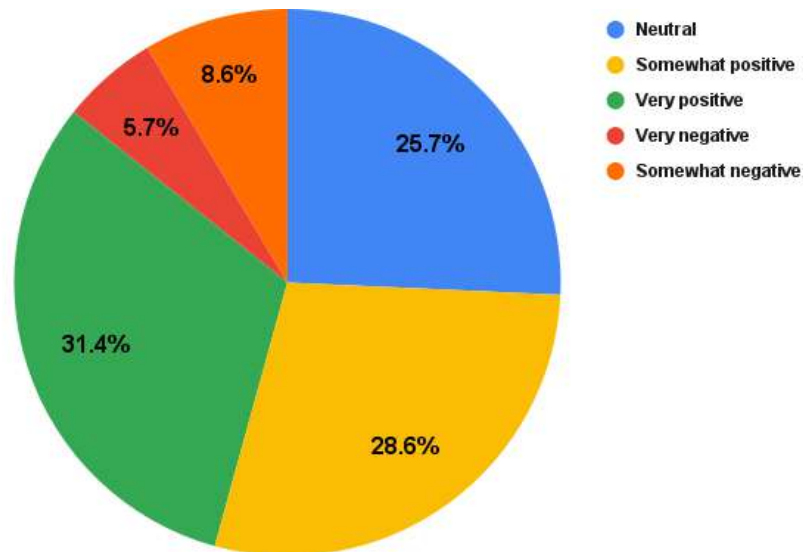


Figure 3.6 Students' experiences using ChatGPT

Figure 3.6 presents students' experiences using ChatGPT. The pie chart above reveals that among students who used AI tools before, the majority rated their experience very positive with (31.4%), and (28.6%) described it as somewhat positive, indicating that the majority (60%) found these tools helpful and satisfying. (25.7%) selected neutral, indicating a mixed or moderate experience, while (8.6%) rated their experience as somewhat negative. The remaining (5%) of students reported a very negative experience. The results reflect an overall positive attitude toward AI tools like ChatGPT, with only few students expressing dissatisfaction. This positive feedback from students may influence their openness to use ChatGPT in writing tasks and enhance their writing skills.

### **Explain your answer?**

To gain insight into the participants' AI experience ratings, they were asked to elaborate in the follow up question. Students who rated it very positive stated how ChatGPT helped them with their home works and projects and improve their writing, as one student stated, “It helps me a lot in University”, other said “ChatGPT can be helpful in generating ideas, improving sentences”. Students who selected somewhat positive appreciated the support but had certain concerns. For instance, one student stated, “It helps, but sometimes the answer is too general”. Those who chose neutral explained, “Sometimes it gives me everything I need and helps me a lot and sometimes it provides only little help and does not understand my requests”. And students who rated it somewhat negative said, “It is hard to explain the questions to ChatGPT”. Only few responded with very negative said, “It gives me wrong answers”. In general, students' ratings were based on how useful they found the AI tool(s).

### **Q7: What are the difficulties you face when writing essays in English?**

The question aimed to explore EFL students' most challenging aspects of essay writing in their own words. The majority reinforced the responses from multiple choice questions, with several students mentioning grammar mistakes and vocabulary as persistent issues. One student mentioned, “Essay writing in English is difficult due to grammar, vocabulary”, while another wrote, “vocabulary is very hard to remember”. Other students also highlighted spelling mistakes, such as “I don't know how to write a difficult word”, another student said “sometimes I don't know the translation of certain words in English or how to write them”. Another major challenge was organizing ideas, responses included “Sometimes I get lost in my ideas” and “I can't organize my ideas”. Few students mentioned other barriers

## Chapter three: Analysis & Discussion

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like lack of motivation, fear of writing off topic, and trouble accessing to ideas. These responses add depth to the quantitative data and reveal how student actually experience these challenges in real writing situations. And support the need for tools like ChatGPT that can address these difficulties.

**Q8:** How can ChatGPT help you write better?

The aim of this question is to explore students' initial expectations and assumptions concerning ChatGPT capabilities before taking the writing test to compare perceptions before and after the intervention. The most common advantage mentioned was grammar correction, with students writing things like "it helps me correct my grammar mistakes", and "it gives me the right word and shows my mistakes". Another frequent response was idea generation and organization, where students explained that ChatGPT helps them and "gives ideas", and "organize ideas for me". Other students mentioned ChatGPT ability to provide text structure guidance, noting that "it gives easy steps to write". However, a few number of students expressed some remarks about uncertainty and limited use, with one noting "I don't use ChatGPT a lot", and another saying "I don't know if it really helps". One student remarked that while ChatGPT can support learning, "a student has to practice writing English on his on to get better".

Overall, the responses show that students view ChatGPT as a supportive writing tool for developing their writing skill, particularly in aspects where they struggle, with few emphasizing the importance of personal effort in writing development.

