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Introducing the Premium QuillBot Paraphrasing Tool in
Enhancing Students' Academic Writing
The Case of Master Two Students of English at Mohamed Khider
University of Biskra

Dissertation submitted in partial fulfillment of the requirements for a
Master Degree in Science of Language

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DECLARATION

I hereby solemnly declare that the work I am going to present in this thesis:

Introducing the Premium QuillBot Paraphrasing Tool in Enhancing Students' Academic Writing by the Premium QuillBot Paraphrasing Tool

The Case of Master Two Students at Mohamed Khider University of Biskra

is my own to the limits of my knowledge, has not been submitted before to any other institution or university or degree and all sources that I have used and quoted from have been indicated by means of complete references. This work is to be carried out and completed at Mohamed Khider University of Biskra.

Date: 02 - 05 - 2025

Signature

Maissa SAADAoui

DEDICATION

thanks to ALLAH for giving me the chance for better education.

We would like to dedicate this modest work to:

To my sunshine, unlimited source of love; my beloved mother

To my father Youcef , whose departure has left an irreplaceable emptiness in our hearts
and lives. I pray that she finds peace in paradise,

To my sisters and my brother

To all my friends with whom I shared the university life with its lights and shadows.

To all who love me

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Finally, my appreciations go also to all teachers for their help and cooperation in answering the interview. We also would like to thank Mastet two students at Mohamed Khider University of Biskra for their seriousness in answering the questionnaire.

ABSTRACT

This study is titled Artificial Intelligence: Enhancing Students' Academic Writing by Using the Premium QuillBot Paraphrasing Tool, The Case of Master Two Students of English at Mohamed Khider University of Biskra. The objectives of the study are threefold. First, it attempts to identify the significance of artificial intelligence (AI) tools in language acquisition and how they impact students' writing skills. Second, it aims to determine the effectiveness of the QuillBot tool in improving the writing skill of EFL students. Third, it strives to offer suggestions on how educators and teachers might incorporate QuillBot. To meet the objectives of the study, mixed-method was applied. Quantitative and qualitative data are collected from a questionnaire administered to master two students at Mohamed Khider University of Biskra and an interview conducted with EFL teachers. The results from the two research instruments indicate that QuillBot helps EFL Master Two students improve their writing skill, students showed progress in grammar, vocabulary, and overall writing quality after using QuillBot. Teachers also observed improved sentence structure and clarity in student work. Consequently, using Premium QuillBot responsibly and balancing its use with traditional academic skill, students can significantly improve their writing quality while maintaining academic integrity, the use of AI tools in education may help in developing best practices for their integration into academic settings.

Keywords: Artificial Intelligence , Premium QuillBot tool , Master Two EFL Student , Academic Writing , Technology .

LIST OF ACROMYMS

AI: Artificial Intelligence

CALL: Computer-Assisted Language Learning

EFL: English as a Foreign Language

ESL: English as a Second Language

FL: Foreign Language

ICT: Information ,Communication ,and Technology

IBM: The International BussinessMachines

SL: Second Language

QCA: QualitativeContent Analysis

Q: Question

%: Percentage

NLP: Natural LanguageProcessing

MKUB: Mohamed Khider University of Biskra

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GENERAL INTRODUCTION

GENERAL INTRODUCTION

The integration of technology into education has been a defining feature of the 21st century, offering students and educators new opportunities to enhance learning experiences and academic productivity. In particular, artificial intelligence (AI) has emerged as a transformative tool, offering innovative solutions to traditional challenges in education. AI technologies, from automated grading systems to personalized learning platforms, are becoming increasingly widespread, providing students with personalized support and facilitating more efficient ways to engage with educational content. One area where AI is gaining significant traction is academic writing, a fundamental skill in higher education that demands clarity, coherence, and originality. As students face increasing pressure to produce high-quality written work, AI-powered tools are being developed to assist with various aspects of writing to suggest alternative phrasing, enhance vocabulary, and improve writing fluency. In the writing process. Tools that offer grammar checks, sentence rephrasing, and content generation have gained popularity, particularly among students seeking to improve their written expression. This research aims to investigate the impact of Quill Bot, an AI paraphrasing tool, on students' academic writing. The study will examine how the tool affects writing quality, student confidence, and the broader implications for academic integrity. By exploring the role of AI in student writing, this research seeks to fill an important gap in the current literature and provide valuable insights into how AI-driven tools are shaping the future of academic writing and learning

1. Statement of the problem

Despite the widespread use of technology, the potential impact of their usage on enhancing EFL students' writing abilities has yet to be fully explored. This research aims to investigate the effect of using technology and Artificial Intelligence tools, specifically; the Premium Quillbot programme as a paraphrasing tool, on the writing skills of EFL students. The study

examine the changes in students' writing ability in terms of grammar, vocabulary, and coherence, before and after using the Quillbot application as a writing tool. The findings of this research provide valuable insights into the potential benefits of using AI tools as writing aids for EFL students

2. Aims of the Study

The purpose of this study is to demonstrate and illustrate how EFL students use artificial intelligence tools, particularly the Quill Bot program, when writing. The following are the main objectives of this study:

1. The significance of artificial intelligence tools in language acquisition and how they impact students' writing skills.
2. The effectiveness of the QuillBot tool in improving the writing abilities of EFL students.
3. To offer suggestions on how educators and teachers might incorporate Quill Bot

3. Research Questions

Q1. How does the use of the Quillbot paraphrasing tool help EFL master 2 students?

Q2. What is the impact of Quillbot on master two students' academic writing?

4. Research Hypothesis

If the use of the Quillbott paraphrasing tool helps EFL master's students improve their academic writing.

5. Significance of the study

The study investigates how the Quill Bot paraphrasing tool might improve important facets of

academic writing, including coherence, vocabulary, and the grammar. This research provides important insights into how AI-driven tools might help the development of higher-level writing skills by concentrating on the unique demands of graduate students. The results could help Master's students write better, perform better academically, and feel more confident when it comes to creating research papers of high-quality.

6.Methodology

The researcher intends to focus on the use of the Premium QuillBot Paraphrasing Tool as a means to enhance academic writing skills. The researcher's objective is to emphasize the utilization of the QuillBot Paraphrasing Tool to improve academic writing abilities.

Data collection is conducted using a mixed-methods approach. Regarding the data collection tools, a questionnaire is designed and distributed to Master 2 students at Mohamed Khider University of Biskra for exploring their perspectives on academic writing and their opinions about use of QuillBot. The second data collection tool is an interview with teachers, which is designed to obtain a deeper understanding of their perspectives on the efficacy of QuillBot in improving the writing abilities of students.

Population Sampling:

Master 2 students of the English department at Mohamed Khider University of Biskra will constitute the population of this study (145 students) because they are in the process of writing their master dissertations and are expected to utilize various online and/or offline research and writing tools. A random sample of 40 students will be selected, along with 6 EFL teachers at the University of Biskra, to examine their attitudes towards using QuillBot as a paraphrasing and writing assistant.

8.Structure of the study:

This research includes two general chapters; starting with the theoretical chapter and

concluding this study with the practical chapter. The theoretical chapter contains two minor parts that focuses on the literature review of each variable. The first section is concerned with providing a theoretical foundation for technology through education. Furthermore, this chapter consists: the AI definition, its impact and importance of Quill Bot. The second section in the theoretical chapter aims to define and gave an overview about the writing skill, its definition, types and also the problems that master two students face in academic writing. The third chapter concludes the interpretation and analysis of the questionnaire and the interview

Chapter One:

Artificial Intelligence

Chapter One: Artificial Intelligence and Quillbot Application

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Introduction

In the 21st century, technology was a fundamental component of our daily existence, despite the fact that its proponents were ineffective in numerous disciplines, particularly education. In the realm of education, artificial intelligence has made substantial strides, prompting educators to contemplate the potential of these emerging technologies to improve the quality of instruction and learning. Additionally, these advancements motivated programmers to develop innovative instruments that would facilitate the development of language skills in learners. Quillbot is a well-known application that was created to aid educators in enhancing their proficiency in learning a second language. The objective of this theoretical chapter is to illuminate the history of artificial intelligence in the context of learning processes. This section examines the concept and provides a comprehensive overview of the application of Quillbot, in addition to its definition. It also emphasizes its advantages and potential disadvantages, as well as whether it would be discovered, finally, this chapter examine the use of Quillbot and its impact on the learning process.

1.1 Background of Information, Communication, and Technology in Education

The most important parts of learning a foreign language are the ability to communicate and the ability to understand. Hence, researchers and teachers tend to explore the most effective strategies and techniques in order to facilitate the process of learning and teaching English as a foreign language (EFL). Information and communication technologies (ICT) are a diverse set of technological equipments resources used to transmit, share and exchange information between learners. This type of technologies is a useful strategy that has been used in the field of teaching the English language therefore, it considered as a way that teachers and students use it in order to raise interaction and motivation.

Information and Communication Technology (ICT) radically transforms both teaching and learning by introducing active elements into the academic environment, and is

considered a powerful tool for delivering academic services. Currently, researchers believe that the educational system can only improve through the implementation of ICT. In schools, colleges, and universities, staff members use technology to perform their technical, office, managerial, administrative, and other duties. Computer literacy is one of the essential skills required when applying for a teaching position, alongside teaching qualifications and skills. Thus, they can say that ICT has significantly contributed to enhancing the overall conditions of the academic environment.(Mayr, Nikitchenko, Spivakovsky, & Zholtkevych, 2014)

ICT covers all aspects of social life and plays a vital role in education by motivating and encouraging the acquisition of basic skills and transforming the academic environment, thereby improving the quality of education. ICT has great educational potential by keeping teachers up-to-date and dynamic. It also enriches students' educational experience and enhances their future career prospects in the technological world.(Mayr, Nikitchenko, Spivakovsky, & Zholtkevych, 2014, p. 48)

To sum up, ICT in teaching develops teachers' confidence by providing them more opportunities, in addition built the bridge between need to meet the needs and demands of the future and this is likely to strengthen the link between technology integration and educational reforms. ICT make learning exciting by developing learners' curiosity and motivation; developing independent and personalized learning.

1.1.1 Computer-Assisted Language Learning

Many applied linguists study issues of technology and communication that have changed the language landscape inside and out of the classroom, but the area of computer-assisted language learning or technology and language learning denotes a more focused set of issues pertaining directly to language teaching and learning: the question is how computer technologies can be introduced and used to help learners to develop their second language ability. At the crux of the issue is a research–practice relationship as new teaching practices

are explored and evaluated. On the practice side, technology prompts some fundamental changes in the way that second or additional languages can be taught and learned. In many places in the world today it is difficult to discuss language pedagogies without considering the options offered by CD-ROMs accompanying textbooks, electronic resources such as dictionaries and corpora, the communication and information offered on the Internet, and online learning materials and assessments. On the research side, technology-based innovations raise thorny issues about evaluation of teaching practices. How can learning be measured and attributed to the amorphous combination of technologies that may come into play in language learning? At a time when most students arrive in the classroom with conceptions about technology and its use for information and communication, issues about how to use and how to evaluate technology for language learning are central to language teaching today (Chapelle, 2005, p. 586).

1.1.2 Technology Enhanced Language Learning

Technology is one of the basic elements of development now, of the back of the current global challenges that requires the use of modern advanced technologies to suit the global changes that took place in various fields. Technological advance has a great effect on human life. The greater these advances are the more they affect the evolution of the human life style, in the middle of the twentieth century; the world witnessed a quantum leap and a real revolution in the domain of communication.

For many years, educators and researchers have used technology to assist language learning and instruction. Merriam-Webster dictionary defines technology as technical processes, methods, or knowledge used to accomplish a specific task. Based on this definition, we use technology in the context of this study to achieve educational goals or complete instructional tasks using technical processes, methods, and knowledge. For example, a learner can complete a speaking task by describing object characteristics in the target language and

using a digital voice recorder to record their speech for later listening by their teacher.

It was found that using technology in classroom settings was equally effective as traditional education. Several scholars reviewed relevant studies to identify the positive impact of technology on language learning and teaching. For instance, Golonka and her colleagues (2014) provide evidence on the effectiveness of technology in language learning and teaching based on reviewed articles, hence, technology provide more flexible access to content and instruction at any time, from any place. Equally important, it is a large and growing market with great potential in higher education. Researchers focused on empirical studies that provided research-based evidence on the effectiveness of technology, rather than just describing its potential uses. Golonka and her team found a lack of evidence in some reviewed studies. Studies focusing on pronunciation training, with the assistance of technology, strongly supported the measurable impact of technology on language learning and teaching. Many other studies strongly supported regarding the use of chat applications for language learning and teaching, network enabled transfer of skills and knowledge through which the delivery of education is made to a large number of recipients at the same or different time. Therefore, the evidence suggests that technology can enhance language learners' performance in areas such as output, interaction, feedback, motivation, and metalinguistic knowledge to a moderate extent (Shadiev & Yang, 2020, p. 1)

1.1.3 E-Learning

Today E-Learning becomes a growing interest for the system of education matter in online and blended deliver. In addition electronic learning is a useful strategy that has been used in the field of teaching the English language, the language skills and raising interaction. Therefore, it considered as a way that the teacher apply it during the course in order to find interaction between students, this can help them to benefit and participate, also, this method the learners get how to send and receive knowledge and make discussion in English. As a result, EFL learners prefer E-learning to enhance their understanding and interact easily in an acceptable social way.

The term e-learning was originated in the mid-1990s when the internet began to gather the momentum (Garrison, 2011). Several definitions were provided by researchers and scholars; each definition tackles the concept of E-learning from a different angle. According to Hoppe et al (2003), E-learning refers to “the learning supported by digital electronic tools and media” (p. 255). Moreover, “E-learning refers to the use of computer network technology, primarily over or through the internet, to deliver information and instructions to individuals” (Wang et al., 2010, p.167). Additionally, e-learning refers to the use of ICT by students and tutors, also it includes the traditional practices like courses and formalization by the collection of documents (Alenezi, 2020).

This means that, E-learning has become popular due to its potential for providing more flexible access to content and instruction at any time, from any place. Equally important, it is a large and growing market with great potential in higher education (Means et al, 2009).

Furthermore, e-learning is important for education since it ameliorates the quality of the learning experience, extends the teaching scope, creates new ways of stimulating and engaging students of all abilities, and inspire them to achieve their educational potential.

The benefits of e-learning include cost-effectiveness, better adaptation to changes, consistency, timely content availability, flexible access, and providing value to customers. The discussion emphasizes the need to build a strong strategic foundation for leveraging e-learning, focusing on emerging approaches in this field, and integrating other educational efforts within the organization (Sanderson, 2002, P. 186) .

