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EFL Students' Perceptions of AI-Based Automated Self-Assessment in Academic Writing

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ABSTRACT

This study explores English as a Foreign Language (EFL) learners' perceptions regarding the use of AI-based automated self-assessment tools and other writing technologies to improve grammatical accuracy and writing quality in English writing assignments. This study was conducted using qualitative methods. Data were collected through semi-structured interviews with five master's students majoring in English education at Yogyakarta State University. They were selected by purposive sampling based on their experience using AI-based tools such as Grammarly and ProWritingAid. The data were then analyzed using thematic analysis, which involved several stages, including data recognition, initial coding, theme search, theme review, and theme definition and naming. This study shows that there are five challenges of using AI-based automated self-assessment tools. These are including context and interpretation errors, difficulty understanding feedback, dependence on paid features, lots of auto-feedback, and technology limitations. In the other hand, there are four benefits of using AI-based automated self-assessment. These are including increased self-confidence, efficiency in writing, independent learning, and better writing quality. This study contributes to the ongoing discussion about the role of technology in language learning, with a focus on how technology influences student learning outcomes, motivation, and reliance on automated feedback.

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1. INTRODUCTION

In recent years, the use of artificial intelligence (AI) in education has increased dramatically globally. Recent systematic studies show that from 2011 to 2024, there was a significant surge in AI adoption, especially with the emergence of advanced tools such as ChatGPT and GPT-4 which are now the main focus in 36% of AI-based education studies (Matos et al., 2025). Countries such as Canada and

China are the biggest contributors to educational AI research, accounting for 16% and 12% of the total studies respectively. AI is not only used for personalization of learning and adaptive learning systems, but also for automation of administrative tasks and improvement of cross-cultural communication through real-time translation (Gârdan et al., 2025). In addition, a bibliometric analysis of more than 2,200 research articles revealed that AI has penetrated various aspects of education, ranging from intelligent assessment, student performance prediction, to human resource management in educational institutions (Wang et al., 2024).

Among the various technological innovations in English as a Foreign Language (EFL) learning, automated self-assessment tools have emerged as a popular solution for supporting students' writing development. These tools, powered by artificial intelligence (AI), offer real-time feedback and corrections that enable learners to improve grammatical accuracy, structure, and overall writing quality (Tang et al., 2024). Automated self-assessment is an extension of formative assessment, a process that provides learners with continuous feedback to enhance learning outcomes. Formative self-assessment fosters learner autonomy by allowing students to reflect on and evaluate their performance (Xhaferi & Xhaferi, 2011). With the integration of AI technologies, such self-assessment has evolved into a more dynamic process, providing instantaneous and context-sensitive feedback, which can support independent learning and reduce reliance on instructors.

Digital platforms such as Grammarly, ProWritingAid, Turnitin, and WriteLab are increasingly utilized by EFL students to identify grammar and style issues in academic writing. These tools are widely praised for their efficiency, user-friendliness, and ability to raise students' awareness of their own writing weaknesses. Research by Ngo et al. (2024) has demonstrated that the use of automated writing evaluation tools contributes to improved academic writing, increased writing motivation, and enhanced revision practices among learners.

Moreover, these tools help streamline the editing process, allowing learners to revise their work more quickly and confidently. By providing immediate suggestions, learners can focus more on content development rather than structural correctness (Sailer et al., 2021). This is particularly beneficial in contexts where timely feedback from instructors is limited, as students can rely on automated responses to continue their learning without interruption.

Despite these benefits, concerns have been raised regarding the pedagogical impact of over-relying on AI-driven assessment. Scholars argue that such tools may lead students to become passive recipients of correction rather than active learners who understand the underlying rules of grammar and syntax (Aldosari & Alsager, 2023). When learners become too dependent on automated tools, the opportunity to develop critical writing skills and language awareness may be diminished.