### 3.3 Analysis of Students' Writing Test

To assess the impact of ChatGPT on students' writing, a general comparison was made between the original writing task and the ChatGPT corrected versions. The researcher treated ChatGPT's version as an ideal standard and the benchmark writing instrument, because it produces a fluent, coherent, and grammatically accurate text. As ChatGPT is a language model that has been trained on diverse datasets, its output represent high quality content against which student writing can be compared to. The students' original tests were evaluated with a 15 point rubric defined in Chapter two reflecting the texts' clarity, grammatical accuracy, coherence, and vocabulary use. This approach was chosen for its practicality and relevance and effectiveness in classroom context,

Below is the consolidated table, treating the ChatGPT corrected version as a perfect benchmark (15/15) and including the calculated improvement by subtracting the pre test score from the ChatGPT Benchmark (model standard) for each draft (Improvement = ChatGPT Benchmark (15) - Original Test Score)

Table 3.1 Original Test vs. ChatGPT Benchmark Scores and Improvements

| Metric                     | Original Test | ChatGPT Benchmark | Improvement |
|----------------------------|---------------|-------------------|-------------|
| <b>Number of Students</b>  | 40            | 40                | /           |
| <b>Average Score (/15)</b> | 8.57          | 15                | 6.37        |
| <b>Minimum Score(/15)</b>  | 6             | 15                | 8.5         |
| <b>Maximum Score(/15)</b>  | 11            | 15                | 4           |

The data in the table 3.1 above compare students' writing tests scores with ChatGPT's corrected versions ideal scores and underscore the resulting gains. On average, students' original drafts scored 8.57 out of 15, whereas the ChatGPT benchmark maintained a perfect score 15 out of 15, contributing to a mean improvement of 6.37 points. The lowest score achieved in the test was 6 points out of 15, gaining a mean improvement of 8.5 points, a gap that underscores how basic errors in grammar, vocabulary choice, and idea organization are common among lower proficiency students. Even the strongest draft, which scored 11 out of 15 improved by 4 points, demonstrating that ChatGPT's corrections also refine texts that already displays a relatively well formed writing.

Overall, these scores demonstrate ChatGPT's consistent ability to elevate every learner's writing to an error free standard. Although the most significant refinements occurred in the lower writing proficiency drafts, considerable improvements were also noticeable in the highest proficiency drafts. These remarkable improvements suggest that ChatGPT can be an effective writing assistant, especially for enhancing coherence, grammar, and vocabulary in EFL students' writing.

### **3.4 Analysis of Students' Post Questionnaire**

The second questionnaire (see Appendice B) in this research was addressed to first year EFL students after taking the writing test. Similarly, it was held in the department of English at Belhadj Bouchaib University of Ain Temouchent. The gathered data from this post questionnaire reveal the following:

**Q1:** ChatGPT corrected copy improved my writing?

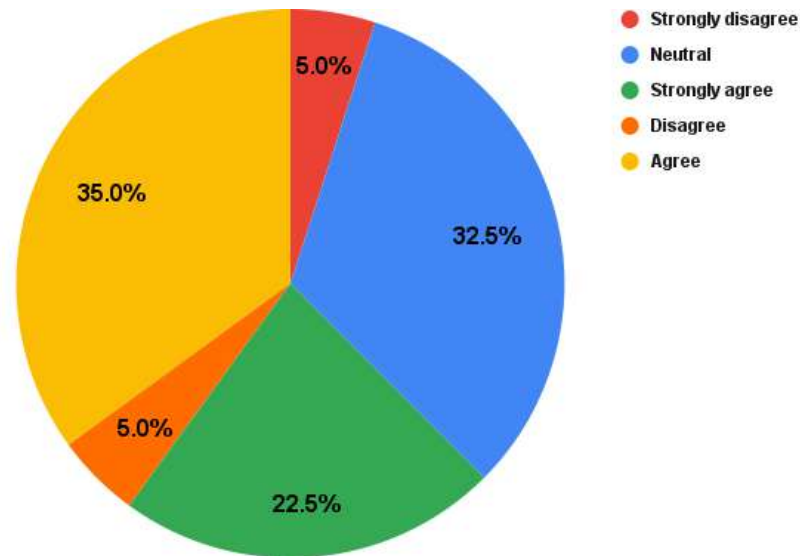


Figure 3.7 Students' Perceptions of ChatGPT writing correction quality

Figure 3.7 illustrates Students' perceptions of whether the ChatGPT corrected version improved their writing. The pie chart above reveals that most students (35%) responded with agree, followed by (32.5%) who answered with neutral, and (22.5%) who strongly agreed. This implies that majority (57.5%) of students positively recognize the role of ChatGPT in enhancing their writing. The neutral responses (32.5%) suggest that a notable number of students were uncertain or may found the improvements moderate. Meanwhile, only (5%) disagreed and another (5%) strongly disagreed, representing a very small minority of students who were unsatisfied or perceived no measurable improvement.

In general, the findings highlight that ChatGPT was largely perceived as positively helpful in refining students' writing, with over half recognizing its benefit and very few expressing dissatisfaction.