Moreover, multiple of users of e-learning platforms view online learning helps in ensure that e- learning can be easily managed, and the learner can easily access the teacher and teaching materials. Currently, the majority of students around the world want to study online and graduate from universities and colleges, but it is hard for them to move to anywhere since they live in isolated places without good communication services (Maatuk et al., 2021, p.55).

To sum, E-learning can be termed as a network enabled transfer of skills and knowledge through which the delivery of education is made to a large number of recipients at the same or different time.

1.2 An Overview of Artificial Intelligence (AI)

AI is a swiftly progressing domain in computer science dedicated to developing

intelligent machines that can replicate human cognitive abilities. These systems can process data, learn from patterns, and make independent decisions. With tools like machine learning and natural language processing, AI facilitates human-machine interaction in diverse industry applications.

1.2.1 Definition of AI

In recent times, as the integration of technology into education threatens traditional methods, it has caused a significant stir in the field of education and other domains. According to (Russell & Norvig, 2016) , AI is defined as the study of agents that receive precepts from the environment and perform actions . AI focuses on developing systems that interpret information from their environment and make decisions to achieve goals. These systems rely on computational models for learning, adaptation, and improving outcomes. Another definition Artificial intelligence is defined in a variety of ways. AI is sometimes portrayed as a computer capable of thinking, understanding languages, solving issues, diagnosing medical disorders, maintaining highway safety, playing chess, and creating impressionistic art.

Imitations of Van Gogh paintings, AI are sometimes characterized as a computer system capable of doing activities often associated with intelligent individuals. Artificial intelligence is now commonly defined as a scientific discipline that creates machines that function appropriately and with foresight in their environment, as the previous definition of intelligence is problematic and illogical. 12 In 1955, the Rockefeller Foundation received the first formal definition of artificial intelligence in a grant application. The theory was founded on the "conjecture that every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to simulate it." This early definition sparked intense debate. Early AI developers saw intelligence as the mechanical processing of logical assertions, defining human intelligence as the calculation of truth value. This approach was historically connected with logical positivism and attempts to codify

mathematics using merely syntactic techniques, but it also highlighted major problems regarding the philosophical foundations of AI (Ilkka, 2018, p. 7).

1.2.2 Types of AI

Most people are familiar with the term (AI). They may have heard about machine learning or natural language processing and figured those were types of AI, but they are actually subsets of AI. What most outside of technology circles don't realize is there are four distinct types of AI that include: reactive, limited memory, theory of mind, and self-aware artificial intelligence. Let's take a look at each to explore what they have to offer.

The four types explained by Marr (2020) as

1. Purely (Reactive) Artificial Intelligence

As claimed by Marr (2021) Reactive AI is a basic AND helpful form of AI that reacts to current situations, as the name suggests. For instance, Deep Blue, the International Business Machines (IBM) Super computer from the 1980s that famously beat Garry Kasparov in chess, is a prime example of reactive AI.

Reactive AI works according to its programming, giving a predictable response based on its input. These machines react the same way to the same situations every time and cannot learn from past or future events. Examples of reactive AI include spam filters and the Netflix recommendation system. Certainly, reactive AI was a tangible accomplishment. Since many human actions are not solely reactionary, it was necessary to develop artificial intelligence to be on par with human intelligence.

2. Limited Memory

Limited memory AI, the next level of AI after reactive AI, can absorb learning data to improve over time based on experience, similar to how the human brain's neurons connect. This type of AI is widely used and continuously developed. Enabled by deep learning algorithms, limited memory AI allows models to be automatically trained and updated based

on their behavior. It can handle complex tasks, use historical data for predictions, and is crucial for applications like self-driving cars, improving reaction times and enhancing safety on public roads (khan, 2021)

3. Theory of Mind AI

Theory of Mind AI aims to enable machines to understand and remember emotions and adjust their behaviour based on those emotions, allowing them to interact intelligently in social relationships as humans do. While Theory of Mind AI has not been fully achieved, robots like Kismet and Sophia have shown some aspects of this type of artificial intelligence by being able to recognize emotions and respond appropriately, khan (2021) One of the key challenges for machines in achieving Theory of Mind AI is the ability to rapidly change behaviour based on emotions to mimic the fluidity of this process in human communication. If this accomplishment is achieved, it will open the door for robots to support daily tasks, including providing human companionship. Ultimately, Theory of Mind AI is expected to be better equipped to work with humans in an emotionally intelligent manner than other forms of artificial intelligence. Researchers in artificial emotional intelligence are already striving to develop this technology, but there is much work to be done before AI can interact appropriately with each individual in a given situation .

4. Self –aware AI

Self-Aware AI is a new advance in AI, where systems not only calculate but also have self-awareness. This allows AI to understand its own actions. Additionally, Self-Aware AI can reflect like humans do, leading to a future where machines interact more deeply with their environment and internal thoughts.(khan, 2021)

1.3 Importance of Artificial Intelligence in Higher Education

Begum (2024) stated that AI is essential for both students and instructors in higher education because it enables students to access a wider range of learning options that are more

flexible and limitless. A significant number of students worldwide are able to enroll in institutions as a result of the increased quickness and adaptability of AI. Despite the fact that its implementation in education has been demonstrated to be rather expensive, it is economically viable when contrasted with other expenses associated with manual labor. Nevertheless, the long-term use of AI by university students is significantly more cost-effective than more traditional training methods and manual labor.

During lectures, AI aids instructors in comprehending their students and enables them to offer suitable recommendations. It functions as a teacher to the pupils, enabling them to easily comprehend the principles. Projects that involve artificial intelligence . Benefit both students and educators (Begum, 2024).

1.4 QuillBot Paraphrasing Tool

The QuillBot Paraphrasing Tool is an AI-powered application that serves as a writing aid, assisting writers in the rephrasing of sentences, the improvement of clarity, and the expansion of vocabulary in the English language. It is an application that enhances, reorganizes, and refines the writing process to ensure that it is more appropriate, accurate, and fluent.

1.4.1 Overview of Quillbot Paraphrasing Tool

The online application QuillBot is used to help rephrase texts to avoid literary theft, summarize long sentences, and improve language rules to make them more accurate and professional (Williams & Davis, 2017). This programme is trusted to assist students, writers, bloggers, faculty members, and others (Chapelle & Sauro, 2019). There is a maximum limit of 400 characters that can be rephrased in the free version of QuillBot. This application consists of two versions, a free version, and a premium version :

Premium version are purchasable on a monthly, semi-annual, or annual basis, these accounts are granted access to the same features as regular users, in addition to additional

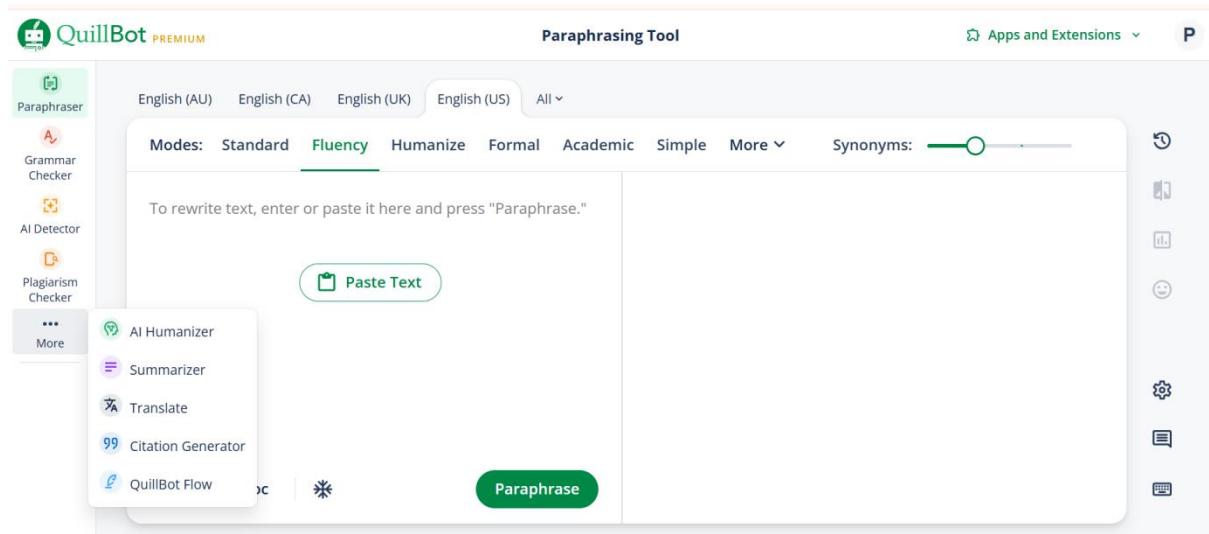
benefits that are exclusively available to Premium users. It adds more functions to assist in simplifying the writing process. With no character restrictions, access to five additional paraphrase types (Standard, Fluency, Formal, Simple, Creative, Expand, and Shorten), and the ability to use the highest level on the Synonym Slider, we will save time and quickly enhance our work(Fitria, 2022)

One of the advantages of this application is its time efficiency and its ability to quickly rephrase sentences in English. In the premium version, this tool can increase the maximum limit to 10,000 characters(Fitria, 2021)

Quillbot offers seven distinct modes that serve various writing purposes .Fitria (2021) clarified the seven features shown in the Standard Modeis designed to maintain the original meaning of the text and enhance its appearance by balancing alterations to the input. Fluency Mode is a feature that emphasizes the use of precise and proper grammar in English, as well as the creation of a natural-looking text. This feature only modifies the text in trivial ways, but it will effectively preserve the original meaning of the text. Creativity Mode which emphasizes the modification of the inputted text to the greatest extent possible. Nevertheless, this may lead to a change in the overall coherence or meaning of the results. If your text is intended to appear significantly different from the original, this mode may prove advantageous.The formal modeworks to modify the text to make it more suitable for a formal audience, making it a great choice for academic and business writing.

The shorten mode aims to condense the text as much as possible while maintaining its meaning, and is particularly useful for reducing the word count or overall size of the text .Expand Modeis designed to increase the duration of the text by incorporating additional words, if feasible. This mode is beneficial for those who desire a greater number of words over all.

Figure 1.1: View of QuillBot Premium Version



Free version includes only two modes that are accessible to free users: Standard and Fluency.

Simultaneously, the premium version is the sole source of access to the Creative, Creative+, Shorten, Expand, and Formal modes

FREE QUILBOT CAPTURE + MODES

COPMARISON BETW THE 2 TYPES

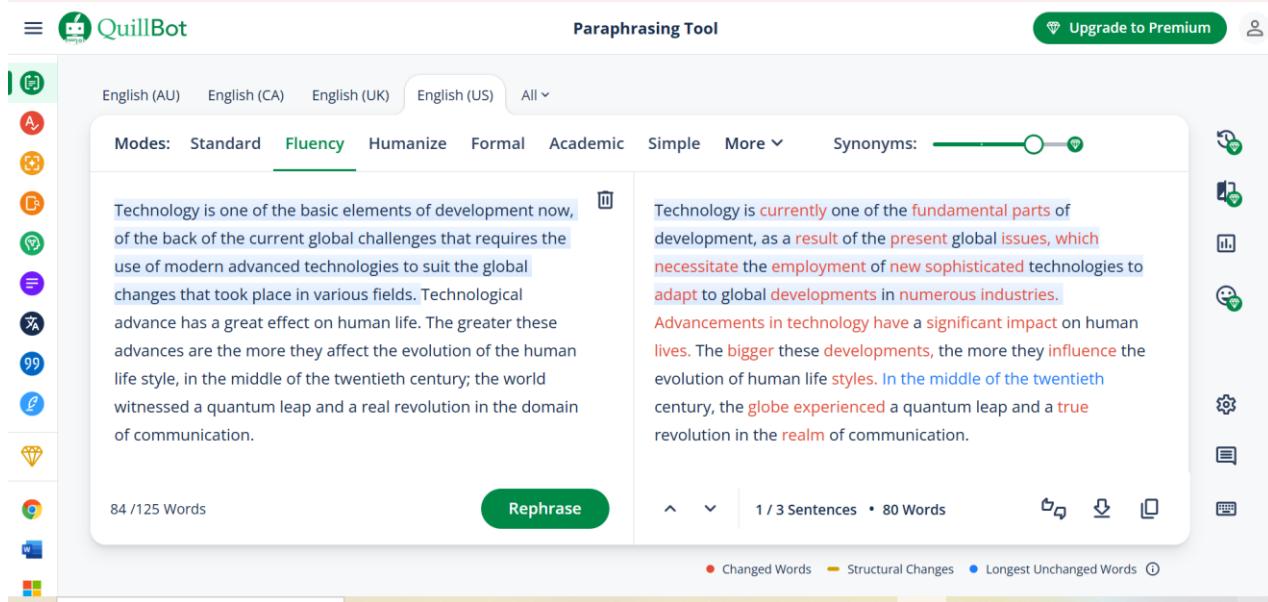
Figure 1.2: Example of Paraphrased Paragraph Using premium QuillBot

The screenshot shows the QuillBot Paraphrasing Tool interface. On the left, a sidebar includes links for Paraphraser, Grammar Checker, AI Detector, Plagiarism Checker, and More. The main area has tabs for English (AU), English (CA), English (UK), English (US), and All. Below these are mode buttons: Standard, Fluency (which is selected), Humanize, Formal, Academic (which is also selected), Simple, More, and Synonyms. A slider for Synonyms is set to 100%. A text input box contains the sentence: "Technology is one of the basic elements of development now, of the back of the current global challenges that requires the use of modern advanced technologies to suit the global changes that took place in various fields. Technological advance has a great effect on human life. The greater these advances are the more they affect the evolution of the human life style, in the middle of the twentieth century; the world witnessed a quantum leap and a real revolution in the domain of communication." A green "Rephrase" button is at the bottom. The paraphrased output is shown in a larger box: "Technology is one of the fundamental parts of development today, as a result of the present global issues that necessitate the employment of new advanced technologies to accommodate global developments in numerous industries. Technological advancement has a significant impact on human lives. The bigger these developments, the more they influence the evolution of human life. In the middle of the twentieth century, the world experienced a quantum leap and a true revolution in the field of communication." Below the paraphrased text are buttons for "Changed Words", "Structural Changes", and "Longest Unchanged Words". The bottom of the screen shows a Windows taskbar with various icons and a system tray indicating the date as 25/05/2025 and the time as 13:48.

