People's Democratic Republic of Algeria
Ministry of Higher Education and Scientific Research

University of Ghardaia

Faculty of Letters and Languages

Department of English

Investigating EFL Learners' attitudes towards using Artificial Intelligence to enhance their writing skills

Dissertation submitted to University of Ghardaia for obtaining the Master's degree in Didactics

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Academic year: 2024/2025

Abstract :

This study investigates the integration of Artificial Intelligence (AI) tools in the teaching and learning of writing within English as a Foreign Language (EFL) contexts. As AI applications such as ChatGPT and Grammarly become increasingly accessible in educational settings, this research explores their pedagogical impact, benefits, and limitations from both learners' and teachers' perspectives. The study adopts a mixed-methods approach, combining quantitative data from questionnaires with qualitative insights from interviews, targeting university level EFL learners and instructors. Findings reveal that while AI tools enhance writing accuracy, provide instant feedback, and promote learner autonomy, they also raise concerns regarding over-reliance, academic integrity, and the erosion of critical thinking skills. The study concludes with pedagogical recommendations for integrating AI ethically and effectively into writing instruction, emphasizing the role of educators in guiding AI use to support rather than replace human input in the writing process.

Keywords: Artificial Intelligence (AI), Writing skill, EFL Learners, Educational Technology

DEDICATION:

First and always, I thank Allah for giving me strength, patience, and guidance to complete this work. Without His help and blessings, none of this would have been possible.

To my mother, thank you for your nonstop love, care, and prayers. Your support kept me going through the hardest moments, and your belief in me gave me strength when I needed it most. I will always be grateful for everything you've done.

To my father, thank you for your steady encouragement, your sacrifices, and for always reminding me to stay focused and keep pushing forward. Your presence and quiet support meant more than words can say.

To my brothers and sister, thank you for being there for me in so many ways. Your words, your patience, and your encouragement helped me more than you know.

To Mounir, my colleague in this dissertation, thank you for being part of this journey with me, I wouldn't have done it without you. Your effort, ideas, and support made the process much smoother and more motivating.

To my supervisor Dr. Ezzoubeyr Mehassouel, thank you for your time, feedback, patience and directions throughout this work. Your guidance helped me stay on track and improve at every stage.

To Azzam, thank you for your helpful advice and honest opinions when I needed them. You helped me look at things more clearly and find better ways forward.

To my friends Mohammed, Abdou, Alim, Abdelhak, Abdenour thank you for your friendship and constant encouragement. You were always there with the right words or just a good distraction when I needed it.

And finally, to everyone who believed in me thank you. Your support and faith pushed me forward, and I will never forget

Souhaib Chenini.

DEDICATION:

To my beloved mother,

Your endless prayers, gentle strength, and unconditional love have been the quiet force behind every step I take. I dedicate this work to you.

To my father,

Thank you for your wisdom, patience, and for always reminding me to stay grounded. Your silent support has meant more than words could ever say.

To my three little sisters,

Your innocence, laughter, and love have been my constant source of joy and motivation. This is for the future, I hope will inspire you.

To my supervisor, Dr. Mehassouel,

Thank you for your guidance, patience, and trust throughout this journey. Your encouragement pushed me to do better, and your words gave me the confidence to keep going.

To Souhaib,

We started this journey together, and I couldn't have asked for a better partner. Through the stress, the late nights, and the laughter, thank you for being there.

To Jarvis,

More than just a teammate, you were a true partner in this adventure. Your knowledge, dedication, and relentless support played a huge part in shaping this work. I'll always be grateful for the long hours, the shared ideas, and the motivation you brought into this journey.

To my dear friends,

Badrou, Mustafa, Yahia, Amine, Marcel, Ramy, Mohammed, Youcef, Noufel, and Youcef. Each one of you has, in your own way, stood by me through moments of doubt and shared in the little victories along the way. Your words, your presence, and your friendship meant more than you probably know.

To all my family and friends,

Each one by name and by heart, thank you for your kindness, encouragement, and for simply being there. This achievement is also yours.

And Finally,

To all those who, in one way or another, offered me their support; through a gesture, a word, or a simple presence. This work carries a piece of each one of you.

Mounir Sebrou,

Acknowledgments

This dissertation is the result of a challenging yet rewarding journey marked by persistent effort, growth, and the unwavering support of those around us. All praise is due to Allah, by Whose grace all good deeds come to fulfillment.

We would like to express our sincere gratitude to our supervisor, Dr. Zoubir Mahsoul, for his invaluable guidance, constructive feedback, encouragement, and patience throughout every stage of this research. His expertise has played a vital role in shaping the quality and depth of this work.

We extend our heartfelt thanks to the esteemed members of the jury for their time, insightful comments, and thoughtful evaluation. Your contributions have significantly enriched this dissertation and helped elevate its academic merit.

Our appreciation also goes to our colleagues in the Department of English at the University of Ghardaia, whose support and collaboration have been greatly appreciated during this research journey.

Finally, we are deeply thankful to all the participants who took part in this study. Your contributions were essential to the completion and relevance of our research

List of Acronyms

- **AI** – Artificial Intelligence
- **EFL** – English as a Foreign Language
- **L1** – First Language
- **L2** – Second Language
- **ICT** – Information and Communication Technology
- **CALL** – Computer-Assisted Language Learning
- **NLP** – Natural Language Processing

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General Introduction

I. General Introduction

I.1. Background of the Study:

Modern education's hot topic of research is clearly the overlap of Artificial Intelligence (AI) and English as a Foreign Language (EFL). As digital technology is changing many different fields, its effects on language learning and instruction are becoming more obvious. Long depending on textbooks, teacher led explanations, and planned writing exercises, traditional EFL training has frequently resulted in inflexible learning environments that fail to meet the different needs of each student. But the rise of artificial intelligence has brought dynamic, customized, and adaptable learning opportunities that let students foster their writing by tools of immediate feedback and AI-generated recommendations.

Today, EFL classrooms are using AI applications like automated grammar checkers, AI- powered text analyzers, and natural language processing (NLP) tools. These have a massive effect on how students strengthen their writing skills, sentence structure, and compositional coherence. The ability of artificial intelligence to provide real-time grammar correction, vocabulary improvement, and structure advice has changed the approach of students toward the writing process.

I.2. Research Aims:

This research discusses the role of AI in improving the teaching of writing to EFL students. It aims to analyze if AI really contributes to the improvement of writing skills or it can compromise crucial language skills. As opposed to traditional methods of teaching, AI technology offers personalized support, instant feedback, and effective revision processes based on individual requirements.

The basic objective of this study is to rate how AI-powered writing tools influence EFL students' writing competence, independence, and self-editing capacity. It aims to explore whether and in what ways the application of AI in writing is viewed by students and teachers as an augmentation or replacement for traditional practices in classes.

I.3. Research Questions:

1. How do AI-assisted writing tools influence EFL learners' writing proficiency and overall language development?
2. To what extent do these tools enhance learning outcomes and foster writing autonomy?
3. Do learners become overly dependent on AI-generated feedback, or do such tools encourage genuine skill improvement?
4. How do teachers and students perceive the role of AI in the EFL writing classroom?
5. What impact does reliance on AI feedback have on learners' self-editing and critical revision skills?
6. What are the perceived benefits and limitations of using AI in EFL writing instruction?
7. How do EFL teachers evaluate the effectiveness and practicality of integrating AI into their writing pedagogy?

I.4. Statement of the Problem:

The quick evolution of technological innovations in the field of education has led to an increased overlap of artificial intelligence (AI) in varied educational settings. While AI has made significant advancements in fields such as healthcare, finance, and engineering, its application around language education particularly in writing pedagogy for English as a Foreign Language (EFL) learners remains in its infancy and keeps being a subject of debate.

Among the long-standing problems of conventional writing instruction is the time-consuming process of giving plentiful feedback and evaluation. Instructors frequently find it difficult to give personalized, in-depth critiques to big classes of students, which may hinder quick advancement and restrict possibilities for revision. Artificial intelligence powered writing tools seem to address this dilemma through the delivery of machine-based corrections, structural recommendations, and instant feedback.

Although such benefits are present, concerns of over-dependence by students on AI-generated material, potential killing of creativity, and ethical concerns in using AI to write have

been cited. In this case, the study explores the possible benefits and limitations in introducing AI into EFL writing instruction, and how both students and teachers perceive its role and impact in the classroom.

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I.5. Rationale

The decision to research the prospects of artificial intelligence in EFL writing pedagogy is based on personal and pedagogical motivations, as well as broader educational developments in the time of digital transformation.

