

PEOPLE'S DEMOCRATIC REPUBLIC OF ALGERIA
MINISTRY OF HIGER EDUCATION AND SCIENTIFIC RESEARCH
Abdelhafid Boussouf University - Mila



Institute of Literature and Languages
Department of Foreign Languages
Branch: English

Investigating Teachers' and Students' Perspectives about using QuillBot in Writing Master Dissertations

Case of Master Two EFL Students in Department of Foreign Languages at
university of Abdelhafid Boussouf Mila Centre

A Dissertation Submitted in Partial Fulfilments for the Requirement of the Master Degree in
Didactics of Foreign Languages

Presented by:
Yousra BEN MERABET

Supervisor:
Dr. Amina ZEMIECHE

Board of Examiners:
Chairman: Dr. Salim BOUDAD
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Examiner: Dr. Yamina BENNANE

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Dedication

I dedicate this work to:

My most profound gratitude goes out to my cherished parents and siblings.

Their support and encouragement had been crucial to my success in school.

*The guidance and encouragement to have devotion to my research are deeply
valued.*

Acknowledgments

All praise goes to Allah, the most gracious and merciful.

I would like to acknowledge my amazing supervisor Dr. Amina Zemieche for her supervision, and for her invaluable guidance throughout this work.

I also want to thank all of my teachers, especially the ones who participated and helped with this research, Without the valuable feedback and patience of the jury, this work wouldn't have been accomplished.

Thank you.

Abstract

The spread of artificial intelligence (AI) in several domains, including education, has resulted in a significant transformation. AI-powered tools like QuillBot are gaining popularity among students who aim to enhance their writing abilities. The extent to which QuillBot improves writing competence is a subject that is becoming more important in the current digital age; however, it remains largely unexplored. This study aims to investigate and understand students' and teachers' perceptions of artificial intelligence tools, specifically QuillBot, in academic writing. To meet these aims, the following questions arise: Are students familiar with the use of artificial intelligence tools like QuillBot as writing tools? What are QuillBot's most frequently used features among students? What are students' and teachers' perceptions about using QuillBot when writing a master's dissertation? What are the potential benefits and shortcomings of using artificial intelligence tools like QuillBot? In order to answer these questions, two questionnaires have been designed and distributed to 62 Masters students and 11 teachers at the Department of Foreign Languages at Mila University Centre. The results demonstrated that both students and teachers positively perceive and recognize QuillBot's transformative impact on enhancing the writing proficiency of the EFL Master's dissertation. Both of them acknowledge QuillBot as beneficial for paraphrasing, vocabulary enrichment, improving sentence formulation, and, most importantly, as a time-saving tool.

Keywords: AI, EFL Students, AI-Writing tools, QuillBot, Academic Writing

List of Abbreviations

AI: Artificial Intelligence

ANI: Artificial Narrow Intelligence

AGI: Artificial General Intelligence

ASI: Artificial Super Intelligence

LMS: learning management systems

EFL: English as a Foreign Language

MIT: Massachusetts Institute of Technology

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General Introduction

1. Introduction

The impact of artificial intelligence on various aspects of modern life cannot be ignored, with the technology advancing into most of the sectors. Artificial intelligence has also advanced in the educational sector where AI-based applications such as Quillbot have become essential elements in aiding students to improve their writing. Therefore, this research will investigate the role and impacts of artificial intelligence basing on the writing tool, Quillbot, on second year EFL Master's students.

2. Background of the Study

A study by Hosseinzadeh & Hughes (2021, as cited in Alcantara-Ebuena, 2023) found that most teachers in the UK have a favourable perception of AI technologies in education, believing they can improve classroom management and student feedback. However, Rana et al. (2019, as cited in Alcantara-Ebuena, 2023) found mixed views, with some seeing AI tools as efficient and others as expensive and difficult to use. Students generally have positive sentiments about AI tools in teaching. Previous research suggests that teachers' perceptions vary due to potential negative aspects, such as cheating, reduced human connection, and job displacement. The expansion of AI technologies, particularly Quillbot, created new dynamics in education. Despite the growing popularity of such tools, the effectiveness of Quillbot in improving students' writing skills remains unclear. This study attempts to fill the gap through examining the varied impact of Quillbot on multiple facets of writing proficiency among EFL Master students.

3. Statement of the Problem

Although Quillbot has emerged as an important tool for enhancing writing skills, there is a lack of widespread understanding of its effectiveness. Despite being a popular tool, students' writing skills often remain elusive. This study aims to address this gap in the literature by investigating the subtle effects of QuillBot on various aspects of writing a Master's dissertation among second year EFL Master's students.

4. Research Aim

The aims of this study are to explore and understand students and teachers' perceptions of artificial intelligence tools, specifically Quillbot, in the context of academic writing.

5. Research Questions

- Are students familiar with the use of artificial intelligence tools like QuillBot as writing tools?
- What are QuillBot's most frequently used features by students?
- What are students' and teachers' perceptions about using QuillBot when writing a master's dissertation?
- What are the potential benefits and shortcomings of using artificial intelligence tools like QuillBot?

6. Research Methodology

For the purpose of gathering comprehensive data and addressing the research questions, a descriptive methods and research instruments are adopted. Two questionnaires will serve as the primary research instrument, targeting second year Master's students specializing in English academic writing at the Department of Foreign Languages at Mila University Centre, and teachers in the same department at Mila university centre.

7. Population and Sampling

The study was carried out within the English Department at Mila University. The students' questionnaire initially was designed to cover 189 Master's students in English, a sample preferred since they were highly involved in the writing of the academic dissertation. From this group, a random subset of 62 students was selected to complete the online questionnaire. The secondary questionnaire went to a Sample comprising 11 faculty teachers drawn from the same Department; the choice of this population was derived from the fact that the teachers interact directly with the students chosen earlier. This idea depicts that these dual-mode questionnaires were suitable for solid data collection necessary to meet the objective of the research.

8. Structure of the study

The study will comprise two chapters. The first chapter will focus on the theoretical framework, divided into two sections. The first section delves into an overview of writing, its importance, various approaches, and definition of academic writing, its types and forms. The second section will provide a brief history of Artificial Intelligence, definition, types, its role in education and its benefits and shortcomings. The second chapter comprises two sections. The first section, will deal with the analysis and interpretation of the questionnaires data. While the second section involves a discussion of the findings by providing insights into students-teachers' perceptions of Quillbot, and its impact on students' writing proficiency.

Chapter One: Theoretical Part

Introduction

Academic writing serves a key role in higher education and beyond. It is a key talent that helps students to participate in critical thinking, explain their thoughts effectively, and contribute to the intellectual debate within their profession. Whether it's writing essays, research papers, or dissertations. Section one delves into the foundational aspects of writing instruction for master's students. Beginning with a definition and importance of writing in academic contexts, then examining various approaches to teaching writing, including the product, genre, and process approaches, with a focus on the stages of pre-writing, drafting, reviewing, and editing. Additionally, the definition, characteristics, and diverse forms of academic writing are also discussed, including dissertations and other scholarly works.

Artificial intelligence is a highly significant subject for experts in modern society. Artificial intelligence has become more widespread in various fields, including economics, business, and education, due to the rapid progress of technical advancements in recent years. Presently, numerous students are eager to integrate artificial intelligence tools into their educational assignments in order to improve effectiveness for a range of objectives such as composing, editing, rephrasing, and condensing their research papers. Advanced tools like QuillBot have greatly simplified the academic workload for numerous learners, enhancing accessibility and efficiency in various activities. Section two deals with: definition of and history of artificial intelligence, its types, its roles in education, and its benefits and drawbacks in education.

1.1 Section One: Master Dissertation Writing

1.1.1 Overview of Writing

Mastering a language is not an easy task because it demands the mastery of four skills: listening, speaking, reading, and writing. These skills are essential for achieving the highest mastery of the English language. The writing skill has attracted the attention of many theorists and researchers, even native speakers whose mother tongue is English encounter multiple pitfalls when writing in standard form.

Many EFL teachers follow a certain order while teaching writing, starting from listening, speaking, reading, and finally writing because it is more complicated than the prior skills. Harmer (2004) compared speaking and writing skills, claiming that “a child acquires spoken language naturally as a result of exposure, yet the ability to write has to be consciously learned” (p.3). From this, it is understood that the necessity of teaching writing as a vital skill. Meanwhile, writing was given primacy over other skills because, as Harmer (2004) pointed out, most tests that examine a student’s proficiency in language or other subjects frequently rely on their writing capacity to assess how well they know the material.

Crystal (2006) stated that writing is regarded as a communication medium that permits the use of visual graphic symbols. Thus, to efficiently convey their ideas via writing, EFL students must use readily apparent graphic markers. These indicators ought to be ordered in accordance with specific conventions that encompass encoding ideas or messages into language (Byrne, 1988).

Further, Johnson (2008) described writing as a device that assists in organizing ideas into an interactive form, visualizing inner thoughts. Moreover, it is the primary practice for changing speech and reinforcing grammatical and lexical aspects of language.

Lado (1964, p.249) defined writing in a foreign language as “the ability to use structures, the lexical items, and their conventional representation in ordinary matter-of-fact writing”. In essence, someone who writes well will be able to convey their concepts in an organized way using carefully chosen vocabulary that will draw readers attention, and making their content engaging and memorable.

One of the hardest things that humans do is writing. “The creation of a design idea is involved. The mental images of information and experiences that are recorded within subjects” (Jozsef, 2001, p. 5). Bell & Burnaby (1984, as cited in Nunan, 1989) highlighted that writing is an exceedingly complex activity requiring the writer to display control over different variables continuously. In short, writing is a cognitive skill that needs mental capacities including thinking, remembering, and making choices, which is why deemed to be hard to learn and enhance.

1.1.2 Importance of Writing

In everyday life, there is a need to pick up the writing skill, because it provides people an avenue to express their hidden ideas in a way that is readily grasped. Thus, it is a fundamental skill. Writing serves as a bridge allowing the exchange of ideas with future generations, and capturing the essence of the present by creating permanent records of knowledge, opinions, beliefs, emotions, arguments, explanations, and theories, among other things. This skill enables communication with individuals from current era as well as those in future times.

Writing has become a crucial talent in the global literate community. According to Brown (2004), it is also necessary to gain employment in an assortment of domains. Furthermore, writing aids pupils in understanding the language more through the visual demonstration of thoughts. Hence, writing is the favored learning approach of students, encouraging visually impaired learners to learn the language (Harmer, 1988).

1.1.3 Approaches to Writing

Teaching writing skill is not an easy process to accomplish because it depends on the target of the teacher which is either to help students to improve their writing skill or to focus on the structure and grammatical components of the language. That is why different kinds of research were made to offer approaches for teaching the writing skill in EFL settings, such as product approach, genre approach, and process approach.

1.1.3.1 The Product Approach

A Product Approach is “a traditional approach in which students are encouraged to mimic a model text, usually is presented and analyzed at an early stage” (Gabrielatos, 2002, p.5).

Nemouchi (2014) cited that this method is regulated, indicating that the instructor controls the learner’s application of writing rules, particularly grammatical usage. He also mentioned that “the training was language-focused and the product approach was a means to an end. Writing was long considered as a secondary ability to speaking with copying methods and accuracy being prioritized” (p.38). In other words, teachers regard themselves as language tutors. This approach stressed three traits which are grammar, syntax rather than fluency, and originality (Raimes, 1983, p.7).

1.1.3.2 The Genre Approach

With the genre approach, before students begin writing on their own, they are given plenty of writing samples. Hence, before they start to construct their own writing, they should be introduced to an example of how to write a business letter or article for a new publication (Harmer, 2001).

Teaching students through a genre based writing approach involves familiarizing them with the conventions and structures of text types showing how genres are shaped by their surroundings. This technique helps students understand the goals, intended audience and language features unique to different academic genres. It empowers them to articulate their

ideas and perspectives, in discussions. (Tuan, 2011). Furthermore, Nemouchi (2014, p.45) pointed out that the goal of the genre approach is to “enable students to use appropriate registers which are important for them.”

1.1.3.3 The Process Approach

The process approach to writing highlights many steps that learners undertake to gain an understanding of the various abilities that should be employed when writing. In contrast to the product approach which focused on the finished product of writing (Harmer, 2001).

Unlike the product approach, the process approach according to MIT Writing & Communication Centre (2022) is recursive rather than linear. Students go through a variety of processes when writing, which summarized as follows:

1.1.3.3.1. Pre-writing

In this phase, the writer must select the subject and generate concepts.

1.1.3.3.2. Drafting

At this step, the author arranges his thoughts into sentences and paragraphs; the writer does not focus on spelling errors because this is just a draft and will be corrected.

1.1.3.3.3. Revising

This step requires refining the text, defining necessary terms, ensuring logical organization and connections between ideas.

1.1.3.3.4. Editing

Once all other stages are finished, the author addresses grammar and spelling accuracy.

The process approach aids students to comprehend that writing entails language proficiency, grasp the aim of writing and linguistic knowledge, learners will be competent in writing (Ghurfron ,2016).

1.1.4 Definition of Academic Writing

According to (Davis & Mckay, 1996), academic writing is merely one form of writing, although an essential one for students in colleges and universities. It bears many parallels with different kinds of writing such as journalism, fiction story, and even particular types of adversity. Academic writing can be defined as literary, indicating a distinct culture in only one language rather than simply being a different type of writing as mentioned by Singh and Lukkarila (2017). It is truly more than just one cultural expression.

Confusion can surely emerge for people attempting to integrate and master language proficiency when there are distinct cultures coexisting at the same time. Scholarly writing is a uniform culture with a majority of achieved, competent writers in the same region probably agreeing on an array of key features. Additionally, academic writing is affected by various traditions due to analogous experiences. Competent academic writers are likely to see the same academically written unit differently. Therefore, delivering entirely several feedback and recommendations for adjustments predicated on what is considered as standard in their particular domain. Furthermore, academic writing is essential for gaining knowledge about the world, understanding reality, the genesis of events, and comprehension, as articulated by Wilson (2022).