Figure 1.3 : Example of Paraphrased Sentence Using Academic mode

This screenshot is similar to the one above but shows the "Expand to view suggested modes" button being used. The expanded view shows the paraphrased text with additional context and variations. The expanded text is: "Technology is a fundamental component of contemporary development, driven by current global difficulties that necessitate the application of advanced modern technology to adapt to the changes occurring across numerous domains. Technological advancement significantly impacts human existence. The more significant these advancements, the greater their impact on the evolution of human lifestyle; during the mid-twentieth century, the globe saw a quantum leap and a genuine revolution in communication." The bottom of the screen shows a Windows taskbar with various icons and a system tray indicating the date as 25/05/2025 and the time as 13:33.

Figure 1.4: Example of Paraphrased Paragraph Using free QuillBot



1.4.2 Definition of QuillBot Paraphrasing Tool

QuillBot is a Natural Language Processing tool that uses AI and technology to help users with writing, summarizing, and text improvement. QuillBot aims to help authors improve their writing skills and create more impactful material (Amyatun & Kholis, 2023). According to Raheem, Anjum, and Ghafar (2023), QuillBot is a highly effective tool for improving academic writing efficiency. QuillBot uses powerful language processing algorithms to give automatic writing aid and comments, enhancing the quality of academic publications. QuillBot's real-time recommendations and edits help students, academics, and scholars improve their writing skills and productivity.

1.5 The Use of QuillBot in Academia

English Foring Language students have access to a number of tools that make producing academic dissertations and qualitative research easier. QuillBot seems to be one of the most often used AI paraphrase tools among these sites. As a result, AI has caused language

analysis to adopt a naturalistic approach, especially when it came to autonomously creating, modifying, and reshaping phrases (Fitria, 2021).

Additionally, it is essential to highlight how AI is transforming traditional approaches and altering the paradigm of learning, particularly in terms of adapting to students' requirements and offering individualized learning experiences, when talking about QuillBot's potential in an academic context.

Furthermore, according to *Raheem et al.* (2023), QuillBot uses advanced language processing algorithms to offer automated writing support and comments with the goal of expediting the writing process and raising the standard of academic writings generally (p.604).

Additionally, QuillBot assists EFL students in acquiring the proficient paraphrasing abilities necessary for writing scholarly dissertations. The use of sophisticated natural language processing (NLP) algorithms for input analysis to give alternative structure and pertinent rewordings to guarantee content readability and clarity is demonstrated by QuillBot's integration with academics.(Bensalah, 2024)

1.6 Advantages of Quillbot

This program has several advantages, including the capacity to conserve time in the writing process. The paraphrase tool employs cutting-edge AI to reword sentences, paragraphs, or articles, enhancing our work by removing extraneous words and aiding users in articulating a cohesive message. The built-in thesaurus tool aids in selecting appropriate synonyms, enabling users to effortlessly substitute certain terms and consistently find the relevant term. Furthermore, it improves meaning and clarity through many writing styles, enabling users to articulate themselves freely, whether they need grammatical corrections, conciseness, or creativity, delivering prompt results. The platform enhances vocabulary by allowing users to swiftly adjust the length of their content using the Synonym Slider. Furthermore, it is effortlessly incorporated into users' workflows, compatible with platforms

including Chrome, Google Docs, and Microsoft® Office. Utilized by millions globally, including authors, bloggers, business leaders, and students, over 50 million persons employ this tool to enhance clarity, speed, and quality in writing (Fitria, 2022).

1.7 Drawbacks of Quillbot

The process of paraphrasing involves the substitution of specific phrases and clauses in the original text. Additionally, synonyms are implemented in specific lexical categories. The meaning, context, and sentence should be preserved by these processes.

Structure, but it is intended that paraphrasing distorts these processes, resulting in a change in the meaning, syntactic structure, and context of the provided text. This violates the purpose of effective written discourse, which is to communicate the intended meaning. In other words, this aspect of text paraphrasing raises concerns regarding the semantic, syntactic, and pragmatic precision of the paraphrasing tools. Niño (2009) concluded that automated paraphrasing tools are ambiguous from an academic perspective in the same terrain. Their reliability is compromised by the presence of a diverse array of linguistic errors that are identified during the paraphrasing process. Nevertheless, these instruments are primarily utilized by research students in the aftermath of the Covid-19 pandemic. They employ these tools for the purpose of paraphrasing, which results in the individual's endeavors to improve their writing abilities. However, the paraphrased text they acquire contains a multitude of grammatical, syntactic, and semantic errors, which has sparked the current research. Attempt to investigate the performance of QuillBot, a paraphrasing instrument that is extensively utilized in Pakistani higher education institutions (Mehmood, Niaz, & Iqbal, Year).

Conclusion

AI, a novel educational approach in the field of education, is designed to meet the needs and expectations of contemporary students while simultaneously fostering the development of advanced cognitive abilities and mastery learning. Quillbot is a paraphrasing

tool that employs state-of-the-art AI technology to easily rephrase any written content. Its primary goal is to alter sentence structures and replace words with synonyms while maintaining the essence of the original content. It can be a viable alternative for students who encounter difficulty in rephrasing English texts in their writing. This chapter delineated the theoretical foundation of the approach, which encompassed its definition, advantages, and disadvantages. It is used in higher education as well .

Chapter Two: Academic Writing in EFL Classes

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Introduction

Writing is a fundamental and essential method of human communication, as it provides the permanence and structure that are lacking in reading and conversing. It is the process of transforming thoughts and ideas into grammatically correct, well-organized, and coherent writing (Olson, 2024). Academic writing is structured plainly, formal, and emphasizes evidence-based reasoning (Oshima & Hogue, 2007). The purpose of academic writing is to enable students and academicians to create, distribute, and evaluate information, which is essential in the fields of education and research. It also aids in the development of analytical thinking, career advancement, and cognitive enhancement (Fang, 2021; Klimova, 2012). It is imperative to possess this skill in order to achieve academic success in schools, particularly those that instruct in English, as students are required to compose structured essays, research papers, theses, and dissertations (Bailey, 2023). This chapter provide a comprehensive examination of academic writing, including the definitions, categories, methods, features, and common challenges that EFL learners encounter.

2.1 Definition of writing

Writing serves an essential function in human communication, unlike other language abilities like speaking or reading. According to the Oxford Dictionary, writing is the act of composing text, as opposed to reading, speaking, and other activities. Writing constitutes a mode of human communication employing a collection of visual symbols, generally associated with a particular linguistic framework (Olson, 2024).

Another definition has been claimed by Teachers' Training College, Barari, Bhagalpur (2024). Writing is a process that is productive and involves several stages. Starting with the exploration and transmission of ideas, thoughts, and emotions into written form. Subsequently, conducting numerous revision processes to ensure that the text is grammatically correct and organized. The writing productions are in the form of legible texts

that should be meaningful to all readers. The process of composing a qualified piece of writing is a multifaceted endeavor.

2.2 Definition of academic writing

Academic writing refers to the style of writing employed in secondary and university . It differs from creative writing, the latter being the form employed in storytelling. It also differs from personal writing, which is a form of Correspondence conducted through letters or emails directed towards friends and relatives. Creative writing and personal writing are informal, allowing for the use of slang, acronyms, and fragmented phrases. Academic writing is formal; hence, slang and abbreviations should be avoided. Furthermore, it is essential to compose whole phrases and to arrange them systematically(Oshima & Hogue, 2007, p. 14)

According to Stephen Bailey (2023), academic writing is intended for those who want to pursue studies in an English-medium college or university and are required to write essays and other assignments for courses or examinations.

2.3 The importance of academic writing

In the classroom and beyond, academic writing is ubiquitous. In academic disciplines, it is a method for the production, codification, transmission, evaluation, renovation, instruction, and learning of knowledge and ideology. The ability to write academically is widely acknowledged as a critical component of academic success and a prerequisite for disciplinary learning. Control over academic writing provides students and scholars with capital, power, and agency in the areas of knowledge acquisition, disciplinary practices, identity formation, social positioning, and career advancement (Fang, 2021, p. 1).

According to Klimova (2012, p. 9) .Writing is crucial in higher education and the workplace, as it is used in various communication tasks such as proposals, memos, reports, and applications. Acquiring writing requires mastering other language skills like listening, reading, and speaking, as well as metacognitive skills. Students must set objectives, plan,

analyze sources, and synthesize them into a concise piece. Encouraging creativity and allowing students to write freely at the beginning of the learning process can attract them to writing(cf. Janikova, 2005/6; Zajicova, 2011; or Rico, 1984). As stated by Maley (2009), creative writing benefits language development at all levels, requires learners to express personal meanings, requires a willingness to explore, and focuses on the right side of the brain (e.g., feelings, physical sensations). Creative writing leads to a significant improvement in self-confidence and self-esteem among students.

Learners foster personal and linguistic growth by discovering new things about themselves and the language. Positive motivation naturally increases when rewards are realized.

2.4 Academic Writing Genres

Academic writing comprises several types molded by goal and audience. Students in higher education often use these genres essays, research papers, theses, and dissertations among others. Depending on the discipline, other formats such case studies, book reviews, and lab reports might also surface. Different fields and universities have different uses and styles for various genres.

2.4.1 Essays

The essay is a fundamental form of academic writing that enables writers to systematically investigate and articulate their ideas.Zemach and Rumisek define an essay as “a group of paragraphs written about a single topic and a central main idea” (p. 56). The essay comprises three principal components: Introduction, main body, and conclusion.

Michel de Montaigne (1533–1592) was the first to introduce the essay genre in literature. He composed an essay that he described as an effort to compile his thoughts in writing. The term "essay" is derived from the French word "essayer," which means "to try" or "to attempt." The English term "trial" or "try" has a similar meaning (Gromiak, 2006). The

literary essay is defined as "a brief prose that is composed freely, expresses personal opinions and impressions on a specific subject or question, and does not claim to provide a comprehensive and definitive interpretation of the subject matter" (Kovalenko, 2012, p. 249). In contrast, the academic essay is designed to evaluate the students' capacity to organize their thoughts in a logical sequence and tests their critical thinking skills. The authors of academic essays should exhibit a comprehensive comprehension of the problem and exhibit well-developed critical thinking. In order to compose an effective essay, it is crucial to concentrate on the issue and present the ideas with a well-organized argumentation and examples.(Medvid & Podolkova, 2019, p. 216)

2.4.2 Research Papers

The research paper is a component of academic writing that involves the compilation of information from a variety of sources. It is a multistep process. The title selection is the most critical aspect of research writing. The chosen title for the investigation should be one that is intriguing. The title of the research is synthesized after collection of all pertinent information. To ensure that the title is thoroughly comprehended and developed, a preliminary outline is created that maintains the logical progression of its investigation. Proper research is initiated following preliminary research, which involves the procurement of prior resources, which are subsequently organized and significant points are identified. After that, the research paper is composed by consulting outlines, notes, articles, journals, and books. A research paper should be well-organized, including core components such as an introduction, material and methods, results, and discussion, as well as significant supplementary components such as a title, abstract, and references.(Shrestha, Joshi, & Kumar, 2021, p. 76)

2.4.3 Dissertations and Theses

Theses and dissertations are essential university projects that demonstrate students' research and analytical abilities. According to Fisher (2010, p. 3) defines a thesis as a claim or argument that is justified by writing and evidence. The thesis is designed to demonstrate and improve students' capacity to characterize and resolve workplace issues by employing the methodologies of their choice and theoretical knowledge. Additionally, the thesis illustrates the extent to which students are capable of autonomously completing challenging expert tasks.

Dissertations and theses are documents that are submitted to obtain a Master's or doctoral degree after the completion of the Master's or doctoral program.

Therefore, they may be regarded as the outcomes of their graduate school education. In other words, theses and dissertations are assessment tools that determine the extent to which an individual can independently conduct research or contribute creatively to the accumulation of knowledge on significant topics within their field of expertise (Sookmyung Women's University, 2022, p. 1).

Submission of theses and dissertations is necessary for the completion of a graduate program in order to get a degree. These papers are distinguished from general research papers by their requirement for specificity. Therefore, it is customary for theses and dissertations to incorporate historical research on the subject matter or sufficient data to reflect the efforts and time invested.

2.5 Stages of academic writing

Academic writing is distinguished from other forms of writing by its "rules and practices" (Bowker, 2007). These rules and practices are primarily concerned with the formal structure of ideas, referencing and citation techniques, writing mechanics, grammar, and the argumentative and persuasive nature of the work. In order to compose a high-quality academic paper, it is necessary to adhere to these guidelines.

2.5.1 Planning

Pre-writing includes any school practice that motivates the students to engage in writing. It incites contemplation for initiation. It effectively redirects kids from confronting a blank page to formulating preliminary thoughts and collecting information for writing(Richards and Renandya, 2002, p. 316)

2.5.2 Drafting

Drafting is a critical phase of the writing process during which writers begin to organize their ideas into a cohesive structure. According to (Richards & Renandya, 2002, p. 317).

Once appropriate ideas are collected during the planning stage, the initial drafting can commence swiftly. During the drafting phase, the writers concentrate on the fluidity of their writing, neglecting grammatical precision and presentation.

The preliminary version. The writer's capacity to envision an audience is one aspect of effective writing.

While the primary audience for writing in the classroom is typically the teacher, students may also be encouraged to write for other individuals, such as their peers, classmates, pen pals, and family members. A specific style can be determined by a conscious understanding of the audience. In order to provide direction to their writing, students should also have a central idea that they wish to convey to the audience.

An introduction to the subject matter may be a startling statement to arrest the reader's attention, depending on the genre of writing (narrative, expository, or argumentative).

Attention, a concise summary of the remainder of the text, a provocative query, a general statement, an analogy, a statement of purpose, and so forth. A strategy of this nature may serve as the driving force during the composition phase. The writing task is simplified as the writers relinquish control and dissolve into the act of writing once they have initiated it

(D'aoust, 1986, p. 7). Drafting is a process that enables writers to effectively engage their intended audience and plainly shape their ideas.

2.5.3 Revising

During revision, students evaluate their texts according to the provided feedback. Response phase. They reassess the written content to evaluate the efficacy of their communication to the reader. Revising entails more than simply identifying linguistic faults. (i.e., revision). This is executed to enhance global content and the organization of ideas, thereby clarifying the writer's intent to the reader.(Richards and Renandya, 2002, p. 317)

2.5.5 Editing

Editing is more concerned with the modification of language than with the modification of ideas, as per Fulwiler (1988, p. 167). Typically, writers edit their work after they have determined what they wish to convey. They verify the necessity, accuracy, and precision of each word or phrase. The content is less of a concern during the editing stage than the surface and formatting errors. Editing emphasizes on improving language by means of grammatical, spelling, and punctuation correction.Aiming to improve clarity and correctness rather than material, it follows concept growth.

