

## Research Article

# EFL paraphrasing skills with QuillBot: Unveiling students' enthusiasm and insights

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EFL students' attitudes are crucial for the development of writing abilities, which in the age of cutting-edge technology depend extensively on artificial intelligence-mediated tools, and paraphrasing draws no exception. Therefore, this study aims to identify English as a foreign language student's enthusiasm and insights about utilizing QuillBot to improve their paraphrasing skills. To achieve the study objectives, the quasi-experimental design was employed. Thirty-one preparatory year students were recruited to answer a questionnaire and semi-structured interview having verified the validity and reliability of the instruments. The sample of the test demonstrated that students improved their performance in synonyms, sentence structure, and word choice. The respondents hold high enthusiasm and insights toward utilizing QuillBot to improve their paraphrasing skills. In addition, students had positive feelings about utilizing QuillBot to improve their paraphrasing skills. In light of the findings, the researchers recommended employing QuillBot in a writing class while learning paraphrasing skills.

Keywords: QuillBot; Saudi EFL context; Paraphrasing skills; Enthusiasm and insights

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## 1. Introduction

Attitude, a firm opinion or feeling about something, is an individual's perspective on a situation and largely affects one's success in all spheres of life with no exception of teaching and learning situations. According to Baker (1992), an attitude is a concept that helps to understand how people behave. As well, the Oxford Advanced Learners Dictionary defines attitude as the way one feels or acts toward something that expresses thoughts and feelings. Ajzen (2005) asserts that personality characteristics and attitudes are hypothetical constructs that cannot be observed directly and must be deduced from measurable responses. These responses must indicate positive or negative judgments of the attitude object. He defines an attitude as a proclivity to respond positively or negatively to an item, person, institution, or event. Attitude refers to how students react to things in their environment, such as teachers or subject matter (Gardner, 2000). Scholars argue that attitudes and their relationship with language learning have numerous implications. Positive

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language attitudes, according to Karahan (2007), enable learners to have a positive attitude toward learning English. In addition, Starks and Paltridge (1996) state that learning a language is directly linked to attitudes about languages. Cabansag (2013) observes that having a positive attitude means understanding the significance of the English language and accepting it as a necessary course to learn. Students grasp knowledge if they have positive attitudes toward the target language; therefore, English teachers should consider students' feelings, beliefs, and behavior that directly link with their enthusiasm and insights before attempting to address the intended knowledge of the target language. According to Popham (2011), the reason why positive attitudes toward learning must be promoted is that students who have a positive attitude toward learning today are more likely to pursue learning in the future. It is believed that a person's language attitude determines whether they do well or poorly. Spolsky (2000) believes that learners' attitudes about the language show their attitude, positive attitude concerns, feelings, or prejudices toward learning English as a second language. In general, student attitudes, skills, and approaches are thought to influence their ability to acquire the intricacies of language (Nunan, 2000; Oxford, 1990).

Moreover, attitudes play an important part in language learning especially writing skills since they might affect students' success or failure in this particular skill. Students should ideally have a good attitude toward writing because it can assist them in attaining better writing results. According to research, there is a link between a good attitude and writing ability (Hashemian & Heidari, 2013). Teachers have utilized a variety of procedures to foster a positive attitude toward writing ability. One of the efforts that aids in the development of a positive attitude is the incorporation of technology into the EFL writing classroom. According to studies, students generally have a favorable attitude toward technology integration in the EFL classroom. It is also worth noting that the digital age is changing how students improve their writing skills, and teachers are utilizing new tools that aid in pedagogy in a variety of ways. Because of the rise of new technology and the internet, students' writing habits in academic writing and language acquisition are changing (Moore et al., 2016; Peters & Cadieux, 2019). Technology in today's globalized world witnesses many digital advancements including AI. AI and natural language processing result in increasingly sophisticated language and writing tools (Geitgey, 2018; Heaven, 2020). New AI-powered writing tools have evolved, many of which are freely available on the Internet (Kinden & Prentice, 2018; Rogerson & McCarthy, 2017). Fageeh (2011) argued Weblogs can give learning motivation, authorship and readership chances, and potential for writing skill development. Rosell-Aguilar (2017) showed that AI was found to be beneficial in increasing self-efficacy, engagement, and academic emotion. According to Lynch (2018), modern teaching and learning can be accomplished by leveraging technology, such as digital tools because today's students are digital natives or members of the younger generation born after the development of technology (Fithriani, 2021). The majority of them are really useful for paraphrasing. For example, the AI tool QuillBot can be of great use to students. Scholars argue that integrating AI tools such as QuillBot is one of the efforts that has favorably engaged students in confronting the obstacles posed by writing abilities, particularly paraphrasing skills. According to Fitria (2022), paraphrasing involves changing the word/clause order, adding synonyms, changing the sentence structure from active to passive voice, and separating the information into several sentences. QuillBot is an AI application that not only helps students paraphrase the text but also helps them solve the obstacles that paraphrasing presents. QuillBot offers a solution that uses AI to paraphrase ideas (Dale, 2020)

The previous studies reveal that there have been many studies focusing on different aspects of the QuillBot. However, there has been little research into students' enthusiasm and insights toward utilizing QuillBot to develop paraphrasing skills, particularly at Najran University. This research is an attempt to focus on this most ignored area and achieve the following objectives.

1. to identify EFL students' enthusiasm and insights toward utilizing QuillBot to improve their paraphrasing skills.
2. to detect any statistical differences in the respondents' answers due to gender.

3. to explore students' feelings about utilizing QuillBot to improve paraphrasing skills.