Oshima and Hogue (2007) stated that academic writing is inherently analytical. It extends even to academic research that supports the positive aspects of a specific course of action or public policy. This is based on the premise that it purports to have a clear-sighted understanding of the subject at hand. There can be no rules or norms in academic writing without investigation. Furthermore, academic writing is a form of writing taught in high school and college workshops. It is distinct from creative writing, which is a type of writing that occurs when creating stories. It is also different from personal writing, which is akin to writing messages or emails to relatives and friends. Both of these types are informal, hence, it is free to use jargon, symbols, and poorly formed expressions. In contrast,

academic writing is formal. As a result, refrain from using signs and slang. Instead, focus on writing full sentences and arranging them in a specific way.

Additionally, Huber (2018) asserted that academic writing is a formal method of conveying concepts and thoughts. White (2017) highlighted that academic writing is prevalent in educational institutions; it is what academics and teachers use to create research papers and what students are expected to do for lectures. Furthermore, Valdes (2019) claimed that academic writing encompasses any formal written work produced within a classroom setting.

1.1.5 Characteristics of Academic Writing

Academic writing is characterized by its explicitness and accuracy, which are necessary for conveying intricate concepts in accordance with scholarly norms. Creme & Lea (2008), identified the following as some of the key characteristics of academic writing:

1.1.5.1. Purpose

According to Creme & Lea (2008), a piece of writing should have a clear purpose. This refers to the intent behind the writer's presentation of a certain idea, their thought process, or what they hope to achieve through their writing. A piece of writing is typically crafted with the intention of informing, presenting, demonstrating, and persuading the reader. Bailey (2011, p. 3) listed the following as the most common purposes for academic writing:

- To summarize an investigation, the author has conducted.
- To respond to a given question.
- To present the writer's perspective on a subject of shared concern.
- To examine other individuals' research on a topic.

1.1.5.2. Audience

The second characteristic of academic writing is the audience, which refers to the individual who reads the written content. (Feak & Swales, 2012) explained that in a foreign language classroom, the audience typically refers to the instructor who assigns various writing tasks to students. However, it is essential to determine the intended audience if the writing is not for a school environment. Here, the author must be aware of the appropriate language to use in order to effectively convey the message. The writer must address a subject that sparks the audience's interest but about which they know little.

Elbow (2000) categorized the audience into four groups:

An audience with authority over the author, such as a teacher, to whom students write to earn high grades and determine if their language use is acceptable.

- An audience of peers or colleagues. When students write for their classmates, they experience less stress.
- An audience of allies, who care more about the writer than the writing (p. 38). An ally encourages and supports an author regardless of how their work is received.
- An audience of self-private writing, used to enhance learners' writing. In this type of writing, learners are more concerned with forming the writing habit than they are with potential criticism of their work.

1.1.5.3. Formal Tone

Oshima & Hogue (2006) defined tone as “the style or manner of expression” (p.3). It is determined by the intended readership and the topic of the academic writing piece. The tone tends to be serious and formal. Formality involves avoiding personal language and using technical complex terms. It indicates that the author employs academic writing rather than using an informal friendly style. (Anderson & Poole, 1994) stated that “personal pronouns including I, we, you, me, and us should only be used in quotation” (p.6).

1.1.5.4. Organization

Organization pertains to the structure of any written piece. It refers to establishing a framework for writing. Additionally, the organization demonstrates to the reader how the writer's ideas flow together.

1.1.5.5. Unity

Unity is a crucial feature of academic writing. It emphasizes that each sentence in a piece of writing must address the same fundamental idea. In other words, every sentence should address and support a specific concept.

1.1.5.6. Coherence

Coherence is another crucial element of good academic writing. The Latin verb “to cohere” means to “hold together”. Hence, coherence refers to the logical and smooth flow throughout a piece of writing. In other words, the ideas make sense when paired and are easy to comprehend. It is essential for communication as it connects concepts and encourages readers to read more.

1.1.5.7. Cohesion

Cohesion pertains to the process of relating a text and making it comprehensible through the inclusion of conjunctions and reference words. These reference words are made up of pronouns (possessive, objective, demonstrative, phrases, and so forth) (Bairely, 2011). As defined in Longman Dictionary of Contemporary English (n.d.), coherence is the connection between the grammatical and lexical components of a sentence and/or a longer piece of writing. Cohesive indicators are required to create relationships between phrases and assist readers in following the author’s ideas.

1.1.6 Types of Academic Writing

Academic writing encompasses a range of types, each resembles a specific goal and audience, these types enable systematic interchange of ideas and progress in understanding.

Fan (2022) distinguished between four main types of academic writing:

1.1.6.1. *Descriptive Writing*

Descriptive writing is one of the most basic types of academic writing. Its aim is to convey facts and information. Examples of this type include an article summary or an experiment report.

1.1.6.2. *Analytical Writing*

It is uncommon to find university-level writing that is merely descriptive. The majority of academic writing is often analytical in nature. Analytical writing incorporates both descriptive writing and the restructuring and rearrangement of ideas and facts into categories, groups, sections, types, and reactions. These classification linkages may already exist in the field, or it might be necessary to define them for research. Analysis should be split into various parts if comparison of two theories preferred.

1.1.6.3. *Persuasive Writing*

Most academic assignments requiring to write persuasively in addition to analytically. All the components of analytical writing, knowledge, and analysis combine with the writer's point of view to create persuasive writing. Most essays are persuasive, or at least the discussion and conclusion of a research article involve a persuasive element. Arguments, suggestions, interpretations of results, and evaluations of other individuals' work are all instances of opinion in academic writing. Every claim is made in a persuasive piece of writing needs to be backed up by evidence such as citations to studies or published work.

1.1.6.4. Critical Writing

Critical writing is crucial for research and for postgraduate and advanced undergraduate coursework. It comprises every facet of persuasive writing along with at least one additional argument from multiple viewpoints. In contrast to persuasive writing, which involves expressing opinion on a subject or issue. Critical writing entails analyzing at least two viewpoints, one of which can be oneself. For instance, before assessing the research, merits, or proposing alternative interpretation, a translation or evidence can be presented in the study. Examples of critical writing assignments include critiques of journal articles and literature reviews that point out the benefits and drawbacks of earlier studies.

1.1.7 Forms of Academic Writing

Academic writing, which serves various purposes, comes in multiple forms ranging from one to thousands of pages long (Harmer, 1998). The most popular ones are listed below:

1.1.7.1 Paragraph

A paragraph consists of several connected sentences that address a single main topic. In academic contexts, a paragraph typically comprises five to ten sentences; however, the length of a paragraph is determined by the nature of the subject. It consists of three basic parts: the topic sentence, supporting sentences, and the concluding sentence. The topic sentence, usually the first sentence of the paragraph, introduces the topic of the piece of writing and states the core idea. (Zemach & Rumisek, 2005) described the topic sentence as “the most general phrase” (p.12). The supporting sentences follow the topic sentence to assist, elaborate, illustrate, or develop the core idea. Consequently, the supporting sentences are more precise than the topic sentences. The concluding sentence, typically the final sentence in the paragraph, may restate the main idea of the topic sentence in various ways, summarize the paragraph’s key points, or provide an opinion about the subject. It is essential for learners to know how to

write a paragraph as it is recognized to be the basic unit of larger academic discourse pieces (Bailey, 2011). Therefore, understanding the organization of a good paragraph is crucial (Boardman & Frydenberg, 2008).

1.1.7.2. Essay

An essay, a common form of academic writing, contains numerous paragraphs in contrast to one or two found in a paragraph. Usually, an academic essay contains five paragraphs, making it substantially longer than a paragraph. However, an essay has an arrangement pattern that is fairly similar to a paragraph. It begins by discussing one main concept related to a single topic. However, an essay's main idea is too complex to be tackled in a single paragraph; as a result, the central idea must be divided into several paragraphs, each addressing one major point or aspect. Hence, an essay, like a paragraph, has a main idea that is conveyed in a sentence known as a thesis statement. Together with additional introductory sentences, these make up the introduction. An essay's paragraphs are analogous to the supporting sentences within the paragraphs. These supporting sentences come together to form a closing sentence; an essay also has a final paragraph labeled the conclusion that wraps up the discussion.

The following figure summarize the basic points on the connection between the paragraph and essay.

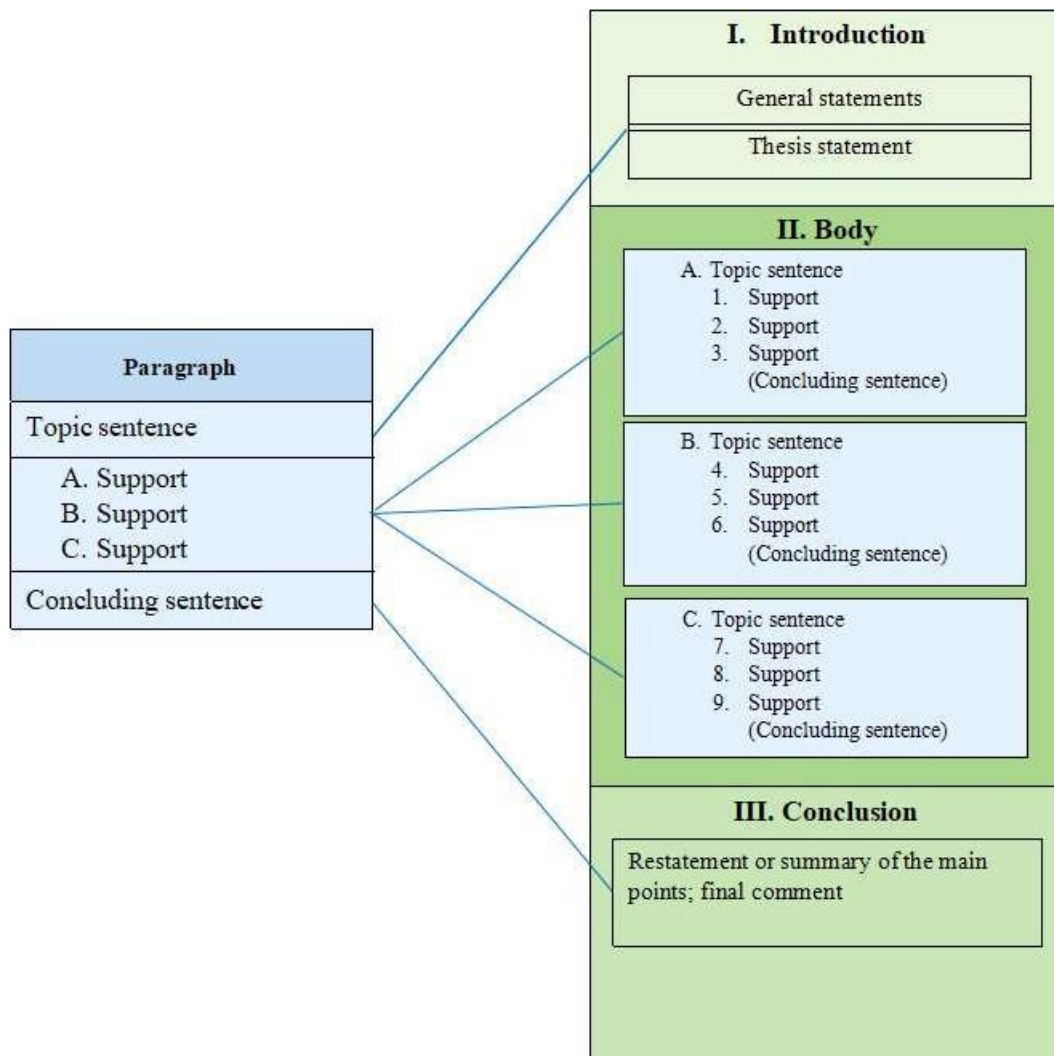


Figure 1. Shows how the paragraph and essay correspond (Oshima and Houge, 2007 p. 147)

1.1.7.3. Dissertation

A dissertation is a comprehensive part of academic writing based on original research, in which it is submitted as a part of the requirements for an undergraduate, Master's, or doctoral degree. A master's dissertation can also be defined as “advanced study of a topic, completed independently by the student, that adheres to the main stages expected of a research project. The dissertation, in effect, is a process.” (Biggam, 2021, P.3). Essentially, the process of writing a dissertation reflects the culmination of a student's research endeavor and writing abilities in the study area. It is considered as the detailed work students will produce during their academic course.

1.1.7.4. Reports

Reports are important and vital in academia acting as records, methodologies, and exhibitor of findings. Reports are objective and fact based, enable researchers to build upon previous work. Writing a report demands specific language and structure skills to facilitate clear communication Ó Siochrú (2022). Each report should include certain components such as the introduction, methodology, results, and conclusion. More importantly, the content of a report should be presented in a coherent and structured manner, facilitating the comprehension of the topic.

1.1.8 Components of a Master's Dissertation

A dissertation is composed of several elements, literature review, methodology, results, and discussion of the findings. It aims to contribute new insights to the existing body of literature in a particular area. Nevertheless, the process for writing a dissertation requires careful planning, research, analysis, and writing skills, especially great writing academic skills. The master's dissertation structure involves distinct parts, where each part focus on specific objectives. The main parts of a dissertation are as follow:

1.1.8.1 The General Introduction Part

This initial part encompasses several purposes. It started by offering a broad background to establish the research into its broader context. It offers a clarification for the study area that the research is focusing on. Following this, it specifies the aims of the research as well as the individual objectives intended to be achieved. Finally, this part outlines the research methods used and provide a timeline for how the research will be driven, and states the significance and value of the research (Biggam, 2021).

1.1.8.2 Theoretical Part (Literature Review)

This part involves compiling and analysing the existing research that has relation to the research topic, in order to build the context and justify the research. Literature review is crucial in establishing a robust foundation within the existing research landscape. This part started with an introduction and an advance organizer, outlining the areas of the research to be covered. Finally, this part concludes with a cohesive summary of the reviewed literature (Bui, 2009).

1.1.8.3 Practical Part (Methods, Results, and Discussion of Findings)

This part explains the research methodology utilized, it provides a detailed account of the procedures, including the setting, participants, materials used, measurement instruments, data collection procedures, and data analysis techniques. Next, it includes a comprehensive presentation of the results, in which results should be reported clearly and systematically, more often in the form of charts, graphs, or tables. The findings are then analysed and discussed in relation to the research objectives. This part is sufficient to enable another researcher to reproduce the research study (Bui, 2009).