**Q2:** ChatGPT corrections were easy to understand and apply?

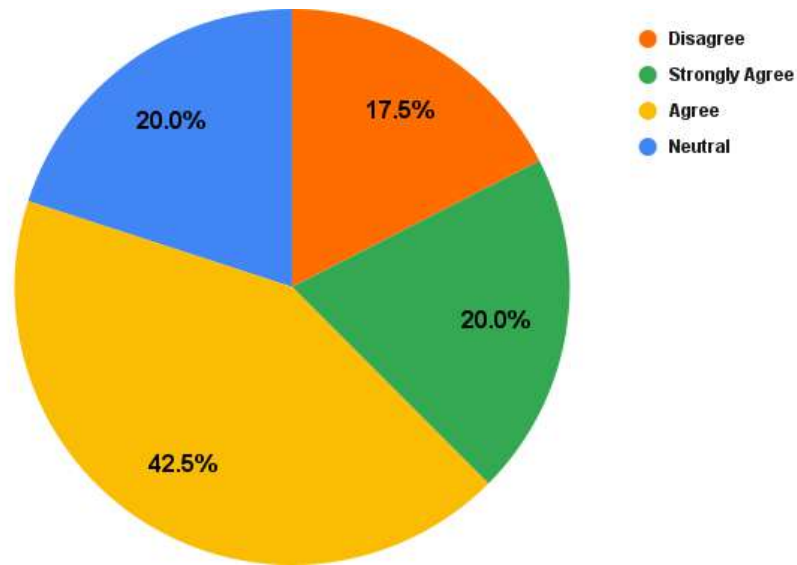


Figure 3.8 Students' Perceptions of ChatGPT Writing Corrections' Clarity and Usability

Figure 3.8 illustrates students' responses to whether ChatGPT's corrections were easy to understand and apply. The pie chart above reveals that most of students (42.5%) chose agree, and an additional (20%) selected strongly agree. This means that (62.5%) of students found the corrections clear and applicable. In contrast, (20%) selected neutral, suggesting that they may not have found the corrections difficult, but they were not fully confident in applying them. A smaller portion, (17.5%) chose disagree, signifying that some students faced challenges in understanding or implementing the suggestions.

Overall, the chart reveals that a vast majority of students (62.5%) viewed ChatGPT as a clear and supportive tool for writing improvement.

**Q3:** I would use ChatGPT to help with my writing in the future.

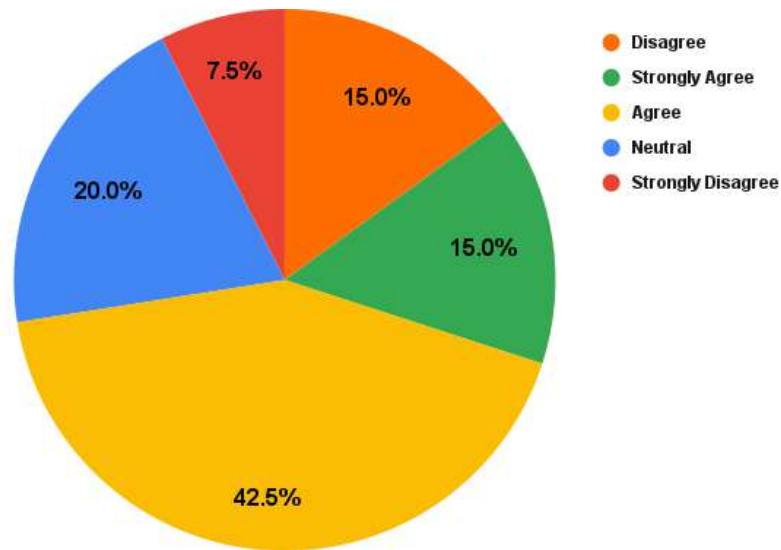


Figure 3.9 Students' Willingness to Use ChatGPT for Future Writing Assistance

Figure 3.9 illustrates students' responses to whether they would use ChatGPT to assist them with writing in the future. The pie chart above reveals that the largest portion (42.5%) chose agree, while (15%) selected strongly agree, reflecting that (57.5%) of students expressed a positive intention to continue using ChatGPT. Around (20 %) of students remained neutral, possibly indicating uncertainty or wait and see situation. On the other hand, (15%) disagreed and (7.5%) strongly disagreed, suggesting that few students were less likely to rely on ChatGPT for their writing in the long term.

Overall, the chart suggests that while majority of students' (57.5%) are open to use ChatGPT again in the future, a portion remain hesitant, possibly due to personal preferences or specific challenges they faced.

### **Q4:** What changes or learning did you gain from ChatGPT correction?

The aim of this question is to assess how ChatGPT's correction fostered students' learning and improvements in writing. Many students reported that ChatGPT helped them improving their grammar and punctuation, with one student stating that, "ChatGPT helped me in grammar and gave me new vocabularies; the structure of my sentences in more clear now". Spelling was the most mentioned area of improvement, several learners commented, "It corrected my spelling mistakes", and "I learned the right spelling". Vocabulary development also was recognized as a significant benefit, with students mentioning that ChatGPT "gave better ideas and new vocabulary" and "ChatGPT suggested new word I did not know before". In addition, some learners pointed out that it assisted them with idea organization saying, "It helped me with organizing my ideas" and "It made my writing better with more details and organization". However, only few students expressed critical reflections, highlighting the value of ChatGPT support while also recognizing the importance of personal effort, "It corrected my faults and gave a better version to apply, but I need to make efforts to make my writing better without ChatGPT corrections". While most of students found the tool helpful, a minority indicated limited benefit, as one respondent mentioned, "Nothing but few mistakes I made".