## 2. Theoretical Framework

The theoretical foundation of the current study also partially aligns with Connectivism, the construct introduced by Siemens (2005), which admits that technology has a substantial role in the learning process and that utilizing technology provides us the chance to choose how we want to learn. The current study in inspiration of connectivism theory focuses on integrating AI-mediated tools like QuillBot, an educational app that uses technology, which assists in enhancing writing experiences including paraphrasing skills. This learning environment offers possibilities for teachers as well as a personalized learning experience for students, as is the case with students who use QuillBot to improve their paraphrasing skills. According to studies, employing AI-mediated IT tools, such as QuillBot has helped students create positive enthusiasm and insights toward utilizing QuillBot to improve their paraphrasing skills. Students are enthusiastic about utilizing an AI-mediated tool to improve their paraphrasing skills. Furthermore, some scholars claim that technologically mediated classrooms have improved students' learning experiences (Fitria, 2022; Nurul & Siti, 2021).

In this study, AI-mediated IT tools like QuillBot are utilized to improve students' paraphrasing skills. It has unquestionably benefited their educational experiences. The QuillBot gives professional learning opportunities for students because the AI tool teaches them so many things and the risks of human error are nearly none (Kurniati & Fithriani, 2022). As a result, it provides teachers with a form of professional orientation. QuillBot, an AI tool, also delivers a tailored learning experience for students because each student has their device, and the teacher pays attention to each student by going around the classroom. This learning approach has greatly aided students in their paraphrasing skills. QuillBot has undeniably enhanced students' attitudes toward utilizing QuillBot to improve their paraphrasing skills (Ginting & Fithriani, 2022).

Studies on students' utilization of technology including AI-mediated tools to enhance writing abilities have been conducted (Al-Haq & Al-Sobh, 2010; Fakhir, 2015; Gupta & Woldermarium, 2011; Zhu, 2001). Nazari et al. (2021) examined the efficacy of a group format of an Artificial Intelligence (AI) driven writing tool for English second postgraduate students in the English academic writing environment with 120 participants using a parametric test of evaluating covariance. According to the findings, AI-powered writing tools could be an excellent tool for boosting learning behavior and attitudinal technology adoption through formative feedback and assessment. New AI-powered writing tools available on mobile devices have the potential to assist students in gaining and developing writing skills that are difficult to learn through traditional training.

QuillBot is a well-known paraphrase tool. It provides a tool that employs artificial intelligence to recommend paraphrases, grammar checkers, summarizing, and even rewriting (Dale, 2020). Furthermore, in a descriptive qualitative study, Fitria (2022) employed observation as the primary data collection tool to evaluate the usage of QuillBot to paraphrase students' scientific writing to reduce plagiarism. Findings show that students can use QuillBot to rewrite any text or as an alternative tool when they are unable to paraphrase manually, according to the research. Furthermore, Kurniati and Fithriani (2022) investigated QuillBot as a digital tool for English academic writing with 20 post-graduate students specializing in English education. A questionnaire and a semi-structured interview were used to obtain data about the participants' viewpoints. The post-graduate students in this study favored using QuillBot to increase the quality of their writing, according to the data. Amanda et al. (2023) conducted a quantitative study to determine QuillBot's involvement in supporting English Foreign Language (EFL) writers. Questionnaires and interviews were used to collect data, which was then compiled and analyzed. According to the findings, students were generally positive about utilizing QuillBot to better their writing and discovered QuillBot's many student-friendly features.

While AI is a major topic in education, its usage in L2 writing presents several difficulties. There has been little research on digital writing applications in L2 writing scenarios. The findings have gotten less attention in the study. Although researchers have identified the AI effect on writing outcomes, it is still unknown how AIs shape learning behavior. Moreover, there has been little research on student enthusiasm and insights toward utilizing QuillBot to improve their paraphrasing skills, particularly at Najran University. The present research attempts to overcome this empirical gap by addressing the research questions:

RQ 1) What is the impact of using QuillBot on students' EFL paraphrasing skills?

RQ 2) What are student enthusiasm and insights about utilizing QuillBot to improve their paraphrasing skills?

RQ 3) What are EFL students' feelings about utilizing QuillBot to improve paraphrasing skills?

### **3. Method**

The study employed the quasi-experimental method research design. The data was collected through a questionnaire, a test, and a semi-structured interview with respondents concerning their enthusiasm and insights toward utilizing QuillBot to improve their EFL paraphrasing skills.

#### **3.1. Population and Sample**

Students enrolled in PY's Technical Writing course during the third semester of the 2023 academic year comprised the study population. Thirty-one students were included in the study sample. To fulfill the objectives of the study, one treatment section was selected by the purposive sampling method. The students are Arabic-speaking learners aspiring engineers, doctors, and computer science professionals who need to pass PY to resume their studies in the intended professional disciplines. They are a 16–22 year old age group. They go to PY following completion of upper secondary education and fulfillment of the prerequisites for enrollment in Najran University. They have completed their upper secondary education in Najran. They study English as a foreign language, and their proficiency level at the time of joining PY ranges between elementary and upper intermediate based the diagnostic test.

#### **3.2. Ethical Approval and Informed Consent**

The study's ethical approval reference number is 011078-024177-DS. Before obtaining the student's agreement, they were informed about the entire research process. They were asked if they would voluntarily take part in the study. Even if they agreed to take part, individuals were free to opt out or not respond to any questions at any moment. Additionally, they had the chance to ask queries about the research. They were also informed that taking part in the research would not provide them with any direct or indirect advantages. They received assurances that all information submitted for the study would be treated with the utmost confidentiality and would not be utilized for anything other than research. Additionally, they were instructed to get in touch with any of the researchers engaged in the study for more information and clarification.

#### **3.3. Instruments**

To address the research questions, the researchers employed a test, a questionnaire, and semi-structured interview.

##### *3.3.1. Test*

The test was developed by the researchers based on their teaching experience and the literature review (Creswell & Guetterman, 2019; Miranty et al., 2021; Marghany, 2023). The test aimed to assess the effectiveness of the instructional program by comparing the performance of pre and post-tests. The test was divided into three major themes: synonyms, sentence structure, and word choice. There were six items under the synonyms category. The students had to match the word with their context. It carries six marks, and every item was denoted one mark. There were five items under the sentence structure category. The students were provided with jumbled words, and



they were supposed to write them in proper sequence following subject, verb, and object patterns. It carries five marks, and every item was denoted one mark. There were eight items under the word choice category. The students had to choose a word from the box as per the context of the paragraph. It carries four marks, and every item has a denoted half mark. The total marks for the test were 15. The average time to complete the test was approximately 15 minutes. The pretest was administered to 70 students. As students did not perform well, the researchers provided them with a three-month instructional program. After the program was over, researchers administered the same test to mark the difference between the two. Students were neither provided the answers to the pretest nor were their mistakes discussed with them. Both tests were administered in the PY building by the researchers on the same population.