2.5.6 Publishing

After editing the manuscripts and making the requisite modifications, writers are now prepared to produce the final version of their work, which will be distributed to the intended audience. At the conclusion of his chapter, Donohue (2009) asserts that "the final stage of the writing process includes sharing, reflecting, and assessments of the students' writing" (p.14).

2.6 Academic Writing Approaches

2.6.1 The product approach

The product approach is among the most frequently used methodologies in educational institutions globally. This writing method motivates students to create a final product comparable to a model essay or the essays often provided by teachers. The primary objective of the strategy is to impart linguistic information to language students [19]. Authors indicate that under this wiring methodology, pupils are anticipated to possess knowledge of language. Consequently, pupils only replicate basic phrases to gain familiarity with the material. They replicate and subsequently modify the models into a new essay, striving for perfection like to that of the original, while adhering to the linguistic guidelines provided by the instructors. Subsequently, students must submit their written essays to the teacher for marking and grading, rather than evaluation. The students are required to resubmit the writings to the teacher after making the necessary modifications. A conventional product method consists of four phases prior to students generating the final output for assessment (Palpanadan, Salam, & Ismail, 2014, p. 790).

2.6.2 The Process Approach

Palpanadan, Salam, and Ismail (2014) .The process approach is fundamentally cyclical. This method requires students to switch between stages while engaging in writing exercises. During the activity, individuals can transition to pre-writing tasks even after achieving the rewriting stage (final stage). The primary emphasis in this method is the author and the act of writing. The focus is on learners' language abilities, such as planning and drafting, prior to linguistic knowledge, including grammar and text structure [9]. Certain scholars contend that in this writing process, the growth of writing is anticipated to occur subconsciously. Writers assert that under this writing style, teachers function as facilitators

who oversee activities at different levels. The process writing technique employs many models, encompassing four connected activities: creating, organizing, composing, and rewriting [17]. A conventional process writing methodology includes eight fundamental phases prior to pupils receiving the final assessment from their teacher (p. 790).

2.7 Features of Academic Writing

According to Bacher (2023, p. 697) .There is an increasing demand for writing, whether in the academic community or elsewhere. In reality, researchers and their research are defined by their academic contributions to refereed journals. Academia has developed a form of orthodoxy that frequently culminates in the following: formality , objectivity , coherence and cohesion .

Formality pertains to the serious and non-conversational diction, conventions (e.g., Dear Sir, Truly Yours), spelling, and grammar employed in writing, namely the avoidance of daily speech and colloquialisms (Bacher, 2023, p. 697)

Objectivity adispassionate approach is consistently desired in academic writing. “Maintain emotional neutrality: the majority of academic writing necessitates a detached analysis as an impartial observer.”(Bacher, 2023, p. 697)

Coherence and Cohesion: Coherence is critical in academic writing, ensuring that ideas flow logically and clearly.Murry and Hughes (2008, p. 45) asserted that a proficient writer is one who preceding and subsequent ones. “If any links are absent, the connections become ambiguous and the argument structure disintegrates.” They also stated, "Coherence is arguably the most crucial element in any form of writing." Coherence denotes the logical linkage and seamless progression of ideas within a written work. It provides that the text is structured clearly and coherently, enabling readers to comprehend the author's ideas without ambiguity.

2.8 The Benefits of Academic Writing

2.8.1 Writing as a Tool for Intellectual Improvement

Linguist Walter Ong (1982) emphasized the importance of writing in helping the human mind reach its full potential. Writing allows writers to concretize abstract ideas and connect the dots in their knowledge. Writing tasks can improve intellectual vitality, creativity, and thinking abilities. Studies show that writing improves memory for significant life events and allows for the storage of information symbolically. Writing also enhances cognitive skills by requiring attention focus, planning, organization of thinking, and reflective thought. For more information on how writing contributes to intellectual and cognitive abilities, readers are encouraged to read McArthur, Graham, and Fitzgerald (2006). (Smith, n.d., p. 2).

2.8.2 Fostering Critical Thinking

Critical thinking is an invaluable skill that is fostered by participating in academic writing. It encourages individuals to analyze, assess, and synthesize information, which allows them to develop well-reasoned arguments and informed conclusions. This ability is not limited to academic pursuits; it also facilitates the exploration of multiple perspectives and the querying of assumptions in real-world situations (King's Education, 2023).

2.8.3 Professional and Academic Growth

Mastering of academic writing is of great importance in both academic and professional contexts. It functions as a benchmark for evaluating understanding and analytical abilities. Moreover, it is essential for disseminating research, collecting funding, and presenting results at conferences, all of which are essential for academic advancement (King's Education, 2023)

2.8.3 Common Difficulties Faced by EFL Students in Academic Writing

According to Azizah and Budiman (2017, p. 177). In the non-English country, students who are at a higher level tend to have specific challenges associated with the

composition of English. In the field of higher education research, there are numerous contexts that are considered challenging in the writing process. These contexts represent the technical aspect of writing, knowledge, and literacy perspective.

Lea and Street (as cited in Murshidi, 2014) identify the characteristics of language and the distinction between linguistic and cultural backgrounds.

Additionally, Phothongsunan (2016) asserted that the challenges encountered by Thai University academics are categorized into three categories: (1) discursive challenges, (2) non-discursive challenges, and (3) other challenges. Language and context, such as vocabulary, structure, citation, and reference making, are all examples of discursive challenges. While non-discursive challenges relate to strange factors such as motivation, plagiarism, emotional and psychological factors, and others. Lastly, the absence of support from the college for conducting research is another set of challenges.

Conclusion

In higher education, academic writing is an essential skill that enables students to contribute to scholarly discussions, think critically, and express ideas explicitly. Learners acquire the capacity to structure their thoughts, validate their arguments, and compose with formality and clarity by means of a structured genre and a step-by-step writing process. Improved writing skills and academic and professional success are achievable for EFL students, despite the obstacles they may encounter, through practice and guidance.

Chapter Three:

Research

Methodology and

Data Analysis

Chapter Three: Research Methodology and Data Analysis

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Introduction

Having presented the theoretical framework regarding AI Enhancing Students' Academic Writing by the Use of the Premium QuillBot Paraphrasing Tool - The Case of Master 2 Students at Biskra University", this chapter focuses on the practical aspects of the research, including the research methodology, and data analysing. It outlines the methods and procedures used for data collection and analysis, describing the mixed research methods using both qualitative and quantitative methods, and provide information about the study population and sample. Furthermore, it sheds light on the two primary data collection instruments, namely the learners' questionnaire and teachers' interview. Finally, the chapter wraps up with the demonstration, analysis, interpretation and discussion of the results obtained from both research tools.

3.1 Research Design

The methodology that is employed in the present research is the mixed method research, because it serves to a large extent the objectives of our study. To support this point, Selinger and Shohamy (1989 as cited in Khaldoun, 2008) affirmed that , "Research design is based on understanding a the steps within the interactive framework of the research , without isolating variables" (p.85) In addition, research design is an important component of the dissertation to answer the research questions. Then, the research design is the overall strategy for conducting research which defines a concise and reasonable plan to solve existing research problems by collecting, interpreting, analysing and discussing data.

Similarly, Cresswell (2009) expresses that "research designs are plans and the procedures for research that span the discussion from broad, Furthermore, a good research design is typically defined by adjectives such as adaptable, appropriate, effective and cost effective. Generally, research design is one that minimizes variance and maximizes the reliability of collected and analyzed data. In certain tests, the design with the smallest

experimental error is considered the best design (p.51).

As a result, this research employs a mixed method research design that employs a case study research approach and involves both quantitative and qualitative data collection methods. Accordingly, combining quantitative and qualitative research methods provides a deep understanding of the research topic and enhances the validity of the research findings concerning Artificial Intelligence: Enhancing Students' Academic Writing by the Use of the Premium QuillBot Paraphrasing Tool - The Case of Master 2 Students at Biskra University . According to Yin (2002) "the case study like other research strategies, is a way of investigation an empirical topic by following a set of pre-specified procedures" (p. 20)

3.2 Mixed Methods:

The basic of methodology is such integration permits a more complete usage of data than do separate quantitative data and qualitative data collection and analysis. For that, mixed methods research comes from the social sciences and has recently expanded into medical sciences including fields such as nursing, family medicine, social work, and others.

In addition, mixed methods approach is useful for such design and incentivized of type of some questions being raised and the objectives being designated. Since any investigation requires a certain set of tools for collection and analysis, it is necessary to shed light on the variant instruments, the sample, and the analysis procedures pertinent to each data gathering tool (Creswell & Clark, 2011, p. 25) . The term "mixed methods" is the combination of quantitative and qualitative data within a single investigation, this approach allowed for a deeper understanding AI : Enhancing Students' Academic Writing by the Use of the Premium QuillBot Paraphrasing Tool - The Case of Master 2 Students at Biskra University".

A qualitative study is appropriate when the goal of research is to explain a phenomenon by relying on the perception of a person's experience in a given situation (Stake, 2010,p.62). In the same context, Birks and Mills (2011) described qualitative approach used

to gets views that comes from the human experience with complete objectivity, understanding a human's perception is imperfect which influenced by society, culture, or other external influences.(p17) .

Qualitative Approach involves collecting and analyzing non numerical data. Cresswell (2009, p.101) defined "is a means for exploring and understanding the meaning individuals or groups ascribe to social or human problem. On the other hand, Frankel and Wallen(2009) argue that "qualitative researcher have a much greater flexibility in both the strategies and techniques they use and the overall research process itself".

In view of what has just been mentioned, the basic principles for using two approaches are that the strengths of the two methods will complement and compensate for each other method wicks. Frankel and Wallen (2009,p.105)express that " it is advantage is that by using multiple methods , researchers are better able to gather and analyse considerably more and different kinds of data than they would be able to using just one approach".

Eventually, qualitative methods use descriptions and categories to study human experiences and realities from the subject's perspective. Its primary goal is to understand the phenomenon from the viewpoint of the participants; with its particular institutional and social context intact. (Palmer & Bolderston, 2006).That is to say, qualitative research is non-statistical, which is based on interpretations generated from the open-ended questions in the teachers' interview.

However, quantitative approach is used to analyze the data. So through quantitative we can measure and analyze data gathering through statistical procedures. Blaxter et al. (2006, p.09) stated that: "Quantitative research is characterized by deductive approaches to the research process aimed at proving, disproving, or lending credence to existing theories. This type of research involves measuring variables and testing relationships between variables in order to reveal patterns, correlations, or causal relationships"(p.128). The quantitative

research method deals with the numerical analysis of variables in order to obtain plausible results. It involves the use of numerical data to answer questions like “who”, “how”, “what”, etc. Aliaga and Gunderson (2002) describe quantitative research methods as the explanation of an issue or a phenomenon through collecting and analyzing data in a numerical form and mathematical methods. Furthermore, in order to pursue a quantitative research, one needs to follow four main steps: establishing the statement of a problem, generating the hypothesis or the research question, reviewing related literature, and implementing a numerical analysis of data (cited in Apuke, 2017, p.21).

That is to say, quantitative research is characterised with the aid of using numerical analysis through the sample selected by the researcher in order to explain the main issue by analysing the collected data in the form of numerical and mathematical procedures. Quantitative research analysed the closed ended questions designed in the students' questionnaire and teachers' interview. All in all , the research will be using both qualitative and quantitative research methods for the collection and analysis of data.

3.3 Setting and Sampling

It is very important to identify the setting and the sample of the work in order to trace an organized path for collection of the required data; Kothari (2004), sampling may be described as “the choice of a few a part of a combination or totality on the idea of which a judgement or inference approximately the combination or totality is made” (p, 152).

Moreover, this study was conducted at the department of English at MKUB , located in northern edge of the Sahara desert Algeria, during the academic year 2024–2025. The department hosts approximately 2092 students across different levels (Licence and Master), including 145 master two students. It also employs 70 teachers who are responsible for delivering various modules. This research was designed as a case study focusing on the sample of Master 2 Students at Biskra University for the academic year 2024 /2025.

Accordingly, a questionnaire was designed to master 2 students to explore their attitudes and experiences in AI : Enhancing Students' Academic Writing by the use of the Premium QuillBot Paraphrasing Tool. Master two students are going to work on their dissertation writing to submit their academic research. For this reason, this faculty is highly relevant to the research. The second sample was English teachers at Biskra University too in order to obtain information about teachers' viewpoints and attitudes towards the investigated topic. This setting was selected because it aligns with the objectives of the study. Familiarity with the department and its academic environment helped ensure smooth access to students, which contributed to an effective data collection process and this reinforces the relevance of the topic under investigation.

3.4 Data Collection Tools

It is necessary to select effective tools in order to present our study investigation, which includes information about the descriptive of the subjects involved in the study. It also includes information about the instruments used to collect data. There is a discussion of the data collection that we choose it to collect the data analysis procedures will be given (questionnaire and interview) data collection.

As mentioned before, in order to obtain the required data of our research, we choose the mixed method because it is the suitable way that could enhance the validity. Due to that, triangulation approach of data collection was employed by using two data collection tools: An interview with EFL teachers and a questionnaire for Master 2 students at Mohamed Khider University of Biskra .These two tools described and analyzed in details in this chapter.

Furthermore , data collection is a method of collecting and analyzing data and knowledge about the study's subjects (people , artifacts , and phenomena) as well as the environment in which they occur .Then , data collection helps the researcher to obtain information from a variety of sources in order to answer pertinent questions , assess results ,and make decisions .

3.5.1 The Students' Questionnaire

The questionnaire is perhaps the most widely used for eliciting information from some target informants relative to their goals, attitudes and backgrounds. The use of this data collection tools in our research aims to investigate the students' attitudes towards the subject under investigation. According the importance of the questionnaire, (Wallace, 1998, p.41) is said that: "the questionnaire was used as a main instrument to elicit data from the two omnipresent partners in the teaching/ learning process: students and teachers for the reason that it allows the analysis of a large number of informants in a relatively short period of time anonymously" . The Questionnaire is one of the most frequent quantitative data gathering tools. It is a set of different types of questions asked to a large number of individuals to collect statistically useful information about a given topic. It is a valuable method of collecting a wide range of information from a large number of individuals, often referred to as respondents (Roopa& Rani, 2012).