Overall, the responses suggest that ChatGPT positively impacted students' writing, particularly in areas of grammar, vocabulary, spelling, and idea organization.

**Q5:** Was there anything in ChatGPT corrected version that you did not understand or agree with? If yes, what was it?

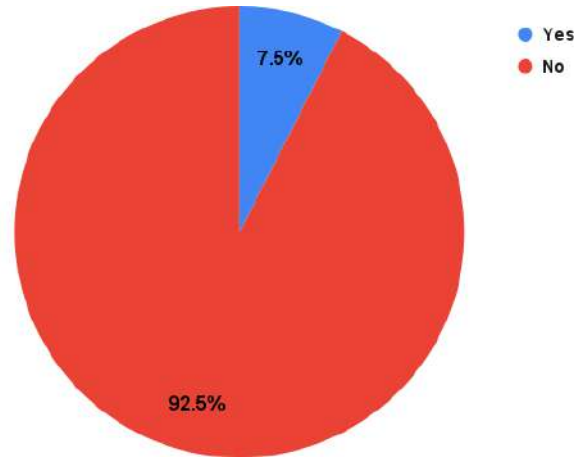


Figure 3.10 Students' Feedback on Clarity and Agreement with ChatGPT corrected version

Figure 3.10 illustrates students' feedback on clarity and agreement with ChatGPT corrected version. The pie chart above reveals that a vast majority (92.5%) of students answered with "No" when asked whether there was anything they did not understand or agree with in ChatGPT corrected version. These responses indicate that most students found the feedback provided by ChatGPT was clear and appropriate for them, reflecting positively on its ability to communicate corrections effectively at the students' proficiency level. On the other hand, a small percentage (7.5%) of students answered with "Yes", indicating misunderstanding or disagreements, possibly due to advanced vocabulary, unexpected sentence restricting, or differing expectations. For instance, one student noted, "I didn't know the meaning of new words", another one stated, "I didn't understand why it changed my sentence", highlighting how AI driven modifications sometimes conflict with learners' level and intentions.

## Chapter three: Analysis & Discussion

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Overall, the responses reflect a high user satisfaction and clarity in ChatGPT's writing corrections, with minimal disagreement reported.

**Q6:** How do you think ChatGPT could be improved to better help students with their writing?

The aim of this question is to collect students' suggestions for strengthening ChatGPT's effectiveness in enhancing their writing. The responses reveal a mix of satisfaction and constructive recommendations. Some students for instance noted, "It is already improved", "No idea", "I don't know", expressing either satisfaction with the current version or uncertainty about how improvements could be made. However several students provided thoughtful suggestions for making ChatGPT more helpful and accessible. One student suggested, "ChatGPT could provide more detailed explanations for the corrections it made and why", showing preference for leaning oriented feedback, not just corrections. Another mentioned, "It will be great if it shows the grammatical rules while writing essays", which points out to the potential of integrating mini lessons or rules into the correction process. Other students highlighted language simplicity and pacing, such as "using clear words and follow slow steps" and "using simpler words for beginners". This indicates that some learners find ChatGPT used language slightly advanced and would benefit from user level customization.

Overall, the feedbacks suggest improvements in clarity, instructional support, and personalized language use that could make ChatGPT even more effective as a writing assistant tool.

**Q7:** would you recommend ChatGPT to other students for improving their writing?

Why or why not?

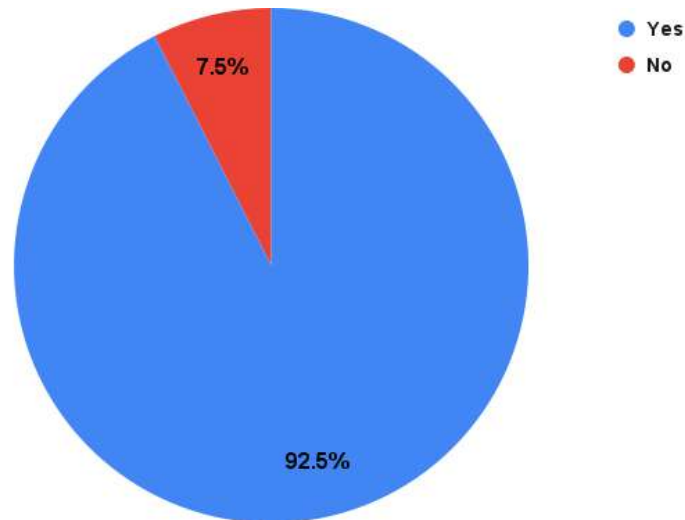


Figure 3.11 Students' willingness to Recommend ChatGPT as a writing assistant to Peers

Figure 3.11 demonstrates students' willingness to recommend ChatGPT as a writing assistant to peers. The results in the pie chart reveal that the vast majority of students (92.5%) stated that they would recommend ChatGPT to others, where one student explained, "Yes, it helps learning from mistakes", while another emphasized that "Yes, it gives new and easier methods and more new words", suggesting it can offer new vocabulary, and present easier methods to write. Several highlighted the tool's accessibility, describing it as "easy to use", "free", and a convenient alternative to private tutors. Interestingly, a few responses included limitations even while recommending it. For instance, one student noted, "Yes, but sometimes it gives false information", pointing to concerns about accuracy. Another commented, "Yes, but only for individuals that have difficulties with English language", suggesting it might be more beneficial for beginners than advanced learners. On the other hand, a small minority (5%) of students state that they would not recommend ChatGPT to other students. The reasons

include fear of overreliance, such as, “No, because I was addicted to it so I prefer to take my writing to a teacher for improvements”, and “No I don’t recommend it, I think it kills the creativity”. These concerns indicate the perception that while ChatGPT can be helpful, it might hinder personal critical thinking or original expression when used inappropriately.