Subjectively, from a student and a prospective teacher in the field of Teaching English as a Foreign Language, the growing usage and visibility of artificial intelligence tools i.e., ChatGPT and Grammarly amongst students has planted a genuine interest in their effects on learning. Seeing other students use such technology to enhance their writing has also caused questioning about whether such advancements truly assist in skill development or only superficial improvement. This research provides a chance to formally examine how AI technologies can support the instructional process, impact learner autonomy, and potentially redefine the traditional role of the instructor in the language learning setting.

Objectively, the study fulfills an urgent need to evaluate how AI can enhance or change writing pedagogy in EFL settings. As English proficiency becomes increasingly vital for academic success and career development, especially in non-native contexts, AI offers scalable and cost-effective solutions. AI systems have the potential to deliver personalized feedback, correct errors, and support filling instructional gaps most especially in under- resourced settings where specialist teachers are typically scarce.

Nevertheless, its use in school settings presents many challenges. Issues of ethics, confidentiality of student information, and whether students become too dependent on technology-based assistance need to be thoroughly debated. The aim of this research is to make a significant contribution to the current scholarly debate concerning technology- facilitated language learning by testing not just the instructional advantages but also the boundaries of artificial intelligence. Last but not least, it aims to provide perspectives on how AI can be sensibly and responsibly integrated into EFL writing teaching in order to support successful

language development.

I.6. Structure of the Dissertation:

This dissertation consists of four chapters, each addressing a distinct aspect of the study:

- **Chapter One: Literature Review**

  This chapter provides a comprehensive review of existing literature on artificial intelligence (AI) and its historical development. It explores the growing integration of AI in education, with a particular focus on its application in teaching and learning writing within EFL contexts. Additionally, this chapter examines traditional methods of writing instruction, the challenges faced by both students and teachers, and the evolving role of AI tools in facilitating the writing process.

- **Chapter Two: Research Methodology**

  This chapter outlines the methodology used in this study, detailing the mixed-methods approach adopted for data collection. It explains how data were gathered through a combination of questionnaires, pre- and post-writing tests, and teacher interviews.

  The chapter emphasizes how AI tools are utilized by students to enhance writing skills and how teachers incorporate these technologies into their instructional practices.

- **Chapter Three: Data Analysis and Discussion**

  In this chapter, the findings from the research are presented and analyzed. The perceptions of both students and teachers regarding the use of AI in writing instruction are examined. The chapter discusses the impact of AI-powered tools on students' writing proficiency, their autonomy in the writing process, and their capacity for self-correction.

- **Chapter Four: Conclusion and Recommendations**

  This chapter summarizes the key findings of the study, discussing their implications for EFL teaching and learning. It provides recommendations for the effective and responsible use of AI in writing instruction and suggests areas for further research.

II. Chapter One: Literature Review

II.1. Introduction:

Education as a whole has recently adopted the integration of technology into language learning. The surging popularity of English as a Foreign Language (EFL) is bringing fresh challenges to researchers and instructors, all of which seek improvement in instructional effectiveness. EFL instruction that is conducted through teacher explanation and textbook usage is enhanced with the help of digital media, artificial intelligence, automatic platforms, and other tools that make the process of acquiring the language more enjoyable and individually tailored.

The automation of feedback processes in writing, perhaps the most difficult skill for EFL learners, has the potential to transform creativity-based tasks such as developing an argument outline, flowery prose, and visual representation of ideas. Teacher and peer review corrections are tedious and often haphazard, but AI can provide suggestions through live feedback and grammar correction for immediacy and ease.

Different views surround the role of AI in teaching writing. While some proponents believe that AI encourages learners' initiative and self-motivation, others caution against becoming overly reliant on technology, as it could limit a person's ability to think critically. Moreover, ethical issues like bias, data privacy, and the dependability of feedback given by machines bring in another layer of controversy.

This chapter provides an overview of the use of AI in EFL instruction, its evolution, current position, and likely advantages and challenges. It discusses AI-based writing software and evaluates the advantages and disadvantages of AI use in the EFL classroom. **This chapter** gives the study's theory a solid foundation by looking at AI's use in teaching English as a foreign language (EFL) writing in detail. It sets the stage for the next study, which will look at how AI can improve writing skills, student participation, and teaching methods.

II.2 Technology in Language Learning/Teaching:

II.2.1 The role of technology in enhancing language education:

The integration of technology into language learning and teaching has greatly impacted the ways children learn and acquire language skills. Technology has turned language teaching into a more engaging and active process compared to the traditional approaches which relied on lectures, textbooks, rote learning, and written activities. There are multiple equipments which support both learners and teachers and enhance their productivity, enabling personalized learning, immediacy of feedback, and increased engagement with the language. One of the great advantages of technology in teaching languages is its ability to create adaptable to different learners and various levels of competencies as well as multitasks immersive environments. (Warschauer, Meskill, 2000).

One of the ways technology enhances instruction is by expanding access to learning materials. Digital platforms, online courses, and language-learning programs provide students with unrivaled access to quality materials, regardless of location. This access is invaluable for EFL students who are not given opportunities to encounter authentic language use in their environments. In addition, students are able to practice their skills at their own pace with the option of revisiting lessons to reinforce their knowledge. Warschauer and Meskill (2000) argue that technology increase student autonomy, which in turn enables learners to manage their language learning processes. (Kukulska-Hulme ,Shield, 2008).

Additionally, with respect to instruction, the contact and communication with a target language facilitated by technology is of great importance. Learners, through forums, social media, and video conferencing, can engage in purposeful interactions with other learners and with fluent speakers of the language. Authentic language engagement helps Learner's skills development fostered through this increased access to real-world language interaction. It has been shown that learner interaction in digital environments enhances language acquisition by enabling students to actively engage with the language (Kukulska-Hulme, Shield, 2008).

Moreover, technology facilitates personalized education allowing instructors to design their classes for the specific requirements of each learner. In artificial intelligence, adaptive learning systems utilize AI to evaluate a student’s performance and modify their instructional path. With this method, students receive targeted assistance in areas that require development

while getting the necessary support throughout the learning process. AI algorithms in language learning applications such as Duolingo and Babbel enhance the efficacy of these apps for language acquisition by customizing the experiences for the learners. Tailored learning environments help language learners to stay more engaged according to Reinders and Benson's 2017 study.

AI assistants enhance digitally integrated language courses by enabling ease of interaction. Automated technology such as speech recognition software provides immediate feedback enabling learners identify and rectify errors instantly. Students can now achieve greater proficiency at an advanced pace and greater ease with such evaluative tools than through traditional methods. In the words of Chapelle and Voss (2016), technology-enhanced assessment improves accuracy and reliability with which a learner's mastery of the language is evaluated, thereby removing a considerable degree of subjectivity in grading and commenting on the performance.

Integrating technology into language teaching is beneficial, but it often comes with challenges. The inclusion of technology into pedagogical practices raises concerns such as the presence of basic IT skills, the availability of constant internet access, potential reduction of interpersonal interaction among learners and moderators within the teaching environment, and, indeed, the crux of the matter: enhancing human experience in the learning environment. Regardless, modern technology offers multiple effective solutions to the issues, so it becomes an indispensable element of contemporary teaching and utilization of language.

II.2.2. Key advancements in integrating technology into classrooms:

The last few years' advancements in technology have provided new methods to enhance teaching and learning processes, thereby transforming the current scenario of language instruction. These advancements have raised the levels of interest, participation, and effectiveness in learning different languages.

One of the most critical advances in language pedagogy is computer-assisted language learning (CALL). It comprises various technological resources - from interactive software and multimedia applications to online learning systems created to facilitate language learning. Earlier, CALL applications centered on grammar drills and lecture-monitored exercises.

Nowadays, modern CALL includes advanced teaching techniques such as simulation-based learning, responsive learning systems, and artificial intelligence education tools. According to Levy (2009), the use of aesthetic teaching and interactive, multiple perspective modalities that enable better understanding and retention is beneficial, and language education has been transformed through CALL.

The development paired with mobile technologies enhanced language teaching is mobile- assisted language learning (MALL). The widespread accessibility of mobile phones and tablets makes MALL a fundamental part of language education. Mobile applications permit students to integrate language learning into their daily routines by enabling practice at any time and place. With AI tutors, learners obtain immediate feedback and assistance on various tasks such as text-to-speech and speech recognition. According to Stockwell (2022), mobile learning augment's learner's attention and motivation, therefore enhancing the precision and ease of acquiring the language.

The use of Virtual and Augmented Reality (VR/AR) in language learning is gaining prominence by the day, as these technologies now allow for the full immersion and simulation of a culture which facilitates language learning effectively. With VR applications such as Mondly VR and ImmerseMe, learners can have realistic conversations in numerous places, including airports, business meetings, and restaurants. These technologies position students in actual language scenarios which help develop practical competence as well as cultural fluency, which are key for effective communication. Godwin-Jones (2019) highlights that learners' confidence and fluency regarding verbal interactions is improved through immersive language learning experiences made possible by using VR and AR technologies.

