QuillBot Use in Student Writing: A Technology Acceptance Model Analysis

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ABSTRACT

The purpose of this study is to determine the extent to which the use of Quillbot, an artificial intelligence-based writing tool, influences students' academic writing skills. This study examines the experiences, perceptions, and impact of Quillbot use on the quality of students' writing, employing a mixed-methods approach. The research respondents were students who actively used Quillbot to complete various academic tasks, such as essays and research reports. The results of the study indicate that students consider Quillbot to be a useful tool for enhancing the clarity and neatness of their writing, as well as correcting grammatical errors. The main indicators of the Technology Acceptance Model (TAM), *Perceived Usefulness* and *Perceived Ease of Use*, indicate positive perceptions of technology use and encourage its continued use. This study confirms that *perceived utility* and *perceived ease of use* have a considerable impact on students' attitudes and behavioural intentions, supporting the theoretical assumptions of TAM. In addition to being a technological tool, QuillBot serves as a teaching tool that encourages students' self-assurance and independence in academic writing.

Keywords: TAM, Quillbot, AI-based writing tool, perceived usefulness, perceived ease of use, behavioral intention.

INTRODUCTION

English proficiency is frequently associated with students' academic achievement and professional growth in higher education. As a result, mastering the English language has emerged as a major objective in many educational establishments across the globe. This requirement emphasises how vital it is for students to develop their English skills including English writing abilities.

Writing requires not only mastery of grammar but also the capacity for coherent and straightforward communication of ideas (Vygotsky, 1986). Hyland (2019) asserts that writing is a useful ability that combines linguistic, cognitive, and cultural competence. Writing serves as a vehicle for intellectual expression and critical thought in academic contexts. For students to communicate successfully in English, they must grasp the rules of academic discourse. However, grammar, vocabulary, and sentence construction are areas where many EFL students

struggle (Richards, 2015). Furthermore, Fareed et al. (2016) note that EFL learners often struggle to organise their ideas coherently, possess limited vocabulary, and demonstrate weak grammatical mastery. These restrictions make it more difficult for them to effectively communicate ideas in academic writing. Teachers are now investigating cutting-edge resources to help students become more proficient writers because of this problem.

Artificial Intelligence (AI) has a revolutionary role in upgrading academic writing and overcoming those obstacles. According to Laurillard (2012), technology makes interactive and flexible learning opportunities possible, which are essential for language development. The use of AI technologies in writing teaching is also consistent with more general objectives for digital literacy. Selwyn (2013) asserts that digital competence is a crucial 21st-century talent that affects both academic achievement and employment. Students who are proficient with AI technologies have an advantage when it comes to writing in a polished and professional manner.

Through encouraging individualised and data-driven learning, artificial intelligence (AI) is continuing to revolutionise education. AI systems can analyse learner behaviour and adjust to individual needs (Holmes et al, 2022). This entails making tailored recommendations and spotting recurrent linguistic mistakes in writing training. Such innovation is exemplified by QuillBot's adaptive algorithms, which modify grammatical correction and paraphrasing according on context. Students get quick feedback from this exchange, which encourages self-directed learning (Chen et al., 2020). AI solutions also help teachers with formative evaluation and workload reduction. As a result, AI's contribution to writing education goes beyond automation since it promotes meaningful and introspective learning.

AI-based tools such as QuillBot provide linguistic support that helps students paraphrase, summarize, and revise their texts (Susanti & Suparman, 2023). These programs are intended to enhance writing's coherence, clarity, and grammatical accuracy. They help students improve their language awareness by providing real-time feedback. QuillBot uses Natural Language Processing (NLP) to evaluate and reformulate sentences while keeping their intended meaning. It enables students to increase the general calibre of their academic works and hone their writing style (Siddiq et al., 2022). Thus, incorporating technology can help lower writing anxiety and boost enthusiasm for studying (Sun & Wu, 2023).

However, there are benefits and drawbacks to the increasing use of AI in education. AI systems provide efficiency, adaptability, and customised learning opportunities (Hwang & Fu, 2020). Conversely, the reliance and the decline in students' capacity for critical thought need to be considered (Selwyn, 2019). Understanding how students view and accept AI tools becomes crucial in this situation. A theoretical foundation for assessing users' adoption of technology is provided by Davis's (1989) namely *Technology Adoption Model* (TAM). *Perceived Usefulness* (PU) and *Perceived Ease of Use* (PEOU) are the two main components that it highlights (Venkatesh & Davis, 2000). Users' attitudes and behavioural intentions about the use of technology are shaped by these factors. Assessing how students adopt such advances in their learning process is made easier by using TAM in the context of AI-based writing tools.