1.1.8.4 The General Conclusion Part

The conclusion of a dissertation is an essential part that effectively concludes the dissertation. This chapter functions as a definitive summation of the research, efficiently summarizing the key findings and their significance to the original questions raised. It makes a final opportunity to make an impact on the reader, emphasizing the importance and relevancy of the work (Biggam, 2021).

1.2 Section Two: Artificial Intelligence and Quillbot as an AI Writing Tool

1.2.1 Definition of Artificial Intelligence.

McCarthy (2007) had defined Artificial intelligence (AI) as the process by which a machine exhibits behaviours considered intelligent in humans. Mahato (2002) defines Artificial Intelligence (AI) as the engineering science dedicated to crafting intelligent machines within the realm of computer science, aiding in technological advancement. According to Valavanidis (2023), Artificial Intelligence (AI) encompasses a broad domain within computer science, concentrating on constructing advanced machines capable of performing tasks typically requiring cognitive abilities.

1.2.2 Brief History of Artificial Intelligence

Artificial intelligence (AI) is the capacity of a system to effectively analyse external information, acquire knowledge from it, and utilize that knowledge to accomplish certain objectives by means of adaptable adjustments. Since beginnings as a field of study in the 1950s, AI has remained relatively unknown in the science community and has not garnered significant practical interest for almost five decades. (Haenlein & Kaplan, 2019) claims that companies and the general population have recently witnessed the emergence of AI due to the increasing availability of large data and advancements in computing power. AI can be categorized into numerous types based on the sort of intelligence it displays, such as analytical, human-inspired, and humanized AI, which involve cognitive, emotional, and social intelligence. Additionally, AI can be classed according to its evolutionary stage: Artificial Narrow Intelligence (ANI), Artificial General Intelligence (AGI), and Artificial Super Intelligence (ASI). Despite these categorizations, a widespread phenomenon known as the "AI effect" occurs. According to (Haenlein & Kaplan, 2019), when AI technologies grow to become more common, some detractors criticize the behaviour of an AI system as "not real intelligence" once its underlying mechanics are revealed, indicating a tendency to see AI as dumb after its workings are

explained. Experts have been predicting the emergence of AGI, which is expected to rival human intellect in several categories, since the 1950s. However, it remains uncertain when this milestone will be accomplished.

1.2.3 The Past Four Seasons of Artificial Intelligence

This section takes us on a journey through the historical development of artificial Intelligence, likening its progress to the changing seasons.

1.2.2.1 Artificial Intelligence Spring: The Birth of AI

In the 1940s, Isaac Asimov wrote fantasy books that explained how robots work. These books are where artificial intelligence got its start, which is acknowledged as the birth of Artificial Intelligence. The development of later study on artificial intelligence was based on these principles. Turing also made the bomb, which was an early mechanical computer. It helped break the Enigma code, which led to his important research into artificial intelligence. The term "artificial intelligence" was first used in 1956 at Dartmouth College. This event was the start of an area that was pushed forward by smart people like Minsky and McCarthy (Haenlein & Kaplan, 2019).

1.2.2.2 Artificial Intelligence Summer and Winter: The Ebb and Flow of AI

After Dartmouth, artificial intelligence flourished for two decades. Among the major achievements were ELIZA, a conversation show, and an all-out answer to general difficulties, which dealt with simple puzzles. These early results have led to increasing funding for artificial intelligence and optimistic expectations. However, in 1973, doubts began to arise, especially from James Laitel, who questioned the complicated reasoning capacity of artificial intelligence. As a result, the United Kingdom and the United States have cut the funding of artificial intelligence, signifying the beginning of the winter of artificial intelligence (Haenlein & Kaplan, 2019).

1.2.2.3 Artificial Intelligence: The Harvest

The initial pause in the AI area can be defined to the limitations of early expert systems like ELIZA and the General Problem Solver. These systems depended on structured collections of rules, assuming that a series of if-then statements could imitate the brain's capabilities. While expert systems performed well on tasks with explicit rules, as proven by IBM's Deep Blue defeating chess champion Garry Kasparov in 1997, they struggled to completely interpret complicated data in tasks such as image categorization or facial recognition. A stressed necessity for AI systems to effectively understand external information, learn from it, and adapt on the fly, resemble characteristics that are crucial to true AI. The 1940s saw the first communicates concerning actual AI data, and research on artificial neural networks began with Donald Hebb's theory of learning. However, progress in this area froze in 1969, when investigations by Marvin Minsky and Seymour Papert indicated that computers lacked the essential processing capacity. Essentially, expert systems' failure to fully grasp the complex components of human-like intelligence delayed the growth of AI. Modern AI began with the research of statistical methods and artificial neural networks, which emerged from the goal of true AI that features based on data learning and flexibility (Haenlein & Kaplan, 2019).

1.2.2.4 The Present Artificial Intelligence Revolution

Silver et al. (2016) stated that there has been a renaissance of interest in artificial neural networks within the field of AI, notably in deep learning. A crucial milestone began this renaissance in 2015, when Google's AlphaGo system crushed the world champion in the complicated board game Go. Due to the large amount of possible moves compared to chess, go was originally believed to be invincible to computer mastery due of its great complexity. AlphaGo's feat was attributed to its use of deep learning, a specific sort of artificial neural network. Today, deep learning algorithms and artificial neural networks form the foundation

for a wide range of AI applications, including recognizing images software used by social media platforms like Facebook and speech recognition systems that power smart speakers and virtual assistants. The current era of AI is marked by the widespread adoption and return of deep learning, revealing that breakthroughs in statistical techniques have been utilized to allow astonishing capabilities and applications in AI.

1.2.4 Main Types of Artificial Intelligence

According to Hintze (2016), AI may be classified into four basic kinds, each offering a unique set of applications and benefits:

- **Reactive machines:** These are memory less devices that offer accurate findings for specified data. They are useful and unable to change their activities based on fresh facts. Machine learning algorithms, for example, make the same recommendations for the same customer based on previous client data.
- **Limited memory:** These systems have the ability to store and apply previous experiences to improve over time. These algorithms are particularly beneficial for applications such as natural language processing, identifying pictures, and deep learning, where the ability to learn from experiences is vital. They imitate the connection of neurons in the human brain, allowing them to better their performance as they consume more training data.
- **Theory of mind:** This sort of AI, along with self-aware AI, could potentially be developed in the future. Currently, there are no real-world examples. The Theory of Mind AI would be able to grasp the mental states of other creatures in the world and how they perceive and react to their environment, which would influence their behaviour towards others.
- **Self-aware:** The ultimate goal would be to construct AI systems that had a feeling of self-awareness and consciousness. This form of AI is not now possible. Being self-aware and

able to grasp one's own existence, emotions, and the ability to predict others' feelings goes beyond the Theory of Mind AI.

1.2.5 The Roles of Artificial Intelligence in Education

Neha (2020) believes that AI has dramatically changed the teaching and learning process, seeking to support each student individually. AI may design and recommend specific learning strategies, as well as provide additional assistance to learners. Moreover, AI-powered data analysis can transform how schools pick teachers and support learners. It can also make notes for professors and offer comments on students' progress, thus boosting the overall quality of education. Furthermore, Suk (2023) states that AI performs six crucial functions in learning and development. These tasks include recognizing knowledge gaps created by a lack of rapid application, which can lead to differences in student performance. AI in education attempts to improve educational outcomes, increase instruction effectiveness, and give students with a more personalized and efficient learning experience. Similar to using search engines like Google to discover information, AI can recognize knowledge gaps and automatically explore the most accessible and relevant resources for the learner. Additionally, AI may adapt learning experiences depending on individual criteria such as age, gender, and demographics by producing lessons that cater to unique needs. As students advance through chapters and modules, AI may gradually supply them with appropriate materials. Moreover, AI can act as a round-the-clock digital tutor, partially decreasing the necessity for human instructors. Employees can receive timely support and answers to their questions whether experiencing training or joining in new courses. AI may also gather feedback, assess employer performance data from learning management systems (LMS), and generate insights for learning and development.

1.2.6 Benefits and Shortcomings of Artificial Intelligence in Education

AI in education offers several advantages and downsides. According to Nalbant (2021), the benefits include facilitating access to information, which is increasingly widespread and allows users to easily receive information from a wide range of sources. Remote learning has also become a vital educational tool, providing students with the ability to choose from many websites for studying at their convenience, even when they cannot physically attend classes due to illness or other reasons. Error detection is another valuable application of AI in education; students can use it to spot their own flaws in assignments, fostering progress and growth. Furthermore, global knowledge bases like Wikipedia offer a huge array of tools that help users translate literature written in other languages and cultures. However, AI in education also has several downsides. One of them is the lack of creativity; by relying on AI models, students may become dependent on them, thereby limiting their creativity and increasing the probability of cheating on assignments, as they may disregard traditional research methods. Additionally, youngsters that are extremely engaged with technology may interact with one other largely through social media rather than in person. Students that spend excessive time on technology may fail to commit appropriate time to their education, courses, and motivation, given that they spend much of their leisure time in online settings and games. Moreover, the lack of real-world experience is another constraint; while robots can access data, they lack the ability to acquire knowledge and skills from experiences and apply them in varied ways. Anxiety and tiredness are emotions that gadgets do not experience, and they cannot fully behave like people due to their incapacity to establish a sense of unity, belonging, and togetherness. Lastly, as AI lacks human-specific emotions and ethical reasoning, it is prone to make incorrect conclusions when relying on its judgment-making powers. Human intellect is unparalleled; computers just execute their programmed code and may not always make the most appropriate decisions in complex situations.

1.2.7 Common Tools of Artificial Intelligence in Education

Asad (2024) observed that the rapid rise of innovation has made the inclusion of AI tools for instruction visible in classrooms, online learning, and educational materials. Quillbot, ChatGPT, and Grammarly are free resources for learning.

- **QuillBot:** is an AI-powered writing program that offers numerous gadgets to improve and polish work. It is well renowned for its powerful paraphrase technology, which employs machine learning to comprehend the context and relevance of any writing beyond basic word swaps. Quillbot increases learning by helping pupils pick up new writing styles and sentences. It can offer pupils individualized highlights to assist them avoid inadvertent duplication. With its extensive syntax, grammar, and spelling checkers, citation generators, translation amenities, and instruments, Quillbot may stimulate creativity and increase writing productivity. It also supports pupils with a range of writing skills.

- **Chatgpt (4.0):** is a sophisticated artificial intelligence which generates writing that is identical to that of a human writer. With the help of a wealth of data, it can learn and produce a wide range of text outputs, thriving in a wide range of functions. It performs well in conversation, creative writing, translation, and writing computer programming languages (codes). It pushes users to learn more about a subject by encouraging critical thinking through interactive conversation. It can also be used as a brainstorming partner, providing creative writing prompts that help and elicit ideas for a variety of topics.

- **Grammarly** is a writing engine that detects copyright, grammar, and misspelled words. It provides guidelines for simplicity, trend, and coherence. It examines the writing style and identifies faults using algorithms and natural language processing (NLP). Grammarly gives specific suggestions for improvement. Grammarly enhances education by inspiring learners to write thoroughly and courageously, enhancing students' capacity to interact and write more

overall. It enables self-directed schooling by offering immediate critiques and helping kids build superior rereading talents.

1.2.8 Definition of Quillbot

Baker (2023) says that Quillbot is a proficient paraphrasing tool that enhances words, paragraphs, and articles applying leading-edge AI technology. This AI aid can be considered as cost-effective, as it revamps content to increase its quality. Hamid (2024) insists that Quillbot is a top AI writing tool that might help everyone increase the quality of their written work. Fundamentally, it is among the greatest AI reworking devices for efficiently rephrasing and polishing materials. Moreover, Singh (2023) presents QuillBot as an AI writing appliance that helps people boost their work. They merely need to enter the text and begin examining the suggestions. Besides, Quillbot is an exquisite AI tool that offers functions such as phrase rewriting, article rewriting, and the creation of AI-generated content.

1.2.9 Quillbot Functions

According to Hamid (2024), QuillBot can be accessed by visiting their website. It is open to use with a few restrictions, and registration is not needed. Upon arriving, the upper column will reveal the available alternatives. To access the user experience for each tool, simply click on it. Every device will have a straightforward interface with multiple capabilities, allowing copy and paste the text onto the browser's input boxes, to start utilizing grammar checker feature. For example, with just one click, QuillBot may discover errors and broken sentences in texts through a basic examination. Similarly, most of the other apps share a comparable straightforward operation and design. For instance, the summarizer makes it straightforward to condense extensive papers or presentations. By uploading a text document, a shortlist of the main points will be displayed. Additionally, QuillBot offers a plagiarism detection feature that permits to find and erase plagiarized information, confirming the

originality of writing works. QuillBot's AI functions by reviewing facts to grasp syntax, voice, punctuation marks, grammar, and readability. These sets of data act as warehouses of information, helping the AI to propose more relevant alternatives.

1.2.10 Features of Quillbot

According to Baker (2023), Quillbot provides numerous capabilities for speedy and more efficient organization. These may include:

1.2.10.1 The Paraphrasing Instrument

This tool changes a few words and alters the way information is put together. As a result, the output will be a fresh piece of the text that keeps its original meaning, which is important to avoid plagiarism. For instance, if a text is uploaded and QuillBot asked to rewrite it, it will produce a limitless amount of appropriate synonyms, and attempt to reword specific verbs. By pressing on any of the little underlined parts to bring up a wide range of suggestions that allow for adjusting and selecting the desired writing styles. The program offers seven paraphrasing styles to choose from, These styles include:

- **Standard:** Strikes a compromise between precisely reporting the source content and keeping the meaning.
- **Formal:** Reframes concepts in a more refined and business-like approach.
- **Creative:** Rewrites material with an elevated level of creative thought and ingenuity.
- **Shorten:** Delivers the text's information consistently and simply.
- **Fluency:** increases language use and resolves grammatical faults.
- **Simple:** It transmits text in a way that the majority of people can understand.
- **Expand:** extends and enriches the content, providing extra details and insights.

Based on the evaluation, it effectively rephrases short texts. However, occasionally there are sentences that may appear unclear and necessitate manual editing and adjustment.

As an illustration, once the text is copied and pasted in the textbox, Quillbot automatically perform paraphrasing.