Overall, the data indicate that majority of students see ChatGPT as a beneficial writing assistant. However, a few remain cautious about heavy reliance and the need of regulating the use of AI in educational context.

### **3.5 Teachers’ Interview Analysis**

A semi structured interview (see Appendice C) was utilized to explore the research aims. The current study employed the qualitative method which aims to gather rich, descriptive insights about EFL writing expression teachers’ professional experience, perspectives, challenges and practical suggestions concerning the integration and implementation of AI tools such as ChatGPT as a writing assistant in EFL classrooms.

#### **Section One: Professional Experience**

**Q1:** How long have you been teaching EFL writing?

This question was selected as an initiation to demonstrate the participants’ relevance and experience with teaching Writing Expression module; the first teacher stated that she has been teaching it for more than 7 years while the second one claimed that she has been teaching ‘Written Expression’ subject for more than ten year, and the third one is relatively new, with almost two years of teaching EFL writing.

**Q2:** What are the most common writing challenges you observe in your students?

The aim of this question is to uncover the specific difficulties EFL learners face in writing that AI could potentially solve or address. The most frequently encountered challenge was limited vocabulary, mentioned by all three teachers as a significant barrier that holds back students from expressing their ideas effortlessly. Another challenge was grammar and sentence structure, including subject verb agreement and the lack of competence to form well-structured sentences. All teachers also mentioned spelling and writing mechanism, such as punctuation and capitalization.

The third teacher exclusively pointed out the tendency of students to translate directly from Arabic, leading to a loss of meaning and confusing English expressions. In addition, the second and third teachers pointed out a lack of critical thinking and organizational skills, noting that students struggle to develop coherent ideas and organize them logically. Finally, fear of making mistakes and a general lack of confidence were identified as psychological barriers that prevent students from writing freely or pushing creative boundaries.

### **Section two: AI Integration**

**Q3:** What are your thoughts on using AI tools like ChatGPT in writing instruction?

This question aims to understand teachers' attitudes, beliefs and also how much they know about AI tools. Moreover, their views will help identify any perceived benefits and concerns of AI use. The three teachers' responses revealed a generally positive attitude toward AI tools like ChatGPT and they acknowledged the potential benefits of AI in writing instruction. The third teacher, for instance, stated that ChatGPT can serve as a useful tool that

illustrates a well-structured style, while the second teacher described it as a possible “solution” to learners’ writing problems.

However, shared concerns were expressed by all teachers including the need for teachers’ supervision and proper use. They highlighted that ChatGPT should be used in a way that aligns with instructional goals, and never replace the effort making by student. The initial teacher noted the significance of teacher’s supervision, while the third teacher notified that if students simply copy and paste AI-generated content; they will risk plagiarism and hinder language learning development.

**Q4:** How do you think ChatGPT could complement your current teaching methods?

This question aims to understand ChatGPT’s integration potential, and identify practical ideas on how it can support their teaching methods. All of the three teachers emphasized that ChatGPT can reinforce what is taught in classroom. For instance, the first teacher stated that ChatGPT may help students consolidate classroom learning by developing good writing skills beyond the ones acquired during lessons. Similarly, the second teacher noted that ChatGPT could underpin the actual learning strategies by providing students with additional guidance on effective writing. The third teacher explained further by highlighting how ChatGPT can provide original, context specific illustrations customized for Algerian EFL learners. This strategy is seen as a way that facilitates comprehension by linking instruction to situational and culturally relevant scenarios. Additionally, ChatGPT was viewed as prompt generator, used for writing ideas and classroom discussions.

However, concerns were also brought up by the last teacher regarding the credibility and reliability of ChatGPT generated data. There was caution concerning the unethical use of AI tools, which could lead to plagiarism.

### **Section three: Implementation**

**Q5:** What challenges you might face in implementing ChatGPT in your classroom?

This question aims to reveal any potential personal or pedagogical challenges teachers might anticipate when integrating ChatGPT into their classrooms. The responses of the teachers revealed a strong shared concern regarding students' misuse of ChatGPT in the classroom. The most frequently addressed challenge by teachers was cheating. The first teacher, followed by the second instructor warned that students might merely copy pass AI generated content. The initial teacher pointed out that full reliance on ChatGPT could result in students becoming passive learners, while the second teacher stated that such practices could undermine students' writing and critical thinking.

The third teacher offered a broader perspective, mentioning that students lack awareness and skills to use this AI app effectively. Instead of employing ChatGPT as a writing assistant, students often use it as a shortcut to avoid any intellectual efforts such as thinking, evaluating and synthesizing information. Beyond personal misuse, she highlighted pedagogical barriers, such as big-size classes and insufficient access to technological materials, which could handicap effective ChatGPT integration. However, she also suggested that when used properly by instructors, it could be a source of original ideas, tailored to teachers' standards.