Gao et al. (2024) further highlight that many automated tools struggle to accurately interpret contextual meaning, idiomatic expressions, and nuanced syntactic structures. Often, the feedback provided is limited to surface-level corrections, lacking deeper explanations necessary for meaningful learning. Moreover, the absence of tailored feedback can sometimes lead to frustration or confusion, especially when learners encounter ambiguous suggestions or misinterpretations of their writing.

Another critical issue is accessibility. As Nunes et al. (2022) point out, limited access to stable internet connections and premium features restricts the full utilization of such tools by students, particularly in developing regions. The effectiveness of automated assessment, therefore, is not equally distributed and may further widen educational disparities between learners with different technological resources.

Nonetheless, various studies affirm the positive impact of AI tools on learners' confidence, writing fluency, and metacognitive awareness. Tang et al. (2024) and Van Reybroeck et al. (2017) note that exposure to regular feedback enhances students' self-efficacy and encourages them to take greater responsibility for their learning. These findings suggest that when used thoughtfully, automated tools can promote not only writing accuracy but also learner autonomy.

Despite growing interest, most existing studies focus primarily on the technical functionality or surface outcomes of automated writing tools. There remains a lack of in-depth research on how learners

interpret and engage with these tools from a cognitive and affective perspective. Understanding learners' subjective experiences is essential for optimizing how such technologies are integrated into instructional practice. Moreover, there is a noticeable gap in research involving postgraduate EFL students—learners who are expected to engage in higher-order thinking, critical reflection, and academic writing of greater complexity. Their perspectives are crucial in assessing how these tools influence advanced-level writing development and academic performance.

This study aims to address these gaps by exploring postgraduate EFL students' perceptions of using automated self-assessment tools to enhance grammatical accuracy in writing. Specifically, it investigates students' understanding of these tools, the challenges they encounter, and the benefits they experience during their use. Through a qualitative inquiry, the study seeks to uncover nuanced insights into the cognitive and affective dimensions of AI-assisted writing assessment. By drawing on the experiences of postgraduate learners, this research contributes to a more comprehensive understanding of the pedagogical value and limitations of automated self-assessment tools. The findings are expected to inform educators, curriculum developers, and technology designers in creating more effective, accessible, and learner-centered writing support systems for the evolving landscape of digital language education.

2. METHODS

This study employed a qualitative research design to explore postgraduate EFL students' perceptions of the use of AI-based automated self-assessment tools in academic writing. A qualitative approach is appropriate when the aim is to investigate participants' experiences, attitudes, and interpretations in a natural context (Aspers & Corte, 2019). According to Flick, qualitative research focuses on understanding meaning, interaction, and the subjective realities of participants, making it suitable for studies on learner perception and educational technology (Flick, 2023).

The participants of this study consisted of five master's students majoring in English education at Yogyakarta State University. They were selected using purposive sampling based on their prior experience using AI-powered tools such as Grammarly and ProWritingAid as part of their writing process. Graduate-level students were considered appropriate for this research because they are expected to possess a higher level of cognitive and reflective capacity compared to undergraduate learners, particularly in evaluating writing tools critically (Silverman, 2011).

Data were collected using semi-structured interviews, allowing for flexibility in probing participants' thoughts while maintaining a focused framework. Semi-structured interviews are effective in eliciting rich, in-depth responses and are commonly used in educational research to explore perceptions and attitudes (Braun & Clarke, 2021). Each interview was conducted in person or via video conferencing, depending on the participant's availability, and lasted approximately 30–45 minutes. To ensure the credibility of the findings, the interviews were audio-recorded and transcribed verbatim. The data were then analyzed using thematic analysis, a method for identifying, analyzing, and reporting patterns within data (Nowell et al., 2017). This approach involves multiple stages, including familiarization with the data, generation of initial codes, searching for themes, reviewing themes, and defining and naming themes (Wolgemuth et al., 2024).