Perceived Usefulness (PU) is the extent to which users think a system improves their performance, whereas Perceived Ease of Use (PEOU) is the degree to which the system is simple to use (Davis, 1989). When assessing users' behavioural intentions and actual usage, these constructs are crucial. According to TAM, a person's intention to use technology is greatly influenced by two key factors: perceived usefulness (PU) and perceived ease of use (PEOU). Users are more likely to exhibit a positive attitude (ATU) and a sustained intention to use the technology (BI) when they believe AI-based solutions such as QuillBot is helpful (PU) and simple to use (PEOU). This, in turn, leads to actual use (Actual Use).

TAM aids in the explanation of how students feel about AI-assisted tools and e-learning platforms in educational settings. Venkatesh and Davis's (2000) study extended TAM by include outside factors like task relevance and social influence. According to their findings,

favourable user impressions promote sustained technology adoption. As a result, TAM is a useful model for examining how EFL students use QuillBot.

Positive reactions to AI-assisted writing tools such as Quillbot in academic settings have been observed in earlier research. According to research by Rahmani (2023), students thought QuillBot was helpful and simple to use, which improved their writing accuracy and fluency. In a similar vein, Fitria (2022) highlighted QuillBot's efficiency in assisting EFL students with paraphrasing and avoiding plagiarism. Nevertheless, the majority of these research lacked qualitative insights into students' actual experiences and instead employed quantitative methodologies. According to Latifah et al. (2024), mixed-method research is necessary to examine both perceptions and real effects on writing outputs. Moreover, research on the use of QuillBot within Indonesian writing education remains limited. Thus, by combining the TAM framework with a mixed-method approach, this study seeks to close this gap.

The current study uses the Technology Acceptance Model (TAM) to examine how students see QuillBot, an AI-based writing tool. It investigates how Behavioural Intention (BI) and Actual Usage (AU) are influenced by *Perceived Usefulness* and *Perceived Ease of Use*. In order to determine the advantages and difficulties of incorporating AI into writing assignments, the study also looks into students' experiences. This study offers a comprehensive explanation of QuillBot's function in language learning by integrating quantitative and qualitative data. It is anticipated that the results will show how technology affects learner autonomy and writing performance. The paper also emphasises how AI has educational implications for promoting academic integrity. This method seeks to offer suggestions for educators and legislators when creating technology-enhanced teaching methods.

By using the TAM framework, it evaluates the factors impacting prolonged technology use in addition to user perceptions. It is anticipated that the findings will show how students' perceptions of QuillBot's utility and usability have a big impact. The project also intends to deepen our understanding of how AI can be used as an additional academic writing tool. The results will aid in the creation of creative learning models that appropriately include digital tools. In the end, this study lends credence to the idea of contemporary education that balances human ingenuity with technical progress. It supports the notion that learners can become more self-assured and independent when AI is applied appropriately.

METHOD

This study employed a mixed-methods approach combining both quantitative and qualitative research designs. The quantitative method was used to measure students' perceptions through structured questionnaires based on the Technology Acceptance Model (TAM). Meanwhile, the qualitative method provided deeper insights through interviews that explored students' real experiences using QuillBot. The combination of both approaches aimed to produce a comprehensive understanding of how AI-assisted tools influence writing performance. This design allowed for data triangulation, enhancing the validity and reliability of the research findings (Creswell, 2018).

Undergraduate students enrolled in English education programs who actively utilised QuillBot for academic writing assignments made up the participants. Five of the thirty students who took part in the poll were chosen for in-depth interviews. To capture a range of experiences and perspectives, the selection process made sure that different academic levels were represented. To ensure the integrity of the research, ethical consent was acquired from each participant prior to the start of data collection.

Because the study focused on participants with particular traits pertinent to the goals of the research, it employed a purposive sampling technique. Students were deemed qualified to offer insightful answers if they have utilised QuillBot for at least one semester. This criterion made sure that the respondents were sufficiently familiar with and experienced with the AI-

based writing tool. Additionally, purposeful sampling made it possible to choose people who could properly describe their experiences. This approach facilitated the gathering of trustworthy and contextually rich data (Richards & Renandya, 2002).