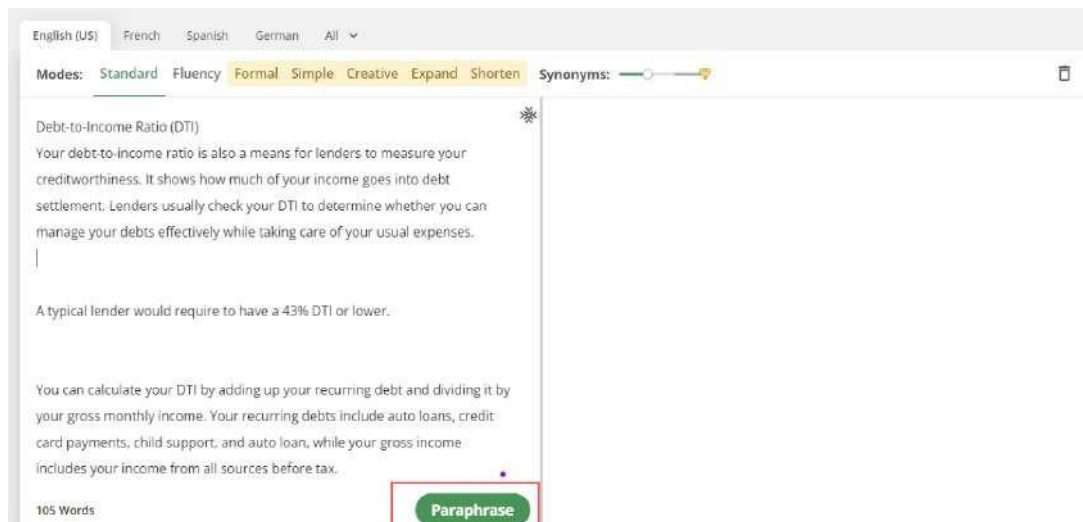


Figure 2. QuillBot Application Interface

Essentially, its primary function is to provide an extensive collection of appropriate synonyms, and attempt to rephrase certain phrases. Each suggestion provided by Quillbot can be selected and inserted within the text automatically. Nevertheless, the tool allows continuous customizations in order to satisfy all users' needs.

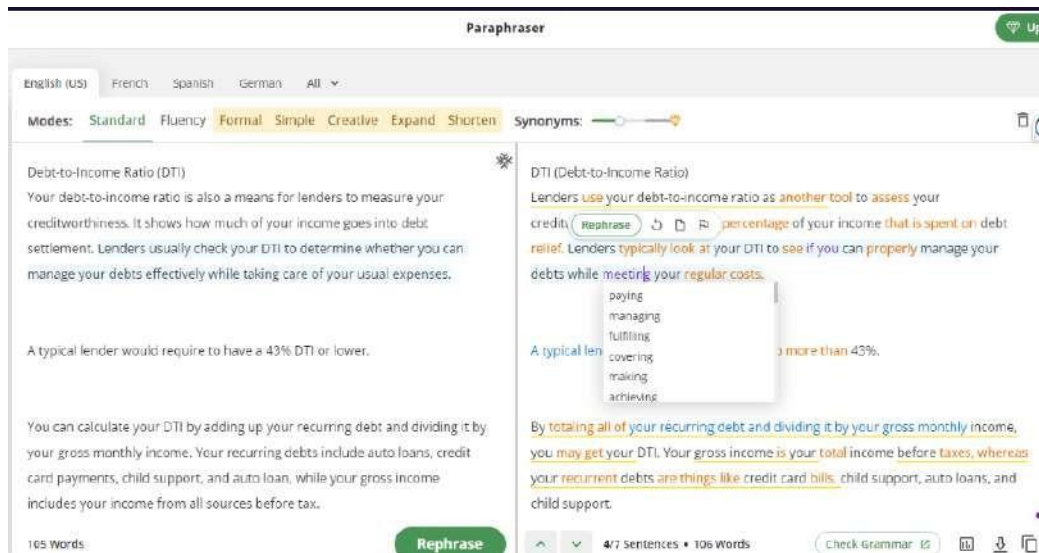


Figure 3. QuillBot's Paraphrasing Function

1.2.10.2 The Grammar Checker

The grammar checker given by QuillBot can handle American, British, and Australian English. grammar issues can be rectified on other online platforms, such as email or social media apps, using a web app or browser extension. For example, when the tool was tried by pasting text, it showed an array of underlined areas, as well as some suggestions. It recognized misspellings and missing apostrophes with higher success than a typical grammar checker like Microsoft Word. However, unlike Grammarly, QuillBot's grammar checker does not provide as much context for grammatical problems.

As an illustration, when testing the tool by copying and pasting the text at this location. This will display the several areas that are underlined and provide ideas for each of them.

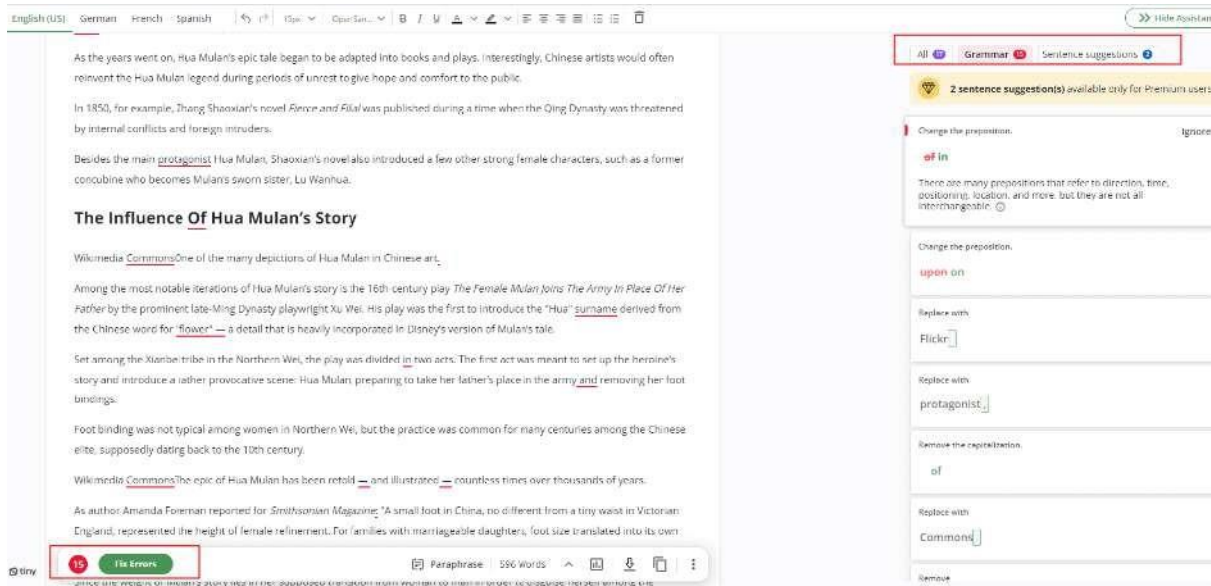


Figure 4. QuillBot's Grammar Checker Function

It effectively detected spelling issues and omitted apostrophes, capturing a greater number of grammatical errors compared to a traditional grammar checker such as Microsoft Word. Nevertheless, QuillBot's grammar checker lacks the same level of contextual information for identifying grammatical faults compared to Grammarly.

1.2.10.3 Plagiarism Checker

This feature is particularly advantageous to academics who write essays. The feature allows for uploading or paste texts, and it takes a few minutes to scan them. Quillbot generates a report containing the data tested, indicating if the writer purposefully or incidentally borrowed text from current academic literature. For instance, when I uploaded texts and examined the links, the actual work could be accessed on the ResearchGate PDF. This capability is not often present in other plagiarism detectors like Grammarly, which often do not scan research articles in PDFs. I placed a handful of articles from this site through the checker, and I was astonished to see that Quillbot had the capacity to identify the original URLs and flag a few cases in which other websites reproduced really identical information. The

plagiarism sensor allows to examine every page, with the first twenty pages, or around 5,000 words, included in the monthly membership. After that, extra pages must be acquired. Nevertheless, prior plagiarism scans can always be consulted at any moment.

1.2.10.4 The Co-writer

The Co-Writer is a research and writing aid that may be used for sentence creation activities and preparing research papers instantaneously. The co-writer develops material depending on the content provided. This function, which is accessible to premium clients, is designed to assist in producing and finalizing research articles rapidly. For example, the research feature can be tested by typing "the benefits of yoga in the morning" in the research box. After that, Quillbot will offer some research findings, and the preferred one can be picked to work with. Subsequently, the necessary material can be copied and pasted into the text editor. More thorough and holistic writing abilities by merging the co-writer with additional instruments, such the paraphraser. Nonetheless, it is merely a recommended text function; it will not actually write the text for you. Instead, it will wrap up a statement and provide other pathways, but not a comprehensive piece.

For example, to test the study feature. The following sentence has been submitted in the search box, "Benefits of doing yoga in the morning".

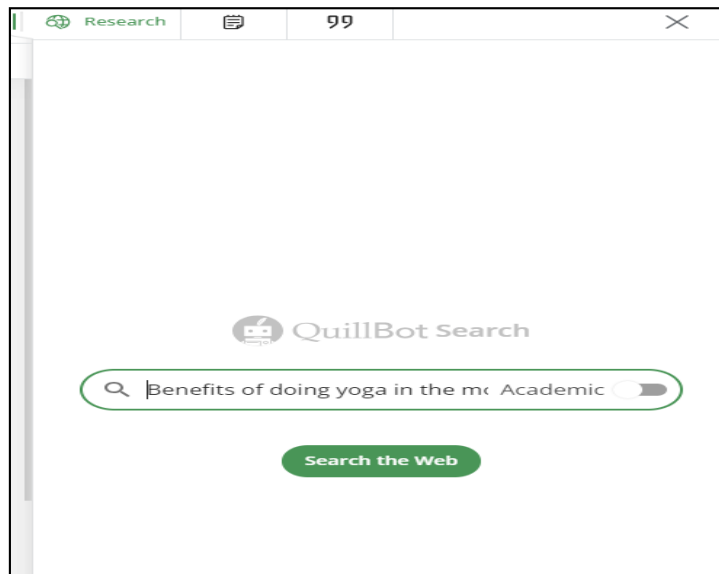


Figure 5. QuillBot's Co-Writer Function

After that, QuillBot will provide several web search results to choose from.

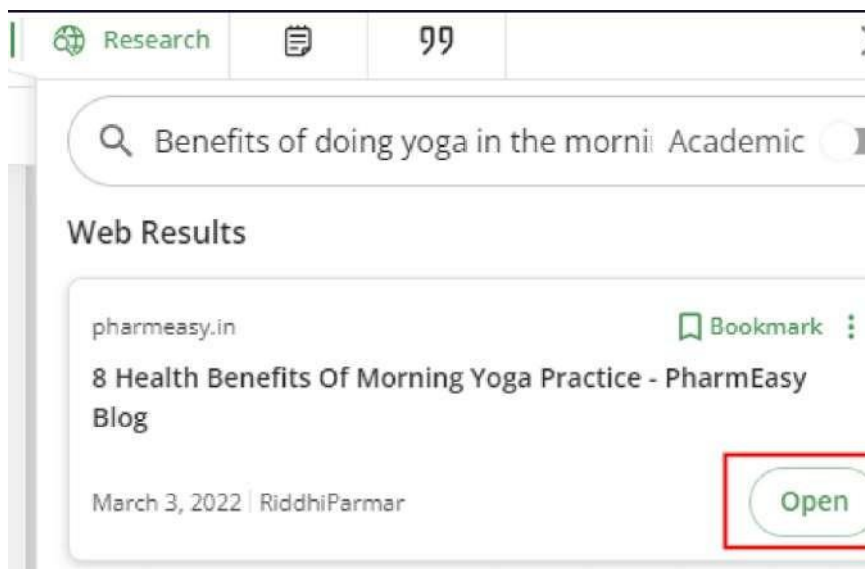


Figure 6. QuillBot Co-Writer Results

By blending the co-writer with other tools like the paraphraser, a smoother and integrated writing experience can be obtained.

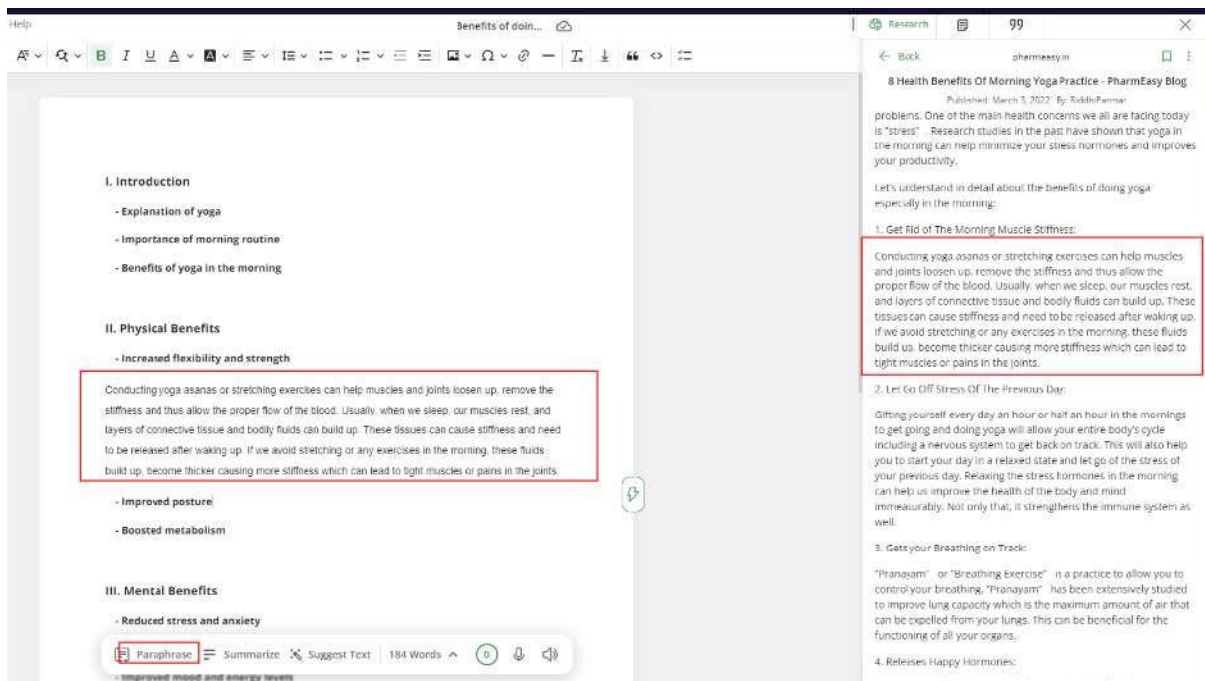


Figure 7. Using Co-Writer Alongside with Paraphraser Functions

1.2.10.5 The Summarizer

Quillbot offers a supplementary AI feature called the Summarizer that helps compress articles, documents, and other content into their most relevant sections. To test this, an article that was over 1,191 words long into the tool. For example, it took the tool only 269 words to distil the article, taking the most critical bits from my writing while requiring the least amount of editing. Furthermore, a slider is supplied to alter the summary length. The choice to adjust the length is simply made by pressing the re-summarize button. Summarization may occur in two ways:

- **Key Sentences Mode:** This mode summarizes any text as key sentences using a bullet-point style. The output looks like a list of separated sentences.
- **Paragraph Mode:** Using this mode, content can be compacted into a paragraph.