In this study, member checking was also employed to enhance trustworthiness. After transcription, the interview transcripts were returned to the participants for confirmation and clarification, ensuring the accuracy of their statements and interpretations (Birt et al., 2016). Coding was conducted both inductively and deductively, allowing the researchers to capture emerging themes while also referencing the research questions. Ethical considerations were carefully followed throughout the research process. Participants were informed about the purpose of the study, their voluntary involvement, and their right to withdraw at any time. Informed consent was obtained prior to data collection, and all personal information was anonymized to protect confidentiality.

3. FINDINGS AND DISCUSSION

3.1 Challenges in Using Automated Self-Assessment Tools

One of the primary themes identified is the challenge faced by students when using AI-based automated self-assessment tools. The first subtheme, context and interpretation error, highlights the tool's inability to understand the linguistic nuances and contextual meanings intended by the students. Respondents reported that automated tools often misjudged correct sentences as incorrect due to their limited ability to interpret implied meanings, idiomatic expressions, or syntactic variation. For instance, one participant stated, *"Sometimes the tools don't understand my words. They say my sentence is wrong when it's actually okay"* (MS-1). Another noted, *"When I write technical terms in my field, especially in linguistics or education, Grammarly often marks them as incorrect or suggests irrelevant replacements"* (MS-6).

The second subtheme, difficulty understanding feedback, emphasizes students' confusion in interpreting automated suggestions. Feedback was described as vague or inconsistent, which hindered the students' ability to revise their writing effectively. As one student explained, *"Sometimes AI gives me feedback that is far from my expectations or that I cannot understand clearly"* (MS-1), while another added, *"The suggestions are too general. It tells me to simplify a sentence but doesn't explain why or which part"* (MS-8).

Another key concern involves the dependency on paid features, which was described as a barrier to full engagement with the tool's capabilities. Students reported that essential features such as advanced grammar suggestions and vocabulary enhancements were locked behind paywalls. One student shared, *"The only difficulty was that I had to spend a lot of money to access the features of the platform or AI"* (MS-2), and another added, *"The free version only gives basic grammar fixes. If I want to check coherence or vocabulary, I have to subscribe"* (MS-10).

The fourth subtheme is the overabundance of automated feedback, which some students found overwhelming. Respondents indicated that receiving too many suggestions at once disrupted their thought process and made it difficult to prioritize revisions. As MS-1 mentioned, *"They give too many ideas at once, and I don't know what to fix first"*. Similarly, MS-12 expressed, *"It gives me so many suggestions at oncesometimes 10–15 in one paragraph. I feel overwhelmed and don't know which ones are necessary."* In the context of writing, such overload may hinder rather than help revision. The interruptions also affected students' control over their own writing, as MS-3 noted, *"The automatic suggestions will replace sentences with other sentences that are not connected and not matched with the previous paragraph."*

Finally, the fifth subtheme is technological limitations, such as the reliance on stable internet connections, were frequently cited. Students expressed frustration when facing connectivity issues, which prevented them from accessing or utilizing the tool efficiently. *"If the internet signal is difficult, then we will also have difficulty using the tool,"* said MS-5, while MS-14 added, *"When the internet was down, I couldn't access Grammarly. I had to wait until I had Wi-Fi again. It's not ideal if you're trying to finish a deadline."*

From the data above, it can be mapped out some of the challenges faced by students in the use of AI-based automated self-assessment tools as follows:

Table 1. Challenges Faced by Students

No.	Challenges	Description
1.	Context and interpretation error.	Highlights the tool's inability to understand the linguistic nuances and contextual meanings intended by the students.
2.	Difficulty understanding feedback.	Emphasizes students' confusion in interpreting automated suggestions.
3.	Dependency on paid features.	A barrier to full engagement with the tool's capabilities.
4.	Overabundance of automated feedback.	Overwhelming feedback from the tools that affected students control over their own writing.

5.	Reliance on stable internet connections.	Connectivity issues which prevented students from accessing or utilizing the tool efficiently.

