# Paraphrasing Prowess: Unveiling the Insights of EFL Students and Teachers on QuillBot Mastery

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***Abstract*—Artificial Intelligence-mediated (or AI-mediated) technology has significantly enhanced teaching and learning environments, particularly in developing students' paraphrasing skills. However, research on students' and teachers' perceptions of AI tools in academic writing is limited. As a result, this study aims to identify English as a Foreign Language (EFL) students' and teachers' perceptions of using QuillBot to learn paraphrasing skills. It also examines whether students' gender and level of study, as well as teachers' qualifications and experience, affect their responses. The study employed a descriptive survey method along with a convenience sampling method to select a study sample of 115 students and 44 teachers. Additionally, a semi-structured interview was conducted with a purposive sample of 13 students to explore their views on utilizing QuillBot. The findings revealed that (i) students and teachers perceived that QuillBot can greatly enhance paraphrasing skills; (ii) students' gender and level of study did not affect their answers as well as teachers' qualifications and years of experience; (iii) the participants' role (whether student or teacher) did not impact their responses; and (iv) students had a high perception of using QuillBot. The researchers recommend QuillBot as a learning tool for mastering paraphrasing skills.**

***Keywords*—QuillBot, English as a Foreign Language (EFL) writing context, paraphrasing skills, descriptive survey design, students' and teachers' insights**

## I. Introduction

One of the most challenging and sophisticated forms of writing is academic writing. Academic writing demands that students not only be eloquent writers but also be critical thinkers. Consequently, in English as a Foreign Language (EFL) settings, there has been a global focus on enhancing academic writing. One of the crucial elements of academic writing courses is the development of paraphrasing skills. These skills hinge on demonstrating students' mastery of the language by effectively paraphrasing unfamiliar texts [1].

Due to their limited vocabulary and a lack of awareness of complex grammatical patterns, EFL students often face challenges in developing their paraphrasing abilities. This concern extends to EFL students worldwide, as many believe that merely changing a few words or altering sentence order is sufficient for paraphrasing. The entire scholarly community is deeply interested in this intricate subject [2].

Students can develop proficient paraphrasing skills through extensive reading, enhancing both their general and academic vocabulary, and maintaining regular writing practices [3]. Nevertheless, with social media and cutting-edge technology dominating the world, teachers face challenges in engaging students with writing. The prevalence of students' mobile phone obsession often leads to frequent distractions in the classroom. It is widely observed that distractions in today's technology-driven age predominantly stem from the use of gadgets.

As a result, existing literature has sought to identify ways to overcome this barrier through technological innovation [4, 5]. This stands out as the most effective technique for harnessing students' enthusiasm for technical devices. Artificial Intelligence (AI), a pivotal component of technology, significantly influences nearly every aspect of our lives, including teaching and learning methods. With the assistance of AI, machines can now perform tasks comparable to those that humans usually carry out while also learning from their experiences and adapting to new inputs.

Technological advancements can lead to innovative teaching and learning experiences for both teachers and students, encompassing evaluation, tutoring, content development, and feedback. A prevalent contemporary trend in language schools involves the integration of artificial intelligence-based technologies, particularly in writing classes [6]. In this scenario, technology based on artificial intelligence, often referred to as paraphrasing tools, is employed to assist students with paraphrasing activities. Bin and Michael [7] define paraphrasing tools as programs that allow users to alter text without altering the original meaning.

QuillBot stands out as one of the most popular online programs for paraphrasing writing lessons. Powered by artificial intelligence and natural language processing technology, QuillBot is a versatile writing tool that serves as an AI writing assistant that aids in rephrasing and restructuring sentences, paragraphs, or articles. Additionally, it also enables users to write more efficiently by leveraging cutting-edge AI to generate new sentences, paragraphs, and complete articles. As an AI writing tool, QuillBot proves valuable in assisting students with the structure and content of their writing, providing substantial support for EFL students aiming to enhance their writing skills [8].

Numerous studies suggest that online paraphrasing tools such as paraphrase-tool.com, QuillBot.com, prepotseo.com, and spinbot.com can be beneficial in addressing students' challenges in academic writing [9−11]. QuillBot offers a solution by aiding in paraphrasing when instructors or students lack the time to perform it manually [11]. The tool is also user-friendly; users simply input or paste content, press the Paraphrase button, and QuillBot paraphrases it [12].

Furthermore, QuillBot offers automatic writing evaluation

and grammar check features that have proven to be beneficial for teachers, authors, bloggers, students, and various other users [13]. Students generally hold positive perceptions and attitudes toward AI-powered Automatic Paraphrasing Tools (APTs), viewing them as useful tools with a significant impact on their academic writing process [14]. Automated paraphrase systems contribute to text organization, information simplicity, and conceptual growth [15]. They can generate sentences that are identical to those in the original text but possess a distinct syntax [16] and improve students' paraphrasing skills [17]. In addition, they may help students overcome challenges when writing academic EFL papers, thereby enhancing the quality of their writing [18]. Still, while APTs can be beneficial for EFL students, it is essential to avoid excessive reliance on them. Students should learn how to paraphrase independently to ensure the appropriateness of the texts produced by APTs [19].