In designing the present self-completed questionnaire for research purposes, the items required answers with dichotomies (yes/no question), or picking up the most appropriate answer from a series of options, or asking the students to give their opinions or to explain their choices. This questionnaire is addressed to Master 2 Students at Biskra University, the population are 145 master two students, we choose 40 students as participants from different groups, and the questionnaire consists of ten (10) questions which are arranged in a logical way to gather insights about the students' attitudes towards AI : Enhancing Students' Academic Writing by the Use of the Premium QuillBot Paraphrasing Tool.

3.5.2 Teachers' Interview

According to Cohen and Manion (1994, p.35) define the interview "as a method used between two persons, with the interviewer aiming to collect views and attitudes of the interviewees concerning a specific topic " . As it is known in social research, the interview is

an important and essential data collection method that is widely used by researchers. In the present study, the researcher adopted a structured interview to collect teachers' perception about AI : Enhancing Students' Academic Writing by the Use of the Premium QuillBot Paraphrasing Tool.

In this study, this tool is adopted as a follow up to the students' questionnaire response, and to test the stated hypotheses. "Structured interviews involve a predetermined set of questions asked in a standardized manner, ensuring all interviewees are asked the same questions in the same order. This method enhances reliability and allows for systematic comparison of responses." (Cohen et al, 2018). Furthermore, "In-depth interviews are one of the most common qualitative methods. One reason for their popularity is that they are very effective in giving a human face to research problems."(Mack et al., 2005, p.29)

That is to say, a structured interview is a standardized questioning method where all participants are asked the same set of questions in the same order, ensuring consistency and facilitating comparison of responses.

The present study involved an interview which is based on what was dealt within the theoretical part of this research. The interview was conducted with EFL teachers at MKUB . The interviewees were random sampling. Also, we gave sufficient time for the respondents to express their opinions, share their views and make comments on the topic under investigation. The interview was conducted with six (6) EFL teachers; they contributed to our study by answering the questions, reporting experiences, commenting, and giving suggestions. The interview consists of eight (8) questions, which are either directly or indirectly related to the research. The questions are closed –ended which required answers with dichotomies (yes/no question), or picking up the most appropriate answer from a series of options, or asking the teachers to explain their choices and open-ended, which provides the freedom of responses as to gain more detailed answers and to gather information on our

subject.

3.5 Data Analysis Procedures

According to (Schwandt, 2015 as cited in Lukenchuk, 2017) data analysis “is the activity of making sense of, interpreting, and theorising data. Analysis begins with the processes of organising, reducing, and describing the data and continues through the activity of drawing conclusions or interpretations from the data, and warranting those interpretations.” (Lukenchuk, 2017, p.57). This will be applied through our data analysis to organise, interpret, and explain our data in particular and our full work in general in the most academic and respected way. For this reason, we made sure to deal with this part, particularly in the most cautious manner. Thus, this part reflects the importance of data analysis in every step is taken to approach our interpretations, findings, and conclusions.

The quantitative analysis of the data collected from the students’ questionnaire. The results are interpreted in terms of numerical data manually coded in a form of percentages which were demonstrated in the form of figures. The percentages are calculated by means of the Rule of three: $x = \frac{z \times 100}{y}$. X refers to the calculated percentage. Z refers the number of answers. Y is the total number of participants under investigation.

The data collected through the teachers’ interview followed a qualitative approach in analyzing through thematic interpretation. Clarke and Braun (2013) define the qualitative approach as “the usage of words as data collected and analysed in all sorts of ways” (Clarke & Braun, 2013, p.3). In the same vein, Coles and McGrath (2010) add as well “Qualitative data is mainly concerned with words it’s usually presented in a discursive manner. You can then use your own powers of logic, induction, and deduction to dig into the data”. Additionally, Lee (2012) demonstrates,

Qualitative research is especially effective in obtaining culturally specific

information about the values, opinions, behaviours, and social contexts of particular populations. The strength of qualitative research is its ability to provide complex textual descriptions of how people experience a given research issue (P.1)

By analyzing patterns and themes in teachers' responses, the goal was to gain deeper insights into "Artificial Intelligence: Enhancing Students' Academic Writing by the Use of the Premium QuillBot Paraphrasing Tool and identify qualitative factors that influence students' writing skills.

3.6 Analysis of Students' Questionnaire

The students replied to the questionnaires of the researcher, so as to analyze them objectively, and then interpret them graphically.

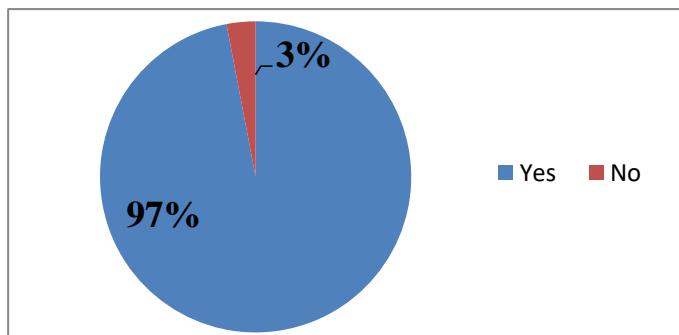
Section 01: Use of QuillBot Paraphrasing Tool

The questionnaire starts with questions which aim to know master two students experience in using AI tool which is QuillBot

Item 01: Do you use technologies in studying the English Language?

The researcher questioned the informants whether technologies in studying the English Language or not. This question is closed ended offering two options 'Yes' and 'No'. From the figure bellow, one may notice that, the majority of master students (97%) claimed that they use technology in learning English as a foreign language by ticking the option "YES", indicating a high reliance on technology to enhance the academic success. However, the rest (3%) said "NO", according to them technology was not the key of learning English. The results indicate that the vast majority of master's students view technology as an essential tool for learning English, highlighting its significant role in modern language education. The results obtained from the above question are displayed in Figure 1.

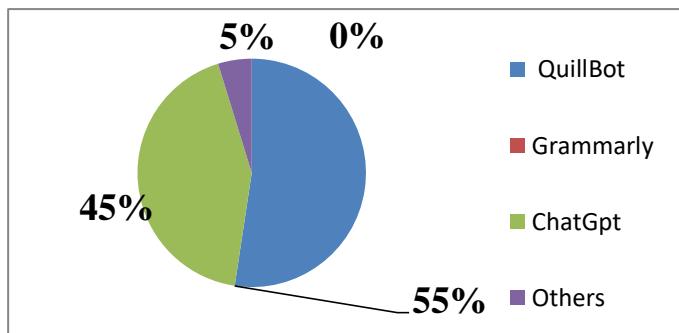
Figure 3.1: The Use of Technology in Learning English Language



Item 02: Which Kind of AI tools you use most

The investigator wanted to know the most used kind of AI tools used by EFL master two students at Biskra University. The participants answered this question by ticking one of the four options offered. It can be seen from the statistics provided that students claim that they most of time use the AI tool QuillBot , which was mentioned by (55%) of them, indicating overall satisfaction with this tool . Chat GPT selected by (45%) of the students. The third option is others, with least percentage of (5%). Also, none of students selected Grammarly, this may due to that they do not find it interesting or they have a high level in grammar skills. The results suggest that EFL Master 2 students at Biskra University favor AI tools that aid in paraphrasing and content creation, like QuillBot and ChatGPT, over grammar-focused tools such as Grammarly, possibly reflecting their greater need for writing support rather than grammatical assistance. The results suggest that EFL Master 2 students at Biskra University favor AI tools that support paraphrasing and content creation, such as QuillBot and ChatGPT, over grammar-focused tools, possibly reflecting a stronger need for assistance with writing development rather than grammatical accuracy.

Figure 3.2: The Most Used Kind of AI Tools by Students

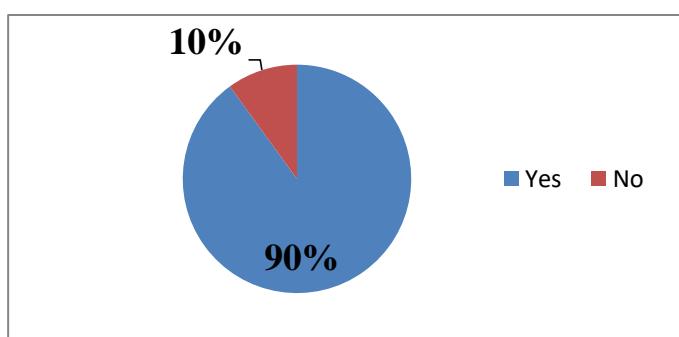


Item 03: Have you ever used QuillBot for academic writing?

Master two students were asked whether they used QuillBot for academic writing before or not.

The data are provided via ticking one of the obtained options ‘Yes’ or ‘No’. From the statistics bellow, the research worker noticed that the majority (90%) of master students reported that they use QuillBot for academic writing, that is to say, they answered with yes. On the other hand, a few part (10%) of them answer negatively, according to them QuillBot was not needed to write academically. The result was indicating that QuillBot is a facilitating and supplementary tool for students to be engaged with academic writing. The high percentage of users demonstrates that QuillBot is seen as a valuable aid in academic writing, likely due to its ability to enhance clarity, paraphrasing, and coherence in students’ work. The research worker found distinctive opinions about QuillBot which can be stated in the following figure using percentages.

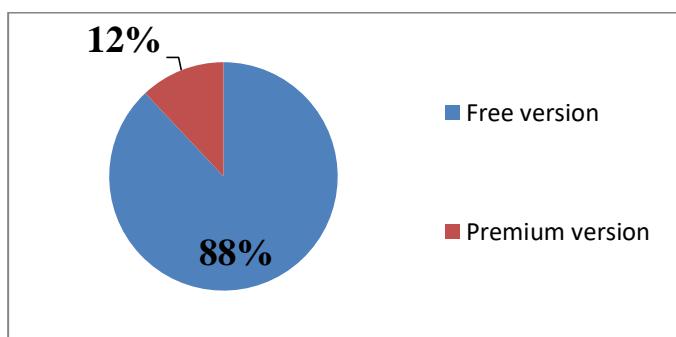
Figure 3.3: The Use of QuillBot in Academic Writing



Item 04: Which version of QuillBot do you use?

The investigator introduced another question related to QuillBot, which is about the version of QuillBot they use. The question consists of two main choices to be selected. According to what is shown in the figure, the majority of master two students at Biskra University (88%), answered that they use free version of QuillBot. However, (12%) of the students answered the question with premium version, one can understand that the majority of students are satisfied with the functionality provided by the free version of QuillBot and do not find it necessary to invest in the premium version. The data indicate that the free version of QuillBot meets the academic writing needs of most students, highlighting its accessibility and sufficient functionality for general academic purposes. The results were various; the following figure summarizes the students' views:

Figure 3.4: Students' Used Version of QuillBot

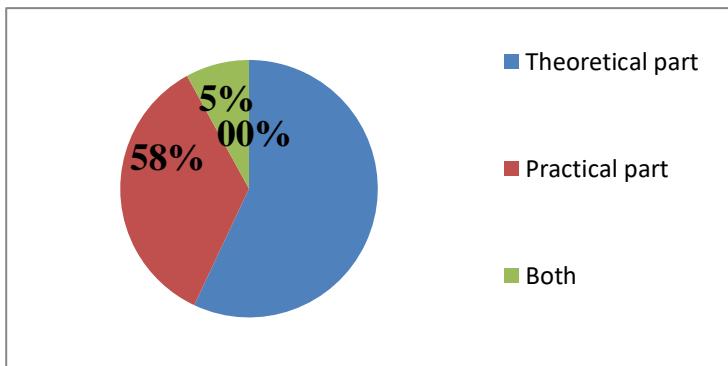


Item 05: To what extent you depend on Quillbot in your dissertation?

The researcher asked the same participants about the extent they depend on Quillbot in writing their dissertation. Three options were offered to select. According to the data given, the majority of the students, (57%) claimed that they rely on Quillbot to write their theoretical part in the academic research. However, some of them (35%) said practical part. In addition, just few students (8%) opted both. This indicates that students prefer to use QuillBot more for

the theoretical sections of their dissertations, possibly due to the greater need for paraphrasing and language refinement in this part. The results of this question are displayed in figure 5.

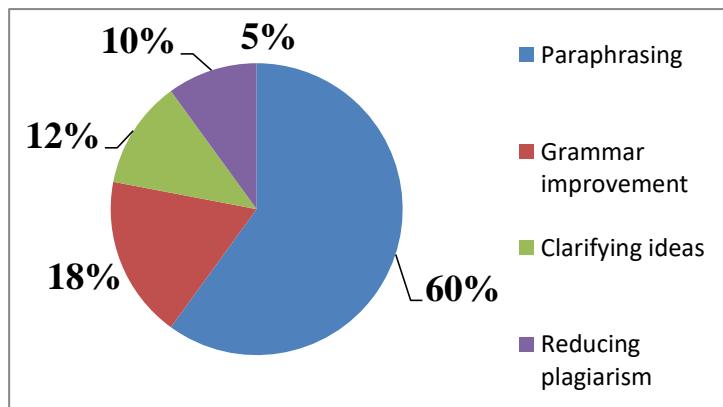
Figure 3.5: Students' Extent in Using Quillbot in their Dissertation



Item 06:What is your primary purpose for using QuillBot? (You may select more than one option)

The researcher questioned the informants about the primary purpose for using QuillBot. The data are provided via ticking one of the four obtained options. It can be seen from the illustrative figure that students did not select more than one option. More specifically, the primary aim of using QuillBot for the majority students is to paraphrase their writing, which was mentioned by (60%) of them. Grammar improvement, selected by (18%) of the students. The third option is clarifying ideas, with a percentage of (12%). Additionally, the minatory part (10%) selected reducing plagiarism. This implies that paraphrasing is perceived as the most valuable feature of QuillBot among master two students, highlighting their focus on rewriting content in their academic work. Students' answers are summarized in figure 06 using percentages.

Figure 3.6: Students' Primary Purpose for Using QuillBot



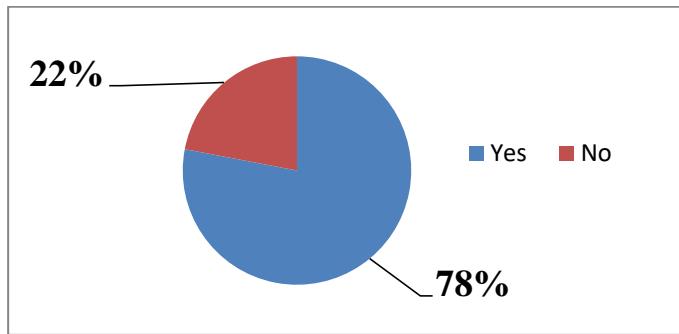
Section Two : Impact of QuillBot on Academic Writing

The researcher design section two to collect data about EFL master two students QuillBot impacts on Academic Writing, students responses are mentioned bellow:

Item 07: Has QuillBot helped improve the quality of your academic writing?