Writing support driven by artificial intelligence have changed how learners improve their abilities. Natural language processing (NLP) algorithms are used in applications including Grammarly, Pro Writing Aid, and Turnitin to find grammatical mistakes, offer style suggestions, and evaluate writing coherence. The resources provide students with opportunities

to hone their self-editing skills, leading to independent improvement of their writing. Although, artificial intelligence comments cannot totally replace human contribution,

it is a useful tool that improves the effectiveness of writing education. Ranalli's research indicates that AI-assisted feedback significantly improves EFL students' writing accuracy and coherence. Furthermore, helping to progress language acquisition are conversational artificial intelligence and speech recognition. AI-powered speech recognition systems like Microsoft Dictate and Siri, help in testing pronunciation trends and give corrections to raise spoken. These resources put students in a controlled setting practice intonation, stress patterns, and phonetic accuracy. Furthermore, simulating real-time conversations, AI-driven conversational bots like ChatGPT and AI-powered instructors provide individualized conversation practice catered to student competence levels. Artificial intelligence-powered speech recognition technologies enhance pronunciation and speaking fluency in language learners, according to research by Flor and Futagi.

II.3. Definition of Artificial Intelligence (AI):

II.3.1 Explanation of AI in general and its application to education:

A subfield of computer science, artificial intelligence (AI) aims to generate systems able of doing tasks usually requiring human intellect. Among these chores are natural language processing (NLP), machine learning (ML), pattern recognition, problem-solving, and decision-making. Operating by examining various amounts of data, spotting trends, and basing options or predictions on the gathered facts, artificial intelligence By learning from past interactions, artificial intelligence can progressively increase its performance over time using algorithms and sophisticated computation. From healthcare to finance to security to education, artificial intelligence (AI) is now a necessary backbone of many sectors that shape human interaction with technology and data processing.

AI originated in the 1950s when Alan Turing proposed the idea that machines could potentially mimic human intelligence. This notion in turn lead to the Turing Test as a standard to assess whether a machine could behave intellectually similar to a person (Turing, 1950). John McCarthy formally proposed the discipline of artificial intelligence at the Dartmouth Conference in 1956, starting artificial intelligence research (McCarthy et al., 1956). Artificial intelligence has developed over many years from simple rule-based systems to the more

complex machine learning models, deep learning architectures, and natural language processing systems that enable the current AI applications.

The educational field has undergone a fundamental transformation through artificial intelligence which offers customized learning methods that adapt to individual student requirements. This technology enables education to analyze student progress and customize learning materials according to their specific needs which stands as its primary educational achievement. The implementation of machine learning techniques enables educational systems to track student progress while identifying learning deficiencies to generate customized learning resources that support further knowledge development. Through AI- based education solutions including intelligent tutoring systems (ITS) and automated grading systems students receive prompt feedback which reduces their reliance on teachers for

repetitive assessment tasks. (Chapelle . Voss (2016)) The domain of language learning through English as a Foreign Language (EFL) receives substantial benefits from artificial intelligence. AI-driven writing guidance through Grammarly, Pro Writing Aid and Turnitin provides students with immediate feedback about their grammar, vocabulary and coherence while working. The use of Google Assistant and iTalki speech recognition tools enables students to practice their spoken English through AI-based pronunciation analysis. Modern EFL education benefits from AI because its applications enable students to enhance their language proficiency through better speaking and writing abilities.

Furthermore, AI enables adaptive learning contexts in which students receive customized lesson plans depending on their performance and learning speed. AI enables applications such as Duolingo and Babbel to create dynamically personalized routes through learning that ensure students receive targeted instruction to address their specific challenges. Through automated assessments, predictive analytics, and learning recommendations, AI-enabled learning management systems (LMS) also support educators in managing student engagement and adapting their instruction (Holmes et al., 2019).

While using artificial intelligence in education has benefits, it also has drawbacks. One issue is the reliability of AI-generated feedback, as AI models do not always understand the nuances of human language, including nuances in creative writing (though generally, this is not only a problem that can occur within the constructive feedback of language use). There are

ethical issues around data privacy, artificial intelligence algorithm discrimination, and the possibility for students to become overly reliant on tools that produce AI-generated recommendations (Selwyn, 2020).

Artificial intelligence has changed the educational landscape by offering personalized assistance, personalized education, and data driven insights in real time. It has changed the future of education, mostly in the EFL landscape. However, it is important that both the technology and teaching have to be balanced, by finding a combination of AI-powered tools and effective teaching. This can often improve learning outcomes while not sacrificing effective teaching.

II.4. Milestones in AI as it relates to education and language learning:

Like it more general evolution, artificial intelligence in education also developed along similar lines and encroached progressively on classrooms and language learning spaces. The use of computers in education began in the 1960s with computer-assisted instruction (CAI) - providing students with the basic drills and exercises to do. Early educational artificial intelligence projects, such as PLATO (Programmed Logic for Automatic Teaching Operations) established computer-based instruction in subjects like mathematics and language learning which then formed the groundwork for AI-enhanced teaching systems (Bitzer, 1960).

Intelligent Tutoring Systems (ITS) like the SCHOLAR system, were introduced in the 1980s and 1990s, and were designed to provide individualized education based on a learner's progression, using artificial intelligence to create adaptive learning experiences in subjects like language education (Carbonell, 1970). These early tutoring systems were a big step forward for artificial intelligence-assisted learning since they could measure students' performance and adapt content based on their performance.

As the internet became increasingly common during the late 1990s and early 2000s, education technology increasingly incorporated artificial intelligence (AI) tools using adaptive learning platforms and learning management systems (LMS). AI LMS platforms such as Moodle and Blackboard included tools that allowed teachers to track student progression, automatically administer assessments, and provide customized learning recommendations. In parallel with these developments in machine translation technology, initial versions of Google

Translate established an opportunity to evaluate the capability of AI to process and translate human language, albeit with a potentially low accuracy level at that time.

In the 2010s, advances in natural language processing (NLP) and AI powered by deep learning offered unprecedented possibilities for language learning. Companies such as Duolingo, Grammarly, and Rosetta Stone all simply integrated AI to present real time grammar correction, pronunciation analysis, and personalized lesson plans. Meanwhile, AI powered chatbots (such as Google Assistant) and virtual tutors (such as ChatGPT) enabled learners to engage in simulated paradigms of conversation, improving the speaking and writing skills of the learner. These available solutions greatly enhanced the availability and efficiency of language learning through the potential of providing learners immediate feedback and personalized learning experiences (Xie, Chu, Hwang, & Wang, 2019).

The emergence of automated writing evaluation (AWE) systems that provide students with artificially generated comments about their essays and writing assignments was another significant game changer in terms of artificial intelligence for education. With AI, Turnitin, WriteLab, Pro Writing Aid, and other tools also evaluated grammar, coherence and writing style and therefore supported students in improving their own writing independently. As a result of timely and comprehensive corrections, AI enhanced feedback has shown that it can improve students writing and allow them to focus on developing their language with peers (Ranalli, 2021).

More recently, AI is used in speech recognition software to help pronunciation, specifically for language learners. Using speech recognition and natural language processing, iTalki and Elsa Speak, researched using a number of AIs, evaluate students' pronunciation and give them feedback. These tools assist students with speaking by allowing them to practice real- life speaking tasks and situations without a human teaching, making learning more engaging and stimulating.

These developments highlight that challenges still remain in fully embedding artificial intelligence in educational contexts. Data privacy issues, biases in artificial intelligence models, and inappropriate trust in AI-generated comment seems to be some of the controversial issues. On the other hand, the world of AI and education is worth beginning to accept, as fusion of different technologies will make new, increasingly complex tools for language acquisition

and instruction.

The change from pure theoretical notion to a viable implementation improving language instruction through adaptive learning environments, automated assessment, and interactive communication tools marks a real change in the presence of artificial intelligence in education. As it would seem likely that the uses of artificial intelligence will expand, along with continuing technology, and continue to shape the way students engage in, and acquire new languages.

II.5. Use of AI in Language Learning/Teaching:

II.5.1. AI-powered tools and platforms:

With AI-powered solutions offering new advances for improving learning environments, increasing student engagement, and enhancing instructional approaches, artificial intelligence has evolved into a natural layer of language teaching and learning. The increasing demand for pedagogically-effective English as a Foreign Language (EFL) instruction has resulted in the implementation of numerous AI-powered programs that help students in writing, grammar usage, pronunciation, reading comprehension, and interactional fluency. Using tools like natural language processing (NLP), machine learning, and deep learning, these AI-powered applications provide rich personalized and adaptive learning environments.