3.2 Benefits of Using Automated Self-Assessment Tools

Despite the challenges identified, students also reported several important benefits gained from using automated self-assessment tools in their academic writing process. These benefits fall into four key subthemes, including increase self-confidence, efficiency in writing, encourage independent learning, and improve writing quality.

The most notable advantage expressed by the participants was an increase in self-confidence. Students felt more assured about their writing abilities after receiving AI-generated corrections, particularly related to grammar and vocabulary accuracy. For instance, MS-1 stated, *"They make me feel happy because my writing looks better"*, while MS-3 explained, *"Using this tool has made me believe that my writing is free from grammatical errors."* These expressions reflect the emotional reinforcement provided by AI tools, which helped reduce anxiety and build assurance in writing.

The second benefit identified was efficiency in writing. Students reported that automated tools helped them identify and fix errors in real-time, which accelerated their revision process and reduced the time spent waiting for external feedback. MS-5 noted, *"Basically, the use of technology in writing helps me solve small and large problems in writing instantly and quickly."* Similarly, MS-2 mentioned, *"Usually these tools immediately provide correction or feedback on my mistakes."* These comments highlight the usefulness of instant feedback mechanisms in enabling students to focus on content development without being delayed by grammatical concerns.

Another important benefit highlighted was the encouragement of independent learning. Rather than relying solely on teachers or peers, students engaged in reflective analysis of AI-generated feedback and made an effort to understand the grammatical principles behind the corrections. MS-1 said, *"When the tools fix my mistakes, I try to learn why they're right,"* and MS-2 added, *"From here, I always want to find out the reasons for understanding the grammatical concepts in English that AI just suggested."*

Lastly, students emphasized that the tools significantly improved their overall writing quality, not just in terms of grammar but also in cohesion, structure, and vocabulary use. For example, MS-4 shared, *"The 'proofread' feature prevents my writing from having typos or word errors that I wouldn't necessarily see if checked manually."* Meanwhile, MS-5 noted, *"After using the automatic assessment in AI tools, my writing became coherent or cohesive."* These reflections demonstrate that students were able to produce texts that were more polished, accurate, and aligned with academic writing standards.

Based on this narrative, there are several benefits of using AI-based automated self-assessment tools felt by students as follows:

Table 2. Benefits Felt by Students

No.	Benefits	Description
1.	Increase self-confidence	Students felt more assured about their writing abilities.
2.	Efficiency in writing	The tools accelerated student's revision process and reduced the time spent waiting for external feedback.
3.	Encourage of Independent learning	Students engaged in reflective analysis of AI-generated feedback and tried to understand the grammatical principles behind the corrections.
4.	Improve writing quality	The tools could improve students writing quality, including grammar, cohesion, structure, and vocabulary use.

The benefits identified in this study underscore the pedagogical potential of AI-based automated self-assessment tools in supporting both cognitive and affective aspects of language learning. The tools were seen not just as correctors, but as facilitators of motivation, independence, and sustained writing improvement. However, to fully realize these benefits, students must be guided in how to interpret and apply automated feedback critically, an area that invites further pedagogical support and digital literacy development.

Discussion

Challenges in Using Automated Self-Assessment Tools

This study shows that there are five challenges faced by students in the use of Automated Self-Assessment Tools. First, errors in context and interpretation. There is significant challenges faced by automated language assessment tools in accurately interpreting the linguistic nuances and contextual meanings intended by learners. These tools often mistakenly flag grammatically correct sentences as incorrect because they struggle to comprehend implied meanings, idiomatic expressions, and acceptable syntactic variations. Additionally, the use of specialized terminology, particularly in fields such as linguistics and education, frequently results in these tools marking terms as errors or suggesting irrelevant corrections (I, 2018). These findings highlight the current limitations of automated language tools in managing the complexity and diversity of language use, which can negatively affect learners' confidence and hinder the overall learning process. Therefore, it is essential for future development efforts to focus on improving these tools' ability to understand context more deeply and to better accommodate domain-specific vocabulary, ensuring more accurate and supportive feedback for users. This is consistent with Gao et al. (2024), who found that AI-powered writing systems struggle to process the semantic depth and pragmatics of user-generated text, leading to feedback that lacks contextual precision.