The literature review underscores the significance of AI-mediated tools in academic writing classrooms, yet few studies have delved into the perspectives of both students and teachers in Arabic-speaking countries on the use of AI-mediated tools for paraphrasing. Given the widespread use of AI tools in academic writing learning, understanding how teachers and students perceive these tools is crucial. Undoubtedly, paraphrasing, a vital component of academic writing courses, is directly associated with QuillBot, an AI-mediated application that aids students in paraphrasing. Therefore, the present study aims to address the following questions:

1) What are the perceptions of EFL students and teachers regarding the use of QuillBot for developing paraphrasing skills?

2) Are there any statistical differences in the students' responses based on gender and study level or in the teachers' responses based on qualifications and experience?

3) Are there any statistical differences in the respondents' answers based on their roles (student or teacher)?

4) What are the views of EFL students, including their experiences, constraints, and the extent of their learning concerning the utilization of QuillBot to enhance their paraphrasing skills?

## II. Literature Review

The current study aligns with Bem's [19] self-perception theory to establish an understanding of how it might be implemented in an educational context. The self-perception theory is based on the concept that individuals interpret their own actions in the same manner as they interpret the actions of others, and that the social environment rather than one's free will influence each individual's activity [19]. Numerous studies have demonstrated that the attitudes and views of both teachers and students play a crucial role in influencing the integration of technology in education. According to Chai *et al.* [20], analyzing students' perceptions of learning with technology can contribute to enhancing educational programs. Abdullahi [21] posits that if educators receive sufficient training and are provided with more opportunities to engage with technology, their attitudes toward its incorporation in the classroom may evolve. Schuck and Kearney [22] discovered that students' attitudes toward Interactive White Boards (IWBs) tend to be more positive. The study also illustrates how perspectives on technology influence its ease of use. Such insights are crucial in the development of instructional programs.

The theoretical framework of the current study aligns with Computer-Assisted Language Learning (CALL), where learning content is presented, reinforced, and assessed using computers, computer-based resources, and educational apps [23]. With computers, language learners can access endless resources to enhance their proficiency in reading, writing, grammar, listening, pronunciation, vocabulary, idioms, slang, English as a Second Language (ESL) tests, and even conversation [24]. Lee [25] suggests that the incorporation of CALL in EFL classrooms can enhance learners' motivation and improve their achievements. Gruba [26] states that CALL contributes to the creation of new learning opportunities. Zhang [27] suggests that technology should be viewed not merely as a tool for achieving academic goals but also as a catalyst for shaping the educational culture.

In the last decade, computers have been increasingly used in education, particularly for second or foreign language acquisition. This trend has led to CALL becoming an integral part of the language learning process in the third millennium [28]. Chapelle [29] highlight CALL's influence on sociology, psychology, education, and linguistics. They emphasize the necessity for effective CALL programs and practices while also underscoring the importance of tailored training and support for teachers, with a focus on educational applications rather than the technology itself. Lam and Lawrence [30] discovered that when computers are utilized in a communicative classroom, the traditional roles of teachers and students undergo a shift. In a digitally advanced setting, students may take charge of their learning by acquiring knowledge and creating meaning.

Acknowledging the crucial role of technology in today's digital world, the current study specifically focuses on the use of AI-mediated tools like QuillBot. QuillBot is an educational program that leverages technology to enhance writing experiences, including the development of paraphrasing skills. This learning environment offers opportunities for teachers and a tailored learning experience for students, particularly those utilizing QuillBot to enhance their paraphrasing skills.

Research indicates that employing AI-mediated IT tools such as QuillBot to enhance paraphrasing skills has contributed to the development of a positive attitude among students towards utilizing QuillBot for improving their paraphrasing skills [10]. In their study, Alammar and Amin [18] employed both qualitative and quantitative approaches to explore how EFL students experienced using AI paraphrase tools. The findings revealed that EFL students held positive attitudes toward AI-driven Automated Paraphrasing Tools (APTs); moreover, they perceived them as useful tools with a significant impact on their academic writing process. Liu *et al.* [31] emphasized the utilization of various AI tools to enhance the teaching-learning process. Their research revealed that multiple AI tools can create a more comprehensive learning environment, particularly by enhancing writing abilities among EFL students. Similarly, Ouyang *et al.* [32] explored the impact of AI on education, and the research findings indicated that teachers who

incorporated a variety of AI technologies to enhance the learning experience contributed to an improvement in students' overall academic performance, including their writing skills. Lu [33] conducted a study on artificial intelligence writing assessment systems and Automated Writing Evaluation (AWE) involving 30 teachers and 200 students and utilizing both qualitative and quantitative data. The findings suggest that the adoption of AWE effectively aids students in their English writing. AWE has been well-received by both teachers and students due to its ability to provide quick and clear feedback, save time, and stimulate students' interest in English writing.