Grammarly is one of the most commonly used AI tools in language education. It provides real-time grammar, punctuation, spelling, and stylistic feedback as an AI-assisted writing tool, which makes it easy to use and not as intimidating for a novice writer. Grammarly evaluates written work, discovers mistakes, and recommends repairs based on NLP and machine learning. When compared to conventional grammar checkers, Grammarly still offers much-needed developmental feedback on other features such as clarity, conciseness, and overall readability; hence it is a useful device for EFL learners developing their academic, or other writing skills. AI-assisted writing tools such as Grammarly have been shown to help learners notice and correct their error so that their writing accuracy eventually improves over time (Ranalli, 2021).

ChatGPT is another critical AI resource used in language education. ChatGPT is a

conversational AI model developed from OpenAI for user interaction closely resembling human-like dialogue. ChatGPT can assist in stimulating writing and oral English since it utilizes deep learning to develop responses based on user supplied data. ChatGPT allows EFL students to role-play real interaction scenarios, provide clarity on challenging grammar rules, and enhance writing coherence by providing AI-generated comments. Studies show that AI

chatbots such as ChatGPT support student confidence mainly in terms of promoting fluency and spontaneity in communication (Xie et al., 2019).

AI-powered translation and language-learning applications have gained some traction with EFL learners, apart from Grammarly and ChatGPT. For instance, Google Translate and DeepL use AI-generated translation models to analyze and understand text with incremental accuracy. These tools allow students to interpret foreign books and develop bilingual skills to some degree, even they cannot entirely replace human translation.

Similarly, AI algorithms in applications like Duolingo and Babbel track the students' progress, assess their level of competency, and adapt the instructional path. These tools add a gamified learning component and help move the language learning experience from discouraging to one that is active and playful.

AI has also progressed tremendously in EFL education in the area of speech recognition. AI utilizes speech recognition in apps like iTalki, Elsa Speak, or Google Assistant that evaluate fluency, intonation, and pronunciation quality. AI technologies allow students to practice speaking skills on their own and provide them instantaneous feedback with sometimes sophisticated scales of pronunciation correction without a teacher. AI tools provide a valuable and unconscious component of any modern EFL education program as studies indicate that voice recognition systems have been shown to increase the pronunciation and spoken fluency of learners (Flor & Futagi, 2020).

AI-powered tools and platforms have changed the landscape of language learning by providing students with easy access, immediate, and customizable learning opportunities. These tools and platforms are great adjuncts to independent learning and the development of skills although they will never replace traditional language learning.

II.5.2. How AI personalizes and automates learning:

The ability for artificial intelligence (AI) to personalize learning to respond to every individual student's need, is one of the most fundamental benefits of AI in education. Traditional classrooms usually take a one fit all model. AIs enable a platform to evaluate student data to personalize learning content. This adaptive learning model ensures that every learner experiences' focused learning specific to their learning speed, ability, and area for growth.

Artificial intelligence learning platforms also utilize machine learning techniques that evaluate the achievement of students' skills and competency levels to track their progress. These tools produce personalized coaching or tutoring designs for our learners. A great example of this ability is Duolingo, which uses AI to automatically adjust the level of difficulty of the tasks presented to its users to keep learners at their learning level. Likewise, adaptive writing software tools such as Turnitin that assess writing and provide students with meaningful information about their writing which provides feedback on areas of their writing

that can improve with recommendations on organization, presentation, and coherence. Research by Luckin et al. (2016) demonstrates that a personalized learning experience with the help of artificial intelligence advances and deepens student engagement and makes learning more meaningful.

One other substantial gain of artificial intelligence in language learning is its use of automation, which allows a teacher to enhance the learning experience by reducing their workload. AI driven assessment tools like Turnitin and WriteLab automate the marking of student work and provide students feedback immediately on grammar, syntax, and even argumentation. This not only expedites the marking process, but also allows students to assess their work according to AI-generated recommendations before they see a response from a human marker. Holmes et al. (2019) found that this automation allows for self-editing and improvement of independent learning, increases the level of writing, and therefore increases the reliability of qualitative feedback provided to the student.

AI is also automating administrative tasks in language education, freeing up the teacher to focus on the more creative and interactive aspects of learning. Learning management systems (LMS) such as Blackboard, Moodle, and Canvas use AI generated analytics to track and assess

student engagement and learning behaviors, and develop reports concerning overall performance. These tools allow for the identification of students who are struggling to engage with the content, and thus allow the instructor room to adapt their pedagogical strategies accordingly.

Intelligent Tutoring Systems (ITS) are another example of technology driven by Artificial Intelligence used to personalize learning in EFL learning. These AI-powered virtual learning assistants provide real-time instructions and explanations to students like a tutor teaching one-on-one. The AI reading coach from Microsoft, and Carnegie Learning's MATHia, analyze learners' mistakes and adjust the learning sequence in order to optimize learning. ITS research has found that students' retention and understanding improved because ITS personalized learning offered a personalized experience that was adaptable to students' changing needs (Van Lehn, 2011).

Although there are numerous advantages to computerized and personalized learning, there are also barriers to complete integration of AI into a learning process. Overreliance on AI feedback could lead to weak critical thinking skills as students can become accustomed to automated corrections rather than spend time critically reflecting on their own mistakes. They uncritically give the machine data points, rather than resolving their problem through critical thought. AI is not infallible and can provide incorrect or oversimplified feedback, which requires human follow-up to confirm learning efficiency. Ethical considerations such as data privacy and biases in algorithms must be considered to ensure responsible use of AI in education (Selwyn, 2020).

Regardless, especially as AI develops, it is an essential resource for modern EFL teaching, and combined with AI-led personalization, teachers can offer a more nuanced and engaging learning experience to students with numerous needs.

II.6. Writing Teaching Methods:

Writing is one of the most difficult skills for English as a Foreign Language (EFL) students because it requires a thorough understanding not only of grammar and vocabulary, but coherence, organization, and awareness of style. Writing instruction by EFL teachers has traditionally relied on teacher-centered approaches, in which students are taught rules, practice controlled classroom activities, and receive immediate feedback from their teachers. Conventional approaches to writing invitation have varied over the years, each with advantages and disadvantages.

One of the first teaching methods still used to teach writing in EFL classrooms is the Grammar-Translation Method (GTM), which emphasizes articulating grammatical rules and translation activities that consist of student translators creating sentences or paragraphs from their native language into English. This method focused on grammar rules and vocabulary acquisition, directing students to make translations from their language into English. While GTM provides an effective foundation of syntax and sentence construction, in many circumstances, GTM neglects the ability to articulate originality and communicative competence leading to students' written fluency development (Richards & Rodgers, 2001).

The product approach is also a frequently-used approach that emphasizes the end product rather than the writing process. Students need to rote copy structures and know only to focus on structure, cohesion and grammatical accuracy focusing on model texts as examples of appropriate writing to copy. The product approach conveys an important technique of teaching a specific writing genre, such as an academic essay and a business letter using specific structural rules, that the students understand. Critics suggest that it undermines their ability to develop independent writing skills since it emphasizes imitation over producing new ideas (Tribble, 1996).

Writing as a process, which does emphasize the writing is a healthy and developing process, is the approach developed in response to the limits of traditional approaches. According to Murray (1982), the Process Approach invites students to go through several stages, which are prewriting, drafting, editing/revising, and re-drafting. This approach allows students to consider ideas and reflect on them, and receive feedback by discussion with fellow students and teachers, and eventually improve their writing. Research studies of the process employing writing approach have indicated how students organized their writing products and produced thoughts in writing. (Hyland, 2003).

In addition to these methodologies, the communicative approach has become quite popular in EFL writing classes for many teachers. The communicative approach emphasizes meaning and real-life communication, instead of the drab pursuit of grammatical excellence. Students write authentic tasks that reflect real-life experiences, these include creative stories, blog posts, and emails. The communicative approach is more engaging and makes writing more relevant to students, resulting in better readiness to write. The downside is that some teachers

feel that the communicative approach lacks significant grammatical support and students struggle due to continuous language errors and mistakes (Harmer, 2007).

Even with the use of these traditional methods, EFL students are not efficient writers. Typical impediments faced by students include little exposure to actual English writing, lack of motivation, and organization of essays. Therefore, teachers today are using approaches and gradually blending traditional approaches with newer, current approaches using technology to create more active and student-centered language learning experiences.

II.7. Challenges of Teaching Writing:

II.7.1. Typical challenges exposing teachers and students in developing their writing skills:

Teaching and learning English as a Foreign Language (EFL) settings pose some compelling challenges to both teachers and students. Writing is among the hardest skills to master since it requires not only a good grasp of the grammar and vocabulary but also a sense of structure, organization, and clear articulation of ideas. Writing requires organized cognitive processes as well as self-monitoring, which may pose greater challenges for non-native English learners. In contrast, speaking is a real time interaction and allows for immediate clarification and correction.