This study employed semi-structured interview procedures and a structured questionnaire. The Technology Acceptance Model (TAM) created by Davis (1989) served as the basis for the questionnaire's design. Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Self-Attitude (SA), and Behavioural Intention (BI) were the four constructs measured by its fifteen items. A five-point Likert scale, with 1 representing "strongly disagree" and 5 representing "strongly agree," was used to score the items. In the meanwhile, the interview guide included seven open-ended questions that probed students' perspectives, difficulties, and experiences using QuillBot.

For both precision and repeatability, the study process included a number of methodical procedures. First, under the direction of language education specialists, the researcher created and verified the research tools. In order to effectively reach every participant, the questionnaire was then disseminated online using Google Forms. Selected participants were interviewed one-on-one to obtain detailed qualitative data following the collection of quantitative data. In the end, all of the data were arranged, verified for accuracy, and ready for analysis using both theme interpretation and descriptive statistics.

Students' answers to the TAM-based questionnaire were the main focus of the quantitative data gathering. Google Forms was used to automatically record and save each response for statistical analysis. The four primary constructs—PU, PEOU, SA, and BI—were used to classify the data. For every item, mean scores and percentage distributions were determined using descriptive statistics. The general tendencies of students' perceptions about QuillBot use were then described by interpreting these numerical results.

Semi-structured interviews with chosen individuals were used to gather data for the qualitative phase. Each interview took place either in person or via online meetings and lasted between 20 to 30 minutes. To guarantee data accuracy, the researcher used audio recordings and thorough notes. Participants were invited to openly discuss their experiences with QuillBot, including its advantages, challenges, and moral implications. This technique made it possible to record in-depth stories that supported the statistical conclusions.

There were two phases to the data analysis process: quantitative and qualitative. Descriptive statistics were used to analyse quantitative data in order to calculate each variable's mean and standard deviation. Cronbach's Alpha was used to evaluate the questionnaire's reliability; a score greater than 0.70 indicated high internal consistency. In the meantime, Miles and Huberman's (1994) framework—which comprises data reduction, data display, and conclusion drawing—was used to analyse the qualitative data. Both numerical and narrative data were rigorously and fairly interpreted thanks to the combination of these methods.

Before starting data analysis, the study instruments' validity and reliability were thoroughly examined. With a Cronbach's Alpha coefficient of 0.923, the questionnaire demonstrated exceptional dependability. Prior to widespread dissemination, a limited group of students underwent pilot testing and expert evaluation to guarantee content validity. Peer debriefing and triangulation between participant replies and researcher observations were used to validate the qualitative instrument. These steps improved the reliability of the information gathered using both approaches.

FINDINGS
Perceived Usefulness (PU)

Students view QuillBot as a very useful tool for improving their academic writing abilities, according to the results of both qualitative and quantitative evaluations. Participants frequently highlighted how the tool makes paraphrasing easier, increases sentence coherence,

and improves grammar accuracy—all of which raise the calibre of academic writing. *"QuillBot makes writing easier, helps with paraphrasing, and corrects grammar,"* Respondent 1 said. Writing gets clearer and more organised. This sentence demonstrates how QuillBot helps with structural and stylistic improvement in addition to grammatical accuracy. These results align with Davis's (1989) concept of Perceived Usefulness (PU), which is the degree to which a person feels that utilising a specific system improves their performance in school or at work.

The quantitative data supports this qualitative finding by demonstrating that students firmly believe QuillBot is beneficial. Table 1 illustrates that between 63.3% and 76.7% of respondents agreed or strongly agreed that QuillBot helps users avoid grammatical errors, choose acceptable terminology, and write sentences more clearly. The high degrees of agreement show that students regularly acknowledge QuillBot as a dependable writing assistance tool that promotes increased precision and fluency. These views support the claim made by Venkatesh and Davis (2000) that technology acceptance is strongly predicted by perceived usefulness since users are more likely to embrace technologies that improve work performance and efficiency

Table 1. Students' Perceptions on Perceived Usefulness (PU)

No	Item Description	SD	D	N	A	SA
1	QuillBot helps me avoid grammatical errors in my academic writing	0%	3.3%	3.3%	76.7%	16.7%
2	QuillBot makes it easier to choose appropriate vocabulary	0%	3.3%	10%	66.7%	20%
3	QuillBot helps me understand how to paraphrase without changing meaning	0%	3.3%	10%	63.3%	23%
4	QuillBot helps me construct English sentences better	0%	6.7%	10%	63.3%	20%