For example, it tested this by submitting an article that was over 1,191 words long. The tool efficiently summarized the article into 269 words. In short, it pulls the most critical terms from the content I produce but still requires minimal editing.

The screenshot displays the QuillBot Summarizer interface. At the top, the word 'Summarizer' is centered, with an 'Upgrade to Premium' button on the right. Below this, there are two tabs: 'Key Sentences' and 'Paragraph', with 'Paragraph' selected. A 'Summary Length' slider is set to 'Short'. The main content area is split into two columns. The left column contains the original text, which includes a paragraph about the cost of a mortgage, a section titled 'What is a mortgage and how does it work?', and another section titled 'What Parties Are Involved In A Mortgage?'. Below the text is a 'Select keywords' section with buttons for 'USDA', 'VA', 'mortgage', 'loan', 'mortgage payment', and 'Interest rate'. A red box highlights '1191 Words' in the bottom left. The right column shows the summarized text, which is a condensed version of the original. A red box highlights '11 Sentences • 269 Words' in the bottom right. A 'Summarize' button is located between the two columns, and a 'Paraphrase Summary' button is at the bottom right.

Figure 8. QuillBot's Summarizer Function

1.2.10.6 Citation Generator

With the assistance of this application, citing resources is effortless and easier. Students, producers, and scholars can generate citations that include a book title or a link. To receive the relevant data for the citation, such as the title, author's name, and publication date, all needed is to submit the link into the input box. If the generator fails to retrieve the required data, it asks the user to manually submit extra information. also it constructs various citations styles, and convert all the citations to be downloaded as MS Word documents.

For example, this feature supports the reference sources in texts, making it easy for students, authors, and academics to make citations that include a book title or a link. All required is to input a link of a source, and the tool will collect all the required information to build the citation, such as the title, publication date, and author's name.



Figure 9. QuillBot's Citation Generator Function

1.2.11 The Use of Quillbot in Writing a Dissertation

According to Kumar (2023), producing a dissertation employing a tool like QuillBot to rewrite material is conceivable. It helps minimize the time needed to write a dissertation. For example, paraphrasing is one of the most time-consuming components of the process. QuillBot make rewriting texts easier and faster, this allow for more time to focus on other sections of the dissertation. Furthermore, Kumar pointed out that QuillBot can benefit in avoiding repetition. When writing a dissertation, one of the most crucial tools for rewriting is QuillBot, which assists in preventing plagiarism, a big issue in academic circles. Even so, Quillbot can be used to avoid plagiarism by paraphrasing contents in authentic manner.

1.2.12 Advantages and Disadvantages of Quillbot

Singh (2023) cites that there are various advantages and downsides to employing Quillbot. These could involve the following:

1.2.12.1 Advantages:

1.2.12.1.1 Unique Content Generation: With its paraphrasing aid, Quillbot supports users in developing unique content and increasing their writing capacities while preventing plagiarism.

1.2.12.1.2 Language Improvement: It assists in improving language by strengthening the clarity, coherence, and overall literary aesthetic of documents. It also provides grammatical checking and recommendation capabilities.

1.2.12.1.3 Time-saving: Quillbot accelerates the writing process and allows users to save precious hours by swiftly generating summaries, rewrites, and footnotes.

1.2.12.2 Disadvantages:

1.2.12.2.1 Meaning Alteration: While Quillbot is capable of constructing precise paraphrases, it may fail to precisely transmit the desired meaning, necessitating manual scrutiny and change.

1.2.12.2.2 Context Issue: Due to context concerns, Quillbot may have trouble grasping slight nuances, resulting in less trustworthy paraphrased output.

1.2.12.2.3 Internet Dependency: QuillBot's need on an unbroken web connection to perform may prove challenging in regions with patchy or unreliable internet access.

Conclusion

In conclusion, the examination of writing instruction for Master's students has yielded insightful revelations about the intricacies of this indispensable skill. By comprehending the importance of writing and investigating efficacious pedagogical strategies, educators can enhance their support for students in honing their writing proficiency. As students immerse themselves in various forms of academic writing, they acquire crucial skills for scholarly investigation and communication. Looking ahead, a dedication to fostering these writing skills will equip students to thrive in their academic endeavours and make significant contributions to their respective fields of study. In the other side, the deployment of artificial intelligence, especially QuillBot, has fundamentally transformed the field of education. Due to the rapid expansion of innovation, academics are becoming increasingly aware of the potential benefits of AI in enhancing efficiency and simplifying jobs such as writing, proofreading, rephrasing, and compressing research papers. There is no doubting that AI will surely play a vital role in education in the coming years, offering students with cutting-edge materials that improve their academic progress.

Chapter Two: Practical Part

Introduction

The first section of this chapter contains a detailed description of the research methodology employed, as well as a full description of the selected populations, and a detailed explanation of the research instrument used. The second section deals with the analysis and discussion of the results of both questionnaires. Then it precedes to discuss the connections between the results obtained. Lastly, it concludes with a comparison of the results obtained from this study with previous research work, on the perception of students and teachers towards using Quillbot in writing a master's dissertation.

2.1 Section One: Methodology

2.1.1 Research Methods

The research methods are based on descriptive methods, and use a mix of qualitative and quantitative approaches. In addition, two different questionnaires were developed aimed at two target groups: second-year master's students and English teachers at the Department of Foreign Languages at Mila University Centre. In addition, the questionnaires are distributed in digital and printed form. The qualitative approach aimed to explore the students' experiences and perspectives. While the quantitative approach aimed to quantify and analyse the numbers. This mixed methods approach helps to understand the research topic, and allows for a deeper analysis of the collected data on students' and teachers' perceptions of using Quillbot in master's dissertation writing.

2.1.2 Population and Sampling

The study was carried out within the English Department at Mila University. The students' questionnaire initially was designed to cover 189 Master's students in English, a sample preferred since they were highly involved in the writing of the academic dissertation. From this group, a random subset of 62 students was selected to complete the online questionnaire. The secondary questionnaire went to a sample comprising 11 faculty teachers drawn from the same Department; the choice of this population was derived from the fact that the teachers interact directly with the first sample. This idea depicts that these dual-mode questionnaires were suitable for effective data collection necessary to meet the objective of the research.

2.1.3 Research Tools

To collect reliable data to answer research questions, two questionnaire versions were distributed to two different samples. Both questionnaires contained a combination of open and closed questions, with multiple choices to explore in-depth students' and teachers' perceptions of using AI tools in academic writing. For that reason, a first questionnaire with five sections was addressed to Master second year students at Abdelhafid Boussouf University Mila. Additionally, a second questionnaire was administered to 11 teachers from the same university. These selected research tools opted to offer further insights into students' and teachers' perception towards the AI tools, particularly Quillbot.

2.1.4 Questionnaire

Kara (2019) defines questionnaire as a carefully designed research tool consisting tested questions aimed for collecting particular data. Furthermore, it is a method for gathering information from individuals via writing. It is made up of many questions and can be performed on paper, tablet, over text message or online. Brown (2001, as cited in Dörney, 2003, p. 6) also defined questionnaires as “any written Instruments that asks respondents a set of questions or statements and requests that they either write out their replies or pick from prepared responses is referred to a questionnaire.” This research instrument serves the objectives of obtaining data from participants, enabling the investigation of the research questions. In brief, it allows the accumulation of useful insights and aligns with the main aims of the study.

2.1.5 Students’ Questionnaire

2.1.5.1 Administration of the Students’ Questionnaire

The questionnaire was conducted online using Google Form, from April 17th to 20th, 2024. It involved 62 Master’s students from the Department of Foreign Languages at Abdhahfid Boussouf Mila University Centre. The collected answers were stored digitally on the platform for better analysis.

2.1.5.2 Description of the Students’ Questionnaire

The student questionnaire carefully designed for the purpose of effective data collection. It is divided into five sections. The questionnaire has different types of questions, multiple choice questions, open-ended questions and closed-ended questions. The questionnaire consists a total of 22 questions spread across the five sections described as follow:

Section one of the questionnaire, “General Information”, collects data about the respondents such as age and gender, which allows to conduct a precise study.

Section two, the aim of this section is to understand students' opinions on the most difficult skills in a second language context. The students are then asked how often they write and whether they participate in writing workshops. In addition, students are asked what challenges they might face when writing their dissertation. The final question asks students about their experiences with paraphrasing and summarizing while writing.

Section three, in this section, students are first asked generally about their utilization of artificial intelligence in academic writing, and whether they use Quillbot in particular. Afterward, students are then asked to rate their experience with the tool and how often they use it. Additionally, students are asked to compare the efficacy of paraphrasing with Quillbot to the efficiency of manual paraphrasing. The final three questions aim to find out whether students believe that using Quillbot would enhance their future writing, and what benefits are there for using Quillbot, specifically its efficient features.

Section four, the aim of this section is to determine the importance of using Quillbot when writing a master's dissertation from the students' perspective. First, students are asked whether they already had experience with the AI writing tool and how familiar they are with it. The students are then asked how they use Quillbot and what aspects they use it for. The final three questions address students' personal experiences with Quillbot while writing and what they find helpful or challenging.

Section five: "Further Suggestions" provides students with an opportunity to share additional insights or recommendations not covered in the previous sections, thereby enriching the data collection.

2.1.6 Teachers' Questionnaire

2.1.6.1 Administration of the Teachers' Questionnaire

For the teacher questionnaire, a second printed questionnaire was distributed to a selected group of 11 English teachers involved in the master's phase at the Department of Foreign Languages, Abdelhafid Boussouf Mila University Centre. This questionnaire took place from April 21 to 28, 2024.

2.1.6.2 Description of the Teachers' Questionnaire

The teachers' questionnaire is divided into five different sections. It included different types of questions, multiple choices questions, open-ended questions and closed-ended questions. These questions format specifically aim to collect qualitative and quantitative data that corresponds to the research objective. The sections of the teachers' questionnaire are described as follows:

Section one: General Information, seeks to gather data about teacher's academic qualifications and teaching experience, providing a context for their perspectives on the use of AI tools in dissertation writing.

Section two: In this section, teachers are first asked about their experiences in supervising master's theses. Then ask teachers about the essential components that make up a good written dissertation, in addition to the common mistakes students make when writing a dissertation. Equally important, the last two questions aim to identify the difficulties students face in writing their dissertation and the approach that can help students overcome these difficulties.

Section three: This section tends to explore the teachers' views on their students' behaviour if they know and are familiar with Quillbot as an AI writing tool. An attempt is also

made to look for evidence of Quillbot in students' work. In addition, based on the teacher's views, it explores students' motivations and the challenges they may face when using QuillBot.

Section four: The aim of this section focuses on the importance of Quillbot in academic writing. Next, teachers' opinions will be assessed on whether the Quillbot tool can help students with academic writing. Afterwards, another question asks about areas in which Quillbot can really bring improvements. The last question is about teachers' perspectives on whether Quillbot can replace the role of teachers by providing feedback and improving the quality of dissertation writing.

Section five: In this final section, teachers were asked to share their thoughts or suggestions regarding using QuillBot to write master's dissertation. This open question would provide deeper examination of QuillBot's potential in academic writing.

2.2 Section Two: Analysis and Discussion

2.2.1 Analysis and Interpretation of the students' Questionnaire

• Section One: General Information

Question 01: How old are you?

Table 01:

Student's Age

| Age | Frequency | Percentage |
|-------|-----------|------------|
| 18-20 | 00 | 00% |
| 20-30 | 59 | 97% |
| 30-40 | 02 | 3 % |

As displayed in the table, the majority of the participants' age range from 20 to 30 with a percentage of (97%), only two participants are 30-40 years old. This showed all participants are younger.

Your Gender?

Table 02:

Participants' Gender

| Gender | Frequency | Percentage |
|--------|-----------|------------|
| Female | 53 | 85% |
| Male | 09 | 15% |

According to the table, (85%) of participants are female students, and only (15%) of the participant are males. This indicating that female students constitute the majority of the participants, which revealed that female students tend to studying foreign languages more than males.

- **Section Two: Writing a Master Dissertation**

Question 02: In your opinion, the most difficult and complicated skill is?

Table 03:

Students' Opinions on Most Challenging Skill

| Option | Frequency | Percentage |
|-----------|-----------|------------|
| Writing | 53 | 87.1 % |
| Reading | 01 | 01.6 % |
| Listening | 02 | 03.2 % |
| Speaking | 03 | 08.1% |

As the frequency table showed that (87%) of the participants believed that the writing skill is the most difficult and complicated skill. Where (8%) of the participants stated that the speaking skill is difficult, (3%) of them believed that it is the listening skill that is difficult. Only one student stated that reading skill is difficult skill. These results indicated that writing is perceived as the most difficult language skill among the majority of participants.

Question 03: How often do you write?

Table 04:

Students Writing Practice Frequency

| Option | Frequency | Percentage |
|-----------|-----------|------------|
| Always | 08 | 12.9% |
| Sometimes | 36 | 59.7 % |
| Rarely | 17 | 27.4 % |
| Never | 00 | 00 % |

As per the table above, (12.9 %) of students always write, and (59.7%) of the them write sometimes, while (27.4%) rarely write. That indicated that writing is an occasional activity for most participants, which justify the reasons for why students tend to use Quillbot.