Limited language ability is foremost an obstacle for learners develop their capacity to write effectively. Many EFL learners struggle with grammar, sentence structure, and vocabulary, which impact their ability to create understandable texts. Learning a second language requires learners to not only apply grammar rules accurately but to also be conscious of punctuation, tone, and convention, such as tense, style, and consistency. Research suggests EFL learners replicate structures directly from their first language, which can produce erroneous grammar, inelegant phrasing, and inappropriate word choice (Ellis, 2008). In writing, this influence from the mother tongue can undermine clarity and flow..

Developing a further level of distress is students' overpowering fear of EFL. Two major factors influence this issue, one being limited exposure to composing in English and the other is anxiety regarding their writing. EFL students do not often have many opportunities to read and compose English texts, compared to native speakers who are immersed through pop culture, interactions, and academic spaces. As a result, many students have difficulty understanding genre conventions, organizational patterns (e.g., a 5-paragraph essay) or the appropriate use of cohesive devices in their writing. For example, if students have had very little exposure to well-organized English writing, they will have trouble generating a "natural" writing style or how to organize different types of writing (e.g. essays vs. reports vs. stories) (Hyland, 2016).

Many EFL students also experience anxiety and lack of confidence about their written English. Students worry about grammar mistakes or negative feedback, but writing involves a combination of creativity and analytical thinking. Often, anxiety manifests as avoidance

behaviors where students rely on preset phrases or translate directly with very little thought to developing and organizing their ideas. Students who have received rigid or grammar based writing instruction, which emphasizes correcting errors rather than development, can be particularly susceptible to writing anxiety. Cheng (2002) found students who are not confident about writing produced shorter, less complex pieces of work and engaged much less in self-editing and rewriting.

From a teaching perspective, providing comment on time and in a useful manner is one of the most difficult aspects of teaching writing. While most EFL classes operate at high

student-to- teacher ratios, therefore inhibiting the opportunity for teachers to give proper individualized attention to their student's work, even more effective writing teaching requires sustained feedback to improve student learning. For teachers, commenting on grammar, coherence, organization, and argument development all require significant time and effort that can be overwhelming. Research suggests students are less able to successfully respond to feedback that has been given too late, or is too general (Ferris, 2003), and therefore has diminished value in regard to development in writing.

The second dilemma for teachers comes from managing the balance of correctness versus fluency. While complete grammatical accuracy is invaluable, excessive emphasis on error correction can inhibit children's opportunity to play with the language and to find their own writing voice. Additionally, to prioritize fluency and to ignore the constructs of structure and grammar, could lead to repeated writingy mistakes that are fossilized over time. Achieving effective writing teaching in classroom scenarios with limited time, satisfies concurrent objectives of ensuring linguistic accuracy and encouraging creativity in writing (Truscott, 1996).

Additionally, when it comes to qualified writing instruction in some schools, roadblocks include a lack of resources or technology assistance. Many schools, more so in rural areas, do not have access to digital devices, AI writing assistance programs, or even online writing sites that would provide students with extra feedback and practice. With limited or no technology assistance, teachers may not provide feedback in a timely manner, and students may lack the writing practice without some physical assistance. However, schools with AI-driven tools with students, such as Grammarly, Pro Writing Aid, or Google Docs have made strides in student engagement and writing development because of the ability for students to self-edit and receive immediate corrective feedback (Warschauer & Ware, 2006).

Finally, differences in writing style may also present challenges in EFL education. The ways that arguments, idea development and the use of rhetorical strategies differ greatly from one culture to another. For example, English academic writing tends to be direct, with an explicit thesis statement, a logical progression of ideas and overt transitions. In some cultures, writing can be more circular, where significant ideas and concepts are implied, not directly expressed. This may create a tension for EFL students who have had experience with a number of different rhetorical patterns, particularly if they try to conform to the specific requirements

of English academic writing, leading to misinterpretations and poorer academic results (Kaplan, 1966).

Though these barriers remain, advances in technology and AI-assisted learning have opened new paths for supporting both students and instructors in overcoming writing difficulties. EFL educators now have opportunities to assist students in developing strong writing skills that will serve both academically and professionally if they incorporate technology, develop student confidence, and provide effective feedback techniques.

II.8. Use of technology to teach writing:

II.8.1. How technology supports writing instruction:

The introduction of technology into the classroom has resulted in a disruption of the traditional approach to the teaching of writing, and given students a way to engage with interactive, instant, individualized learning environments. With technology, students are able to engage with digital tools that use automation, instant feedback, and individualized learning approaches to create the writing process without relying on printed documents or teacher feedback. For English as a Foreign Language (EFL) students, the technological advances in writing instruction have made it also easier, more effective, and more engaging.

Probably the most significant impact of technology on writing instruction is that it provides instant automatic feedback. Advanced artificial intelligence (AI)-based writing assistants such as Grammarly, Pro Writing Aid, and Turnitin, for example, allow students to engage in real-time analysis of their writing with suggestions on structural issues, punctuation, and grammar issues. Students can monitor and fix their own writing at a basic level prior to submission, while allowing instructors/teachers to concentrate on more complex aspects of writing instruction such as logic and clarity (Ranalli 2021), thereby reducing the dependency on instructors/teachers for minor errors.

Adaptive learning systems - which adapt writing tasks to fit an individual student's assessment - also support the improvement of writing pedagogy. No Red Ink and Write & Improve sites use artificial intelligence algorithms to assess student assessments and provide targeted workouts to remediate any weaknesses. This individualized process is valuable in large classes when it is challenging for teachers to construct differentiated opportunities, to

ensure students have the support that is based on their level (Klimova, 2021).

Google Docs, Padlet and Wikis are also collaboration-based writing tools that have fundamentally changed how students engage and participate in a project. These collaborative writing systems allow multiple users to work in the same document simultaneously, which may be useful in peer review, teacher feedback or even simultaneous editing. Evidence suggests that collaborative writing may help students not only in writing, but also in their ability to critically reflect and revise their work (Storch, 2013). Furthermore, these collaborative tools improve student engagement by providing an interactive process for writing that simultaneously allows students to generate ideas and provide feedback to peers.

Adaptive learning systems, which modify writing tasks based on the performance of individual students and feedback, also support refining writing pedagogy. Emerging technologies, such as a No Red Ink or Write & Improve, utilize artificial intelligence with algorithms to analyze student performance and deliver exercise targeted toward "remediating" student error. Why is this important? This type of individualized, adaptive learning is useful in autoregressive systems, especially in large classes, where it may be challenging for a teacher to design differentiated opportunities, in that it recognizes a student's individual level (Klimova, 2021).

Google Docs, Padlet, and Wikis and sites, like these, have altered the way in which students work when approached with writing projects, as they are collaborative-based platforms. Often, collaborative-based forums allow the interaction of multiple users on a shared document at the same time, which allows for peer review, teacher feedback, as well as multi-user editing. The available research has noted that collaborative writing can benefit students not only in their writing but also in their ability to critically reflect on and revise their writing (Storch, 2013). Additionally, these digital collaborative tools contribute to an enhanced student engagement while allowing writing to be a more interactive process, wherein students can mutually generate and share ideas as well as give one another feedback simultaneously.

II.8.2. Advantages and limitations of using AI tools for writing:

The incorporation of artificial intelligence (AI) in writing education has numerous advantages, especially regarding quick feedback, correctness in writing, and student autonomy. However, AI tools also have some limitations that must be acknowledged if we are to use them effectively in a teaching context.

One of the major advantages of AI tools is the ability to deliver fast, personalized feedback. Unlike human teachers who may take a day or longer to provide feedback, AI applications can instantly identify grammar, punctuation, and style errors in the writing that has been generated in real-time, flagging issues as the text is being processed. Quick feedback allows students to correct errors immediately while writing, which can improve their learning and understanding of grammatical rules and sentence structures (Li, 2022). in addition, AI tools can analyze and process large amounts of writing much faster than human instructors, which should be a significant benefit in large classroom settings when there is not enough time available to provide all students individual feedback.

There is one more a huge benefit from supporting autonomous learning. AI-powered tool help students "own" their writing development by making comments and explanations about mistakes that are found. People using AI writing assistants tend to become better self-editors because they are more aware of common mistakes, and recognize how to fix this independently (Chapelle & Sauro, 2017.). This allows one to own the writing process and reduces dependence on teachers for minor edits.