Second, difficulty understanding feedback. The feedback provided by AI writing assessment tools is often perceived as unclear and inconsistent, which impedes students' ability to effectively revise their work. The feedback which are received did not meet their expectations or was difficult to comprehend (Guo et al., 2024). Moreover, the suggestions were frequently described as overly general, lacking specific explanations or guidance on which parts of the text needed improvement or why certain changes were recommended (Yoon et al., 2023). These findings underscore a critical limitation of current AI feedback systems in supporting learners' writing development, highlighting the need for more precise, transparent, and actionable feedback mechanisms to enhance the revision process and ultimately improve writing outcomes. According to Karatay and Karatay, for feedback to be pedagogically effective, it must be specific, clear, and actionable characteristics often absent in current AI-generated suggestions (Karatay & Karatay, 2024). This supports the notion that while AI tools are useful in surface-level correction, they fall short in offering the type of instructional feedback that promotes deep learning.

Third, the dependency on paid features. Many students face challenges accessing essential features of AI writing platforms due to paywall restrictions. Advanced functionalities, such as sophisticated grammar suggestions and vocabulary improvements, are often only available through paid subscriptions (Purgina et al., 2020). The free versions typically offer only basic grammar corrections, limiting users' ability to fully benefit from the tools. This financial barrier was highlighted as a significant obstacle, as some students expressed frustration over having to invest considerable money to unlock more comprehensive support for aspects like coherence and vocabulary enhancement. These findings underscore the need for more accessible and affordable AI writing tools to ensure equitable learning opportunities for all users. This aligns with Nunes et al. (2022), who noted that economic and infrastructural limitations hinder the equitable access to AI-based learning platforms, especially in developing regions. Limited access to premium functions not only impedes student learning but also contributes to dissatisfaction with the tool's performance.

Fourth, the overabundance of automated feedback. Students often feel overwhelmed by the volume of suggestions provided simultaneously by AI writing tools. The user may receive numerous recommendations at once disrupts their thought process and makes it challenging to determine which revisions to prioritize. Many expressed difficulties in managing the feedback when multiple suggestions are presented together, leading to confusion about which changes are most important (Barrett & Pack, 2023). These findings highlight a significant usability issue in current AI writing platforms, suggesting a need for more streamlined and prioritized feedback systems that can help learners focus on the most critical improvements first, thereby enhancing their revision efficiency and overall writing experience. This phenomenon can be linked to cognitive overload theory, which explains that excessive external input can burden working memory and reduce learners' ability to process and apply information effectively (Sweller et al., 2019).

Fifth, reliance on stable internet connections. Students frequently experience frustration due to connectivity problems, which hinder their ability to use AI writing tools effectively. Participants reported that unstable or weak internet signals significantly disrupt their access to these platforms. For instance, some students mentioned that when the internet connection is poor, it becomes difficult or even impossible to use the tool, causing delays and interruptions in their writing process. During internet outages, they were unable to access the AI-based tools and had to wait until a stable Wi-Fi connection was available, which was particularly problematic when facing tight deadlines (Chander et al., 2022). These findings emphasize the critical dependency of AI writing tools on reliable internet access and suggest that connectivity issues can pose a substantial barrier to efficient tool usage and timely task completion. This echoes the findings of Nunes et al. (2022), who argue that digital inequality remains a critical issue in the successful implementation of educational technology, particularly in remote or underdeveloped areas. For users in such environments, internet dependency hinders the consistent and effective use of AI-assisted writing tools.