Sulistyaningrum's [34] study on students' attitudes and perceptions of social media technology revealed that, while most students are aware of its potential for educational purposes, concerns about rules and regulations, as well as the inability to control it, were raised. In a follow-up study, Chen *et al.* [35] developed a corpus-based paraphrasing tool to assist EFL students in improving their writing skills. The results suggest that their online corpus-based paraphrasing tool, PREFER, could be beneficial for EFL students struggling with paraphrasing, meeting their writing needs, and enhancing their writing abilities. Zulfa *et al.* [36] conducted a qualitative study involving 73 participants. The findings suggest that incorporating technology tools into English academic writing can bring about changes in the development and evaluation of writing skills.

Kurniati and Fithriani's [37] study aimed to investigate professors' attitudes toward online learning. The survey revealed that, on average, teachers held positive attitudes toward online classrooms during the epidemic. Despite encountering some technical difficulties, the majority of professors expressed appreciation for their online teaching experience.

According to the study of Hieu *et al.* [38] in Vietnam, Vietnamese EFL learners held positive opinions regarding the impact of QuillBot on their writing performance. Xuyen [39] conducted a quantitative survey with 220 students to gain insight into their attitudes toward using the online paraphrasing tool. The findings indicate that participants hold a positive view of QuillBot and that this online paraphrasing tool influenced their attitude toward source text paraphrasing as well as their language development.

In a descriptive qualitative study evaluating the use of QuillBot to paraphrase students' scientific writing and reduce plagiarism, Fitria [40] utilized observation as the primary data collection instrument. The study suggests that students can utilize QuillBot to rewrite any text or as an alternative tool when faced with challenges in paraphrasing manually. Fadda [41] selected fifty postgraduate students to participate in his study. The results demonstrate that students encounter a broad spectrum of difficulties and pressures in academic writing. These challenges include distinguishing spoken English from written English, outlining before starting a draft, identifying the skills required for successful writing, and avoiding common words and expressions. Fitria [42] conducted a study that employed descriptive qualitative methods to assess the efficacy of QuillBot as an artificial intelligence tool system for students' rewriting and paraphrasing in English writing. The findings indicate that QuillBot can employ a variety of strategies in paraphrasing text that include the use of synonyms or equivalents, altering a word's form, utilizing active or passive phrases, and changing the word order in sentences.

The primary focus of the studies has been on enhancing paraphrasing skills with the aid of QuillBot, the AI-mediated tool. While QuillBot has proven effective in improving paraphrasing skills, it is imperative to explore its application to other writing skills as well. The existing literature review indicates numerous studies examining various aspects of QuillBot. However, the research gap pertains to the perceptions of QuillBot's use in enhancing paraphrasing skills among teachers and students in the EFL academic writing teaching and learning context.

## III. Materials and Methods

The researchers adopted a descriptive-survey research design, a methodology commonly employed across various disciplines. Descriptive survey research involves systematically collecting and analyzing data related to a specific population or phenomenon. Researchers utilize surveys or questionnaires to elucidate the characteristics, behaviors, or attributes of the subject under investigation. The primary objective is to obtain a detailed portrayal of prevalent features within the population, which is often achieved through closed-ended questions for categorizing responses. Subsequently, the collected data undergo analysis to reveal patterns and trends, providing a snapshot of the current scenario. This research approach refrains from manipulating variables or establishing causal relationships, instead focusing on delivering a comprehensive and precise representation of the subject at hand and contributing to an enhanced understanding of its characteristics [43]. The data were collected through a questionnaire and semi-structured interviews with respondents regarding their perceptions of using QuillBot to develop EFL paraphrasing skills among preparatory year students. Below, Fig. 1 illustrates the flow of the research methodology.

### *A. Population and Sample of the Study*

The study comprised 170 students and 50 teachers from preparatory year writing courses in the third semester of 2023. The convenience sampling method was employed to select the study sample. The questionnaire link was shared with the targeted population and remained open for three weeks. After refining the responses, 115 students (67.6%) and 44 teachers (88%) constituted the final study sample. Additionally, after obtaining their approval, 13 students were purposefully selected for semi-structured interviews. These students ranged in age from 16 to 20 and aspired to become medical, engineering, and computer science professionals.

Most of the students are high school graduates and Saudi citizens from Najran, Saudi Arabia. The demographic sample includes both males and females. The selected teachers are preparatory year teachers at Najran University and represent various nationalities such as Indian, Pakistani, Sudanese, Egyptian, Jordanian, Egyptian-American, British, and the like. They were categorized based on their qualifications and years of experience. The demographic sample encompasses both males and females. Table 1 indicates that the study sample comprised 115 students (67.6%) of the total student population of 170) and 44 teachers (88% of the total teacher population of 50).