**Q6:** How would you suggest using ChatGPT effectively in writing instruction?

This question aims to gather best practical suggestions from writing Expression subject teachers' on how ChatGPT can be meaningfully applied in teaching writing instruction. All three teachers emphasized the importance of supervised and guided use of ChatGPT in writing instruction. Both of the first teachers emphasized that students must be aware on how to use it responsibly with ethical considerations.

The third instructor suggested specific pedagogical strategies, at which ChatGPT can be a useful resource for generating illustration texts tailored to classroom objectives, such as teaching paragraph types. Additionally, ChatGPT could assist in generating specific writing exercises based on teacher's goal, content, and student needs.

### **3.6 Discussion and Interpretation of the Findings**

The conducted study required the use of different tools which were students' questionnaires, writing test comparisons, and teachers' interviews; it offered a clear understanding of ChatGPT's role in EFL writing instruction, by evaluating ChatGPT's effectiveness in improving first year Algerian students', and examine learner's and teachers' perceptions, including the challenges and opportunities of its use.

First, in addressing ChatGPT's effectiveness, the writing test analysis revealed an average score improvement of 6.37 points (jumping from 8.75 to 15 on a 15 point scale), demonstrating the tools' consistent capacity to eliminate and correct errors in grammar, vocabulary, and overall coherence. Even the lowest draft of the score 6 out of 15 improved by 8.5 points, and the highest of 11 improved by 4 points ,indicating the AI tool benefit to all learners, including those with limited and high writing skills. These findings directly support

## Chapter three: Analysis & Discussion

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the study objective, demonstrating ChatGPT effectiveness as a writing assistant tool, rapidly elevating students' writing accuracy and reduce writing errors for all proficiency levels.

Second, the alignment between perceptions and performance emerged clearly. Pre-questionnaire responses had reported students' weaknesses and mostly moderate confidence in writing, alongside their overall positive experiences with ChatGPT and expectations regarding ChatGPT's assistance in writing. Post-questionnaire data confirmed that ChatGPT's corrections to students' writings not only met but often surpassed expectations, with learners reporting error awareness and high satisfaction and appreciation for the correction made to their writing in the revised version; the majority even stated that they would recommend it to their peers due to its ease of use, accessibility, and its ability to support learning by providing feedback (such as grammar corrections), new methods, and enhanced vocabulary. However, few students stated some drawbacks when using ChatGPT such as over reliance and inaccurate outputs.

Third, the data collected from teachers' semi structured interview reveals a clear illustration of EFL learners' writing challenges, and teachers' attitudes toward integrating ChatGPT in writing instruction. All three teachers determined four main student challenges in writing including, a limited vocabulary, grammar and mechanism errors, first language interference (translating from Arabic Language to English) that hinder meaning, and psychological barriers of low confidence and fear of making mistakes, all of which were effectively addressed through ChatGPT generated corrections. When reflecting on the role of ChatGPT in writing instruction, all three instructors agreed it offers substantial potential. They mentioned that it can serve as a model of academic style, reinforce classroom lessons, and generate context specific illustrations. However, they insisted that ChatGPT must be employed

under the teacher supervision, with clear pedagogical objectives and ethical considerations to prevent misuse. The main concerns expressed by teachers were academic dishonesty (copy-pasting AI texts), over reliance leading to passive learning, and digital literacy gaps as many students lack the skills to engage critically with AI outputs, compounded by large sized classes and insufficient access to technological resources.

### **3.7 Recommendation**

The research results states ChatGPT's effectiveness in enhancing students' writing draft to an error free draft in grammar, vocabulary, and clarity as reported in students' feedback. However, some concerns were drawn by students' and teachers' regarding its misuse. This part attempts to put at hand a list of recommendations aim to harness ChatGPT's strengths in first year Algerian EFL writing instruction.

#### **a. Recommendations for Instructors and Program Administrators**

- They should establish clear ethical guidelines; this should include rules against copy pasting AI outputs and outline consequences for misuse such as grade penalties, instead AI outputs should be treated as a draft to be revised in the student on words. By including these rules, they will raise student awareness on how to use of ChatGPT responsibly and ethically.
- Instructors should be enrolled in teacher training on pedagogical practices supported by AI. As highlighted in the previous interview, giving student's access to ChatGPT is not enough; teachers must know how to integrate it effectively.

- Teachers should be positioned as mediators who design and select prompt, assess outputs, and tailor ChatGPT activities with learning goals. Also employ ChatGPT for targeted tasks by producing illustrations texts and writing exercises that directly address students' weaknesses.

### **b. Recommendations for Students**

- Students should use ChatGPT as a writing assistant, not a short cut so they can avoid overreliance on the tool. They must balance between ChatGPT use and independent writing by setting up time each week to write freely, then compare their version to the one revised by ChatGPT so they gauge their progress and build confidence in their writing abilities.
- Students are advised to learn crafting clear and precised prompts to get useful and relevant feedback and save their time, such as “Correct the grammar mistakes in the following paragraph”.
- Students need to reflect on ChatGPT's feedback, by pausing and writing notes on the suggested changes and what did they learned from it.