Additionally, there are AI tools to support enhancing word choice and style of writing. Tools such as Grammarly and Pro Writing Aid provide advanced suggestions related to word

choice, tone, and clarity. Through suggesting different phrasing and mitigating the risk of repetition - they enable students to better develop their style, expanding their vocabulary. For academic writing and avoiding plagiarism, AI-based paraphrase technologies assist students to rework sentences and sustain meaning (Turnitin, 2020).

While these are advantages, AI writing tools are undoubtedly limited. One of the major drawbacks is that artificial intelligence feedback can sometimes simply be inaccurate. AI writing tools may struggle with complex language use, idioms, and rhetorical frameworks, even when they can identify issues with grammar and offer surface-level edits. For example, especially in programming dialect that requires editing of meanings, AI macro-writing tools might misinterpret the intention behind the original communicative act (Bikowski & Vithanage, 2016).

Another limitation is that students can develop an over-reliance on suggestions from AI writing tools, as this could lead to dependency and make it difficult for students to interact with their own output critically. In some cases, students may even passively accept AI feedback and employ the suggestions, without engaging actively as a learner when there was an original mistake that the AI corrected. In rare cases, preliminary text production can be seen as a critical learning exercise; however, there is little to no growth if the AI does all of the corrections, potentially resulting in delays in long-term writing development and in critical thinking (Dikli & Bleyle, 2021).

Ethical considerations may also arise around academic integrity and plagiarism. AI-based text generators like ChatGPT, with their ability to quickly produce coherent essays and comments in response to prompts, raises concerns about students submitting AI-generated writing as their own. While it should be emphasized that AI can be used as a support tool and not a substitute for original thought, teachers should establish clear guidelines on the ethical use of artificial intelligence in writing instruction (Selwyn, 2023).

AI tools may also reinforce prejudices inherent in the data on which they were trained. Some research has demonstrated that sometimes AI writing aides will privilege some linguistic formations or writer's styles over others, therefore potentially disadvantaging learners with different linguistic backgrounds. For instance, if AI-based grammar checkers and learnings mark unacceptable nonstandard forms of English as wrong, it reinforces prescriptive rules and limits a student's ability to find their voice in writing in standard English forms (Bender et al., 2021).

Ultimately, how we embed AI-powered resources into writing education will determine whether AI will be beneficial in educational context, even if the benefits appear compelling. When used constructively, AI has the potential to increase student ownership of their writing, enhance writing skills, and provide meaningful feedback. However, it is important for educators to ensure that learners use AI critically and mitigate between technology and human education as well as self-reflection. Fully realizing the potential of AI for writing

education will only occur if we adopt a hybrid approach that includes educators facilitation, AI resources, and engagement with peers.

II.9. Conclusion:

Technology and Artificial Intelligence (AI) have significantly transformed EFL writing instruction, making it more accessible, interactive, and personalized. AI tools like Grammarly and ChatGPT offer immediate feedback and adaptive learning, supporting student autonomy and enhancing the writing process. Writing pedagogy has evolved from rule-based methods to process-oriented and technology-enhanced approaches, allowing for more purposeful and contextualized writing.

Despite these advancements, challenges remain—such as addressing varied proficiency levels, writing anxiety, and timely feedback. While AI offers valuable support, it cannot replace human instruction. Ethical concerns like plagiarism, over-reliance, and language bias must also be carefully managed.

In sum, AI holds great pedagogical potential, but its integration must be guided by thoughtful planning, sound teaching practices, and ethical responsibility.

Chapter 2: Practical Part

1- Introduction
2- Research Methodology
   Research Design
   Population
   Sample
   Data Collection Methods
   Data Analysis Methods
3- Results and Discussion:
   Analysis of The Questionnaire Data
   Analysis of The Interview Data
4- Conclusion

III. Introduction

This chapter presents the practical part of the study, which investigates the perceptions of EFL students regarding the use of Artificial Intelligence (AI) tools such as ChatGPT and Grammarly in enhancing their writing skills. It outlines the research methodology, describes the sample and instruments used for data collection, and discusses the main findings obtained from both questionnaire and interview responses. The analysis follows a thematic approach to identify recurring patterns and key insights.

III.2 Research Methodology

III.2.1. Research Design

This study adopts a mixed-methods approach, combining both quantitative and qualitative data to provide a comprehensive understanding of how AI tools influence students' writing development. A structured questionnaire and follow-up interviews were used to gather detailed information on student behaviors, perceptions, and experiences with AI-powered writing support.

III.2.2. Population

The target population for this study includes third-year EFL students at the Department of English, university of Ghardaia. These learners represent a group actively engaged in academic writing and potentially exposed to digital tools.

III.2.3. Sample

A random sample of students was selected. The sample consisted of both male and female third-year license students who had varying degrees of familiarity with AI tools. The diversity of respondents helped ensure a more representative understanding of general attitudes and usage patterns.

III.2.4. Data Collection Methods

Data were collected using two primary instruments: a structured questionnaire and a set of semi-structured interview questions. The questionnaire included both closed-ended and open- ended items, allowing for both measurable trends and descriptive insights.

III.2.5. Data Analysis Methods

Quantitative responses were analyzed using frequency counts and percentages to identify major patterns in AI tool usage, perceived benefits, and challenges. Qualitative responses were analyzed thematically, following Braun and Clarke's (2006) model of thematic analysis, which involves identifying, coding, and interpreting patterns within qualitative data.

III.2.6. Analysis of the Questionnaire Data

Using thematic analysis, student responses were examined to identify patterns in writing challenges, AI tool usage, motivations, perceived impact, challenges, and opinions on integration. Beyond categorizing trends, this section probes into students' *underlying reasons*, *belief systems*, and *learning habits* influencing their views.

III.2.6.1 Participants' gender and level :

Gender and Level	Option	Percentage
Gender	Male	39.62%
	Female	60.38%
Level	L1	9.80%
	L2	45.10%
	L3	45.10%
	M1	00.00%
	M2	00.00%

Interpretation:

The data shows that **female students (60.38%)** participated more in the questionnaire than male students (39.62%), indicating higher engagement from females in this study. Regarding academic level, most responses came from **second year (L2)** and **third year (L3)** students, each representing **45.10%**, while **first-year (L1)** students made up only **9.80%**, suggesting more interest or experience with AI tools among higher-level students.

III.2.6.2. The usage of AI tools:

Do you use AI tools to improve your writing skill?	percentage
Yes	80.77%
No	19.23%

Interpretation:

Most students (**80.77%**) reported using AI tools to improve their writing skills, showing strong interest in leveraging technology for learning. Only **19.23%** do not use AI tools, suggesting that most students find them helpful in enhancing their writing.

III.2.6.3 AI tools :

What Ai tool do you use?	Percentage
ChatGPT	57.97%%
Quilbot	13.04%
Grammarly	18.84%
Deepseek	2.90%
Messenger AI	1.45%
Remini	1.45%
Perplexity	1.45%
Gemini	1.45%

Interpretation:

The data indicates that **ChatGPT** is the most widely used tool, representing **57.97%** of all mentions. This suggests a strong preference for its versatility and effectiveness in language-related tasks. **Grammarly** (18.84%) and **Quillbot** (13.04%) follow as the next most used tools, likely valued for grammar correction and paraphrasing. Other tools such as **Deepseek**, **Perplexity**, and **Gemini** appear only marginally, reflecting limited use. Overall, the results show a clear concentration of user preference around a few dominant AI tools.

III.2.6.4 Frequency of AI tool usage:

How often do you use AI tools?	Percentage
Sometimes	49.06%
Often	26.42%
Rarely	11.32%
Always	11.32%
Never	1.89%

Interpretation:

The data shows that nearly half of the respondents (**49.06%**) use AI tools for writing **sometimes**, indicating a moderate but regular reliance on such tools. A significant portion (**26.42%**) reported using them **often**, suggesting growing integration into writing practices. Smaller but equal groups (**11.32%** each) use them either **rarely** or **always**, showing varied but consistent user behaviors. Only **1.89%** never use AI tools, highlighting their widespread acceptance among the sample population. Overall, the results suggest that AI tools have become a common, though not constant, component of writing routines.

III.2.6.5 Applications of AI tools in the writing process?

In what ways do you use AI tools for writing?	Percentage
Grammar and spelling mistakes?	66.04%
Generation	45.28%
Paraphrasing	26.42%
Enriching vocabularies	33.96%
Brainstorming	1.89%
Acquire information	1.89%

Interpretation:

The data shows that grammar correction is the most common use of AI tools among participants, with **over two-thirds** (66.04%) indicating this function. This is followed by idea generation (45.28%) and vocabulary enrichment (33.96%), reflecting AI's role in content development and language refinement. Paraphrasing (26.42%) is also a notable use, while more specific or less conventional uses like brainstorming and retrieving information appear only rarely. This suggests that most learners rely on AI for foundational writing support rather than advanced or research-driven tasks.