Question 04: What kind of academic writing do you write?**Table 05:***Types of Academic Writing Produced*

| Option | Frequency | Percentage |
|---------------|-----------|------------|
| Essays | 53 | 85.5% |
| Dissertations | 06 | 09.7 % |
| Articles | 03 | 04.8 % |

According to the table above, (85.2%) of the participants write essays, (9.7%) of them write dissertations, and (4.8%) of the participants write articles. Results revealed that essays writing is most focused type of writing among respondents.

Question 05: Have you ever participated in workshops particularly focused on guiding students writing a master dissertation?**Table 06:***Students' Participation in Master's Dissertation Writing Workshops*

| Option | Frequency | Percentage |
|--------|-----------|------------|
| Yes | 34 | 54.8% |
| No | 28 | 45.2% |

As shown in the table, (54.8%) of the participants reported that they participated in workshops that guided them on how to write a master dissertation, while the other (45.2%) reported that they did not, suggesting that respondents have less focus on writing workshops.

Question 06: Was writing your dissertation challenging?**Table 07:***Students' Experience on Dissertation Writing*

| Option | Frequency | Percentage |
|--------|-----------|------------|
| Yes | 47 | 76% |
| No | 15 | 24 % |

According to table, a percentage of (76%) of the participants stated that writing their dissertation was indeed challenging, while the other (24%) of participants stated that it was not. Responses revealed that students found dissertation writing more challenging.

If yes, what are the challenges that you faced?

The analysis of student's answers uncovered several important themes, in which the responses showed that main challenges students found during writing their dissertation were the writing process, and finding good references. Other (24%) students had worries about plagiarism and time managements issues. This insights justifying why students tend to use Quillbot.

Question 07: How do you describe your experience with summarizing and paraphrasing writing your dissertation?

After a qualitative analysis, responses indicated that 25 students found the process of summarizing and paraphrasing challenging and difficult, while others rated their experience as positive. Only (19%) students said that they had minor challenges. This explains why students tend to perform such tasks using a AI tool like Quillbot.

- **Section Three: Artificial Intelligence (Quillbot)**

Question 08: Have you ever used artificial intelligence in your academic papers?

Table 08:

Students' Use Artificial Intelligence in Academic Papers

| Option | Frequency | Percentage |
|--------|-----------|------------|
| Yes | 62 | 100% |
| No | 0 | 0% |

The table showed that all participants 100% stated that that they do use Artificial Intelligence in their academic papers, suggesting all participants had used AI tools in academic writing.

If yes, which tools have you used?

Table 09:

Most AI Tool Used by Students

| Option | Frequency | Percentage |
|-----------|-----------|------------|
| Chatgpt | 33 | 53, 2% |
| Quillbot | 25 | 40.3% |
| Grammarly | 04 | 6, 5% |

As shown in the table, (53.2%) of the participants have used “Chatgpt”, while (40.3%) of the participants have used “Quillbot” and the remaining (6.5%) have used “Grammarly”. This distribution suggested a significant preference for “Chatgpt” and “Quillbot” among most participants.

Question 09: Have you ever used Quillbot?

Table 10:

Students’ Use of Quillbot

| Option | Frequency | Percentage |
|--------|-----------|------------|
| Yes | 57 | 92% |
| No | 5 | 8% |

According to the table, a percentage of (92 %) of participants have used Quillbot, while a very small number of participants had not used it, suggesting a high level of familiarity and usage of Quillbot among the participants.

If yes, how do you rate your experience with this program?

Table 11:

Student Ratings of Program Experience

| Option | Frequency | Percentage |
|-----------|-----------|------------|
| Excellent | 17 | 27% |
| Good | 45 | 73 % |
| Bad | 00 | 00 % |

Results revealed that (73%) of participants rated their experience using Quillbot as “good”, and (27%) rated as “excellent”. This indicated a positive experience towards Quillbot among the respondents, which means all participants are satisfied due the features brought by the tool.

Question 10: How often do you use Quillbot?

Table 12:

Students' Use of Quillbot

| Options | Frequency | Percentage |
|---------|-----------|------------|
| Always | 09 | 14. 5% |
| Often | 35 | 56. 5% |
| Rarely | 15 | 24. 2 % |
| Never | 03 | 4. 8 % |

As shown in the table, (56.5%) of the participants stated that they often use Quillbot. Besides, (24.2%) of the participants stated that they rarely use it, and (14.5%) of them reported that they always use Quillbot. However, (4.8%) of them reported that they never use it. These results indicating a generally high usage rate of Quillbot among the respondents.

Question 11: Is Quillbot an effective tool for paraphrasing texts?

Table 13:

Effectiveness of Quillbot for Text Paraphrasing

| Option | Frequency | Percentage |
|-------------------|-----------|------------|
| Strongly Agree | 17 | 27 % |
| Agree | 33 | 53 % |
| Neutral | 9 | 15 % |
| Disagree | 3 | 5 % |
| Strongly Disagree | 00 | 00% |

The table analysis indicated that a significant majority (80%) of students either agree or strongly agree that Quillbot is an effective paraphrasing tool. However, a small fraction, (5%), disagreed with this notion, while (15%) remained neutral, suggesting that participants acknowledge Quillbot's capability in paraphrasing texts.

Question 12: Do you think Quillbot saves time compared to manually paraphrasing texts? Please elaborate

The qualitative data analysis revealed several themes, (71%) of student found Quillbot to be a time-saver for paraphrasing tasks. In contrast, 11% students reported that Quillbot can saves time, but sometimes it is ineffective for paraphrasing. However, (18%) of students had no clear opinion or no response at all. Overall, the responses indicated a positive perception of Quillbot's as a time-saver tool, with few concerns about its consistency and effectiveness.

Question 13: Do you think that using Quillbot overtime enhances your writing skill on the long run? If yes, please explain.

Table 14:

Long-Term Impact of Quillbot on Writing Skills

| Option | Frequency | Percentage |
|--------|-----------|------------|
| Yes | 32 | 51.6% |
| No | 30 | 48.4% |

Over half of the students (51.6%) believed that using Quillbot over time enhances their writing skills, while (48.4%) disagree. Among those who responded with ‘yes’, believed that Quillbot can enhance their writing skills due to benefits such as vocabulary expansion and improved sentence structure. While (35%) of students believed that Quillbot either does not enhance their skills or limits creativity. However, (18%) of students did not express a clear opinion. These results indicated a split opinion on QuillBot’s efficacy in enhancing writing skills on the long run, which means that students are aware of the effects of AI tools on their future skills.

Question 14: What benefits do you get using Quillbot?

Based on qualitative analysis of the students’ responses uncovered several recurring themes, showing that (48%) students found Quillbot a beneficial tool for saving time. Another (24%) students find it as beneficial for vocabulary expansion task, while (16%) students reported it as beneficial for grammar improvement. However, only (11%) students considered it as beneficial for paraphrasing texts. These insights suggested that Quillbot has several beneficial uses.

Question 15: What is the most effective feature in Quillbot do you use?

Table 15:

Students’ Most Effective Quillbot Feature Utilized

| Option | Frequency | Percentage |
|--------------------|-----------|------------|
| Paraphrase | 36 | 58.1 % |
| Grammar checker | 17 | 27.4 % |
| Plagiarism checker | 6 | 9.7 % |
| Citation generator | 2 | 03.2% |
| Summarize | 1 | 01.6% |
| Co-author | 0 | 00% |

The table showed, (58.1%) of participants believed that QuillBot’s mostly effective for paraphrasing students tend to use, while (27.4%) think that it is effective for grammar checker.

Other (9.7%) of participants think that Quillbot is most effective for plagiarism checker feature. While (3.3%) claimed that it is the citation generator that is most effective, and (1.6%) of the participants believed that the summarize feature is the most effective. This analysis suggests that QuillBot's paraphraser is perceived as the most effective feature.

Section Four: Significance of Using Quillbot in Writing a Master Dissertation

Question 16: Have you previously used artificial intelligence in writing a master dissertation?

Table 16:

Students' AI Usage in Master's Dissertation Writing

| Option | Frequency | Percentage |
|--------|-----------|------------|
| Yes | 42 | 67.7% |
| No | 20 | 32.3% |

As shown in the table, (67.7%) of the students had previously used artificial intelligence tools in writing a master dissertation, while (32.3%) of them did not. This means that a large proportion of students recognize the support of AI tools in the writing process.

Question 17: How comfortable were you with using technology in your academic work?

Table 17:

Students' Comfort Level with Technology in Academic Work

| Option | Frequency | Percentage |
|--------------------|-----------|------------|
| Very comfortable | 14 | 22.6% |
| Comfortable | 29 | 46.8% |
| Neutral | 16 | 25.8% |
| Uncomfortable | 03 | 04.8% |
| Very uncomfortable | 00 | 00 % |

As displayed in the table, (47.5%) of the participants were comfortable, besides to (21.3%) were very comfortable. Whereas, (25%) of the participants were help neural position

towards using technology. This explained that most students (68%) are satisfied with using technology in academic tasks due to the assistance technology provide.

Question 18: What is your perception on using artificial intelligence tools like Quillbot for writing your dissertation?

Table 18:

Students' Perception on Quillbot for Dissertation Writing

| Option | Frequency | Percentage |
|---------------|-----------|------------|
| Very positive | 09 | 14 % |
| Positive | 39 | 62% |
| Neutral | 12 | 20 % |
| Negative | 01 | 2% |
| Very negative | 01 | 2% |

The table showed that (62%) of the students' perception as positive, and (14%) others stated their perception as very positive. In addition, (20%) of students had neutral position. However, two students reported their perception as either negative or very negative. Results shows that (77%) of students hold positive perceptions, this proves the assistance Quillbot provide to students.

Question 19: Which aspects of your dissertations did you used Quillbot for?

Table 19:

Dissertation Aspects Assisted by Quillbot

| Option | Frequency | Percentage |
|----------------------------|-----------|------------|
| Paraphrasing and rewording | 34 | 55.7 % |
| Improving structure | 13 | 21.3 % |
| Generating ideas | 05 | 8.2 % |
| All of the above | 09 | 14.8 % |

The table revealed that (55.7%) of the participants used Quillbot to paraphrase and rewording, whereas (21.3%) of them used Quillbot to improve their writing structure. And only

(8.2%) of them used it to generate ideas, and (14.8%) use all Quillbot feature. This showed that paraphrasing and improving structure are the primary aspects for using Quillbot.

Question 20: If there are other aspects, please specify

The analysis of responses uncovered several recurring themes, including 15 students use it for paraphrasing, and (24%) students use it for grammar and plagiarism checking. These insights suggested that paraphrasing, grammar and plagiarism checking are most recurring themes in students' responses.

Question 21: What are the reasons that make you use Quillbot in writing your dissertation? If there are others reasons please mention them

Table 20:

Students' Reasons for Using Quillbot in Dissertation Writing

| Option | Frequency | Percentage |
|------------------------------|-----------|------------|
| Saving time and effort | 24 | 38.7 % |
| Originality and plagiarism | 20 | 32.3 % |
| Quality of generated content | 17 | 27.4 % |
| Dependency on technology | 01 | 1.6 % |

The table revealed that (38.7%) of the students use Quillbot to save time and effort, and (32.3%) of the students use Quillbot for originality and plagiarism. While (27.4%) of the participants use it for the quality of generated ideas. Only one student expressed dependence on technology. this confirmed what reasons of Quillbot students are attracted to.

Question 22: Please share your personal experience with using Quillbot tools for writing your dissertation?

The students' answers were varied and revealed three recurring themes, mainly paraphrasing, grammar checking, plagiarism checking. As a results they found these features a time saver.

What did you find helpful about QuillBot?

Responses indicated that Quillbot was mainly useful to students for rewording text, checking grammar, detecting plagiarism, indicating students appreciate the assistance Quillbot provides to facilitate their writing process.

What challenges did you face about using QuillBot?

The analysis revealed that while (33%) of students did not face any challenges using Quillbot, others encountered issues with the paraphrasing feature. Only (16%) of students stated that the tool is limited in features. This can be due to the student's experience with technology.

- **Section five: Further Suggestions**

Please add any further suggestions

Half of the students (50%) provided suggestions. These suggestions expressed challenges they faced when using QuillBot, and they suggest that students have to learn how to use QuillBot. And some others suggest use cases on how it can be integrated as an assistant tool for improving academic writing, such as sentence structure and vocabulary expansion.

2.2.2 Discussing the Findings of the Students' Questionnaire

The student questionnaire findings revealed significant insights into the students' perceptions of using QuillBot in the process of writing a master's dissertation.

Firstly, the study reveals that all students are aware of AI technology and its potential capabilities, with a significant number acknowledging its support in the writing process. Most students are familiar with AI writing tools like QuillBot, rating their experience positively or

very positively. The study shows that most students use QuillBot for high usage rates, mainly due to its features like paraphrasing, text structure improvement, grammar, and plagiarism checking. Students express satisfaction with the ease of using the tool, particularly for dissertation writing. The most commonly used features are paraphrasing and summarizing, with automatic paraphrasing being the preferred feature over manual paraphrasing. However, there is a split in opinions on QuillBot's effectiveness in enhancing writing skills, indicating students' awareness of AI tools' impact on future skills. Thirdly, the study indicates that while students find QuillBot beneficial for dissertation writing, 16% find it challenging and limited in features, possibly due to their technology experience, indicating a need for improved features. Fourth, the study reveals that 87% of students find writing the most challenging skill, largely due to lack of practice and participation in writing workshops. 76% of students find dissertation writing challenging due to academic requirements. Consequently, 77% of students prefer using QuillBot to overcome these challenges, indicating that QuillBot is successful in helping students overcome these challenges due to inadequate writing skills.

In conclusion, the discussion suggests that while QuillBot is widely used and generally well-received among EFL students, perceptions of its effectiveness and impact on writing their dissertation process are positive due to the benefits and features AI tools can offer, with saving time being the most acknowledged feature.

2.2.3 Analysis and Interpretation of the Teachers' Questionnaire

- **Section One: General Information**

Question 01: What is your highest academic degree?

Table 21:

Teachers' Educational Degree

| Degree Hold | Doctorate | Magister |
|--------------------|-----------|----------|
| Number of Teachers | 11 | 0 |
| Percentage | 100% | 0% |

The table showed that all teachers (100%) are doctorate-holding teachers, indicating a substantial academic accomplishment and subject mastery.