Additionally, students said that QuillBot helped them create phrases that were more professional and natural. *"The main benefit of QuillBot is that it helps me paraphrase sentences so they sound more natural and professional,"* said a Respondent 3. This opinion supports the quantitative data demonstrating strong levels of agreement with QuillBot's contribution to enhancing vocabulary, sentence structure, and paraphrasing abilities. All of these findings show that QuillBot's perceived value goes beyond simple mechanical support to include educational support, assisting students in internalising language patterns and honing their writing style. According to the viewpoints of Davis, Bagozzi, and Warshaw (1989) and Venkatesh and Bala (2008), students are more likely to incorporate technology into their academic routines and continue using it over time if they believe it to be beneficial.

Moreover, the combination of the two datasets emphasises that QuillBot is more than just a correction tool; it is a cognitive and educational tool. After consistent use, students' self-awareness of grammatical norms and stylistic accuracy increased, indicating a change from system reliance to more independent writing. The Technology Acceptance Model's (TAM) premise that perceived utility is the primary driver of technology adoption is supported by the consistency of favourable perceptions in both qualitative reflections and quantitative statistics.

The combined results show that QuillBot's Perceived Usefulness (PU) is based on its ability to increase writing fluency, improve linguistic accuracy, and boost academic confidence. The agreement between qualitative experiences and quantitative data demonstrates that QuillBot not only fulfils user expectations but also promotes sustained academic development. QuillBot's incorporation into students' writing routines demonstrates how AI-based tools may foster productivity, autonomy, and skill development, positioning it as a useful and instructive tool in higher education settings.

Perceived Ease of Use (PEOU)

The combined results of the qualitative and quantitative evaluations show that students view QuillBot as a very user-friendly, accessible, and intuitive instrument that reduces the difficulty of academic writing. Perceived Ease of Use (PEOU) is defined as "the degree to which a person believes that using a particular system would be free of effort" in accordance with Davis's (1989) Technology Acceptance Model (TAM). Students frequently emphasised QuillBot's ease of use and clarity, which provides good qualitative support for this criterion. Respondent 1 said, *"Very simple! The user interface is easy to use. Without a doubt! It gets more comfy the more you use it."* This analysis demonstrates how familiarity with QuillBot boosts self-assurance and promotes consistent use, indicating that user engagement and pleasure are directly influenced by perceived simplicity.

"Using QuillBot is not difficult, because Quill itself is very easy to understand," said Respondent 2, confirming this impression. These testimonies demonstrate that pupils encounter no cognitive strain when working with the system. The platform's multilingual features (English, German, and Indonesian), accessible layout, and various writing styles (simple, formal, and academic) enable it to accommodate a wide range of academic requirements. Because of QuillBot's simple operation, even students who were accustomed with other AI-assisted tools said they preferred it. This result supports the claim made by Venkatesh and Bala (2008) that low-intensity systems improve user happiness and long-term adoption.

These qualitative views are supported by the quantitative findings. Table 2 shows that a significant percentage of respondents (over 70%) agreed or strongly agreed that QuillBot makes writing faster and more efficient and is simple to use. In particular, 73.3% of students said QuillBot makes it easier for them to compose English texts, and 66.7% said it makes the process easier. These numbers demonstrate how important usability is in determining whether or not technology is accepted. Users can concentrate more on idea development, content refining, and linguistic accuracy rather than technical operation because of the system's responsiveness and ease of navigation, which lower cognitive barriers.

Table 2. Students' Perceptions on Perceived Ease of Use (PEOU)

No	Item Description	SD	D	N	A	SA
1	QuillBot helps me write English text more efficiently	0%	6.7%	10%	73.3%	10%
2	QuillBot makes writing in English easier	0%	6.7%	6.7%	66.7%	20%
3	QuillBot is easy to learn and navigate	0%	3.3%	10%	63.3%	23%

The high agreement rates show how important PEOU is in encouraging students to use QuillBot and stick with it. The results verify that a clear functional design and an easy-to-use interface lower the learning curve, increasing task efficiency and user confidence. Students' comfort level and desire to incorporate the tool into their academic routines rise in direct proportion to their familiarity with it. This result validates the TAM framework, which holds that perceived usefulness and behavioural intention are positively influenced by perceived ease of use.