III.2.6.6 Purposes of using AI in writing?

What are your purposes of using AI in writing?	Percentage
Improving writing quality	40.38%
Ease/Speed	30.77%
Idea generation	26.92%
Style refinement	1.92%

Interpretation:

Most people use AI tools to **make their writing more accurate** (40.4%). Many also use them to **write faster and more easily** (30.8%). A good number of users rely on AI to **help them come up with ideas** (26.9%). Only a few use AI mainly to **improve their writing style** (1.9%). This shows that AI is mostly used to correct mistakes, save time, and get inspired.

III.2.6.7 The impact of using AI in writing?

What is the impact of using AI tools on your writing skill?	Percentage
Using AI tools has helped me understand my writing mistakes better	63.46%
I feel my writing skills has improved thanks to AI.	17.31%
I depend less on AI tools over time as my writing improves.	11.54%
AI tools make me more motivated to write in English.	5.77%
I believe AI tools support my long-term development as an English writer	1.92

Interpretation

The data shows that **most students (63.5%) believe AI tools help them recognize and understand their writing mistakes**, which suggests that AI is widely seen as a learning aid. About **17.3% feel their writing skills have improved overall**, likely due to frequent feedback and corrections. A smaller portion (**11.5%**) stated that they **now rely less on AI**, indicating growing confidence in their writing. Meanwhile, **5.8% reported feeling more motivated to write in English**, and **only 1.9%** believe that **AI supports their long-term development as writers**. These findings highlight that AI tools mainly help with awareness of mistakes and writing improvement, with motivation and independence developing gradually over time

III.2.6.8 Debating the usage of AI integration in writing:

Do you think AI tools should be integrated into writing classes?	Percentage
Yes (Yes, definitely / Yes / Sure / Yeah 100% / Absolutely / With conditions like careful use)	68%
Negative (No / Not really / I don't think so / Strong concerns)	20%
Neutral/Mixed responses (Maybe / Depends / I don't know / Pros and cons discussed):	12%

Interpretation:

Most students support integrating AI tools into writing classes, with **68% expressing positive views**. They believe AI helps improve grammar, vocabulary, idea generation, and writing confidence. Some suggest it should be used as a supportive tool after mastering the basics. About **20% are against or hesitant**, citing risks like overdependence, loss of creativity, and reduced critical thinking. The remaining **12% hold mixed or neutral views**, acknowledging both benefits and drawbacks. Overall, while students favor AI use, they recommend **gradual and guided integration** to enhance learning without replacing core writing skills.

III.2.6.9 Difficulties faced in written expression:

difficulty	description	percentage
Grammatical mistakes	**Struggles with tenses, subject-verb agreement, punctuation, etc.**	**28%**
Poor vocabulary	**Not knowing enough words or using basic/simple**	**20%**

	vocabulary	
Lack of ideas	**Difficulty generating or organizing ideas before writing**	**18%**
Poor organization	**Trouble structuring paragraphs logically (intro-body-conclusion, cohesion)**	**14%**
Difficulty structuring sentences	**Problems with word order, sentence clarity, or complexity**	**20%**

Interpretation:

Based on the responses, the most common difficulty students face in written expression is grammatical mistakes, reported by approximately 28% of participants. This reflects a strong need for support in using correct sentence structures, punctuation, and verb tenses.

Additionally, around 20% of students struggle with limited vocabulary, which affects their ability to express ideas clearly and accurately. An equal percentage reported difficulty in structuring sentences, indicating issues with word order and sentence clarity. Lack of ideas was also a challenge for about 18% of students, especially when beginning a writing task or developing content. Finally, about 14% mentioned poor organization, which involves problems with arranging paragraphs logically and maintaining coherence throughout a text. These findings highlight the importance of focusing on grammar, vocabulary building, and sentence structuring in writing instruction, while also helping students generate and organize their ideas effectively.

III.2.6.10 : Challenges while using AI tools:

What challenges do you face in using AI tools for writing?	Percentage
No challenge / Nothing	26.67%
Context misunderstanding (AI doesn't get the point)	11.11%
Dependency / Loss of style / Laziness	8.89%
Trouble phrasing what they want	6.67%
AI gives too generic / unsuitable content	6.67%
Advanced words / Unclear suggestions	4.44%
Grammar & Vocabulary errors in AI output	4.44%
Over-reliance & academic integrity concerns	4.44%
Limited access / Not free	4.44%
Plagiarism concerns	2.22%
Poor punctuation correction	2.22%
Creativity/originality issues	2.22%
Connection issues	2.22%
Lack of specialized tools	2.22%
AI overdoes tasks / invasive	2.22%
Difficulty in communicating ideas	2.22%
Generalization / Lack of human-like writing	2.22%

Interpretation:

The results indicate that **26.67%** of the participants face **no challenges** when using AI tools, showing a relatively smooth experience for many students. However, **73.33%** of respondents reported encountering **specific issues**. The most frequently mentioned difficulty was that **AI tools do not always understand the context properly** (**11.11%**), making the output sometimes irrelevant or inaccurate.

Other notable challenges include **dependence on AI**, **loss of personal writing style**, and concerns about becoming lazy (**8.89%**), as well as **struggling to phrase their prompts effectively** (**6.67%**). Some students also criticized AI content for being **too generic or academically unsuitable**, while others worried about **academic integrity**, **over-reliance**, and **plagiarism**.

A few technical and functional issues were also mentioned, such as **limited access**, **connection problems**, and **AI's inability to properly correct grammar or punctuation**.

In conclusion, while AI writing tools are widely used and often helpful, many students still experience limitations that highlight the need for **critical and guided use**, especially in academic settings.

III.2 Discussion of the results:

The analysis of the collected questionnaire data provides valuable insight into students' perceptions, usage patterns, and experiences with AI-based writing tools within the context of learning English writing. A total of approximately 30–40 students participated, with most respondents being third-year undergraduate students majoring in English.

III.3 Demographic and Academic Profile:

Participants were mostly in their third year of study, with a roughly balanced gender distribution. The survey captured a diverse range of writing experiences and proficiency levels, which enriched the findings.

III.4 Common Difficulties in Writing:

Students reported various persistent challenges in English writing. The most frequent issues included:

- **Grammatical mistakes**
- **Poor vocabulary**
- **Lack of ideas**

These responses underscore the multidimensional nature of writing difficulties among EFL learners.

III.5 Usage and Frequency of AI Tools:

A significant portion of students (over 75%) reported using AI tools, primarily:

- **ChatGPT**
- **Grammarly**
- **Quillbot**

Usage frequency ranged from "sometimes" to "often," suggesting that AI tools have become relatively integrated into students' writing practices. This aligns with recent studies highlighting the normalization of AI-assisted writing in academic settings

III.6 Perceived Benefits of AI in Writing:

Thematic analysis of open-ended responses revealed several recurring benefits:

- **Idea Generation**: Students use AI to brainstorm and overcome writer's block.
- **Grammar Correction**: Tools like Grammarly and ChatGPT help with syntactic accuracy.
- **Vocabulary Enrichment**: AI aids in lexical variation and precision.
- **Time Efficiency**: Many noted that AI makes the drafting process faster and more manageable.

Several students noted that AI tools foster self-awareness in writing and, over time, led to greater independence. As one respondent stated: *"I depend less on AI tools over time as my writing improves."* This may point to a scaffolding function of AI initially supporting

students, then gradually fading as proficiency increases.

III.7 Challenges and Concerns:

Despite the advantages, students voiced certain limitations:

- **Over-reliance**: A common concern was becoming too dependent on AI, potentially stunting personal development.
- **Generic Output**: Some students expressed dissatisfaction with vague or non-specific responses from AI.
- **Lack of Critical Thinking Practice**: A few implied that AI might bypass the reflective elements of the writing process.

These concerns reflect broader debates in academic literature around AI's pedagogical implications.

III.8 Attitudes Toward Classroom Integration:

The majority of students (approximately 70–80%) support the integration of AI tools in writing instruction, either as:

- A guided classroom resource
- An autonomous tool for out-of-class practice

However, a minority expressed skepticism, advocating for traditional methods or citing fears of reduced engagement and cognitive effort.

III.9 Conclusion

The analysis of both questionnaire and interview data revealed a growing reliance on AI tools in EFL writing practices. While students largely appreciate the support AI provides, especially in improving grammatical accuracy and generating ideas, concerns remain regarding over-reliance and authenticity. The findings underscore the importance of developing critical AI literacy among students and suggest that, if thoughtfully integrated, AI can be a valuable aid in writing instruction without undermining foundational skills.