### 3.3.2. Questionnaire

The questionnaire contains ten items, which were based on key elements of EFL students' enthusiasm and insights about utilizing QuillBot to improve their paraphrasing skills. The items focused on whether students had a positive attitude while dealing with the most complicated parts of paraphrasing and how QuillBot facilitated their journey and developed their positive attitude. A closed-item questionnaire was utilized to highlight EFL students' enthusiasm and insights about utilizing QuillBot to improve their paraphrasing skills. The questionnaire was developed by the researchers based on their teaching experience and a review of the literature (Dale, 2020; Heaven, 2020; Karahan, 2007; Peters & Cadieux, 2019; Popham, 2011). The questionnaire was chosen to collect data by Creswell (2012), who believes that "surveys help discover important ideas and attitudes of individuals" (p. 6). The questionnaire was divided into two pieces. The first section offers demographic information on the participants. In the second section, there were statements about EFL students' enthusiasm and insights about utilizing QuillBot to improve their paraphrasing skills. The questionnaire took about 20 minutes to finish on average. The questionnaire used the Likert scale with five responses: 1 for strongly disagree, 2 for disagree, 3 for neutral, 4 for agree, and 5 for strongly agree.

### 3.3.3. Semi-structured interview

In addition, the semi-structured interview was conducted to know factors that develop EFL students' positive enthusiasm and insights about utilizing QuillBot to improve their paraphrasing skills. It was conducted to report on students' observations on how utilizing QuillBot developed Students' positive enthusiasm and insights. The interview questions/contents were developed based on the researchers' teaching experience and consultation with previous studies (Batubara & Fithriani, 2023; Genç-Ersoy & Göl-Dede, 2022; Ozer & Badem, 2022). One of the researchers conducted a semi-structured interview that lasted approximately 5-10 minutes for each participant. Finally, the data from the interview was content-analyzed following Braun and Clarke's (2006) model for analyzing qualitative data. The semi-structured interview question was asked under the following prompts: Views, opinions, beliefs.

## 3.4. Validity

The validity of the study tools was verified through content and construct validities. A jury of ten experts checked the study tools (test, questionnaire, interview). The jury specializes in technology-assisted language learning and teaching and has a very long teaching experience. They maintained whether the tools could collect data to answer the research questions and thus achieve the study objectives. Also, the jury highlighted language and wordiness issues. After evaluating the tools, the jury determined that they could respond to the research questions and made the following suggestions about language and wordiness. The jury of experts suggested using words and expressions, which represent the enthusiasm and insights level of students with the tool. They advised to include ten items instead of eight. In addition, they suggested minimizing the number of questions and using prompts to help students brainstorm. Moreover, it was advised to stimulate

students to come up with the feelings affecting enthusiasm and insights in paraphrasing through technology-mediated AI tools.

In addition, the internal consistency of the test and questionnaire was checked by applying it to an exploratory sample (n= 20) from outside the main study sample. Pearson's correlation coefficient was calculated between the questions and the total score. Table 1 shows the results.

Table 1

*Pearson's correlation coefficient between items with the total score*

No.	Question	Correlation coefficient	Sig.
1	Synonyms	.654**	.002
2	Sentence structure	.503*	.024
3	Word choice	.771**	.000

Note. \*\*. Correlation is significant at the 0.01 level (2-tailed), \*. Correlation is significant at the 0.05 level (2-tailed).

Table 1 shows that Pearson's correlation coefficients between the items with the total score were statistically significant at the significance levels of (0.01), (0.05). The correlation coefficients between the items with the total score of the scale ranged between (0.503 - 0.771). These values indicate the test's validity to achieve the study objectives.

Table 2

*Pearson's correlation coefficient between items with the total score*

Item	Correlation coefficient	Sig.	Item	Correlation coefficient	Sig.
1	.715**	.000	6	.709**	.000
2	.661**	.000	7	.648**	.000
3	.765**	.000	8	.731**	.000
4	.823**	.000	9	.788**	.000
5	.847**	.000	10	.754**	.000

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

The Pearson correlation coefficients between the items and the total score were statistically significant at the significance level (0.01), as shown in Table 2. Pearson correlation coefficients between items and total score ranged from (0.661\*\* to 0.847\*\*) and were statistically significant at (0.01). These scores demonstrate the questionnaire's internal consistency in accomplishing the study objectives.

### 3.5. Reliability

The reliability coefficients were calculated on the total score of the test through Cronbach's alpha equation and test-retest methods on a survey sample consisting of (20) students. Table 3 presents the reliability coefficients.

Table 3

*Cronbach's alpha reliability coefficient and test-retest coefficient on the total score of the tool*

Domain	Test-retest	Cronbach's alpha
Test	0.85	0.80
	Cronbach's alpha	Split-half (Guttman)
Questionnaire	0.91	0.88

Table 3 shows that the reliability coefficient by test-retest as a whole was (0.85) and that the reliability coefficient by Cronbach's alpha was (0.80). These values indicate that the study tool is reliable.

### 3.6. Instructional Program

Teachers of technical writing have been using Quillbot, an online paraphrasing tool, for more than four years. The third semester, which ran from January 2023 to April 2023, observed its use. The

program was tested in advance before being used. Due to the students poor pretest performance, the researcher created an instructional program that included the following steps:

Step 1. Students and teachers first attended a training workshop given by the researchers. The benefits of utilizing the Quillbot and how it operates were described to them.

Step 2. Ten sentences that focused on changing synonyms, sentence structure, and word choice were given to teachers and students.