In conclusion, QuillBot's user-friendliness greatly improves students' engagement, satisfaction, and long-term use, according to both qualitative and quantitative data. EFL learners may concentrate more on content and creativity rather than technical obstacles thanks to the application's ease of use, flexibility, and effectiveness. These results confirm that students' motivation, confidence, and long-term acceptance of AI-assisted writing tools in academic settings are all strengthened by perceived simplicity of use, which also streamlines the writing pro

Actual System Use (ASU) / Self-Attitude (ATU)

With a high level of Actual System Use (ASU) and a favourable Self-Attitude (ATU) about its use, the combined qualitative and quantitative results show that QuillBot has become a crucial component of students' academic writing routines. According to Davis, Bagozzi, and Warshaw (1989), ATU reflects users' emotional and cognitive assessments influencing continuous utilisation, whereas ASU measures the level of practical technological involvement. Students frequently utilise QuillBot for academic writing projects, papers, and essays, according to the qualitative data. *"Very often! For example, writing essays or college assignments,"* said Respondent 1, demonstrating regular use and incorporation into regular academic tasks. This result shows that QuillBot has developed from an additional tool into a reliable writing partner that improves output and learning effectiveness.

Additionally, students recognised QuillBot's important contribution to enhancing literary coherence, sentence structure, and grammatical precision, allowing them to concentrate more on topic organisation and critical thinking. Frequent participation demonstrates both internalised confidence in the dependability of the system and behavioural commitment. Sekaran and Bougie (2016) highlight that frequent use of reliable tools is a sign of high user confidence and pleasure. Additionally, a number of students reported utilising QuillBot for paraphrase and multilingual understanding, demonstrating the platform's versatility for a range of academic tasks. These results demonstrate profound engagement with the technology as part of students' learning techniques, confirming that ASU goes beyond usage frequency to encompass cognitive and affective integration.

The results show a significant increase in students' writing self-efficacy and self-confidence in addition to active system use. "*After regularly using QuillBot, I feel that I can learn new words or sentences from the paraphrases it generates,"* said one participant. Additionally, I started to learn how to construct stronger sentences and use them in my own work. This claim captures QuillBot's revolutionary role in promoting independent learning and self-regulated writing development. These mastery experiences boost students' self-assurance and independence, according to Bandura's (1997) theory of self-efficacy. According to the qualitative data, QuillBot serves as a pedagogical scaffold that promotes self-directed improvement and increases language awareness in addition to acting as a corrective mechanism.

These qualitative conclusions are further supported by the quantitative data. Many students had favourable opinions about using QuillBot, as Table 3 illustrates. About 76.7% of respondents agreed or strongly agreed that QuillBot makes them feel more prepared for academic writing, 70% said it improves their ability to write independently, and 63.3% said it gives them more confidence when writing in English. These findings support TAM's hypothesis that perceived usefulness (PU) and perceived ease of use (PEOU) together promote favourable attitudes and persistent behaviour towards technology adoption by demonstrating that the platform enhances both psychological comfort and academic preparedness.

Table 3. Students' Perceptions on Self-Attitude (ASU/ATU)

No	Item Description	SD	D	N	A	SA
1	QuillBot helps me feel more prepared to complete writing tasks	0%	3.3%	10%	70%	16.7%
2	QuillBot enhances my independent writing skills	0%	6.7%	13.3%	70%	10%
3	QuillBot increases my confidence in writing English texts	0%	6.7%	13.3%	63.3%	16.7%

QuillBot's excellent affective and cognitive endorsement as an academic and motivational support system is demonstrated by the high percentage of agreement across all measures. The findings imply that students have better self-control, less writing anxiety, and

more confidence when utilising English for academic communication. This demonstrates how AI-assisted tools can affect students' attitudes and sense of self as writers in addition to their writing performance.

In summary, both qualitative and quantitative results confirm that QuillBot encourages consistent system use, boosts self-efficacy, and develops a favourable attitude towards AI-assisted writing tools. It has evolved from a digital tool into an integrated learning partner because to its user-friendly design and dependable performance, which have promoted habitual use and internalised trust among students. These findings support the TAM framework by showing that high perceived usefulness and ease of use enhance Actual System Use (ASU) and Attitude Towards Use (ATU), resulting in greater confidence, contentment, and long-term acceptance. Therefore, QuillBot enhances students' autonomy and academic empowerment in digital learning environments in addition to facilitating writing skills.