Benefits of Using Automated Self-Assessment Tools

One of the most significant benefits of using AI writing tools was an enhancement in students' self-confidence regarding their writing skills. Participants reported feeling more positive and assured about their work after receiving AI-generated corrections, especially in areas related to grammar and vocabulary accuracy. The improvements suggested by the tools made them feel happier with their writing, while others noted that the use of these tools helped them believe their texts were free from grammatical mistakes. These responses illustrate the emotional support and reassurance provided by AI feedback, which contributed to reducing writing anxiety and fostering greater confidence in their writing abilities. This finding is consistent with Van Reybroeck et al. (2017), who found that regular automated feedback enhanced students' writing confidence and strengthened their self-efficacy beliefs. Self-efficacy, according to Bandura, plays a vital role in learners' motivation and persistence in improving performance, especially in complex tasks like academic writing (Bandura, 1997).

Next, AI writing tools significantly enhance writing efficiency by enabling students to detect and correct errors in real-time (Song & Song, 2023). Participants shared that these automated tools accelerate their revision process by providing immediate feedback, which reduces the waiting time typically required for external review. Technology helps resolve both minor and major writing issues quickly and effectively. The tools promptly offer corrections or suggestions for mistakes, allowing them to focus more on developing content without being delayed by grammatical concerns (Alharbi, 2023). These findings underscore the value of instant feedback mechanisms in supporting students to revise more efficiently and maintain momentum in their writing tasks. Sailer et al. (2021) noted that automated feedback systems enhance writing fluency by facilitating prompt revision, thereby increasing students' writing frequency and practice intensity factors known to improve writing competence.

AI writing tools also play a significant role in fostering independent learning among students. Rather than depending exclusively on teachers or peers for feedback, students actively engaged in reflective thinking by analyzing the AI-generated corrections. They made efforts to understand the

underlying grammatical rules behind the suggested changes (Pahi et al., 2024). When the tools corrected their mistakes, they were motivated to explore why those corrections were accurate. There is a desire to deepen students understanding of English grammar concepts based on the feedback provided by the AI. AI writing tools not only assist in error correction but also encourage learners to take initiative in their language development by promoting self-directed learning and critical reflection on language use (Li et al., 2024). This behavior aligns with the concept of metacognitive regulation, which involves planning, monitoring, and evaluating one's learning (Zimmerman, 2002). AI tools, in this case, function not only as corrective assistants but also as catalysts for learner autonomy and critical thinking. Research by Boud et al. emphasizes the importance of self-assessment in promoting learner agency and deeper learning, particularly when students internalize feedback and use it to guide their own learning paths (Boud et al., 2018).

In the other hand, AI writing tools contribute significantly to enhancing students' overall writing quality. The improvements were not limited to grammar but extended to aspects such as cohesion, structure, and vocabulary usage (Marzuki et al., 2023). Participants noted that features like the proofreading function helped them avoid typographical errors and word choice mistakes that might be overlooked during manual review. For example, one student mentioned that the proofreading feature effectively prevented errors that they would not have caught otherwise. Another respondent highlighted that the automatic assessments provided by the AI tools helped make their writing more coherent and logically connected. These reflections indicate that students were able to produce more polished, accurate, and academically appropriate texts through the support of AI writing tools, demonstrating the tools' value in fostering higher standards of writing. Ngo et al. (2024) found similar results, reporting that students who used AI-supported writing platforms produced texts with better lexical diversity, syntactic accuracy, and logical flow. These outcomes are further supported by the theory of formative feedback (Hattie & Timperley, 2007), which argues that well-timed, actionable feedback fosters measurable improvement in performance when learners actively engage with the information provided.

The study illustrate the dual nature of AI-based writing tools: while they offer clear advantages in terms of feedback immediacy, learner autonomy, and writing quality, they also introduce notable pedagogical and technological challenges. On the one hand, students benefit from instant, grammar-focused feedback that boosts their confidence, streamlines their revision process, and encourages independent learning. On the other hand, the tools' limitations such as lack of contextual sensitivity, vague feedback, dependence on premium features, and internet reliability reveal a set of barriers that can hinder their effective use. These dual realities reflect the complex pedagogical space in which AI-based tools operate (Walter, 2024).