Step 3. Teachers and students were instructed to type each statement, and then to hit the "paraphrase" button to have the phrases automatically paraphrased.

Step 4. At the conclusion of each lesson, teachers were required to commit fifteen minutes. Through the Quillbot, teachers were able to teach the lesson on synonyms, sentence structure, and word choice during this period.

Step 5. Students were happy to use online paraphrasing tools for the last fifteen minutes.

Step 6. For a duration of three months, teachers were instructed to carry out the same procedure.

Step 7. To gauge the program's impact, a post-test was also administered following three months of instruction via Quillbot.

Step 8. It was noted that students' competence in paraphrase skills had significantly improved.

### 3.7. Data Analysis

The data was analyzed by the researchers using SPSS version 23. Validity was assessed using Pearson's correlation coefficients, while reliability was assessed using Cronbach's alpha. Additionally, the significance of the variations in the mean scores of the treatment group members on the pre-and post-test was demonstrated using the t-test for paired samples. Furthermore, the effect size (effect size equation =  $t / \text{square root of the sample size}$ ) of the statistically significant changes was retrieved. Lastly, using Braun and Clarke's (2006) qualitative data analysis approach, the interview data was content-analyzed. The steps taken to analyze the qualitative data were as follows:

(1) The data was carefully read; (2) themes were developed from the data; and (3) the topics were checked to make sure the online AI tool for paraphrasing reflected the excitement and insights of the students. (4) Themes were identified and given names; (5) The exemplars of these themes were found.

## 4. Results

### 4.1. Impact of Using QuillBot on Students' EFL Paraphrasing Skills

Table 4 depicts the results of the t-test for paired samples to show the students' performance before and after the instructional program.

Table 4

*Paired samples statistics t-test for the significance of differences between the mean scores of the treatment group on the pre-and post-test*

Question	Test	Mean	SD	t	df	Sig.	Effect size	Level
Synonyms	Pre	.95	.813	-10.995	29	.000	1.84	Large
	Post	2.53	.754					
Sentence structure	Pre	.15	.511	-16.745	29	.000	3.05	Large
	Post	2.70	.726					
Word choice	Pre	.05	.201	-8.536	29	.000	1.56	Large
	Post	2.10	1.335					
Total	Pre	1.15	2.323	-10.601	29	.000	1.93	Large
	Post	7.33	5.257					

According to Table 4, there were statistically significant differences at the significance level of (0.05) between the mean scores of the treatment group members on the pre-and post-test. The

results came in favor of the post-test. The effect sizes of the test questions and total scores were high, except for the first question, which was small. This result means that the instructional program using Quillbot highly benefited students' paraphrasing skills in Technical Writing. Table 5 shows some students' works on paraphrasing skills before and after employing the instructional program.

Table 5  
Students' works on paraphrasing skills

Synonyms		
Sentence structure		
Word choice		

#### 4.2. Student's Enthusiasm and Insights about Utilizing QuillBot to Improve their Paraphrasing Skills

Table 6 depicts the results of the study sample's enthusiasm and insights to utilizing QuillBot in improving their paraphrasing skills. According to Table 6, the overall score for student enthusiasm and insights about utilizing QuillBot to improve their paraphrasing skills in English as a foreign language among preparatory year students came to a high degree (M=3.76, SD=1.25). The means on the items ranged between (3.46 - 3.96), and all of them received high degrees. Item 6 "QuillBot helps learn complex grammatical structures while paraphrasing" scored the highest degree (M=3.96, SD=1.34). Then, item 7 "QuillBot assists in punctuation while paraphrasing" followed (M=3.89, SD=1.20). Item 3 "QuillBot predicts synonyms of the words in a text" scored third (M=3.88, SD=1.30). Item 10 "QuillBot helps me acquire linguistic skills that aid in paraphrasing." had the lowest score (M= 3.46, SD=.933). Based on the results, it is noted that QuillBot highly affects student enthusiasm and insights toward utilizing it to improve their paraphrasing skills.

#### 4.3. Students' Feelings about Utilizing QuillBot to Improve Paraphrasing Skills

One of the study's three aims was to directly interview students to learn about the factors that influence students' positive enthusiasm and insights toward utilizing QuillBot to improve their paraphrasing skills. The major goal of the interview was to cross-validate the data collected via the questionnaire. The interview replies additionally record the students' individual opinions about the elements that contribute to students' good enthusiasm and insights toward utilizing QuillBot to



Table 6

Means, standard deviations, and rank of the study sample's responses to utilizing QuillBot to improve their paraphrasing skills

No.	Item	Means	SD	Rank	Level
1	QuillBot helps in express ideas in my own words	3.79	1.456	6	High
2	QuillBot familiarizes with a variety of sentence structures used in paraphrasing	3.82	1.283	4	High
3	QuillBot predicts synonyms of the words in a text	3.88	1.304	3	High
4	QuillBot eases technology use in improving paraphrasing skills	3.66	1.359	9	High
5	QuillBot improves vocabulary in terms of employing various words and phrases for paraphrasing	3.67	1.515	8	High
6	QuillBot helps learn complex grammatical structures while paraphrasing	3.96	1.340	1	High
7	QuillBot assists in punctuation while paraphrasing	3.89	1.204	2	High
8	QuillBot assists in honing my paraphrasing skills more effectively.	3.79	1.432	5	High
9	QuillBot helps me paraphrase difficult sentences (complex compound)	3.73	1.499	7	High
10	QuillBot helps me acquire linguistic skills that aid in paraphrasing.	3.46	.933	10	High
Total degree of enthusiasm and insights toward QuillBot		3.76	1.256		High

improve their paraphrasing skills. The information gathered was classified into three major categories: their thoughts, beliefs, and feelings regarding utilizing QuillBot to increase their paraphrasing skills. After carefully reading the content, the analysts divided the concepts into three categories (views, opinions, and beliefs). The key points were then emphasized to identify the major themes. Because it made them feel important, students were eager to express their ideas. The content analysis identified the key factors that develop a positive attitude toward utilizing QuillBot to hone one's paraphrasing abilities. Students had a high attitude when QuillBot was used to help them with their paraphrasing. As a result, students' enjoyment, engagement, productivity, and brilliance in developing their writing abilities, particularly paraphrasing skills were developed. The followings show the participants' views, opinions, and beliefs:

#### 4.3.1. Views

The perspectives of students on the utilization of QuillBot were disclosed. Upon scrutinizing the responses from the interviews, it became evident that the students harbor favorable veivs regarding QuillBot as a valuable resource for enhancing paraphrasing skills. They acknowledged the tool's role in expanding their vocabulary and expressed that it could assist in acquiring diverse and advanced language structures, thereby bolstering their command of language. Furthermore, the students perceived that using QuillBot contributed to an enhancement in their confidence levels, as they felt more adept at paraphrasing texts compared to their previous abilities. The ensuing excerpts serve as illustrations of the students' sentiments regarding QuillBot: I think QuillBot helps improve vocabulary (S1); QuillBot helps me learn new structures (S5); I feel confident using QuillBot (S6); I think QuillBot provides many easy words (S8); I think QuillBot helps rephrase (S7).

#### 4.3.2. Opinions

Students' opinions on the utilization of QuillBot were investigated, and the qualitative analysis revealed that students acknowledge the tool's capacity to simplify the paraphrasing process, making it more manageable. Another noteworthy feature that served as a motivational factor for students was the significant time savings, attributed to the tool's prompt responses. With students

taking responsibility for their own learning, the class became an enjoyable experience. The tool's provision of a varied vocabulary, ranging from easy to challenging, effectively addressed the diverse academic needs of students. The subsequent excerpts encapsulate the opinions expressed by students regarding QuillBot: QuillBot makes it easy to paraphrase a sentence (S9); Online paraphrasing encourages me as it saves time (S11); Using QuillBot in a writing class is very thrilling (S13); AI tool made it very motivating to paraphrase the text (S15); QuillBot has a good variety of vocabulary that makes it inspiring to learn new words and expressions (S26).

#### 4.3.3. Beliefs

Students express a belief in QuillBot's utility for solving paraphrase exercises and view it as a helpful tool in overcoming challenges associated with paraphrasing. Additionally, the anticipation of excitement regarding other features of QuillBot indicates a positive attitude toward the tool's extended capabilities. Moreover, the statement about QuillBot removing the fear of making mistakes highlights its role in fostering a supportive and confidence-building learning environment. Overall, the theme revolves around the positive influence of QuillBot and related educational support structures on the students' paraphrasing skills and learning experiences. Some of the statements were as follows: I believe QuillBot helps in solving paraphrase exercises (S18); I think mobile phones could be a great learning device in paraphrasing (S21); I believe other paid features of QuillBot will be more exciting (S23); Teacher's guidance and inspiration was a great source (S28); QuillBot assists in removing the fear of making mistakes (S30).

## 5. Discussion

### 5.1. Impact of Using QuillBot on Students' EFL Paraphrasing Skills

The result of the test's data showed that the treatment group had higher scores in the post-test compared to those in the pre-test. The effect sizes of the test questions and total scores were high, except for the first question, which was small. This result means that the instructional program using Quillbot highly benefited students' paraphrasing skills in Technical Writing. They perceive that QuillBot highly helps them learn complex grammatical structures while paraphrasing. Also, QuillBot predicts synonyms of the words in a text and helps them acquire linguistic skills that aid in paraphrasing. The reasons might owe to the fact that students were greatly interested and highly motivated to use AI mediated tool. The tool made it easier for the students to comprehend one of the most difficult topics in paraphrasing. As the students were already provided a training workshop, they did not feel any difficulty in using the tool. Students significantly improved their command on synonyms as the QuillBot provided them many synonyms of the same word. The findings align with another study by Fitria (2022) who proclaims that Quillbot is a timesaving tool that can assist in improving the text's clarity and finding appropriate synonyms. It makes things easier for students. The findings also support another study's findings by Miranda (2021) who states that by utilizing the paraphrasing tool, students can improve their understanding of the context of a text, learn new vocabulary, and increase the overall quality of their writing. The study samples reveal that students improved sentences structure by using the AI tool. Likewise, the results are consistent with another study by Sulistyningrum (2021), who confirms that online paraphrasing tools assisted students in overcoming challenges with academic writing in terms of content, structure, language use, and paraphrasing technique. Additionally, the paraphrasing tools assisted in rewriting the source text's sentence structure. Students were able to make a better choice of the words and vocabulary as the samples of the test demonstrate. The findings align with another study by Kurniati and Fithriani (2022), who felt that the employment of Quillbot was effective in enhancing their overall academic writing. Similar findings are reported in a study by Xuyen (2023) asserting that Quillbot paraphraser modifies the original sentence, allowing authors to easily edit and alter the source material. The study's findings are consistent with another study by Aqilah and Zalfa (2023), which claims that many EFL students use the online paraphrase tool (Quillbot) to get around paraphrasing difficulties including coming up with synonyms, combining

sentences, having better word choice, and changing sentence structures. However, the findings of the study contrast with a study by Huang and Liao (2013) that discovered that both postgraduates and undergraduates failed to write appropriate texts. The reasons for this included not having formally learned online paraphrasing tools and failing to transfer paraphrasing knowledge to writing due to a lack of experience and practice. The results may be different when the AI tool is implemented on advanced learners.

## **5.2. Student Enthusiasm and Insights about Utilizing QuillBot to Improve their Paraphrasing Skills**

The results showed that the overall score for student enthusiasm and insights about utilizing QuillBot to improve their paraphrasing skills in English as a foreign language among preparatory year students came to a high degree. This result means that the participants hold high enthusiasm and insights toward utilizing QuillBot to improve their paraphrasing skills. The reasons for these findings may be attributed to the fact that QuillBot is very popular among students. Students prefer technology-mediated to a traditional classroom. Another reason is that practically all students have smartphones or tablets, making it easy for them to use paraphrasing tools and affecting their attitude positively towards paraphrasing skills. Kurniati and Fithriani (2022) offer similar findings, asserting that employing QuillBot can positively improve students' writing attitudes by reducing their writing anxiety and increasing their confidence in the quality of their writing. Furthermore, the study's findings are consistent with Kelleher (2000), who states that the employment of AI technology, such as QuillBot drive, has been shown to considerably contribute to the enhancement of students' positive enthusiasm and insights throughout the academic writing process.