Behavioral Intention (BI)

Students have a high behavioural intention to continue using QuillBot in their academic and professional writing activities, according to the integrated findings from both qualitative and quantitative evaluations. According to Venkatesh et al. (2003)'s Technology Acceptance Model, BI is the last stage of technology acceptance and is described as a person's willingness or ready to engage in a specific behaviour. According to the qualitative data, students' desire to continue using QuillBot is driven by contentment, writing progress, and confidence in its dependability. Since it will be utilised to ensure proper grammar in writing assignments, emails, and even captions. This declaration demonstrates a persistent dedication to and internalised faith in QuillBot's capacity to improve writing output and communication precision.

Students also underlined that QuillBot is a long-term writing partner rather than just a short-term tool. Many stated that they intended to utilise the tool for a range of future tasks, such as draughting professional documents, journal articles, and academic papers. Their behavioural purpose is based on both favourable previous experiences and expected future usefulness, as evidenced by their forward-looking orientation. These findings imply that perceived usefulness (PU) and perceived ease of use (PEOU) serve as the main determinants of sustained technology use, which is consistent with Venkatesh and Bala (2008). The students' continued dependence on QuillBot suggests that its features have been successfully incorporated into everyday academic routines, demonstrating a long-lasting correlation between behavioural intention and satisfaction.

High levels of user intention and satisfaction are confirmed by the quantitative results, which support these qualitative findings. As seen in Table 4, a sizable percentage of students— 66.7% agreed and 20% strongly agreed—said they would suggest QuillBot to their peers, and 63.3% said they were satisfied with the tool's functionality. Additionally, 66.7% of respondents said they would be willing to stick with QuillBot even if there were no outside demands, indicating intrinsic motivation. These findings demonstrate that a strong basis for long-term adoption is formed by the combination of satisfaction, trust, and usefulness.

Table 4. Students' Perceptions on Behavioral Intention (BI)

No	Item Description	SD	D	N	A	SA
1	I am satisfied with using QuillBot as a writing tool	0%	6.7%	10%	63.3%	20%
2	I will continue using QuillBot even without lecturer requirement	0%	3.3%	13.3%	66.7%	16.7%
3	I will recommend QuillBot to my peers	0%	0%	13.3%	66.7%	20%

The high percentages of agreement across all categories show that students' behavioural intentions towards QuillBot are self-sustaining due to positive experiences and perceived academic benefits rather than being imposed from the outside. This is consistent with the findings of Venkatesh et al. (2003), who highlighted that BI is a trustworthy indicator of ongoing technological involvement. Students' willingness to suggest the platform also represents a diffusion of innovation effect, in which contented users encourage their classmates to adopt new technologies. Such support shows faith in QuillBot's function as a successful AI-based writing tool that can improve productivity, fluency, and linguistic accuracy.

In conclusion, both qualitative and quantitative findings confirm that students' behavioural intention to stick with QuillBot is motivated by projected long-term benefits, trust, and contentment. These results support the TAM paradigm by showing that BI is the result of favourable opinions about its utility and use. Students' willingness to maintain and encourage QuillBot use shows that technology is meaningfully accepted and integrated into academic culture. As a result, QuillBot serves as both a digital writing assistant and a pedagogical partner that promotes academic empowerment, lifetime learning, and ongoing use of intelligent writing tools.

DISCUSSION

A thorough grasp of students' opinions about QuillBot use within the context of the Technology Acceptance Model (TAM) is revealed by the integration of qualitative and quantitative findings. All four TAM constructs—Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Self-Attitude (SA), and Behavioural Intention (BI)—showed high to very high mean values, indicating substantial acceptance and satisfaction, according to the research. These patterns were confirmed in qualitative interviews, where students highlighted QuillBot's ability to make paraphrasing easier, enhance grammatical accuracy, and foster clarity in academic writing. These results support the claims made by Davis (1989) and Venkatesh and Davis (2000) that PU and PEOU are important indicators of technological adoption. QuillBot is therefore seen as an educational scaffold that supports EFL learners in addition to being a writing tool. The QuillBot is therefore seen as an educational scaffold that supports the academic development of EFL learners in addition to being a writing tool.