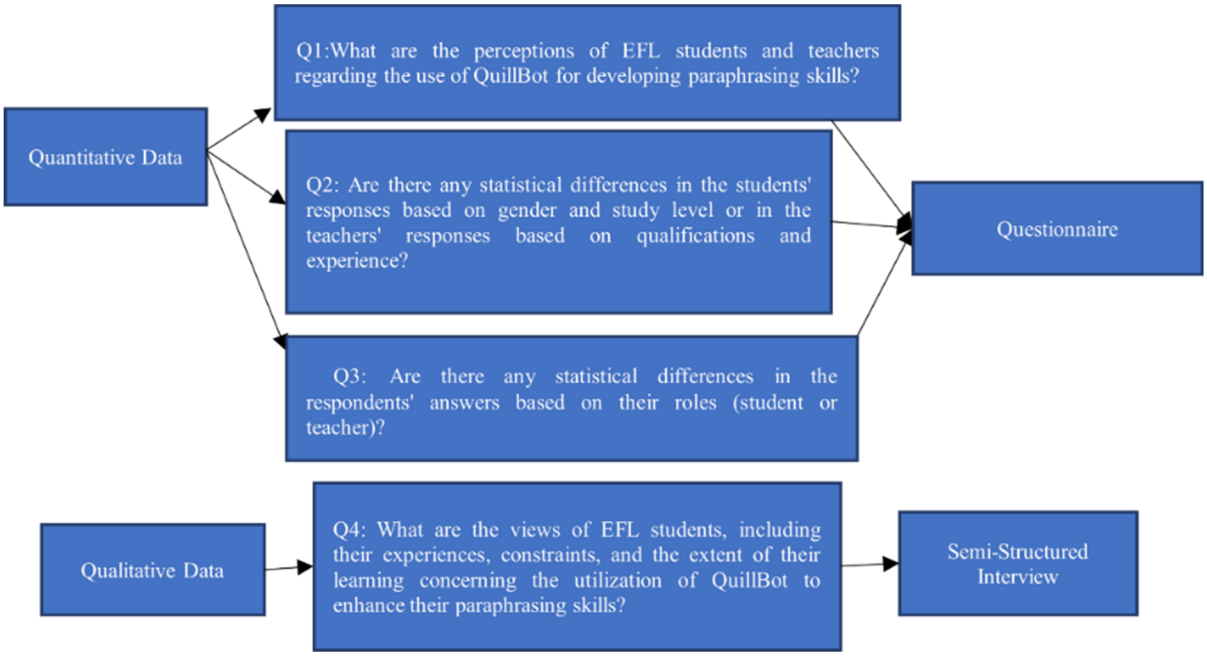


Fig. 1. The research methodology flow.

Table 1. The distribution of the study sample according to variables

| Participants | Variables | Group | No. of population | No. of sample | % |
|---|---|---|---|---|---|
| Students | Study level | Level 1 | 48 | 32 | 66.6 |
| | | Level 2 | 57 | 39 | 68.4 |
| | | Level 3 | 65 | 44 | 67.6 |
| | Gender | Male | 84 | 57 | 67.8 |
| | | Female | 86 | 58 | 67.4 |
| | | Total | 170 | 115 | 67.6 |
| Teachers | Qualification | Master | 26 | 21 | 80.7 |
| | | Doctorate | 24 | 23 | 95.8 |
| | Experience | Less than 10 years | 23 | 20 | 86.9 |
| | | 10 years or more | 27 | 24 | 88.8 |
| | | Total | 50 | 44 | 88.0 |

### B. Ethical Approval

The reference number for the study's ethical approval is 011078-024177-DS. Before getting the student's consent, they were informed of the entire research process. They were then asked if they would engage in the study willingly. Moreover, individuals could drop out or not respond to any questions at any time, even if they had previously consented to participate. They were also allowed to ask questions concerning the research. Additionally, they were also informed that participation in the study would provide them with no direct or indirect benefits. Furthermore, the participants were told that any information they provided for the study would be kept strictly confidential and would not be utilized for any other reason than research. Finally, they were also encouraged to contact any of the researchers if they had any questions.