The study supports the theoretical framework of formative assessment as outlined by Black and Wiliam (2018), where feedback is not merely evaluative but a driving force for learning and development. Participants in this study consistently treated feedback from automated tools as a learning opportunity, either by acting on it directly or by using it to trigger further inquiry into grammatical concepts. However, the findings also reveal that without adequate scaffolding—such as guidance on how to interpret automated feedback students may misinterpret suggestions, apply corrections inappropriately, or disengage due to frustration (Ng et al., 2024). Therefore, for formative assessment through AI tools to be genuinely effective, it must be coupled with instructional mediation and feedback literacy training, particularly in higher education writing contexts.

Furthermore, this study contributes to ongoing discussions on AI literacy in education. As Holmes et al. (2022) emphasize, equipping students with critical thinking skills to navigate and evaluate AI-generated outputs is essential. While students appreciated the support offered by automated tools, they also demonstrated confusion and even mistrust in certain contexts, such as when the feedback contradicted their own linguistic judgments or lacked clear explanations (Zeevy-Solovey, 2024). AI literacy must extend beyond functional use, encompassing the ability to assess the validity, appropriateness, and limitations of automated feedback (Almatrafi et al., 2024). Educational

institutions, therefore, have a responsibility to include AI literacy as part of broader digital competence development.

Importantly, this study offers a novel contribution by focusing on the qualitative experiences of postgraduate EFL students**,** a group often underrepresented in AI-assisted writing research. While most existing studies emphasize tool accuracy or writing scores, this study foregrounds students' perceptions, emotions, and cognitive responses highlighting how these tools influence not just writing outcomes, but also learner identity, autonomy, and metacognition (Ayanwale et al., 2024). Students are not passive recipients of feedback but active meaning-makers who evaluate and negotiate feedback in complex ways (Ratnam, 2024).

Students' understanding of automated self-assessment tools is multifaceted, shaped not only by their functionality but also by their usability, reliability, and the clarity of the feedback provided. The benefits and challenges experienced by students, shedding light on how automated feedback affects confidence, writing efficiency, independent learning, and overall writing quality, while also identifying persistent barriers such as technological access and feedback ambiguity (Rad et al., 2024).

While AI-based self-assessment tools have the potential to transform academic writing practices among EFL learners, their optimal impact depends on the presence of pedagogical support, critical digital literacy, and equitable access**.** This study underscores the need for a balanced integration of AI in writing instruction where human mentorship and automated feedback coexist to empower learners, rather than replace human insight with mechanical correction.

4. CONCLUSION

Findings revealed a duality in students' experiences. Several challenges faced by students on using AI-based automated self-assessment tools in academic writing. These are regarding context misinterpretation, vague or ambiguous feedback, dependence on paid features, excessive or irrelevant suggestions, and limitations due to unstable internet access. These challenges point to pedagogical gaps that must be addressed to support students in using such tools effectively. On the one hand, students reported numerous benefits, including increase self-confidence, greater efficiency in writing, enhanced independent learning, and noticeable improvements in writing quality. AI-powered tools such as Grammarly and ProWritingAid were seen as helpful for immediate feedback, reducing dependence on teachers, and encouraging reflection on grammatical concepts.

This study highlights students' internal processes—how they interpret feedback, negotiate tool suggestions, and adapt their writing strategies accordingly. These insights contribute to the growing discourse on AI literacy and the role of technology in higher education writing instruction. This study implies that while automated self-assessment tools offer promising support for writing development, their effectiveness depends greatly on students' ability to critically engage with the feedback provided. Further research is needed on institutions' efforts to provide literacy guidance and training. This is useful to ensure that learners can interpret, evaluate and apply automated feedback responsibly and effectively.

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