The results also show that QuillBot's accessibility and usability have a significant impact on its long-term uptake. Students reported that the system greatly decreased cognitive strain during writing assignments and was easy to use, intuitive, and adaptable to different writing modes and languages. These claims were corroborated by quantitative data, which showed that more than 70% of respondents agreed or strongly agreed that QuillBot improved the speed and efficiency of writing. Venkatesh and Bala's (2008) assertion that systems requiring little effort boost user pleasure and engagement is supported by this favourable perception. As a result, QuillBot's usability encourages both short-term writing effectiveness and long-term incorporation into students' academic schedules. Additionally, the results show that when students consistently interacted with QuillBot, their Actual System Use (ASU) and Self-Attitude (SA) significantly improved. Many responders said they were more confident and ready to write.

Additionally, the results show that when students consistently interacted with QuillBot, their Actual System Use (ASU) and Self-Attitude (SA) significantly improved. The psychological advantages of AI-assisted writing tools are demonstrated by the numerous responders who reported increased writing confidence and readiness following regular tool use. According to Bandura's (1997) theory of self-efficacy, mastery experiences boost self-assurance and independence. The qualitative reflections demonstrate that QuillBot is not a tool that encourages dependency but rather a learning companion that supports self-directed improvement. The tool's pedagogical value in higher education is demonstrated by its capacity to boost motivation and lessen writing stress.

Furthermore, motivated by satisfaction, trust, and expected long-term benefits, students showed a strong Behavioural Intention (BI) to keep using QuillBot for academic and professional objectives. According to quantitative data, 66.7% of students agreed and 20% strongly agreed that they would suggest QuillBot to others, demonstrating the role of peer pressure and intrinsic motivation in the spread of technology. This is consistent with the findings of Venkatesh et al. (2003), who found that BI was the main indicator of ongoing technology use. QuillBot is a revolutionary educational tool in EFL learning environments because of its substantial contributions to increasing academic production, encouraging writing autonomy, and improving students' linguistic competence, as demonstrated by the combination of qualitative and quantitative findings.

Table 5. Descriptive Results of TAM Variables (N = 30)

No	Variable	Mean Score	Category	Description
1	Perceived Usefulness (PU)	4.45	Very High	Students perceive Quillbot as improving writing quality
2	Perceived Ease of Use (PEOU)	4.38	Very High	Students find Quillbot easy to use and navigate
3	Self-Attitude (SA)	4.27	High	Students feel motivated and confident when using Quillbot
4	Behavioral Intention (BI)	4.41	Very High	Students intend to continue using Quillbot in future writing tasks

PU had the highest mean score (4.45) in the quantitative data, indicating that students thought QuillBot was a useful tool for enhancing writing quality. Additionally, PEOU received a very high score (4.38), suggesting that students thought the application to be user-friendly and efficient in lowering writing effort. While BI (4.41) showed a strong intention to keep using QuillBot for future academic and professional goals, SA (4.27) showed increased motivation and confidence. These results corroborate the ideas put forth by Venkatesh & Davis (2000) that perceived utility and usability are important indicators of technology adoption.

These conclusions are further supported by qualitative data. Students reported that by introducing them to better phrase patterns, QuillBot promoted independent learning, enhanced coherence, and saved time. Instead of seeing the instrument as a substitute for human creativity, they saw it as a "writing partner." A few respondents, however, advised against relying too much on AI, in line with Latifah et al. (2024), who expressed concern that this could stifle creativity. Despite this, the general consensus was that QuillBot is a useful pedagogical addition for EFL writing since it fosters productivity, confidence, and self-regulated learning.

CONCLUSION

Based on both qualitative and quantitative data utilising the Technology Acceptance Model (TAM), this study shows that students had very favourable opinions about QuillBot as an AI-based writing tool. QuillBot successfully improves writing fluency, grammatical precision, and vocabulary while reducing cognitive effort, as evidenced by the high scores on the dimensions of Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Self-Attitude (SA), and Behavioural Intention (BI). These findings support Davis's (1989) claim that acceptability of technology in education is mostly influenced by its utility and usability.

In addition to enhancing writing mechanics, QuillBot boosts students' self-efficacy, motivation, and confidence. According to Bandura's (1997) self-efficacy theory, learners view it as a helpful partner that helps them grasp language structures and improve independent writing abilities. Students have more control over their writing processes through regular use, which strengthens academic engagement and language proficiency.

Furthermore, students' faith and sustained dedication to utilising QuillBot in academic and professional settings are shown in high behavioural intention. Its dependability, usefulness, and accessibility encourage continued use and peer recommendations. To sum up, QuillBot is a useful educational invention that improves student autonomy and writing performance. To

ensure that technology enhances rather than substitutes critical and creative thinking in academic writing, it is important to emphasise its ethical and balanced use.

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