### C. Tools of the Study

To address the research questions, the researchers gathered data through questionnaires and semi-structured interviews. The questionnaire aimed to capture the perceptions of both students and teachers regarding the use of QuillBot in developing EFL paraphrasing skills among preparatory year students enrolled in writing courses. It comprised ten items focusing on key aspects of how teachers and students perceive the utilization of QuillBot for EFL paraphrasing skills development. The questionnaire statements were identical for both students and teachers. A closed-item questionnaire format was employed to assess the perceptions of EFL students and teachers regarding the use of QuillBot for improving paraphrasing skills. Furthermore, the questionnaire was developed based on the researchers' teaching experience and a thorough review of the literature [6, 15, 18]. Creswell [44] used the questionnaire to collect data because ''surveys help discover important ideas and attitudes of individuals'' (p. 6). The questionnaire comprised two sections: nominal data, which gathered participants' demographic information, and ordinal data, which captured the opinions of EFL students and teachers regarding the use of QuillBot to develop paraphrasing skills. On average, the questionnaire took approximately 20 minutes to complete. Participants responded utilizing a five-point Likert scale, where 1 indicated "Strongly Disagree", 2 "Disagree", 3 "Neutral", 4 "Agree", and 5 "Strongly Agree".

#### 1) Semi-structured interview

A semi-structured interview was conducted to explore the factors influencing EFL students' perceptions of using QuillBot to enhance their paraphrasing skills. This interview aimed to capture students' first-hand experiences with AI technology. The researchers formulated the interview questions and content based on their teaching experience and consultation with previous studies [45–47]. One of the researchers conducted semi-structured interviews that lasted approximately five to ten minutes for each participant.

Subsequently, researchers performed a content analysis on the interview data following Braun and Clarke's proposed methodology [45]. The semi-structured interview questions revolved around the following prompts: experiences, constraints, and the extent of learning (link).

*2) Validity*

The study tools, including the questionnaire and interview questions, underwent verification for content and construct validity. A panel of nine specialists possessing extensive teaching expertise and specializing in technology-assisted language learning and teaching validated the tools. Their evaluation focused on the tools' ability to collect data to address the research questions and achieve the study objectives. The jury also addressed linguistic and wordiness concerns during the validation process. Following the review, the jury confirmed the tools' suitability for answering the study questions and proposed the following language and wordiness changes:

- Suggested using words and expressions that better represent students' and teachers' perceptions of the tool.
- Advised including 10 items instead of 8.
- Suggested minimizing the number of questions and using prompts to facilitate students in brainstorming.
- Advised stimulating students to express their perceptions about paraphrasing through technology-mediated AI tools.

In addition, the questionnaire underwent a pilot test with a sample of 20 students and teachers who were subsequently excluded from the main study. Pearson's correlation coefficients were calculated between the items. The total score and results are presented in Table 2.

Table 2. Pearson's correlation coefficient between items with the total score

| Item | Correlation Coefficient | Sig. | Item | Correlation Coefficient | Sig. |
|---|---|---|---|---|---|
| 1 | 0.697** | 0.001 | 6 | 0.697** | 0.001 |
| 2 | 0.643** | 0.002 | 7 | 0.640** | 0.002 |
| 3 | 0.792** | 0.000 | 8 | 0.764** | 0.000 |
| 4 | 0.827** | 0.000 | 9 | 0.825** | 0.000 |
| 5 | 0.857** | 0.000 | 10 | 0.753** | 0.000 |

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

In Table 2, the Pearson correlation coefficients between the items and the total score were found to be statistically significant at the 0.01 significance level. The Pearson correlation coefficients ranged between 0.640 and 0.857, significant at the 0.01 level. These values indicate the questionnaire's internal consistency in effectively fulfilling the study objectives.

*3) Reliability*

To assess the reliability of the questionnaire, both split-half and Cronbach's alpha techniques were employed. A survey pilot sample comprised of twenty students and teachers not included in the study's core sample was utilized for this evaluation. The Cronbach's alpha reliability coefficient was found to be 0.92, while the split-half method yielded a reliability coefficient of 0.89. These values signify that the study tool exhibits high reliability.

### *D. Data Analysis*

Utilizing Pearson's correlation coefficients for validity assessment and Cronbach's alpha and split-half (Guttman) reliability coefficients for reliability assessment, the researchers employed SPSS version 23 to analyze the data from the test. Additionally, averages, standard deviations, and ranks were calculated to address the first question regarding the perceptions of students and teachers. The researchers used the following scale based on the range equation to measure the degree of compliance of the items and domains of the study instrument, thus establishing the degree of approval as follows: 1−1.80 = very low, 1.81−2.60 = low, 2.61−3.40 = medium, 3.41−4.20 = high, and 4.21−5.00 = very high. The study sample's mean scores on gender, qualification, years of experience, and participant role (addressing the second and third questions) were compared, and the significance of these differences was assessed using the t-test for independent samples after verifying the normality of data distribution with the Kolmogorov-Smirnova test. Furthermore, a one-way analysis of variance was employed to address the second question related to the level variable.

## IV. Result

### *A. EFL Students' and Teachers' Perceptions of Using QuillBot to Learn Paraphrasing Skill*

Table 3 shows that the total score for teachers' perceptions of utilizing QuillBot for developing EFL paraphrasing skills was high (M = 3.73, SD = 1.057). The means for the items ranged from 3.51 to 3.87, with all items receiving high scores except for item 1, which received an average score. This result suggests that teachers believe QuillBot can significantly enhance EFL paraphrasing skills among preparatory year students.