In a similar study, Khabib (2022) found that the majority of participants have a positive attitude towards utilizing AI-based tools to help write scientific articles. The findings also support the outcomes of another study by Marzuki et al. (2023), who claims that incorporating AI writing tools can help improve the quality of EFL student writing. The findings support another study by Warschauer (1996) that proposes a possible reciprocal association between having greater knowledge and experience with technology and having a good attitude toward it. Liu (2009) revealed in a similar study that students had largely good attitudes about ICT and the incorporation of technology into English learning. The findings are consistent with the conclusions of another study by Guo and Stevens (2011), who argue that positive attitudes are required for successful language acquisition processes and meaningful usage of technologies. Students demonstrated a more positive attitude toward technology.

The findings are consistent with the findings of another study by (Golonka et al., 2014), who assert that the fun factor associated with using technology in EFL learning appears to engage students in the learning process, and thus improve their enthusiasm and insights toward learning, as opposed to the lack of enjoyment associated with more traditional EFL teaching approaches. The findings align with another study by Graham et al. (2007) who assert that the results were quite valuable considering the contribution of positive attitudes and motivation towards writing. The findings of the study affirm the findings of another study by Knudson (1991) who states that positive attitudes towards writing are exhibited by better writers. The study's conclusions are consistent with another study by Burkhard (2022), who asserts that students' overall assessment of the effectiveness of writing tools is good.

However, the findings of the study somewhat contrast the findings of a study by Hew and Cheung (2013) who state technology itself cannot bring the desired results, but it depends upon how the technologies are used to help students enhance their performance. He also claims that the employment of technology does not appear to have a positive overall impact. The findings of this study contrast another study by Warschauer (1996) who asserts that the use of technology had no significant increase in learners' attitudes. The study's findings contrast another study by Rogerson and McCarthy (2017), 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 (2022), who claims that AI-powered writing tools are typically utilized unsupervised and without further instructions (no opportunity to ask questions) and that students may require supervision and help from the teacher when dealing with those tools. The reasons for this contrast could be related to the fact that improper usage of technology can have harmful consequences. According to Kranzberg (1986), technology is neither good nor harmful, nor neutral. A given technique can have several outcomes.

### 5.3. Student Feelings about Utilizing QuillBot to Improve Paraphrasing Skills

The results of the interview demonstrate that students' enthusiasm and insights reflect a positive perspective on utilizing QuillBot to enhance their paraphrasing skills. When QuillBot was employed to assist students with their paraphrasing, they displayed a positive attitude. Consequently, students' enjoyment, engagement, productivity, and brilliance in honing their writing skills, particularly their paraphrasing skills, were enhanced. The results of this study are consistent with those of another study by Burkhard (2022), according to which students had a favorable attitude about writing tools powered by AI because they only cited the benefits of these tools and did not raise any ethical questions or drawbacks. The study's findings are in line with those of another study by Zefran (2015), who claims that internal factors like attitude, apprehension, and self-confidence maintain a distinct influence on each student's success in their academic writing learning. The study's findings contradict those of Ozer and Badem (2022), who claim that students' unfavorable perceptions of online learning appear to outweigh the positive effects.

## 6. Conclusion

The study aimed to find out the EFL students' enthusiasm and insights about utilizing QuillBot to improve their paraphrasing skills. The samples of the test reaffirm that students improved significantly especially in three areas: synonyms, sentence structure and word choice. The results of the questionnaire display that EFL students' enthusiasm and insights had a positive outlook about utilizing QuillBot as it helped them deal with several challenges related to paraphrasing skills. The study's findings triangulate the data collected through quantitative and qualitative means. Students' views, beliefs, and opinions in utilizing QuillBot to improve paraphrasing skills demonstrated a positive attitude. The study implicates the importance of having positive enthusiasm and insights by EFL students who use AI-mediated tools like QuillBot to improve their writing skills in general and paraphrasing skills in particular. The study might prove a big support for the teachers who deal with low and negative enthusiasm and insights of students due to the difficulties of paraphrasing, as it requires students to do well in many components of writing like grammar, synonyms, sentence structure, word choice, parts of speech, etc. The study is limited to a limited population of PY, Najran University. The results might be stated differently if implemented on a different size of population or different context. The researchers recommend that QuillBot should be actively used especially in a technical writing class as it helps develop a positive attitude, which subsequently affects their learning temperament. It is also suggested that QuillBot should be used under the proper guidance of teachers to avoid its misuse. The teachers and students should be well-trained to use the AI tool to achieve desired outcomes.