Another interesting question was asked to EFL master students, was about whether QuillBot helped students to improve the quality of their academic writing or not. This question is closed ended offering two options 'Yes' and 'No'. A considerable number of students (78%) confessed that QuillBot helped them to improve the quality of their academic writing. this implies that they answered positively with "Yes". Whereas, (22%) of students answered the question with "No". This indicates that the majority of students perceive QuillBot as an effective tool for enhancing the quality of their academic writing. The results obtained from the above question are displayed in Figure 7.

Figure 3.7: Quillbot Impacts on Improving the Quality of Students' Academic Writing



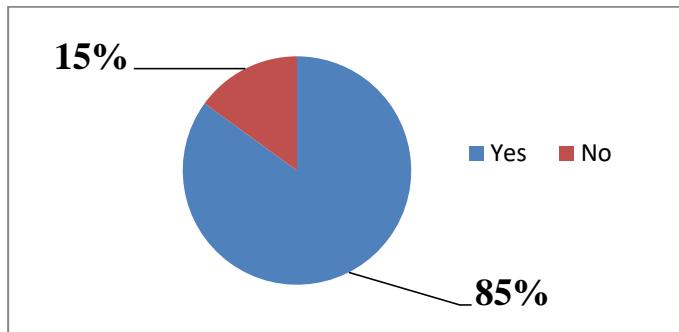
If yes, mention it, students answers are summarises as follow :

The aim of this question was to explore how QuillBot specifically helped students improve their academic writing. The majority of students reported that QuillBot assisted them mainly with paraphrasing, improving grammar, organizing sentence structure, avoid repetition and expanding their academic vocabulary. Some also mentioned benefits like generating and organizing ideas, summarizing content, and enhancing clarity. A few students highlighted the tool usefulness in specific sections like the literature review. However, a small number noted limited impact due to lack of familiarity with the tool or minimal use. This indicates that most students find QuillBot helpful for technical improvements in writing, particularly in language clarity and paraphrasing, though some remain under-informed about its full capabilities.

Item 08: Does QuillBot help you develop your academic vocabulary?

The researcher wants to have extra information about QuillBot impacts, which is about whether QuillBot help students to develop their academic vocabulary. Participants are then expected to express their view by ticking one of the two options. According to what is represented bellow , the majority of students (85%) claimed that QuillBot help them to develop their academic vocabulary. However, the rest (15%) said no. This indicates that most students perceive QuillBot as a useful tool for enhancing their academic vocabulary, while a smaller group may either not use it for this purpose or find its vocabulary support insufficient.

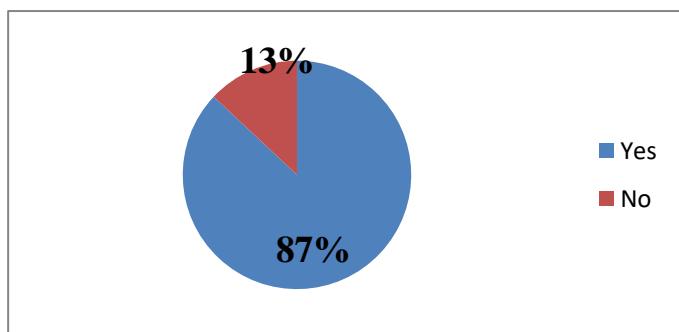
Figure 3.8:Quillbot Impacts on Developing Academic Vocabulary



Item 09: Does QuillBot help you better organize your ideas in academic writing?

Through this question the investigator wanted to know whether QuillBot help students better organize their ideas while writing their dissertation or not. The respondents are asked to give their answers by ticking one from the two choices “Yes, NO”. Again, from the data presented reveal that the majority of master two students (87%) confessed that QuillBot help them better to organize ideas in academic writing, this means that they gave an affirmative answer ‘yes’. However , a minatory part (13%) reported negatively with no. This indicates that most students view QuillBot as a supportive tool for structuring their ideas, while a small portion may not rely on it for organizational purposes or find its assistance in this area limited. The results are displayed in figure 09.

Figure 3.9: Quillbot Helps in Organizing Ideas in Academic Writing



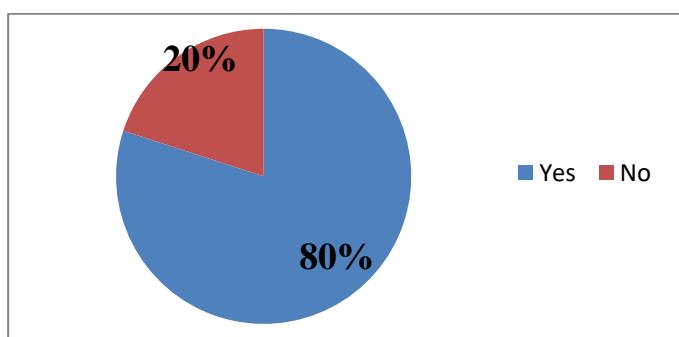
Section Three: Challenges and Concerns

The present section gathers data about master two students at Biskra University challenges and concerns about using the AI tool Quillbot. Students answers are displayed bellow in detailed:

Item 10: Have you encountered any challenges during using Quillbot?

Since QuillBot is an important part of this research, the investigator aimed to determine whether EFL Master Two students experienced any challenges while using the tool. The data were collected through a simple “Yes” or “No” choice. The results show that the majority of students (80%) stated they did not encounter any challenges while using QuillBot. However, a minority (20%) reported facing some difficulties. This indicates that most students find QuillBot easy and accessible, though a smaller group may struggle with certain features or technical aspects of the tool. Students’ answers are summarized in figure and 10 using percentages.

Figure 3.10: Students’ Challenges in Using Quillbot



If yes, please briefly describe the challenges or concerns:

The aim of this follow-up question was to explore the specific challenges or concerns students might have faced while using QuillBot. Among the responses, the majority either

repeated that they faced no challenges or provided unclear or irrelevant answers. However, a few meaningful concerns were identified. These included: inaccurate or inappropriate word choices during paraphrasing, difficulty in maintaining academic tone, limitations of the free version (such as word count restrictions), lack of familiarity with the tool, and concerns about over-reliance affecting originality. This indicates that while most students did not face issues using QuillBot, a few experienced minor limitations related to tool accuracy, access restrictions, or personal usage skills.

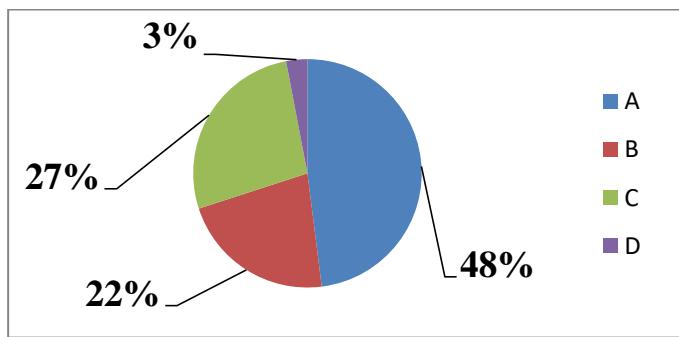
Item 11: Reading the fact that Quillbot is an AI editor, what do you think about the ethical perspectives about using it?

- A.** They are helpful tools that improve writing clarity and efficiency when used responsibly
- B.** They raise ethical concerns, such as potential plagiarism and over-reliance, which may hinder skill development.
- C.** Their ethicality depends on the context and purpose of use; they can be beneficial or problematic.
- D.** They are unethical, as they compromise originality and academic integrity.

The researcher gathered the data from the respondents about the ethical perspectives they think since Quillbot is an AI editor. This question is offering four options. Another interesting response provided by EFL students, indeed, the majority of the informants (48%) answered that the ethical perspectives about using Quillbot as an AI editor are helpful tools that improve writing clarity and efficiency when used responsibly. However, others (27%) reported that their ethicality depends on the context and purpose of use; they can be beneficial or problematic. Additionally, (22%) said they raise ethical concerns, such as potential plagiarism and over-reliance, which may hinder skill development. Just a few students (3%)

selected they are unethical, as they compromise originality and academic integrity. This indicates that while most students view QuillBot as ethically acceptable when used with discretion, there is still a significant minority that raises concerns about its potential to undermine academic values and individual writing development. The results are provided in Figure 11

Figure 3.11: The Ethical Perspectives about Quillbot



3.7 Analysis of the teachers' Interview

This part included the interview analysis that seeks to gather information about teachers' perception towards "Artificial Intelligence: Enhancing Students' Academic Writing by the Use of the Premium QuillBot Paraphrasing Tool. The analysis of the six (6) EFL teachers' responses to each question is provided below:

Item 01: Are you familiar with artificial intelligence programs that assist students in paraphrasing and enhancing their academic writing?

The aim of this question is to explore whether teachers are aware of AI-based tools that support students in improving their academic writing through paraphrasing. From the results, it is evident that all participants expressed familiarity with such programs. Their unanimous responses indicate a shared awareness of technological advancements in language learning and writing support, suggesting that AI tools like QuillBot are not only recognized by students

but are also known and acknowledged by their instructors. This reflects a general openness among teachers to digital resources in academic contexts. Their answers are listed as follows:

Participant 1 claimed: Yes

Participant 2 claimed: Yes

Participant 3 claimed: Yes

Participant 4 claimed: Yes

Participant 5 claimed: Yes

Participant 6 claimed: Yes

Item 02: Which primary programs do you utilize in your work?

The aim of this question is to identify the main AI-based tools teachers use in their professional practice, particularly those that support language editing and academic writing. The results reveal varied responses. While two teachers reported not using any such programs, the others indicated regular use of tools like Grammarly, QuillBot, ChatGPT, Gamma, and general AI-supported editing platforms. These answers reflect a growing integration of AI in educational practices among some teachers, especially those who recognize its potential in enhancing language accuracy, clarity, and instructional efficiency. Thereon, the absence of use by others may point to gaps in training, access, or personal preference regarding digital tools in teaching. Their answers are listed as follows:

Participant 1 claimed: None

Participant 2 claimed: None

Participant 3 claimed: Grammarly, Gamma, Quilbot, ChatGpt, & others

Participant 4 claimed: AI-supported language editing programs

Participant 5 claimed: Quillbot

Participant 6 claimed: Grammarly and QuillBot

Item 03: Please rate your assessment of the QuillBot application based on the following criteria

The first criteria aim to assess whether QuillBot effectively contributes to enhancing students' writing quality or not. To begin with, the majority of teachers agree that QuillBot has a positive impact on students' writing, as indicated by the 4 "Agree" responses. This suggests that teachers generally view the tool as a useful resource for improving students' writing quality. However, two teachers are "Neutral," due to variability in their experiences with the tool.

The second criteria aim to evaluate the accuracy and relevance of the paraphrasing suggestions provided by QuillBot. The majority of teachers 5 out of 6 agreed that the paraphrasing suggestions were accurate and relevant, which suggests that QuillBot is perceived as effective in offering meaningful and appropriate paraphrasing options. However, one teacher remained neutral, which could indicate occasional concerns or limitations in the tool's ability to provide paraphrases that fully adjust with the specific requirements of academic writing.

The third criteria aim to assess the user- easiness and navigability of the QuillBot interface. Five teachers agreed that the interface is intuitive and easy to use, suggesting that QuillBot's design is accessible and easy. This indicates that teachers find the platform easy to navigate, which is crucial for effective integration into the academic atmosphere. However, the remaining teach is "Neutral" , this implies that, there may be some aspects that could be improved or that certain users may find less intuitive, depending on their familiarity with similar tools.

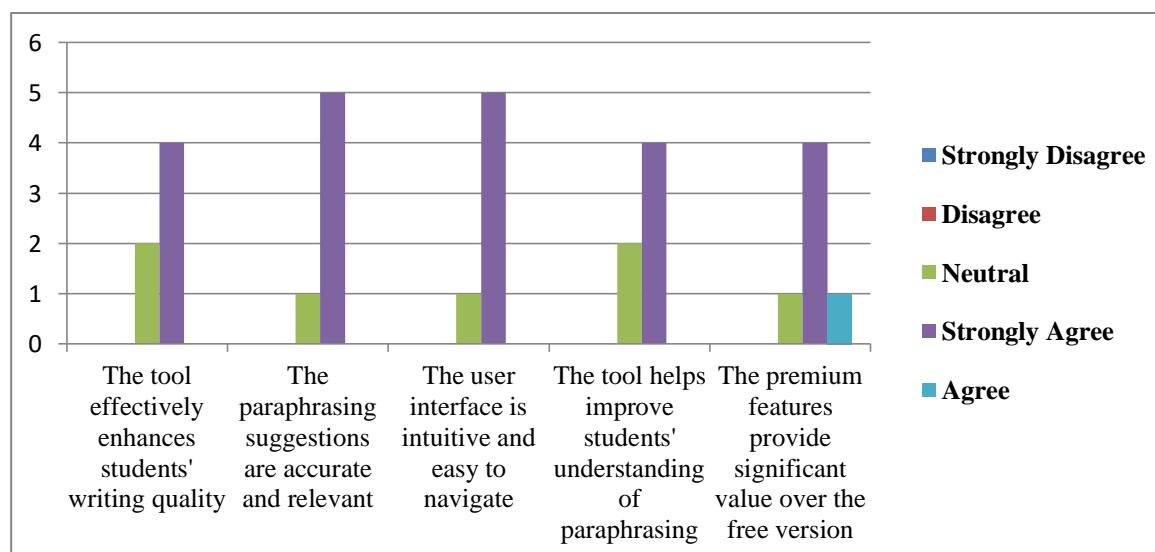
The fourth criteria aim to determine whether QuillBot aids in enhancing students' understanding of paraphrasing. The majority of teachers (4 out of 6) agreed that the tool contributes positively to improving students' paraphrasing skills. This suggests that QuillBot

is viewed as a helpful and complementary tool for teaching and reinforcing the concept of paraphrasing. However, two teachers gave a "Neutral" response, indicating that they may not replace traditional methods of teaching paraphrasing.

The last criteria to evaluate whether the premium features of QuillBot offer added value compared to the free version. The majority of EFL teachers agreed that the premium features offer significant value, with one teacher strongly agreeing. This indicates that, in general, teachers see the premium version as an improvement over the free version, likely due to additional features that enhance functionality, such as advanced paraphrasing modes or more comprehensive language editing. However, the "Neutral" response from one teacher suggests that not all users may see a clear distinction in value between the two versions, or they may not have used the premium version enough to assess its benefits fully. From the teachers responses QuillBot is generally supported by teachers for its contribution to students' writing quality, paraphrasing skills, and ease of use. Most teachers appreciate the value of its premium features.