Table 3. Means, standard deviations, and rank of the study sample's responses to using QuillBot to learn paraphrasing skills

| No. | Item | Means | Std. deviations | Rank | Level |
|---|---|---|---|---|---|
| 1 | QuillBot can be used to divide a longer sentence into shorter one | 3.51 | 1.411 | 10 | High |
| 2 | QuillBot improves paraphrasing with special reference to grammatical transformations | 3.74 | 1.187 | 5 | High |
| 3 | Paraphrasing (joining shorter sentences with sentence connectors) with QuillBot can be adaptable | 3.76 | 1.159 | 6 | High |
| 4 | QuillBot keeps the original meaning intact while paraphrasing the text | 3.62 | 1.221 | 9 | High |
| 5 | QuillBot assists in practicing paraphrasing using different vocabulary, grammar, and writing styles as opposed to the traditional way of learning | 3.72 | 1.198 | 4 | High |
| 6 | QuillBot provides an opportunity to experiment with different structures in paraphrasing | 3.87 | 1.161 | 1 | High |
| 7 | QuillBot can be used as a tool for maintaining the main idea of a passage while paraphrasing | 3.77 | 1.157 | 3 | High |
| 8 | QuillBot improves vocabulary and helps acquire different semantic and syntactic structures needed in paraphrasing. | 3.76 | 1.222 | 7 | High |
| 9 | QuillBot minimizes mistakes when paraphrasing (understanding long texts in smaller groups of sentences on their own) | 3.69 | 1.243 | 8 | High |
| 10 | QuillBot offers all the features required for paraphrasing the text. | 3.85 | 1.159 | 2 | High |
| | The total degree of perceptions toward QuillBot | 3.73 | 1.057 | | High |

### B. Students' Responses by Gender and Study Level and Teachers' Responses by Qualifications and Experience

#### 1) The impact of study level on students' answers

In Table 4, it is evident that there were no statistically significant differences in preparatory year students' opinions about using QuillBot to improve their paraphrasing abilities based on the study level variable. The significance level (0.138) of the F-value was higher than 0.05. This result suggests that the variable of study level did not have a significant effect on preparatory year students' perceptions of utilizing QuillBot to develop their paraphrasing skills.

Table 4. One-way analysis of variance based on level of study (students)

| Source | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 0.397 | 2 | 0.198 | 0.138 | 0.871 |
| Within Groups | 93.369 | 113 | 1.436 | | |
| Total | 93.766 | 115 | | | |

#### 2) The impact of gender on students' answers

From Table 5, it is evident that there were no statistically significant differences between genders at the 0.05 level. This result suggests that the gender variable did not have a significant impact on preparatory year students' perceptions of using QuillBot to improve their paraphrasing skills.

Table 5. T-test for any variations in the replies of the study sample due to the gender of the students (male, female)

| Gender | N | Mean | Std. Deviation | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|
| Male | 57 | 3.52 | 1.177 | −0.580 | 113 | 0.564 |
| Female | 58 | 3.69 | 1.200 | | | |

#### 3) The impact of qualification on teachers' answers

Based on Table 6, there were no statistically significant differences at the 0.05 level for teachers' perceptions of using QuillBot to learn paraphrasing skills among preparatory year students based on the qualification variable. The significance level of the t-value was greater than 0.05. This result indicates that the variable of qualification did not significantly impact teachers' perceptions of using QuillBot in developing EFL paraphrasing skills among preparatory year students.

Table 6. T-test for any differences in the study sample's responses attributed to teachers' qualifications (master, doctorate)

| Qualification | N | Mean | Std. Deviation | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|
| Master | 21 | 4.00 | 0.729 | 0.557 | 42 | 0.581 |
| Doctorate | 23 | 3.86 | 0.825 | | | |

#### 4) The impact of years of experience on teachers' answers

In Table 7, it is apparent that there were no statistically significant differences in instructors' perceptions of using QuillBot to increase paraphrasing skills among preparatory year students based on experience. The significance level of the t-value was greater than 0.05. This result indicates that the experience variable did not significantly impact teachers' perceptions of using QuillBot to assist preparatory year students in developing EFL paraphrasing skills.

Table 7. T-test for differences in the replies of the study sample due to teachers' years of experience

| Experience | N | Mean | Std. Deviation | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|
| < 10 years | 20 | 4.17 | 0.722 | −1.815 | 42 | 0.077 |
| 10 years or more | 24 | 3.74 | 0.768 | | | |

### C Are There any Statistical Differences in the Respondents' Answers Based on Their Roles (Student or Teacher)?

As indicated in Table 8, there were no statistically significant differences at the 0.05 level for respondents' perceptions of using QuillBot to develop EFL paraphrasing skills among preparatory year students based on their participation role as role as a student or a teacher. The significance level of the t-value was greater than 0.05. This result suggests that the participation role of either student or teacher did not have a significant influence on their perceptions of using QuillBot in developing EFL paraphrasing skills among preparatory year students.