Questions 02: How long have you been teaching?

The answers showed that teachers' teaching experience was varied, which spanned from 2 to 30 years, denoting a wealth of accumulated knowledge and expertise.

- **Section Two: Writing A Master Dissertation**

Question 03: Have you supervised master dissertation before? If yes, How many?

Table 22:

Number of Master Dissertations Supervised by University Teachers

| Range of Dissertations Supervised | Number of Teachers (n=11) |
|-----------------------------------|---------------------------|
| 16+ | 6 |
| 11-15 | 2 |
| 6-10 | 1 |
| 1-5 | 1 |
| None | 1 |

Most teachers (91%) have supervised a master's dissertation before, with a wide range in the number of dissertations supervised, indicating that the majority of teachers have prior experience in supervising master's dissertations.

Question 04: What are the key components of a well-written Master dissertation?

Table 23:

Essential Components of a Master's Dissertation

| Option | Votes |
|-------------------------------------|-------|
| Clear and Focused Research Question | 9 |
| Comprehensive Literature Review | 6 |
| Well Organized Structure | 8 |

The table showed that a clear and focused research question, a comprehensive literature review, and a well-organized structure are considered key components of a well-written master's dissertation. Other explanations provided by teachers highlighted a well-defined research methodology and language proficiency, which are also considered key components of a well-written dissertation.

Question05: Throughout your experience as a university teacher, what kind of mistakes students make when writing their dissertation?

Table 24:

Teachers' Views on Common Dissertation Writing Mistakes

| Option | Number of Votes | Percentage |
|----------------------------------|-----------------|------------|
| Lack of Clear Research Questions | 8 | 73% |
| Poor Organization and Structure | 7 | 64% |
| Inadequate Literature Review | 6 | 55% |

From the given results, students mostly struggle with formulating clear research questions, organizing their work, conducting a thorough literature review, Other explanations provided

by teachers mostly related to methodology and writing skills, indicating that students should be aware about what constitute a well-written dissertation.

Question 06: What are the common challenges students encounter when writing their dissertation?

Table 25:

Dissertation Writing Challenges

| Option | Votes |
|-------------------|-------|
| Time management | 10 |
| Handling feedback | 7 |
| Writing block | 6 |

According to the teachers' opinions, time management is the most common challenge faced by students when writing their dissertation, followed by lack of feedback on their writing, as well as writing block. These challenges may explain why students prefer to use Quillbot in their writing work.

Question 07: What do you recommend for your students to enhance their writing of dissertation?

Table 26:

Teachers' Recommendations for Improving Dissertation Writing

| Option | Votes |
|---|-------|
| Books or guides on dissertation writing | 10 |
| Online writing tutorials and courses | 7 |
| Peer feedback and writing groups | 7 |

The votes indicated that teachers prioritize reading books or guides on dissertation writing, including online tutorials, courses, and peer feedback. This means that teachers urge students to be self-sufficient rather than relying on writing tools such as QuillBot.

- **Section Three: Artificial Intelligence (QuillBot)**

Question 08: Are your students aware of Artificial Intelligence tools?

Table 27:

Teacher's Views on Their Students Awareness of AI Tools

| Option | Strongly Agree | Agree | Neutral | Disagree | Totally Disagree |
|-----------------|----------------|-------|---------|----------|------------------|
| Teachers (n=11) | 4 | 3 | 4 | 0 | 0 |
| Percentage | 36% | 28% | 36% | 0% | 0% |

Most of teachers either strongly agree or are neutral on this matter. None of the teachers disagreed or totally disagreed. This indicating that most teachers believed their students are aware of AI tools, this due to the availability of technology around students.

Question 09: To what extent do you believe your students are familiar with QuillBot?

Table 28:

Teacher's Views on Their Student Familiarity with Quillbot

| Option | Totally familiar | Familiar | Neutral | Not Familiar |
|-----------------|------------------|----------|---------|--------------|
| Teachers (n=11) | 2 | 3 | 5 | 1 |
| Percentage | 18% | 27% | 45% | 10% |

The results indicated that (27%) believed their students are familiar, and 18% teachers recognized their students are totally familiar, However, (45%) teachers are neutral, this can be due to QuillBot being external topic in the classroom.

Question 10: Have you noticed any signs of using QuillBot in your students' work?

Table 29:

Quillbot Usage indicators in Student Work

| Option | Teachers (n=11) | Percentage |
|--------|-----------------|------------|
| Yes | 6 | 54% |
| No | 5 | 46% |

Results revealed that (54%) of teachers have detected QuillBot usage in student work, while others (46%) have not. These results explained that it is not easier to detect QuillBot usage in students' work even, because of the quality offered by Quillbot.

Question 11: Do you think it is an ethical act to use QuillBot when paraphrasing or summarizing? If no, in what way learners maximize benefiting from this tool still in a more ethical manner?

Table 30:

Ethical Implications of Using Quillbot for Paraphrasing and Summarizing

| Option | Number of Teachers (n=11) | Percentage |
|--------|---------------------------|------------|
| Yes | 4 | 36% |
| No | 7 | 64% |

The table revealing interesting insights. Results showed a divergence in teachers' views on the ethical use of QuillBot for paraphrasing or summarizing. Where (36%) teachers considering it ethical act. Conversely, (64%) of teachers considered it as unethical act. Those teachers who chose 'No', suggested strategies for ethical usage, such as using the tool in initial writing stages, learning from mistakes, or identifying linguistic problems.

Question 12: In your opinion, what motivates your students to utilize QuillBot?

Table 31:

Motivations Behind Students' Use of Quillbot

| Option | Votes |
|---|-------|
| Save Time | 10 |
| Enhance Writing Skills | 7 |
| Improve Vocabulary and Language Proficiency | 5 |

Based on teachers' opinions, time efficiency is the primary motivator for students using QuillBot, followed by enhancing writing skills and improving language proficiency. Other

motivations provided by teachers include technological curiosity and language proficiency concerns. In general, teachers believed that saving time is a priority for students to use Quillbot.

Question 13: From your experience, what are the challenges faced by students when using QuillBot?

Table 32:

Student Challenges in Using Quillbot: Teachers' Perspectives

| Option | Votes | Percentage |
|--|-------|------------|
| Potential Errors in The Paraphrased Text's Grammar or Meaning | 8 | 73% |
| Failure to skilfully Integrate the Written Text Into Their Own Writing | 8 | 73% |
| Comprehension of The Recommendations being Difficult | 5 | 45% |

The table results suggested that (73%) of teachers believed that most significant challenges students face when using QuillBot are skilfully integrating the paraphrased text into their own writing. As well as potential errors in the paraphrased text's grammar or meaning, this indicated a lack of technical and linguistic skills to handle different issues.

Question 14: Could Using QuillBot in writing a thesis affects learners' writing skill in future occasions? Please explain.

Table 33:

Impact of Quillbot on Future Writing Skills in Thesis Writing

| Option | Number of Votes (n=10) | Percentage |
|-----------------|------------------------|------------|
| Positive Impact | 3 | 30% |
| Negative Impact | 7 | 70% |

The table revealed a split in teachers' views on the use of QuillBot in thesis writing. A majority of teachers (70%) stated it negatively impacts students' future writing skills. This

choice was justified by the reasons that students may become dependent on apps, losing self-confidence and motivation, and they should correct mistakes with their supervisor's help. However, three teachers said it positively students' future writing skills; their justifications were using QuillBot to recognize errors, enhance writing skills, and practice writing. writing.

Question 15: According to you, what is the significance of using QuillBot in academic writing?

The qualitative data analysis of teachers' responses revealed four key benefits, including enhancing language skills, paraphrasing, vocabulary enrichment, and sentence formulation. Nevertheless, teachers noted its efficiency in facilitating the writing process and saving time. More importantly, the central theme that dominated the teachers' answers was using QuillBot as an initial assistant tool for the writing process and to overcome writer block.

Question 16: Do you believe that QuillBot can help students in writing a good dissertation? Whatever your answer is, please explain.

Table 34:

Teachers' Views on QuillBot's Role in Enhancing Dissertation Writing

| Option | Yes | No |
|-----------------|------|----|
| Teachers (n=11) | 11 | 0 |
| Percentage | 100% | 0% |

All teachers surveyed (100%) agreed that QuillBot can assist students in writing a quality dissertation. From the qualitative analysis of the teachers' explanations, five teachers highlighted QuillBot's role in language improvement. However, the rest of the teachers expressed concerns about potential dependency on the tool, emphasizing the importance of balanced use and self-reliance. These results indicate a consistent teacher's perception of QuillBot's utility in academic writing.

Question 17: Tick the correct answers from the following, QuillBot can improve:

Table 35:

Teachers' Views on QuillBot's Role in Enhancing Dissertation Writing

| Option | Selections |
|------------------------|------------|
| The grammar accuracy | 10 |
| The content of writing | 6 |
| Richness of ideas | 3 |
| Strength of arguments | 3 |
| Other answers | 0 |

The table shows that all teachers agreed that QuillBot is most recognized for improving grammar accuracy. It's also seen as beneficial for enhancing the content of writing, while its impact on idea richness and argument strength is less acknowledged. The table indicated that teachers are aware of the QuillBot's main features.

Question 18: Do you recommend your students to use QuillBot in writing their dissertation? Justify.

Table 36:

Teachers' Selection of QuillBot's Improvement Areas

| Choice | Yes | No |
|-----------------|-----|-----|
| Teachers (n=11) | 5 | 6 |
| Percentage | 45% | 55% |

Teachers' recommendations on using QuillBot for dissertation writing were divided, with 45% endorsing it and 55% rejecting it. This contrast in choices is explained by the teacher's justification, where five teachers acknowledged its role in language improvement and six other teachers emphasized the importance of independence and effort in dissertation writing.

Question 19: Can QuillBot replace human teachers in terms of providing feedback and enhancing the quality of writing dissertation?

All teachers stated that QuillBot cannot replace human's feedback. Nevertheless, some teachers viewed it as a tool offering limited assistance; others underscored the irreplaceability of human creativity, stressing the unique value of humans' creativity in academic writing.

- **Section Five: Further Suggestions**

If you have further suggestions regarding the use of QuillBot in writing a Master thesis, please add them.

Although the number of responses received were less, most responses advocated a cautious approach when it comes to incorporating tools like QuillBot into the writing process. They highlighted the importance of developing self-reliance and consistent practice in writing skills. The teachers have expressed concerns that overreliance on automated tools may hinder a student's ability to write independently and think critically. However, teachers' responses acknowledge that QuillBot, when used appropriately, can be a valuable aid, enhancing students' writing by offering suggestions for improvement and helping them overcome challenges in grammar and style. suggesting that technology can be a useful supplement but should not replace basic skills that can be acquired through dedicated practice.

2.2.4 Discussing the Findings of the Teachers' Questionnaire

The results collected from the questionnaire served to teachers provided insightful perspectives on the use and perception of artificial intelligence tools, specifically QuillBot, in writing a master dissertation. The findings are interpreted as follows:

Firstly, the study reveals that teachers have found four key benefits of using artificial intelligence tools, specifically QuillBot, in writing master dissertations. These include vocabulary enrichment, paraphrasing, and sentence formulation, as well as its reliability and efficiency in facilitating the writing process and saving time. However, few teachers struggle to detect QuillBot's use in students' work, with 64% of teachers considering it unethical for tasks like paraphrasing and summarizing. Some teachers suggest strategies for ethical use, such as using the tool in initial writing stages, learning from mistakes, or identifying linguistic problems. Secondly, the primary motivations for students to use QuillBot are related to the challenges they face when writing their dissertations, which may stem from unclear research questions, poor organization, inadequate literature reviews, and poor writing skills. Teachers recommend that students enhance their dissertation writing through books, guides, online tutorials, and courses. For the findings analysis, it has been shown that teachers acknowledge QuillBot's features, such as improving grammar and writing content, but less about its impact on idea richness and argument strength. They also emphasize that tools like QuillBot cannot replace human feedback and creativity in the writing process. 70% of teachers believe QuillBot negatively impacts students' future writing skills and may make them dependent on AI tools, while 30% believe it can positively impact them if used cautiously.

In conclusion, teachers advocate a balanced approach to using tools like QuillBot. They stress the importance of self-reliance and practice in writing skills, while at the same time acknowledging the benefits of AI tools and the capabilities they can offer. This suggests that

technology can supplement, but cannot replace, humans' role in helping students write a good dissertation.

2.2.5 Correlation between Students and Teachers' Findings

The results obtained from both student and teacher questionnaire analyses show a positive correlation between students' and teachers' perceptions of QuillBot in writing a master's dissertation. Firstly, both students and teachers demonstrated a greater awareness of AI tools and their potential capabilities in improving the writing process. Secondly, both students and teachers acknowledge that writing a dissertation is indeed challenging due to various aspects, such as a lack of a clear research plan and weak writing skills. Furthermore, both students and teachers recognize the benefits of QuillBot for various tasks, such as paraphrasing, improving text structure, grammar, and plagiarism checking. In addition, they believe that QuillBot can be beneficial for producing originality and quality in texts, as well as its contribution to time efficiency in the writing process. However, despite its benefits, both students and teachers agree that QuillBot cannot replace human feedback and creativity in writing a dissertation. Lastly, students and teachers raise concerns about the potential impact of QuillBot on students' future writing, where both groups recognize the importance of self-reliance and developing their writing skills. To summarize, students and teachers' perceptions of AI tools show several positive correlations in terms of QuillBot's effectiveness and benefits.

Conclusion

This chapter presented a synthesis of findings from the two questionnaires on the use of QuillBot in academic writing, specifically a master's dissertation. The majority of students have used QuillBot in their writing, primarily for paraphrasing and grammar checking, and they generally rate their experience positively. On the other hand, teachers also perceive QuillBot as beneficial for improving grammar accuracy and enhancing writing content. However, they recommend responsible use of AI tools such as QuillBot and emphasizing the importance of self-reliance in writing. Both students and teachers recognize the potential drawbacks of dependence on such tools. Finally, students are advised by teachers to consider various strategies, including books, guides, and online courses, to enhance their dissertation writing.

Limitations

Important results were produced despite theoretical limitations and empirical limits, as no physical copies of sources were provided, emphasizing the complexity of understanding artificial intelligence from various perspectives.