Note : None of EFL teachers add other criteria

Figure 3.12: Teachers' Assessment of the QuillBot Application



Item 04: Do you believe the QuillBot Paraphrasing tool influences creativity and originality in EFL writing?

The aim of this question is to understand teachers' perceptions regarding the impact of QuillBot's paraphrasing tool on students' creativity and originality in EFL writing. The responses show a mix of opinions. Three participants clearly stated that they do not believe QuillBot negatively influences creativity or originality. One EFL teacher offered a more nuanced view, suggesting that while it facilitates students' work, its effect on writing quality depends on appropriate use. On the other hand, two teachers expressed concern, indicating that it could potentially affect originality. EFL Teachers responses highlight a divide in opinion while some view QuillBot as a useful support tool, others are cautious about its possible overuse and the risk it poses to students' independent thinking and creative expression. Their answers are listed as follows:

Participant 1 claimed: No

Participant 2 claimed: No

Participant 3 claimed: No

Participant 4 claimed: Not really, it facilitates the work for students and if used appropriately it is expected to positively affect the quality of their writing.

Participant 5 claimed: Yes

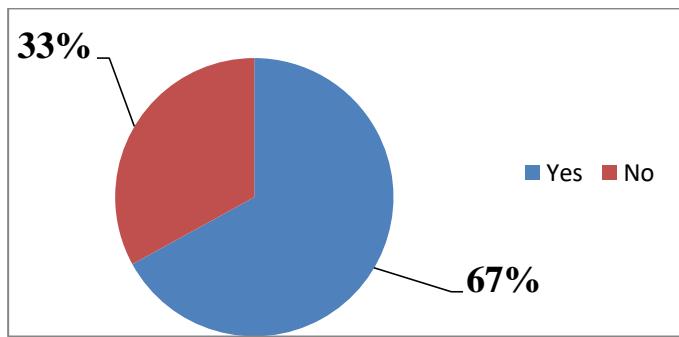
Participant 6 claimed: Probably yes

Item 05: Do you believe that students can use QuillBot to support their writing development without becoming overly dependent on it?

This question aims to know teachers opinion whether students can use QuillBot to support their writing development without becoming overly dependent on it. The data are provided via ticking one of the obtained options 'Yes' or 'No'. As far as QuillBot has positive

side, it is clear that the majority of EFL teachers (67%) reported that students may use QuillBot to support their writing development without becoming overly reliance, however, few part answered with (33%) answered with no. Teachers' answers are summarized in figure 13 using percentages. This indicated that while most EFL teachers are optimistic about students using QuillBot as a supportive tool for writing development, there remains a concern among a minority about the potential risk of overreliance.

Figure 3.13: Students' use of QuillBot in Writing Development without Overly Reliance

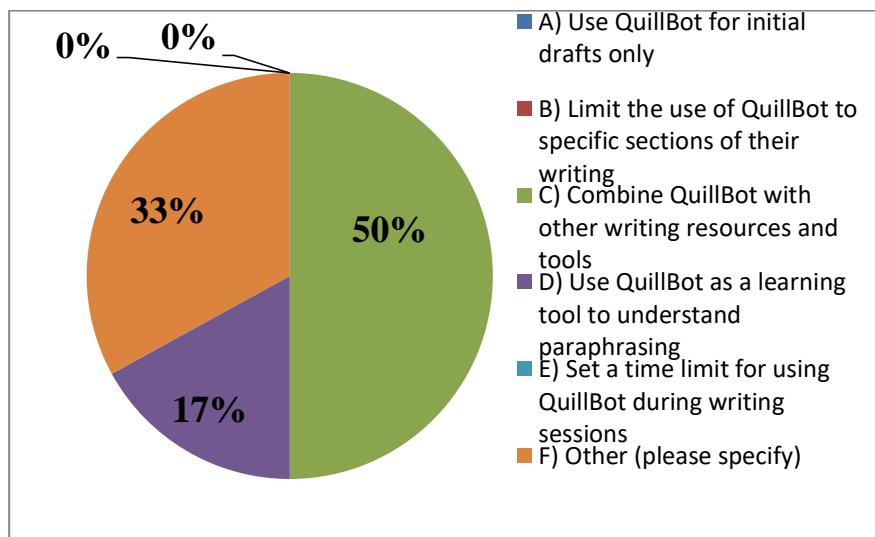


Item 06: If yes, please select the recommended strategies

This question seeks to extra information which complete the previous question (5) the. The participants answered this question by ticking one of the five options offered. From figure 14, it can be observed that half of teachers (50%) indicated that combining QuillBot with other writing resources and tools is a useful strategy to decrease the over reliance on QuillBot. However , (33%) of them mentioned others such as recommending not to use AI, especially for novice researchers, using the tool can very well be addictive and opt for C & D options. The remaining percentage (17%) refers to the teachers who select use QuillBot as a learning tool to understand paraphrasing. None of teachers selected use QuillBot for initial drafts only, limits the use of QuillBot to specific sections of their writing or set a time limit for using QuillBot during writing sessions options. This indicated that while many teachers recognize the value of integrating QuillBot with other resources, there is also a significant concern about

potential overdependence on AI tools, especially among less experienced users.

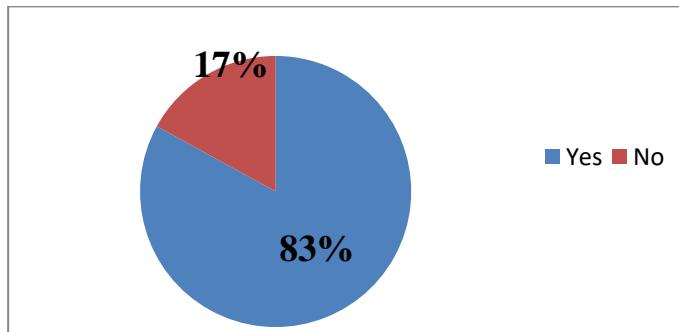
Figure 3.14: Teachers' Recommended Strategies for Over-Reliance on Quillbot



Item 07: Are you aware of the premium version of QuillBot?

Again, another interesting question was asked to EFL teachers, was about whether they are aware of the premium version of QuillBot. The data are provided via ticking one of the obtained options ‘Yes’ or ‘No’. The results displayed that the majority of teachers (83%) claimed that they are familiar with the premium version of QuillBot. However, a few participants (17%) answered negatively with no. This indicated that most EFL teachers are well-informed about the available features of QuillBot, including its premium version, which may influence their perceptions and usage of the tool.

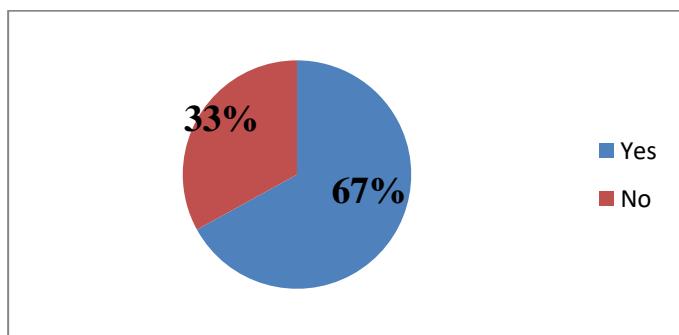
Figure 3.15: Teachers' Familiarity with the Premium Version of QuillBot



Item 08: If yes, do you think it offers significant advantages over the free version in terms of writing improvement?

The researcher questioned the EFL teachers about their consideration that teacher-student relationships help in achieving students' learning outcomes. The data are provided via ticking one of the obtained options 'Yes' or 'No'. According to what is given in the figure below, the vast of EFL teachers (67%) confessed with yes that the Premium Version of QuillBot offers significant advantages over the free version in terms of writing improvement. This indicated that a majority of EFL teachers perceive the premium version of QuillBot as a more effective tool for enhancing writing skills, suggesting a belief in the added value of its advanced features. However, others (33%) answered with no. Teachers' answers are summarized in figure 16 using percentages

Figure 3.16: Premium QuillBot Offers Significant Advantages in Writing Improvement



-If no, would you like to share your reasons for not being aware of the premium version?

The aim of this question is to explore the reasons behind teachers' unfamiliarity with the premium version of QuillBot, in cases where they previously indicated a lack of awareness. From the responses received, only two participants provided comments. One teacher stated a lack of interest as the reason for not knowing about the premium version, while the other pointed out that the question seemed irrelevant or mismatched with the previous one. These responses suggest limited engagement with or priority given to QuillBot's extended features among some teachers, and they also highlight the importance of clarity in questionnaire design. Their answers are listed as follows:

Participant 1 claimed: Not interested in.

Participant 2 claimed: This is a wrong question; it doesn't answer the previous one

Item 9: Based on your experience with the QuillBot program, particularly its premium version, please identify the advantages and disadvantages of using this tool.

The aim of this question is to collect teachers' insights on the benefits and drawbacks of using QuillBot, especially its premium version, based on their own experience or expectations. The responses varied, reflecting different levels of familiarity and attitudes toward the tool. One participant stated a preference for traditional methods and chose not to use QuillBot at all. Others highlighted several advantages, such as advanced paraphrasing modes (e.g., Formal, Creative, Fluency), improved vocabulary and writing style, enhanced coherence, time efficiency, and a broader range of options suitable for academic writing. One participant noted the issue of AI-generated text detection, implying concern about academic integrity. Some also pointed out disadvantages like the cost of the premium version and the potential redundancy in paraphrasing. These reflections suggest that while QuillBot's

premium version is seen as a useful and time-saving tool with sophisticated features, concerns remain regarding its affordability, overuse, and the need for careful integration into academic contexts. Their answers are listed as follows:

Participant 1 claimed: I prefer not to use this tool. I prefer using traditional ways.

Participant 2 claimed: The premium version of QuillBot offers advanced paraphrasing modes, such as Formal, Creative, and Fluency, which help tailor writing to different academic or professional needs.

Participant 3 claimed: It can offer a different style, vocabulary, a newer paraphrasing, but it can be payable and redundant at times.

Participant 4 claimed: AI-generated text detection 5

Participant 5 claimed: Gain time, coherence for writing, plenty of options that suits the researcher

Participant 6 claimed: I haven't used the paid version but I expect it to have more features, no limited input and more accurate language editing

Item 10: What advice can you give to researchers and M2 students regarding the use of QuillBot?

The aim of this question is to gather advice from teachers on how researchers and Master 2 students should use QuillBot in their academic work. The responses reflect a variety of perspectives, emphasizing both the potential benefits and the limitations of the tool. EFL teachers recommended that students use QuillBot as a supportive tool rather than a substitute for their own writing. The tool can be helpful for improving sentence structure, paraphrasing, and overcoming writer's block, but it should always be used cautiously. One teacher advised combining QuillBot with proper citation practices and peer or supervisor feedback, stressing the importance of manual editing and careful review of the output. Another teacher cautioned against over-reliance on AI, urging students to focus on developing their own writing skills.

The advice highlights the need for moderation in using AI tools, suggesting that they should be viewed as complementary resources rather than replacements for independent thought and writing. Their answers are listed as follows:

Participant 1 claimed: I advise them to develop their writing skill and do not rely on AI.

Participant 2 claimed: Use QuillBot as a support tool not a replacement for your own writing. It's helpful for improving sentence structure, paraphrasing, and understanding alternative phrasing, especially when facing writer's block. However, always review the output carefully to ensure the meaning remains accurate, particularly in academic writing.

Combine it with proper citation practices, and never use it to disguise copied material. It's best used in moderation, alongside manual editing and feedback from peers or supervisors.

Participant 3 claimed: Don't use it. If you have to, use it as an inspiration

Participant 4 claimed: Use wisely

Participant 5 claimed: Learn as much they can about AI use in higher education

Participant 6 claimed: Use with moderation

1.8 Discussion of the Results

1.8.1 Discussion of the Students' Questionnaire

This part provides a discussion of the main results obtained from the questionnaire distributed to Master Two EFL students at Biskra University. It aims to answer the research questions set out in the general introduction and examine the validity of the proposed hypotheses, while also interpreting the findings related to the use of QuillBot as an AI writing tool.

On the basis of the results obtained, it was found that most students use the free version of QuillBot, which suggests that they find it sufficient for their academic writing needs without the necessity of upgrading to a premium version. Regarding the areas of writing

where QuillBot is most used, the majority reported relying on it mainly for the theoretical part of their dissertations. This shows that students use the tool primarily where language refinement and paraphrasing are essential. Moreover, when asked about their main purpose for using QuillBot, most students pointed to paraphrasing, while a smaller portion mentioned grammar correction, clarifying ideas, and reducing plagiarism. This implies that QuillBot's paraphrasing function is perceived as its most beneficial feature.

On the ground of the results, the majority of the students indicated that QuillBot helped improve the quality of their academic writing. They stated that it assisted with clearer sentence structure, vocabulary enhancement, and better coherence. Moreover, students who elaborated further mentioned that QuillBot supports paraphrasing, corrects grammar, and offers vocabulary alternatives, although some highlighted the importance of not over-relying on the tool and of maintaining personal writing voice. As for vocabulary development, most students expressed that QuillBot helped expand their academic vocabulary. This highlights the tool's effectiveness in providing diverse word choices and enhancing lexical richness in students' writing.

The statistics provided in the analysis indicated that a large number of students believe QuillBot helps them structure their ideas better in academic writing. This supports the view that AI tools can play a role in improving writing logic and flow. When asked about possible challenges while using QuillBot, most students reported no significant difficulties. However, a few pointed to challenges such as tool limitations, unfamiliarity with its features, or concerns about its accuracy and word appropriateness.

From the quantitative evidences data obtained from questionnaires, concerning the ethical perspectives of using QuillBot, the majority of students agreed that QuillBot is a helpful tool when used responsibly, contributing positively to writing clarity and efficiency.

Others argued that its ethicality depends on the context and intended use, while a smaller part raised concerns about potential plagiarism or academic integrity. A few considered it unethical, stating it could compromise originality.

To sum up, the analysis of questionnaire reveals that the majority of Master Two EFL students at Biskra University view QuillBot as a valuable writing aid, particularly for paraphrasing, grammar support, and vocabulary development. They tend to use it more in theoretical writing and believe it helps them better structure their ideas. While ethical concerns exist among a minority, the general perception is that QuillBot is a supportive and effective tool when used responsibly.