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## References

- Ajzen, I. (2005). *Attitude, personality and behavior*. Open University Press.
- Al-Haq, A. F., & Al-Sobh, A. M. (2010). The effect of a web-based writing Instructional EFL program on enhancing the performance of Jordanian secondary students. *The JALT CALL Journal*, 6(3), 189-218. <https://doi.org/10.29140/jaltcall.v6n3.101>
- Amanda, S. E. M., Lubis, N., & Dewi, U. (2023). QuillBot as an AI-powered English writing assistant: An Alternative for Students to Write English Amanda. *Jurnal Pendidikan Dan Sastra Inggris*, 3(2), 188-199. <https://doi.org/10.55606/jupensi.v3i2.2026>
- Aqilah, N., & Zalfa, K. (2023). *Online paraphrasing tools in efl academic writing: Problems, affordances, and students' feelings* [Unpublished doctoral dissertation]. Universitas Kristen Satya Wacana, Salatiga.
- Baker, C. (1992). *Attitudes and language*. Multilingual Matters.
- Batubara, S. F., & Fithriani, R. (2023). Exploring EFL students' challenges in academic writing: The case of Indonesian higher education. *Jurnal Onoma: Pendidikan, Bahasa, Dan Sastra*, 9(1), 704-709. <https://doi.org/10.30605/onoma.v9i1.2605>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Burkhard, M. (2022). Student perceptions of AI-powered writing tools: Towards individualized teaching strategies [Paper presentation]. In D. G. Sampson, D. Ifenthaler, & P. Isaias (Eds.), *Proceedings of the 19th International Conference on Cognition and Exploratory Learning in the Digital Age (CELDA 2022)* (pp. 72-81). Iadis. [https://doi.org/10.33965/celda2022\\_2022071010](https://doi.org/10.33965/celda2022_2022071010)
- Cabansag, J. N. (2013). The attitudinal propensity of students toward strategies in English language learning. *International Refereed Research Journal*, 4(2), 10-18.
- Creswell, J. W. (2012). *Educational research*. Pearson.
- Creswell, J. W., & Guetterman, T. C. (2019). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Pearson Education.
- Dale, R. (2020). Natural language generation: The commercial state of the art in 2020. *Natural Language Engineering*, 26(4), 481-487. <https://doi.org/10.1017/S135132492000025X>
- Fageeh, A. I. (2011). EFL learners' use of blogging for developing writing skills and enhancing attitudes towards English learning: An exploratory study. *Journal of Language and Literature*, 2(1), 31-48.
- Fakhir, Z. (2015). *The impact of blended learning on the achievement of the English language students and their attitudes towards it* [Unpublished Master's thesis]. Middle East University, Amman, Jordan.
- Fithriani, R. (2021). The utilization of mobile-assisted gamification for vocabulary learning: Its efficacy and perceived benefits. *Computer Assisted Language Learning Electronic Journal*, 22(3), 146-163.
- Fitria, T. N. (2021). QuillBot as an online tool: Students' alternative in paraphrasing and rewriting of English writing. *Englisia: Journal of Language, Education, and Humanities*, 9(1), 183-196. <http://dx.doi.org/10.22373/ej.v9i1.10233>
- Fitria, T. N. (2022). Avoiding plagiarism of students' scientific writing by using the QuillBot paraphraser. *Elsya: Journal of English Language Studies*, 4(3), 252-262. <https://doi.org/10.31849/elsya.v4i3.9917>
- Gardner, R. C. (2000). Correlation, causation, motivation and second language acquisition. *Canadian Psychology*, 41(1), 1-24. <https://doi.org/10.1037/h0086854>
- Geitgey, A. (2018). *Natural language processing is fun! How computers understand human language*. Medium.
- Genç-Ersoy, B., & Göl-Dede, D. (2022). Developing writing skills, writing attitudes and motivation through educational games: Action research. *International Journal of Contemporary Educational Research*, 9(3), 569-589. <https://doi.org/10.33200/ijcer.1089781>
- Ginting, R. S., & Fithriani, R. (2022). Peer and Automated Writing Evaluation (AWE): Indonesian EFL College Students' Preference for Essay Evaluation. *LLT Journal: A Journal on Language and Language Teaching*, 25(2), 461-473. <https://doi.org/10.24071/llt.v25i2.4879>
- Golonka, E. M., Bowles, A. R., Frank, V. M., Richardson, D. L., & Freynik, S. (2014). Technologies for foreign language learning: A review of technology types and their effectiveness. *Computer Assisted Language Learning*, 27(1), 70-105. <https://doi.org/10.1080/09588221.2012.700315>