### **c. Recommendations for Institutions**

- Institutions should ensure equitable access to technology, as all students must be able to benefit from using ChatGPT as a writing assistant. Universities should upgrade Wi-Fi in classrooms so ChatGPT functions without issues; they need to keep computer labs available for students to use. This will ensure that no student is left behind due to limited access to computers or reliable Internet service.

### Chapter three: Analysis & Discussion

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These recommendations should not be taken as a fixed guideline. It is more like a set of suggestions that can be applied to harness ChatGPT's benefits in the Algerian EFL programs and foster the deeper writing skills that are crucial for student academic success.

### 3.8 Conclusion

This chapter highlights the practical part of the research. It opens with an analysis of the data collection instruments used, including a pre-questionnaire, writing test, post-questionnaire for students, and semi structured interview with teachers. From the analysis of the results, the researcher concludes that ChatGPT is an effective writing assistant, as it elevates every student's draft regardless of the level of proficiency. Students' feedbacks from pre and post questionnaires confirmed these gains, as students found ChatGPT feedback clear, applicable. They highlighted ChatGPT's benefits including the clear feedback, its easy accessibility, and ability to support learning by providing instant grammar corrections, vocabulary enrichment. However, drawbacks included over reliance, inaccurate outputs. Teacher interviews underscored the substantial potential of ChatGPT, stating that it can serve as a model of academic style, reinforce classroom lessons, and generate context specific examples. The main challenges related to academic dishonesty, over reliance leading, and digital literacy gaps as many students lack the skills to engage critically with AI outputs, compounded by large sized classes and insufficient access to technological resources.

Together, these findings answered the research objectives on the effectiveness of ChatGPT as a writing assistant for first year EFL students and the opportunities and challenges perceived by teachers and students. Its also support the integration of ChatGPT in Algerian EFL writing instruction classrooms under the teacher supervision, with clear pedagogical objectives and ethical considerations to prevent misuse.

# **General Conclusion**

## General Conclusion

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This dissertation was carried out in the department of English at Belhadj Bouchaib University of Ain Temouchent. It was set out to assess ChatGPT's effectiveness as a writing assistant among Algerian first year EFL university students, as well as to capture both students' and writing comprehension teachers' perceptions regarding the opportunities and challenges of using ChatGPT for writing focused language learning.

The findings of the gathered qualitative and quantitative data from the conducted writing test, students' questionnaires, and teachers' interviews helped to confirm the initial hypotheses proposed in this research. First, in addressing ChatGPT's effectiveness, the writing test analysis revealed an average score improvement of 6.37 points (jumping from 8.75 to 15 on a 15 point scale), demonstrating the tools' consistent capacity to eliminate and correct errors in grammar, vocabulary, and overall coherence, indicating the AI tool benefit to all learners.

Second, Post-questionnaire data showed that ChatGPT's corrections increased learners' error awareness, satisfaction and appreciation for the reversion made to their writing; the majority identified several benefits of ChatGPT, including its ease of use, accessibility, and its ability to support learning by providing feedback (such as grammar corrections), new methods, and enhanced vocabulary. However, few students stated some drawbacks when using ChatGPT such as over reliance and inaccurate outputs.

Third, the data collected from teachers' semi structured interview revealed a clear illustration of their attitudes toward integrating ChatGPT in writing instruction. When reflecting on the benefits of ChatGPT in writing instruction, all three instructors agreed it offers substantial potential. They mentioned that it can serve as a model of academic style, reinforce classroom lessons, and generate context specific illustrations. However, they insisted that ChatGPT must be

## General Conclusion

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employed under the guidance of the teacher, with specific pedagogical goals and ethical considerations to prevent misuse. The main concerns expressed by teachers were academic dishonesty (copy-pasting AI texts), over reliance, and digital literacy gaps as many students lack the skills to engage critically with AI outputs, compounded by overcrowded classes and limited access to digital tools.

Despite the fact that the research has met the two objectives, it is worth to mention that these findings cannot be generalized due to the short term effects of the intervention which restricted the ability to observe long term effects, the relatively limited sample size of 40 students and only three writing comprehension teachers, also due the unreliability of ChatGPT as it can sometimes produce inaccurate output. These insights can inform future researches to involve more diverse populations, extended timelines, and varied academic settings to build on the findings' study and offer broader generalization.

To conclude, this dissertation highlights the potential of ChatGPT in enhancing writing instruction in EFL classrooms. Its potential to improve learners' writing quality in vocabulary, grammar, and overall coherence, reduce common difficulties such as spelling, reinforce classroom lessons, serve as a model of academic style, and generate context specific examples make it a valuable tool in writing instruction .However, this AI technology cannot replace human teaching; instead it serves as a valuable aid that complement traditional teaching. With proper guidance and ethical pedagogical integration, ChatGPT can play a constructive role in shaping the future of EFL writing classroom. This study invites further inquiries into AI's role in language education and encourages educators to adapt to the emerging technological innovations.

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### Appendix A: Students' Pre-questionnaire

Please answer the following questions in relation to your writing habits and experience with ChatGPT. This research explores how ChatGPT supports the development of writing among Algerian EFL students. Your responses will be kept confidential and used for research purposes only. Thank you very much for taking the time to support this research!