1.8.2 Discussion of the Teachers' Interview

The analysis of the EFL teachers' interview responses reveals a generally positive perception of QuillBot and similar AI-powered writing tools. The majority of EFL teachers acknowledged their familiarity with AI applications for academic writing and recognized the benefits of tools like QuillBot in enhancing writing quality, paraphrasing accuracy, and ease of use. EFL teachers found the premium version particularly valuable due to its advanced features. Teachers also expressed confidence in students' ability to use the tool without becoming overly dependent, provided it's integrated responsibly with other educational resources. There was a shared sense that, when used appropriately, QuillBot can support writing development and save time, especially in tasks like paraphrasing and improving coherence.

However, a few part of EFL teachers expressed reservations about potential over use , diminished creativity, and issues around academic integrity, particularly with AI-generated content. Some preferred traditional writing methods or had not used the premium version,

citing cost or lack of interest. The advice given to M2 students reflected a strong emphasis on moderation, responsible use, and maintaining academic honesty. Collectively, these insights indicate that while AI tools like QuillBot are generally welcomed in educational contexts, their adoption must be accompanied by clear guidelines and a focus on developing students' independent writing skills in the educational setting.

3.9 Summary of Results, Limitation, and Recommendation

This section provides readers with a summary of the results, highlights the limitations encountered during the research process, and offers a set of practical recommendations for both students and teachers in the context of using QuillBot as an AI-powered academic writing tool.

1. Summary of Results

The findings from both the students' questionnaire and the teachers' interview present a generally positive attitude towards the use of QuillBot in academic writing among master two EFL students and EFL teachers at Biskra University. The students reported regular use of the free version of QuillBot, especially for paraphrasing tasks in the theoretical sections of their dissertations. They acknowledged its role in improving sentence structure, coherence, grammar, and vocabulary. The paraphrasing function was considered the most helpful feature, while grammar and plagiarism-related functions were appreciated to a lesser extent. Most students believed QuillBot enhanced their academic vocabulary and helped organize ideas more clearly, though a few raised concerns about overuse and ethical considerations.

From the teachers' perspective, QuillBot was seen as a helpful and practical tool when used appropriately. Most EFL teachers showed familiarity with the tool and supported its use for enhancing academic writing, particularly through its advanced paraphrasing

features in the premium version. Teachers appreciated its ease of use and contribution to writing quality but also emphasized the importance of balancing AI assistance with students' independent writing development. EFL teachers raised valid concerns regarding the potential for decreased originality and the ethical risks associated with improper use. Teachers' advice for students centered on using QuillBot moderately, critically reviewing the generated content, and integrating it with traditional learning and academic integrity practices.

2. Limitation

Despite the valuable insights gained, the current study faced several limitations that may have affected the breadth and depth of the research. Firstly, the sample size for both the questionnaire and interviews was limited to Master Two students and six EFL teachers at Biskra University, which may not represent wider perspectives from other institutions or academic levels. Secondly, some participants did not provide detailed answers, especially in open-ended questions, which limited the richness of qualitative data.

Another limitation was the non familiarity among participants with QuillBot premium version. Some students and teachers had not used or explored its full features, which may have affected the depth of their evaluation, additionally; technical terminology in the questionnaire may not have been fully understood by all student respondents, potentially impacting the accuracy of some responses. Time constraints and limited access to broader digital tools also restricted further comparative analysis or triangulation through classroom observation or writing samples.

3. Recommendation

To improve the academic use of QuillBot and address the concerns raised in this study, the following recommendations are proposed for both students and teachers:

1. Recommendations for EFL Teachers:

- Teachers are required to encourage the responsible use of QuillBot as a supplementary tool for improving writing, not as a replacement for students' own thinking and expression.
- Teachers asked to provide training or workshops on how to critically evaluate AI-generated content and integrate it into the writing process while maintaining academic integrity.
- Teachers requested to promote awareness of ethical considerations related to AI use, such as plagiarism and originality, especially in academic writing contexts.
- Teachers asked to encourage the use of a variety of writing resources and manual editing to reduce overdependence on a single tool.

2. Recommendations for EFL Students:

- *It is recommended that* Students use QuillBot in moderation and focus on learning from the tool by analyzing the suggested paraphrasing and vocabulary options.
- Students have to avoid overreliance by drafting initial ideas independently before using AI tools for refinement or correction.
- Students are required to enhance awareness of citation rules and academic honesty to avoid misuse of paraphrasing tools.
- Students are encouraged to seek feedback from supervisors or peers in addition to using AI tools, in order to ensure clarity and quality in academic writing.

By implementing these recommendations, both students and teachers can make more effective and ethical use of AI-powered writing tools like QuillBot, supporting academic

development while preserving critical thinking and originality.

Conclusion

The present chapter includes the research methodology and analyzed the data collected from both teachers and students. It explained the research tools, participants, and procedures used to gather information about “Artificial Intelligence: Enhancing Students' Academic Writing by the Use of the Premium QuillBot Paraphrasing Tool”. The results from the interviews and questionnaires revealed that both teachers and students recognize the importance of QuillBot as a supplementary and assistant tool in improving academic writing.

GENERAL CONCLUSION

General Conclusion

The present study has attempted to investigate Artificial Intelligence: Enhancing Students' Academic Writing Using of the Premium QuillBot Paraphrasing Tool - The Case of Master 2 Students at Biskra University. More specifically, the ongoing study sought to reach the main aims which previously mentioned in the general introduction. The study aimed at to examine the effectiveness of QuillBot in improving various aspects of writing, such as paraphrasing, grammar, vocabulary development, and the overall quality of academic writing. Additionally, the study sought to understand the perceptions and experiences of both students and teachers regarding the tool, its advantages, and potential challenges.

The present study is composed of three chapters; the first provides a comprehensive overview of AI tools in education, with a specific focus on QuillBot, discussing its functionalities, applications, and relevance in academic writing. In the second chapter, we shed the light on academic writing its definition, importance in EFL learning and main characteristics. Finally, the third chapter introduced the research methodology and design, population, sample, and data collection instruments, including the analysis of student questionnaire and teachers' interview, as well as engages in discussions regarding the implications, limitations, and suggestions for further studies, ultimately leading to a general conclusion.

In order to attain the research objectives, provide answers to the research questions stated in the general introduction, and confirm or refute the proposed hypotheses, we have meticulously examined "Artificial Intelligence: Enhancing Students' Academic Writing by the Use of the Premium QuillBot Paraphrasing Tool". A mixed method approach were adopted, to be more precise, data were collected using a questionnaire for EFL master two students at Biskra University , in addition, an interview conducted with EFL teachers . The obtained data were analyzed using quantitative and qualitative content analysis (QCA).

Based on the results displayed in chapter three and the discussion provided, it answers the research questions and confirms or rejects the hypothesis. Master Two EFL students showed a positive attitude toward using QuillBot as a writing tool. Most students reported using it often, especially for paraphrasing and rewriting their academic content. They believed it made their writing clearer and more professional. Teachers also recognized students' enthusiasm but warned against becoming too dependent on the tool. This answered the first research question, which is, what are the attitudes of Master Two students towards using the QuillBot paraphrasing tool as an AI device to enhance their writing skill?

QuillBot helped students paraphrase better, improve grammar, and expand vocabulary. Students mainly used it in the theoretical parts of their dissertations. They said it made it easier to express ideas and avoid plagiarism. Teachers agreed that it supports writing improvement when used correctly. This answered the second research question, which is, How does the use of the QuillBot paraphrasing tool help EFL Master Two students?

Students believed QuillBot improved their academic writing quality, especially in grammar, sentence structure, and clarity. They felt more confident and noticed their writing became more organized. Teachers confirmed these improvements but warned that relying too much on AI may limit original thinking. Still, the tool was seen as useful for writing development. This answered the third research question, which is, what is the impact of QuillBot on Master Two students' academic writing?

There were clear differences between students' and teachers' perceptions of QuillBot. Students valued it for being fast, helpful, and easy to use. Teachers, support the use of QuillBot and recognizing its benefits, while were more concerned about academic integrity and overuse. They emphasized the need for guidance and critical use. This answered the fourth research question, which is, are there any significant differences between teachers' and students' perceptions of using QuillBot in academic writing?

The hypothesis proposed that QuillBot helps EFL Master Two students improve their writing skills. Based on the results, this hypothesis is confirmed. Students showed progress in grammar, vocabulary, and overall writing quality after using QuillBot. Teachers also observed improved sentence structure and clarity in student work. Therefore, relying on the results of the three selected data collection tools that the present study provides, the findings confirmed that the hypothesis which was previously advanced in the general introduction is accurate and valid which is , the use of the QuillBot paraphrasing tool helps EFL Master's students improve their academic writing.

In light of this conclusion, some suggestions for further research are required. While the study has provided valuable insights into the use of Premium QuillBot among EFL students, future studies could examine the impact of Premium QuillBot on different academic levels, such as undergraduate or postgraduate students, to determine if its effectiveness varies with academic experience. It may also be beneficial to examine the impact of other AI tools in academic writing and compare them with QuillBot in terms of effectiveness, user experience, and ethical considerations. A more detailed exploration of students' attitudes toward the ethical use of AI in academic writing would provide a deeper understanding of how these tools are perceived and their potential impact on academic honesty. Moreover, the study was limited to a specific sample at Biskra University, and future research could expand the sample size to include students from other universities to enhance the generalizability of the findings.

In short, this study contributes to understanding the role of AI tools like Premium QuillBot in enhancing academic writing and provides useful insights for both students and teachers. By using Premium QuillBot responsibly and balancing its use with traditional academic skills, students can significantly improve their writing quality while maintaining academic integrity, the use of AI tools in education may help in developing best practices for their integration into academic settings.

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If yes , mention it .
.....
.....
.....

8_Does QuillBot help you develop your academic vocabulary?

Yes No

9_Does QuillBot help you better organize your ideas in academic writing?

Yes

No

Section 3: Challenges and Concerns

10_Have you encountered any challenges during using Quillbot?

Yes No

If yes , please briefly describe the challenges or concerns :

.....
.....

2/Reading the fact that Quillbot is an AI editor, what do you think about the ethical perspectives about using it ?

A.They are helpful tools that improve writing clarity and efficiency when used responsibly.

B.They raise ethical concerns, such as potential plagiarism and over-reliance, which may hinder skill development.

C.Their ethicality depends on the context and purpose of use; they can be beneficial or problematic.

D.They are unethical, as they compromise originality and academic integrity.

Appendix B : Teachers' Interview

Interview request

Dear teacher;

My name is Maissa Saadaoui, and I am a Master Two student at UMKB. I am currently conducting research on "Artificial Intelligence: Enhancing Students' Academic Writing by the Use of the Premium QuillBot Paraphrasing Tool - The Case of Master 2 Students at Biskra University", and if you are interested in participating, I would like to schedule a confidential interview at your convenience. The interview will be recorded (audio only) for transcribing purposes.

Questions

Q1) Are you familiar with artificial intelligence programs that assist students in paraphrasing and enhancing their academic writing?

.....

.....

Q2) Which primary programs do you utilize in your work ?

.....

.....

Please rate your assessment of the QuillBot application based on the following criteria

The tool effectively enhances students' writing quality.

The paraphrasing suggestions are accurate and relevant.

The user interface is intuitive and easy to navigate.

The tool helps improve students' understanding of paraphrasing.

The premium features provide significant value over the free version.

(You can add other criteria)

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Q4) Do you believe the QuillBot Paraphrasing tool influences creativity and originality in EFL writing?

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Q5) Do you believe that students can use QuillBot to support their writing development without becoming overly dependent on it?

- Yes
- No

If yes, please select the recommended strategies:

- A) Use QuillBot for initial drafts only.
- B) Limit the use of QuillBot to specific sections of their writing.

- C) Combine QuillBot with other writing resources and tools.
- D) Use QuillBot as a learning tool to understand paraphrasing.
- E) Set a time limit for using QuillBot during writing sessions.
- F) Other (please specify): _____

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Q6) Are you aware of the premium version of QuillBot?

- Yes
- No

If yes, do you think it offers significant advantages over the free version in terms of writing improvement?

- Yes
- No

If no, would you like to share your reasons for not being aware of the premium version?

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Q7) Based on your experience with the QuillBot program, particularly its premium version, please identify the advantages and disadvantages of using this tool.

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Q8) What advice can you give to researchers and M2 students regarding the use of QuillBot?

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الملخص

تهدف هذه الدراسة إلى تحقيق ثلاثة أهداف رئيسية: أولاً، تسعى إلى التعرف على أهمية أدوات الذكاء الاصطناعي في اكتساب اللغة، وكيف تؤثر هذه الأدوات على مهارات الكتابة لدى الطلبة. ثانياً، تهدف إلى تحديد مدى فعالية أداة QuillBot في تحسين مهارة الكتابة لدى طلبة اللغة الإنجليزية كلغة أجنبية.(EFL) ثالثاً، تسعى إلى تقديم اقتراحات حول كيفية دمج هذه الأداة في العملية التعليمية من قبل الأساتذة والمعلمين.

ولتحقيق هذه الأهداف، تم اعتماد المنهج المختلط، حيث جمعت البيانات الكمية والنوعية من خلال استبيان وزّع على طلبة السنة الثانية ماستر بجامعة محمد خيضر بسكرة، بالإضافة إلى مقابلات أجريت مع أساتذة اللغة الإنجليزية.

تشير نتائج أدوات البحث إلى أن استخدام أداة QuillBot يساعد طلبة السنة الثانية ماستر في تحسين مهارة الكتابة لديهم، حيث أظهر الطلبة تقدماً في قواعد اللغة، والمفردات، وجودة الكتابة العامة بعد استخدام الأداة. كما لاحظ الأساتذة تحسناً في هيكلة الجمل ووضوح الأفكار في كتابات الطلبة.

وبالتالي، فإن الاستخدام المسؤول للأداة QuillBot Premium ، مع الموازنة بينها وبين المهارات الأكademية التقليدية، يمكن أن يُسهم بشكل كبير في تحسين جودة الكتابة لدى الطلبة، مع الحفاظ على النزاهة الأكademية. كما أن استخدام أدوات الذكاء الاصطناعي في التعليم قد يساعد في تطوير أفضل الممارسات لإدماجها ضمن البيئة الأكademية.

الكلمات المفتاحية:

الذكاء الاصطناعي، أدوات QuillBot Premium ، طلبة السنة الثانية ماستر لغة إنجليزية، الكتابة الأكademية، التكنولوجيا.