- The data was gathered within a brief timeframe.
- Using a questionnaire as a self-reported instrument may not accurately depict reality and does not ensure learners' sincerity.
- Several aspects could not be controlled; for instance, students' motivation, perception, and challenges are more likely to influence the results.
- Some participants did not submit their replies.

Recommendations

Academic research utilizes AI for effective teaching and student engagement, but its accuracy and prompting depend on specific methods, ensuring fairness and accuracy in the research process. Offer comprehensive training sessions for both students and teachers to familiarize them with the functionalities and benefits of AI writing tools like Quillbot offer comprehensive training sessions for both students and teachers to familiarize them with the functionalities and benefits of AI writing tools like Quillbot.

- Promoting Transparency in AI Use in Academic Writing
- Encourage open dialogue about AI use in writing tasks.
- Integrate AI writing tools like Quillbot into curriculum.
- Provide guidance and feedback for students to experiment with Quillbot.
- Address perceived threats or anxieties.
- Highlight AI tools complement traditional writing skills, enhancing productivity and creativity.
- Establish clear assessment criteria for AI-integrated writing assignments.
- Offer constructive feedback on integrating AI content into writing.
- Foster a culture of experimentation and innovation in academic writing.
- Showcase successful AI integration examples.
- Continuously evaluate the effectiveness of AI tools.
- Solicit user feedback and adjust training materials, support resources, and curriculum integration strategies

General Conclusion

In this study, the aim was to investigate and understand students and teachers' perceptions of artificial intelligence tools, specifically Quillbot, in the context of academic writing. The research questions include, are students familiar with the use of artificial intelligence tools like QuillBot as writing tools? What are QuillBot's most frequently used features by students? What are students' and teachers' perceptions about using QuillBot when writing a master's dissertation? What are the potential benefits and shortcomings of using artificial intelligence tools like QuillBot?

Based on the collected data, and after examining various viewpoints and experiences related to Quillbot, the research questions are addressed in the following manner. First, it is concluded that most students are aware of AI writing tool, and rate their experience using these tool, such Quillbot, as very positive. And in the same way, most of teachers admit their students' familiarity with AI tools. Second, in terms of the most used QuillBot's features by students were paraphrasing and summarizing, this is due to the speed and quality of outputs provided by Quillbot, which students cannot achieve by manual paraphrasing or summarizing. Third, in term of students' perception towards the use of Quillbot in writing their dissertation, it is concluded that students have higher degree of conformity and satisfaction when using Quillbot in writing their dissertation, due to the ease and richness of features offered by Quillbot. While in the other hand, teachers perceive Quillbot as a beneficial tool for dissertation writing, recognizing its efficiency and time saving features. And yet, teachers have expressed ethical considerations such as authenticity of students' work in academic writing. As a result, they advocate a responsible use of such AI tools, asserting self-reliance and practicing academic writing. Lastly, in terms of benefits of using Quillbot, it is concluded that both students and teachers find Quillbot beneficial for paraphrasing, vocabulary enrichment, and improving sentence formulation, and most importantly a time saver tool. In terms of its

shortcomings, a minority of students find Quillbot challenging, which can be due to lack of technical experience with technology. Nevertheless, a significant majority of teachers believe that over-dependence on AI writing tools can negatively impact students' future writing skills.

To Conclude, this research has focused on the perceptions of student and teachers about QuillBot's contribution to dissertation writing. Nevertheless, it also emphasizes the need for careful use of AI writing tools, ensuring that these tools enhance the development of personal writing skills and creativity instead of replacing it.

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Appendices

\Appendix A

Students' Questionnaire

Dear master two students

You are kindly requested to answer this questionnaire that tackles the use of Artificial intelligence particularly QuillBot in academic writing

Please indicate your option by marking the appropriate box and offer a complete statement when required

* Indicates required question

Section One: General Information

1. 1) How old are you? *

Tick all that apply.

18-20

20-30

30-40

2. 2) Gender *

Mark only one oval.

Male

Female

Section Two: Writing a Master Dissertation

3. 3) In your opinion, the most difficult and complicated skill is: *

Mark only one oval.

Writing Reading

listening Speaking

4. 4) How often do you write? *

Mark only one oval.

Always

Sometimes

Rarely

Never

5. 5) What kind of academic writing do you write? *

Mark only one oval.

Essays

Articles

Dissertations

6. 6) Have you ever participated in workshops particularly focused on guiding students to write a master dissertation? *

Mark only one oval.

Yes No

7. 7) Was writing your master dissertation a challenge? *

Mark only one oval.

Yes N

8. If yes, what are the challenges have you faced? *

9. 8) How do you describe your experience with summarizing and paraphrasing when writing your thesis? *

Section Three: Artificial Intelligence (Quillbot)

10. 9) Have you ever used Artificial intelligence in your academic papers? *

Mark only one oval.

Yes

No

11. If yes, which tools have you used?

Mark only one oval.

Quillbot

Chatgpt

Grammarly

12. 10) Have you ever used Quillbot? *
Mark only one oval.

Yes No

13. If yes, how do you rate your experience with this programme? *
Mark only one oval.

Excellent

Good

Bad

14. 11) How often do you use Quillbot? *
Mark only one oval.

Always

Often

Rarely

Never

15. 12) QuillBot is an effective tool for paraphrasing texts? *
Mark only one oval.

Strongly agree

Agree

Neutral

Disagree

Strongly Disagree

16. 13) Do you think Quillbot saves time compared to manually paraphrasing texts?
Please elaborate *
-
-

17. 14) Do you think that using Quillbot overtime enhances your writing skill on the long run? *
Mark only one oval.

yes No

18. If yes, please explain *

19. 15) What benefits do you get when using Quillbot? *

20. 16) What is the most effective feature of QuillBot do you use? *
Mark only one oval.

- The paraphraser
- The grammar checker
- The plagiarism checker
- The co-writer
- The summarizer
- Citation generator

Section Four: Significance of Using Quillbot in Writing a Master Dissertation

21. 17) Have you previously used Artificial intelligence for writing a master dissertation? *
Mark only one oval.

- Yes No

22. 18) How comfortable are you with using technology in your academic work? *
Mark only one oval.

- Comfortable
- Very comfortable
- Neutral
- Uncomfortable
- very uncomfortable

23. 19) What is your perception of using artificial intelligence tools like QuillBot for writing your dissertation? *
Mark only one oval.

- Positive
- very positive
- Neutral
- Negative

very negative

24. 20) Which aspects of your dissertation did you use Quillbot for? *
Mark only one oval.

- Generating ideas
- paraphrasing and re-wording
- Improving sentence structure
- all of them

25. Other Please Specify *
-

26. 21) What are the reasons that make you use Quillbot in writing your dissertation? *
Mark only one oval.

- Quality of generated content
- Originality and plagiarism issue
- Dependency on technology
- Saving time and effort

27. Others please mention them *
-

28. 22) Please share your personal experience with using QuillBot tools for writing your dissertation? *
-
-

29. What did you find helpful?
-
-

30. What challenges did you face? *
-
-

Section five:

31. Please add any further suggestions *

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Google Forms

Appendix B

Teachers' Questionnaire

Dear Teachers

You are kindly requested to participate in answering this questionnaire which aims to investigate the use of Artificial Intelligence tools specifically QuillBot used in writing Master dissertation.

Please put a cross X in the appropriate box and provide a complete statement when necessary.

Section One: General Information

1. Degree Hold:

Magister Doctorate

2. How long have you been teaching English?

Section Two: Writing A Master Dissertation

1. Have you supervised master dissertation before? If yes, How many?

Yes No

If yes, how many?

2. What are the key components of a well-written Master dissertation?

- Clear and Focused Research Question
- Comprehensive Literature Review
- Well Organized Structure
- Other please specify

3. Throughout your experience as a university teacher, what kind of mistakes students make when writing their dissertation?

- Lack of Clear Research Questions
- Poor Organization and Structure
- Inadequate Literature Review
- Others:

4. What are the common challenges students encounter when writing their dissertation?

- Time management
- Writer's block
- Handling feedback
- Others

5. What do you recommend for your students to enhance their writing of dissertation?

- Books or guides on dissertation writing
- Online writing tutorials and courses
- Peer feedback and writing groups
- Others

Section Three: Artificial Intelligence (QuillBot)

1. Are your students aware of Artificial Intelligence tools?

- Strongly Agree Agree Neutral
 Disagree Totally Disagree

2. To what extent do you believe your students are familiar with QuillBot?

- Totally familiar Familiar

Neutral Not Familiar

3. Have you noticed any signs of using QuillBot in your students' work?

Yes No

4. Do you think it is an ethical act to use QuillBot when paraphrasing or summarizing?

Yes No

5. If no, in what way can learners maximize benefiting from this tool still in a more ethical manner?

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

6. In your opinion, what motivates your students to utilize QuillBot?

- To Enhance Writing Skills
 - To Improve Vocabulary and Language Proficiency
 - To Save Time
 - Others please specify
-

7. From your experience, what are the challenges faced by students when using QuillBot?

- Potential Errors in The Paraphrased Text's Grammar or Meaning
 - Failure to skilfully Integrate the Written Text into Their Own Writing
 - Comprehension of The Recommendations Being Difficult
 - Others please mention them
-

8. Could Using QuillBot in writing a thesis affects learners' writing skill in future occasions?

Positive Impact Negative Impact

Please justify

Section Four: Significance of Using QuillBot in Writing a Master Dissertation

1. According to you, what is the significance of using QuillBot in academic writing?

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

2. Do you believe that QuillBot can help students in writing a good dissertation?

Yes No

Whatever your answer is, please explain

.....

3. Tick the correct answers from the following, QuillBot can improve:

- The grammar accuracy
- The content of writing
- Richness of ideas
- Strength of arguments
- Other Answers

4. Do you recommend your students to use QuillBot in writing their dissertation?

Yes No

Justify

5. Can QuillBot replace human teachers in terms of providing feedback and enhancing the quality of writing dissertation?

.....
.....

.....

Section Five: further suggestions

If you have further suggestions regarding the use of QuillBot in writing a Master thesis, please add them.

.....

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الملخص

أدى انتشار الذكاء الاصطناعي في العديد من المجالات، بما في ذلك التعليم، إلى تحول كبير. وفي هذا السياق، إكتسبت الأدوات المدعومة بالذكاء الاصطناعي مثل كويلبوت شهرة بين الطلاب الذين يهدفون إلى تعزيز قدراتهم الكتابية. إن مدى مساهمة كويلبوت في تحسين الكفاءة الكتابية أصبح موضوع أكثر أهمية في العصر الرقمي الحالي؛ ومع ذلك، لا يزال هذا الموضوع غير مستكشف إلى حد كبير. تهدف هذه الدراسة إلى استقصاء وفهم تصورات الطلاب والأساتذة حول أدوات الذكاء الاصطناعي، وتحديدًا كويلبوت، في الكتابة الأكاديمية. لتحقيق هذه الأهداف، شملت الدراسة على الأسئلة التالية: هل الطلاب على دراية باستخدام أدوات الذكاء الاصطناعي مثل كويلبوت كأدوات للكتابة؟ ما هي ميزات كويلبوت الأكثر استخدامًا بين الطلاب؟ ما هي تصورات الطلاب والمعلمين حول استخدام كويلبوت عند كتابة رسالة الماجستير؟ ما هي الفوائد وأوجه القصور المحتملة لاستخدام أدوات الذكاء الاصطناعي مثل كويلبوت؟ من أجل الإجابة على هذه الأسئلة، تضمنت الدراسة على استبيانين، حيث تم تسليمهما إلى 62 طالبًا من طلاب الماجستير و11 أستاذًا في قسم اللغات الأجنبية في المركز الجامعي بميلة. أظهرت النتائج أن كلاً من الطلاب والمدرسين ينظرون بشكل إيجابي إلى تأثير كويلبوت على تعزيز الكفاءة الكتابية لمذكرة الماجستير في اللغة الإنجليزية كلغة أجنبية. كما أظهرت النتائج أن كلا المشاركين يدركون مدى فائدة كويلبوت في إعادة الصياغة وفي إثراء المفردات وتحسين صياغة الجمل، والأهم أنه أداة فعالة في توفير الوقت.

الكلمات المفتاحية: الذكاء الاصطناعي، طلاب اللغة الإنجليزية كلغة أجنبية، أدوات الكتابة بالذكاء الاصطناعي، كويلبوت، الكتابة

الأكاديمية

Résumé

La diffusion de l'intelligence artificielle (AI) dans divers domaines, y compris l'éducation, a entraîné une transformation significative. Des outils alimentés par l'IA tels que QuillBot gagnent en popularité parmi les étudiants qui cherchent à améliorer leurs compétences en rédaction. L'impact de QuillBot sur l'amélioration des compétences en écriture est devenu un sujet de plus en plus important à l'ère numérique actuelle, bien qu'il soit largement inexploré. Cette étude vise à examiner et à comprendre les perceptions des étudiants et des enseignants concernant les outils d'intelligence artificielle, en particulier QuillBot, dans le domaine de la rédaction académique. Pour atteindre ces objectifs, les questions suivantes se posent : Les étudiants sont-ils familiers avec l'utilisation d'outils d'intelligence artificielle tels que QuillBot comme outils d'écriture ? Quelles sont les fonctionnalités de QuillBot les plus utilisées par les étudiants ? Quelles sont les perceptions des étudiants et des enseignants concernant l'utilisation de QuillBot lors de la rédaction d'un mémoire de master ? Quels sont les avantages potentiels et les inconvénients de l'utilisation d'outils d'intelligence artificielle tels que QuillBot ? Afin de répondre à ces questions, deux questionnaires ont été élaborés et distribués à 62 étudiants en master et à 11 enseignants du Département de langues étrangères du Centre universitaire Mila. Les résultats ont montré que les étudiants et les enseignants perçoivent de manière positive et reconnaissent l'impact transformateur de QuillBot sur l'amélioration de la compétence rédactionnelle des mémoires de Master en anglais langue étrangère (EFL). Ils reconnaissent tous les deux QuillBot comme étant bénéfique pour le paraphrasage, l'enrichissement du vocabulaire, l'amélioration de la formulation des phrases, et surtout, comme un outil permettant de gagner du temps.

Mots-clés: AI, EFL étudiants, outils d'écriture AI, QuillBot, rédaction académique