\* Please read each question and tick (✓) your answer

1. How old are you?

- 18-20
- 21-23
- 24+

2. How often do you write in English outside of class?

- Never
- Rarely (once a month or less)
- Sometimes (few times a month)
- Often (few times a week)
- Always (daily)

3. How confident are you in your English writing skills?

- Not confident at all
- Slightly confident
- Somewhat confident

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- Very confident
  - Extremely confident
4. What do you find most challenging about writing in English? (you can choose more than one)
- Grammar
  - Vocabulary choice
  - Sentence structure
  - Organizing ideas
  - Others:.....
5. Have you ever used ChatGPT or any other AI tool(s) before?
- Yes
  - No
6. If YES, in general how would you rate your experience with ChatGPT? (If NO, please skip to question 7)
- Very negative
  - Somewhat negative
  - Neutral
  - Somewhat positive
  - Very positive

Please explain your answer:

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7. What are the difficulties you face when writing essays in English?

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

8. How can ChatGPT help you write better in English?

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

### Appendice B: Students' Post-questionnaire

Please take a moment to review your original writing and the ChatGPT-corrected version. Then, answer the following questions about your experience. This research investigates how ChatGPT supports the development of writing in a group of Algerian EFL students. Your responses will be kept confidential and used for research purposes only. Thank you very much for taking the time to support this research!

- please circle the answer that best matches your opinion

1. The ChatGPT corrected copy improved my writing

Strongly Disagree      Disagree      Neutral      Agree      Strongly Agree

2. The ChatGPT corrections were easy to understand and apply

Strongly Disagree      Disagree      Neutral      Agree      Strongly Agree

3. I would use ChatGPT to help with my writing in the future

Strongly Disagree      Disagree      Neutral      Agree      Strongly Agree

- please answer the following questions

4. What changes did ChatGPT make that helped you the most?

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.....  
.....

5. Was there anything in the ChatGPT corrected version that you did not understand or agree with?

Yes  No

If yes, what was it?

.....  
.....

6. How do you think ChatGPT could be improved to better help students with their writing?

.....  
.....

7. Would you recommend ChatGPT to other students for improving their writing?

Yes  No

Why yes or why not?

.....  
.....

### **Appendix C: Teachers' Interview**

Dear teachers,

I'm currently working on my dissertation, which explores the use of ChatGPT as a writing assistant in Algerian EFL classrooms. Your insights as a teacher would be incredibly valuable for my research.

The purpose of my research is to investigate the possibility of how ChatGPT can help students with their writing skills and find out the opportunities and challenges of using this tool in EFL classrooms. Your view as a teacher will contribute much to my investigation of how to fit ChatGPT into the practice of teaching.

Key questions are the following:

#### **Professional Experience:**

1. How long have you been teaching EFL writing?
2. What are the most common writing challenges you observe in your students?

#### **AI Integration:**

3. What are your thoughts on using AI tools like ChatGPT in writing instruction?
4. How do you think ChatGPT could complement your current teaching methods?

#### **Implementation:**

5. What challenges you might face in implementing ChatGPT in your classroom?

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6. How would you suggest using ChatGPT effectively in writing instruction?

Thank you so much for taking the time and sharing your insights. I really value your perspective, as it will be of great help in better understanding how ChatGPT can be used in EFL classrooms. If you have any further thoughts or questions, please do not hesitate to contact me.

## ملخص

تسلط الأطروحة الحالية الضوء على فعالية ChatGPT كأداة للكتابة في الفصول الدراسية للتعليم العالي في اللغة الإنجليزية كلغة أجنبية في الجزائر. الغرض من هذه الدراسة هو التحقيق من موثوقية ChatGPT في تعزيز جودة كتابة طلاب السنة الأولى من التعليم العالي في اللغة الإنجليزية كلغة أجنبية، وتصورات كل من المتعلمين ومعلمي التعبير الكتابي فيما يخص الفرص والتحديات المتعلقة باستخدامه ودمجه في تعليم اللغة الإنجليزية كلغة أجنبية. الكلمات المفتاحية: ChatGPT، طلاب اللغة الإنجليزية كلغة أجنبية، الفصول الدراسية للغة الإنجليزية كلغة أجنبية ، أداء الكتابة.

## Résumé

La présente thèse examine l'efficacité de ChatGPT en tant qu'outil d'écriture dans les salles de classe de l'enseignement supérieur algérien de langue anglaise. Le but de cette étude est d'étudier la fiabilité de ChatGPT dans l'amélioration de la qualité d'écriture des étudiants de première année d'EFL, et la perception des apprenants et des enseignants de compréhension de l'écriture, y compris les opportunités et les défis concernant son utilisation et sa mise en œuvre dans l'enseignement de l'EFL.

**Mots clés :** ChatGPT, étudiants d'EFL, salles de classe d'EFL, outil d'écriture

## Summary

The present dissertation sheds light on ChatGPT's effectiveness as a writing tool in Algerian EFL higher education classrooms. The purpose of this study is to investigate the reliability of ChatGPT in enhancing first year EFL students' writing quality, and the perceptions of both learners and Writing Comprehension teacher, including opportunities and challenges regarding its use and implementation in EFL instruction.

**Key words:** ChatGPT, EFL students, EFL classrooms, writing tool.