Table 8. T-test for any differences in the study sample's responses attributed to participation role

| Participant | N | Mean | Std. Deviation | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|
| Students | 115 | 3.61 | 1.183 | −1.566 | 157 | 0.120 |
| Teachers | 44 | 3.93 | 0.769 | | | |

### D EFL Students' Views of Utilizing QuillBot to Enhance Their Paraphrasing Skills

One of the research objectives was to conduct personal interviews with students to understand their perceptions, including their experiences, constraints, and the extent of learning regarding the use of QuillBot to enhance their paraphrasing skills. After a careful examination of the interview contents, the analysts categorized them into three groups: experiences, constraints, and the extent of learning. The main points were then highlighted to identify major themes. Students expressed enhanced enthusiasm, engagement, productivity, and brilliance in developing their writing abilities, particularly paraphrasing skills. However, students identified several issues that they encountered while using QuillBot. The following excerpts showcase the participants' views, encompassing experiences, constraints, and the extent of learning:

(S1) "QuillBot helps learn vocabulary."

(S5) "QuillBot provides new sentence structures."

(S6) "QuillBot is easy to use."

(S7) "QuillBot offers many easy words to replace difficult words."

(S8) "QuillBot helps rephrase many times."

(S9) "QuillBot helps in paraphrasing a phrase or a sentence."

(S10) "I learned how to paraphrase with the help of QuillBot."

(S11) "QuillBot makes writing class very interesting."

(S12) "QuillBot helps learn the proper use of language."

(S13) "It is good that QuillBot helps in doing homework to paraphrase exercises."

(S14) "Mobile phones are not good for paraphrasing as the messages from other social media disturb us."

(S15) "It is difficult to use QuillBot as everything is in English."

(S16) "QuillBot blocks my thinking."

(S17) "I feel dependent on QuillBot."

(S18) "QuillBot makes me confused with different new words and structures."

## V. Discussion

The findings revealed a consensus among both students and teachers that QuillBot can significantly enhance the paraphrasing skills of preparatory year EFL students in an English language writing class. Respondents acknowledged that QuillBot offers a valuable opportunity to explore new structures in paraphrasing, providing all the necessary features to effectively rephrase the text. Moreover, QuillBot can serve as a tool for retaining the main idea of a text while paraphrasing and for facilitating the practice of paraphrasing using varied vocabulary, syntax, and writing styles, contrasting with the conventional high-level learning approach. The preference for AI-mediated tools such as QuillBot among students can be attributed to their user-friendliness. Given that most students are tech-savvy, the adoption of the AI tool QuillBot was well-received by them.

Recognizing the pivotal role of perception in learning academic writing, it becomes evident that individuals' understanding and interpretation of writing tasks significantly influence their engagement and proficiency levels. Emphasizing the meaningfulness and importance of academic writing, positive perceptions foster motivation, enthusiasm, and a constructive outlook. This perspective encourages students to perceive writing not merely as an assignment but as a tool for critical thinking and effective communication. Conversely, negative perceptions, where writing is viewed as uninteresting or unimportant, can hinder the learning process, leading to resistance and apathy. Teachers can shape students' perspectives by highlighting the practical applications of writing, providing insightful feedback, and creating engaging tasks. This approach ultimately enhances the learning experience and refines academic writing skills.

The findings of the present study support Miranda's [16] findings, which claim that students using a paraphrasing tool can improve their understanding of the context of a text, help them learn unfamiliar words, and improve the overall quality of their writing. The findings align with another study by Xuyen [39], who argues that QuillBot paraphrasing modifies the original sentence, allowing authors to quickly amend and alter the source content. The study's findings are in line with the conclusions of another study by Aqiilah and Zalfa [46], who state that many EFL students use the online paraphrasing tool QuillBot to overcome paraphrasing challenges such as finding synonyms, merging sentences, and changing sentence structures. This finding is similar to Zimmerman and Labuhn's [48] findings, which assert that online learning environments may make it easier for students to study, encourage them to participate more actively in their writing, experience positive effects, and continue their practice with perseverance, motivation, and confidence. The findings are consistent with Ariyanti's [49] findings that using a variety of technology to learn languages and teach students boosts motivation while reducing fear. In addition, the findings are consistent with another study by Moore and MacArthur [50], who claim that students receive real-time feedback via technology, eventually driving them to revise and like the process of writing more than the outcome. The outcomes of this study agree with Aqiilah and Zalfa [46], who revealed that motivation is a crucial element in the language learning process.