General Conclusion

IV. Conclusion

This dissertation set out to explore the contribution of Artificial Intelligence (AI) tools in enhancing the writing skills of English as a Foreign Language (EFL) learners. The research problem was rooted in the growing presence of AI in academic contexts and its unclear pedagogical value specifically whether such tools foster genuine language development or risk encouraging dependency and superficial engagement with the writing process. To address this issue, the study posed several key questions: How do AI-assisted writing tools influence EFL learners' writing proficiency and overall development? To what extent do these tools foster learner autonomy and improve learning outcomes? What are the benefits and limitations of integrating AI into writing instruction? Corresponding hypotheses proposed that AI contributes positively to writing skill development and autonomy, and that overreliance on AI tools may hinder critical thinking, personal voice, and self-revision.

Through a theoretical and practical investigation, this study has provided sufficient ground to confirm the first hypothesis, establishing that AI when integrated thoughtfully can enhance writing instruction by offering personalized support, streamlining feedback, and encouraging self-editing. At the same time, findings partially confirm the second hypothesis, indicating that unguided or excessive use of AI tools may lead to reduced learner agency, diminished originality, and ethical concerns such as plagiarism or overdependence on machine generated content. These results underline the dual nature of AI's role: it is both a powerful support mechanism and a potential risk if implemented without pedagogical oversight.

Considering these conclusions, several recommendations are offered. First, AI should be introduced as a complement, not a replacement, to human instruction, with a focus on supporting rather than replacing the development of critical writing skills. Second, educators must receive training on how to incorporate AI tools ethically and effectively in writing classes. Third, institutions should establish clear guidelines on responsible AI use, academic integrity, and the development of AI literacy among students. Such measures would ensure that the use of AI remains pedagogically meaningful and ethically sound.

Future research should investigate the long-term impact of AI tools on learners' writing autonomy, revision habits, and cognitive engagement, ideally through longitudinal studies across diverse educational contexts. There is also a need to explore how AI can be adapted to support culturally relevant pedagogy and fair access in under resourced settings.

This study is not without limitations. It was confined to a specific academic and cultural setting, and while it draws on both theoretical frameworks and applied observations, its findings may not be universally generalizable. Additionally, it did not directly measure skill improvement over time, which suggests a need for experimental studies that assess writing progress in controlled environments. Despite these constraints, the research contributes meaningfully to ongoing debates on AI in education and opens valuable pathways for pedagogical innovation in EFL writing instruction.

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Appendix

Appendix A: Student Questionnaire on Perceptions of Using AI Tools

This appendix contains the questions included in the survey distributed to students to gather data on their perceptions and usage of AI tools (like ChatGPT, Grammarly) for improving writing skills.

Section 1: Demographic Information

1. Gender:
   Male
   Female
2. Level:
   (e.g., 1st Year, 2nd Year, 3rd Year, Master 1, Master 2)

Section 2: Writing Background and AI Tool Usage

3. Difficulties faced in written expression (you can choose more than one):
Grammatical mistakes
Poor vocabulary
Lack of ideas
Poor organization
Difficulty structuring sentences

4. Do you use AI tools to improve your writing skill?
   Yes
   No
5. What AI tools do you use?
   (Open-ended text response)
6. How often do you use these AI tools for writing?
   Always
   Often
   Sometimes
   Rarely
   Never
7. In what ways do you use AI tools for writing?
   To correct grammar
   To generate ideas
   To enrich vocabulary
   To rephrase sentences
   To check plagiarism
8. What are your purposes of using AI in writing?
   AI tools help me improve the accuracy of my writing
   AI tools make the writing process easier and faster
   AI tools help me generate ideas for writing topics
   AI tools help me overcome writer's block

9. What is the impact of using AI tools on your writing skill?
   Using AI tools has significantly improved my writing
   Using AI tools has helped me understand my writing mistakes better
   I depend less on AI tools over time as my writing improves
   My writing style has become too reliant on AI
   No significant impact
10. What challenges do you face in using AI tools for writing?
    (Open-ended text response)
11. Do you think AI tools should be integrated in writing classes?
    Yes
    No
    Maybe
    I don't think so

ملخص باللغة العربية

سعى هذا البحث إلى استكشاف مساهمة أدوات الذكاء الاصطناعي في تعزيز مهارات الكتابة لدى متعلمي اللغة الإنجليزية كلغة أجنبية .(EFL) وقد انطلقت الإشكالية البحثية من التساؤل المتنامي المتسارع لاستخدام أدوات الذكاء الاصطناعي في السياقات الأكاديمية، مقابل التعويض المحيط بقيمتها التربوية، وتحديداً ما إذا كانت هذه الأدوات تسهم فعلياً في تطوير مهارات اللغة أم تشجع على الاعتماد السطحي وتضعف من التفاعل المعرفي العميق مع عملية الكتابة. للإجابة عن هذه الإشكالية، تناولت الدراسة عدة أسئلة بحثية رئيسية: كيف تؤثر أدوات الكتابة المدعومة بالذكاء الاصطناعي على كفاءة الكتابة لدى متعلمي اللغة الإنجليزية؟ إلى أي مدى تعزز هذه الأدوات استقلالية المتعلم وتحسن نتائج التعلم؟ وما القيود المرتبطة بدمج الذكاء الاصطناعي في تعلم الكتابة؟ وقد صيغت فرضيتان رئيسيتان: الأولى تفترض أن الذكاء الاصطناعي يسهم إيجابياً في تنمية مهارات الكتابة واستقلالية المتعلم، والثانية ترى أن الاعتماد المفرط عليه قد يعيق التفكير النقدي ويضعف الأسلوب الشخصي والمراجعة الذاتية.

ومن خلال التحقيق النظري والتطبيقي، توصلت الدراسة إلى ما يدعم تأكيد الفرضية الأولى، حيث تبين أن الذكاء الاصطناعي، إذا ما تم توظيفه بشكل مدروس، يمكن أن يحسن تعلم الكتابة من خلال تقديم دعم مخصص وتغذية راجعة فورية وتعزيز قدرات المراجعة الذاتية. كما توصلت النتائج كذلك إلى تأكيد الفرضية الثانية، إذ أن الاستخدام المفرط أو غير المنظم لتلك الأدوات قد يؤدي إلى تراجع استقلالية المتعلم وتقلص الأصالة في الكتابة، وظهور إشكالات أخلاقية ترتبط بالأمانة الأكاديمية والإفراط في الاعتماد على المحتوى المؤلّف آلياً. وتبرز هذه النتائج الدور المزدوج للذكاء الاصطناعي، كونه أداة ذات قيمة من جهة، ومصدر خطر محتمل إذا لم يدمج ضمن أطر تربوية واضحة من جهة أخرى.

واستناداً إلى هذه الخلاصات، تقدم الدراسة عدداً من التوصيات. أولاً، لا ينبغي إبعاد أدوات الذكاء الاصطناعي كمكمل وليس بديلاً للتدريس البشري، مع التركيز على دعم المهارات الكتابية النقدية لا استبدالها. ثانياً، يجب تدريب المعلمين على كيفية استخدام هذه الأدوات بشكل فعال وأخلاقي في تدريس الكتابة. ثالثاً، يتعين على المؤسسات التعليمية وضع سياسات واضحة لضمان الاستخدام المسؤول للذكاء الاصطناعي، وتعزيز النزاهة الأكاديمية، وتوسيع الوعي التكنولوجي بين المتعلمين، لضمان تحقيق الاستفادة القصوى من الإنجاز بجانب التربية.

أما بالنسبة لآفاق البحث المستقبلية، فتوصي الدراسة بإجراء بحوث طويلة المدى لتبيّن تأثير الذكاء الاصطناعي على استقلالية المتعلم، وعاداته في المراجعة، وانخراطه المعرفي. إلى جانب دراسة الكيفية التي يمكن بها تكييف هذه الأدوات بشكل يتماشى مع الخصوصيات الثقافية والتعليمية المتنوعة، خاصة في السياقات منخفضة الموارد.

وتجدر الإشارة إلى أن الدراسة بعض القيود، إذ اقتصرت على سياق أكاديمي وتقليص محدد، كما أن اعتمادها على الأطر النظرية والملاحظات التطبيقية قد لا يجسد تمام النتائج. إضافة إلى ذلك، تؤول القابليات لقياس المستوى الفعلي في مهارات الكتابة عند المتعلمين إلى حدود معينة. لكن رغم ذلك، يفتح البحث مستقبلاً في بناء استراتيجيات مضبوطة، تراعي الفروق الفردية وتنسجم مع التطلعات الأكاديمية الدائرة حول الذكاء الاصطناعي في التعليم، وتفتح آفاقاً واعدة للتكامل التربوي في تعليم الكتابة باللغة غير الإنجليزية.