- Graham, S., Berninger, V., & Fan, W. (2007). The structural relationship between writing attitude and writing achievement in first and third grade students. *Contemporary educational psychology*, 32(3), 516-536. <https://doi.org/10.1016/j.cedpsych.2007.01.002>
- Guo, Z., & Stevens, K. J. (2011). Factors influencing perceived usefulness of wikis for group collaborative learning by first year students. *Australasian Journal of Educational Technology*, 27(2), 221-242. <https://doi.org/10.14742/ajet.967>
- Gupta, D., & Woldemariam, G. S. (2011). The influence of motivation and attitude on writing strategy use of undergraduate EFL students: Quantitative and qualitative perspectives. *Asian EFL Journal*, 13(2), 34-89.
- Hashemian, M., & Heidari, A. (2013). The relationship between L2 learners' motivation/attitude and success in L2 writing. *Procedia - Social and Behavioral Sciences*, 70, 476-489. <http://doi.org/10.1016/j.sbspro.2013.01.085>
- Heaven, W. D. (2020). *OpenAI's new language generator GPT-3 is shockingly good and completely mindless*. MIT Technology Review.
- Hew, K. F., & Cheung, W. S. (2013). Use of Web 2.0 technologies in K-12 and higher education: The search for evidence-based practice. *Educational research review*, 9, 47-64.
- Karahan, F. (2007). Language attitudes of Turkish students towards the English language and its use in Turkish context. *Journal of Arts and Sciences*, 1(7), 73-87.
- Kelleher, R. (2000). A review of recent developments in the use of information communication technologies (ICT) in science classrooms. *Australian Science Journal*, 46(1), 33-38. <https://doi.org/10.3316/aeipt.100393>
- Khabib, S. (2022). Introducing artificial intelligence (AI)-based digital writing assistants for teachers in writing scientific articles. *Teaching English as a Foreign Language Journal*, 1(2), 114-124. <https://doi.org/10.12928/tefl.v1i2.249>
- Kinden, C. E., & Prentice, F. M. (2018). Paraphrasing tools, language translation tools and plagiarism: an exploratory study. *International Journal for Educational Integrity*, 14(1), 1-16. <https://doi.org/10.1007/s40979-018-0036-7>
- Knudson, R. E. (1991). Development and use of a writing attitude survey in grades 4 to 8. *Psychological Reports*, 68(3), 807-816. <https://doi.org/10.2466/pr0.1991.68.3.807>
- Kranzberg, M. (1986). Technology and history: "Kranzberg's laws". *Technology and culture*, 27(3), 544-560. <https://doi.org/10.1353/tech.2021.0008>
- Kurniati, E. Y., & Fithriani, R. (2022). Post-graduate students' perceptions of QuillBot Utilization in English academic writing class. *Journal of English Language Teaching and Linguistics*, 7(3), 437-451. <https://doi.org/10.21462/jeltl.v7i3.852>
- Liu, J. (2009). A survey of EFL learners' attitudes toward information and communication technologies. *English Language Teaching*, 2(4), 101-106. <https://doi.org/10.5539/elt.v2n4p101>
- Lynch, M. (2018, July 6). Consequences of the new digital childhood. *The Tech Advocate*. <https://www.thetechadvocate.org/consequences-of-the-new-digital-childhood/>
- Marghany, M. M. (2023). Using artificial intelligence-based instruction to develop EFL higher education students' essay writing skills. *CDELT Occasional Papers in the Development of English Education*, 82(1), 219-240. <https://doi.org/10.21608/opde.2023.313623>
- Marzuki, M., Widiati, U., Rusdin, D., Darwin, & Indrawati, I. (2023). The impact of AI writing tools on the content and organization of students' writing: EFL teachers' perspective. *Cogent Education*, 10(2), 1-17. <https://doi.org/10.1080/2331186x.2023.2236469>
- Miranda, D. (2021). *The impact of paraphrasing tools on students paraphrasing skills* [Unpublished master's thesis]. Universitas Islam Negeri Ar-Raniry, Banda Aceh.
- Miranty, D., Widiati, U., Cahyono, B. Y., & Sharif, T. I. S. T. (2021). The effectiveness of using Grammarly in teaching writing among Indonesian undergraduate EFL students. In m. Hidayati, Y. Basthomi, F. M. Ivone, N. Ariani, & A. Tohe (Eds.), *International seminar on language, education, and culture (ISoLEC 2021)* (pp. 41-45). Atlantis Press. <https://doi.org/10.2991/assehr.k.211212.008>
- Moore, J. L., Rosinski, P., Peeples, T., Pigg, S., Rife, M. C., Brunk-Chavez, B., Lackey, D., Rumsey, S. K., Tasaka, R., Curran, P., & Grabill, J. T. (2016). Revisualizing composition: How first-year writers use composing technologies. *Computers and Composition*, 39, 1-13. <https://doi.org/10.1016/j.compcom.2015.11.001>
- Nazari, N., Shabbir, M. S., & Setiawan, R. (2021). Application of Artificial Intelligence powered digital writing assistant in higher education: randomized controlled trial. *Heliyon*, 7(5), 1-9. <https://doi.org/10.1016/j.heliyon.2021.e07014>
- Nunan, D. (2000). *Language teaching methodology*. Pearson.

- Nurul, A. I., & Sulistyningrum, S. D. (2021). Employing online paraphrasing tools to overcome students' difficulties in paraphrasing. *STAIRS: English Language Education Journal*, 2(1), 52-59. <https://doi.org/10.21009/stairs.2.1.7>
- Oxford, R. (1990). *Language learning strategies*. Heinle and Heinle Publishers.
- Ozer, O., & Badem, N. (2022). Student motivation and academic achievement in online EFL classes at the tertiary level. *LEARN Journal: Language Education and Acquisition Research Network*, 15(1), 361-382.
- Popham, W. J. (2011). *Classroom assessment: What teachers need to know*. Pearson.
- Rogerson, A. M., & McCarthy, G. (2017). Using Internet based paraphrasing tools: Original work, patchwriting or facilitated plagiarism?. *International Journal for Educational Integrity*, 13(1), 1-15. <https://doi.org/10.1007/s40979-016-0013-y>
- Rosell-Aguilar, F. (2017). State of the app: A taxonomy and framework for evaluating language learning mobile applications. *CALICO Journal*, 34(2), 243-258. <https://doi.org/10.1558/cj.27623>
- Peters, M., & Cadieux, A. (2019). Are Canadian professors teaching the skills and knowledge students need to prevent plagiarism?. *International Journal for Educational Integrity*, 15, 1-16. <https://doi.org/10.1007/s40979-019-0047-z>
- Siemens, G. (2005). Learning development cycle: Bridging learning design and modern knowledge needs. *Elearnspace everything elearning*, 48(9), 800-809.
- Spolsky, B. (2000). Anniversary article. Language motivation revisited. *Applied linguistics*, 21(2), 157-169. <https://doi.org/10.1093/applin/21.2.157>
- Starks, D., & Paltridge, B. (1996). A note on using sociolinguistic methods to study non-native attitudes towards English. *World Englishes*, 15(2), 217-224. <https://doi.org/10.1111/j.1467-971X.1996.tb00107.x>
- Sulistyningrum, S. D. (2021). Utilizing online paraphrasing tools to overcome students' paraphrasing difficulties in literature reviews. *Journal of English Language Studies*, 6(2), 52-59. <https://doi.org/10.30870/jels.v6i2.11582>
- Warschauer, M. (1996). Motivational aspects of using computers for writing and communication. In M. Warschauer (Ed.), *Telecollaboration in foreign language learning: Proceedings of the Hawai'i symposium* (pp. 29-46). University of Hawaii Second Language Teaching & Curriculum Center.
- Xuyen, N. T. (2023). Using the online paraphrasing tool Quillbot to assist students in paraphrasing the Source Information: English-majored students' perceptions. In T. T. Nghi (Ed.), *Proceedings of the 5th Conference on Language Teaching and Learning* (pp. 21-27). AIJR. <https://doi.org/10.21467/proceedings.150.3>
- Zefran, M. (2015). Students' attitudes towards their EFL lessons and teachers: their retrospective study. *Revija za Elementarno Izobrazevanje*, 8(1/2), 167.
- Zhu, W. (2001). Performing argumentative writing in English: Difficulties processes and strategies. *TESL Canada Journal/Revue TESL Du Canada*, 19(1), 34-50. <https://doi.org/10.18806/tesl.v19i1.918>