However, the study's findings contradict those of Hew and Cheung [51], who found that the use of technology does not appear to have a beneficial overall influence. The study's findings contrast another study by Rogerson and McCarthy [1], who warn about the risks of these digital writing tools and their potential misuse, which could lead to new sorts of plagiarism, among other things. The study contradicts another study by Burkhard [52], who argues that AI-powered writing tools are often used unattended and without additional instructions (e.g., no opportunity to ask questions) and that students may require supervision and assistance from the teacher when using those tools.

Similarly, the results indicated that students' gender and level of study had a limited impact on their perceptions of using QuillBot to enhance EFL paraphrasing skills among preparatory year students. This result could be attributed to QuillBot's popularity among both male and female college students, with teachers on both sides actively incorporating technology into their teaching methods. Additionally, students from all levels utilize QuillBot in academic writing programs, particularly when faced with challenges in the paraphrasing unit.

The findings of this study contradict those of Cahyono and Rahayu [53], who assert that female EFL students have higher levels of writing skills than male EFL students. The findings also contradict the findings of Williams and Takaku [54], who claim that female students used the QuillBot more efficiently than male students because of differences in motivation and attitude. The reasons for this contradiction could be ascribed to the fact that there is little difference in students' knowledge when their levels 1 or 2 alter, particularly in their preparatory year at Najran University. The advanced-level course is just an integration of several skills learned at lower levels.

In addition, it was demonstrated that teachers' qualifications and years of experience had little effect on their perceptions of utilizing QuillBot to improve EFL paraphrase skills among preparatory year students. The reasons could be that teachers with varying degrees of experience and qualifications teach the same topic levels using the same textbooks. Researchers did not find any study that reports similar findings. The findings of this study contradict those of Alshammary *et al.* [55], who claim that there is only a minor association between academic qualification and writing evaluation, as well as between writing proficiency and writing assessment. The link between teaching experience and writing assessment, on the other hand, was moderate. Moreover, the respondents' role (whether as student or instructor) did not affect their perceptions about utilizing QuillBot to enhance EFL paraphrasing skills among preparatory year students. Researchers found no studies that supported or contradicted these conclusions.

The findings of the semi-structured interview are consistent with the conclusions of another study by Burkhard [52], who states that students had a positive view of writing tools powered by AI because they only mentioned the benefits of these tools and did not raise any ethical concerns or adverse effects. On the other hand, the findings of the study contradict those of Ozer and Badem [56], who contend that students' negative perceptions of online learning appear to outweigh the beneficial effects.

The findings from the semi-structured interview on the constraints of utilizing QuillBot to enhance EFL paraphrasing skills among preparatory year students are in line with another study by Ariyanti and Fitriana [57], who reported that students were having difficulty dealing with grammar and spelling errors while paraphrasing. Moreover, during the interview, students admitted that an occasional beep of messages on WhatsApp also caused disturbances for them. The language barrier was another issue faced by learners as some of them did not understand the target language used on QuillBot. Students felt that QuillBot blocked their faculty of creativity as there was a ready-made solution available for every problem. Moreover, too much information also led some of the students to confusion. These issues might be resolved if students practice utilizing the tool regularly. To not block the creativity of students, teachers should suggest ways to use the tool more creatively.

According to the discussion, there have been various studies that have discussed QuillBot and its multiple advantages. The results of the research cited in the discussion section show that they partially or entirely support or contradict the current study. Nonetheless, studies revealing EFL students' and teachers' perspectives on QuillBot mastery in terms of paraphrasing prowess are infrequent. The novelty of the current study lies in the fact that it addresses an issue that has not previously been addressed, particularly at Najran University.

The current research employed a convenience sampling approach due to difficulties in reaching the target population, which might constrain the generalizability of the findings. Limitations are evident in the sample size, potentially impacting the capacity to draw robust conclusions. While the study instruments prioritized validity and reliability, the results are inherently bound by these factors. Furthermore, the assessment of EFL paraphrasing skills was restricted to utilizing QuillBot as a paraphrasing tool, thus limiting the extension of results to other platforms.

## VI. Conclusion

The study aimed to assess the perceptions of both EFL students and teachers regarding the use of QuillBot for enhancing paraphrasing skills, revealing positive attitudes towards its utility. Importantly, no significant differences were observed in responses based on various demographic factors. Semi-structured interviews further indicated the optimistic views of students on the tool's efficacy in improving paraphrasing skills. The study's practical contributions lie in its potential benefits for educators and learners struggling with academic writing skills in an EFL setting. However, the findings also highlight potential issues, such as disruptions from messaging apps, language barriers, and information overload. To enhance practical applications, educators could address these challenges by minimizing distractions, promoting creativity, and offering strategies to manage information effectively. Additionally, the study suggests that further research with larger and more diverse samples encompassing various academic and geographical contexts is warranted to validate and extend these findings.

## Conflict of Interest

The authors declare no conflict of interest.

## Author Contributions

TM, AA, MN, SK conducted the research; AA analyzed the data; TM, AA, MN, SK wrote the paper; all authors had approved the final version.

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