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THE SWOT ANALYSIS OF EFL LEARNERS' ADAPTATION TO AI-BASED WRITING TOOLS IN ACADEMIC CONTEXTS

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ABSTRACT

The aim of this study was to identify the adaptation of English as a Foreign Language (EFL) learners to AI-based writing tools in academic context. Although AI-based writing tools were progressively implemented into language education, limited research has explored how EFL learners interpreted and adapted to these tools. In particular, structured frameworks are infrequently applied to comprehensively analyze this perception. The study employed a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis to investigate EFL learners' perceptions of AI writing tools such as Chat-GPT, Grammarly, or Quillbot. Data were gathered through semi-structured interviews involving 25 university EFL students. The findings uncovered that students conceived time efficiency and instant grammar feedback as key strengths. In contrast, excessive reliance and deficiency of deep academic understanding were seen as major weaknesses. Opportunities comprised enhanced writing confidence and facilitated idea generation and structured academic writing, while threats focus on diminished critical thinking and passive plagiarism. The results emphasized the demand for ethical pedagogical strategies to guide AI integration in language education.

Keywords: Academic Writing, AI-Based Writing Tools, EFL Learners, SWOT Analysis.

INTRODUCTION

Artificial Intelligence (AI)-based writing tools nowadays are transforming the academic writing landscape, and for assistance, English as Foreign Language (EFL) learners are increasingly turning to applications such as ChatGPT, Grammarly, and QuillBot (Widiati, 2023). In the current worldwide academic and professional field, competence and proficiency in English exceeds spoken communication, highlighting the essential role of well-structured writing. The integration of AI in EFL education is considered essential for transforming the educational setting (Selim, 2024). The EFL learners often battle with language use and clarity. Academic integrity as well as writing competence issues may arise from the uncritical adoption of these supportive tools. As AI tools gain widespread use in academic contexts, recent studies have highlighted their potential benefits and limitations in writing processes (Smith, 2023).

While these tools offer significant advantages in terms of improving grammar and language fluency, they may also lead to over-reliance, diminishing students' ability to write independently (Tram, 2024).

The implementation of AI writing tools into the instructional process is not without its drawbacks. Even though these systems provide potential for tailored learning and immediate assistance, they correspondingly produce considerable apprehensions concerning academic ethic and the possibility to strong reliance on technology. Analysts asserted that excessive dependence on AI may reduce learners' analytical thinking and innovative capacity, which are essential components of effective writing (Baker, 2021). Artificial intelligence technologies in education show great potential in advancing education, but integration is crucial for achieving their full potential (Baker, 2021). Moreover, issues related to personal data protection and the technological gap can aggravate inequalities among learners, particularly in regions with inadequate access to technology (Selwyn, 2022). Therefore, it is crucial to examine both the advantages and disadvantages of these tools to distinctly recognize their implications for EFL learners.

Specifically, academic integrity has emerged as a focal point in discussions regarding AI tools. The machine-generated suggestions delivered by platforms like Grammarly and QuillBot, while useful, may not always align with the student planned interpretation. This misalignment could lead to a diminishment of originality or misrepresentation of ideas (Zhang *et al.*, 2023). The unquestioning use of AI-based writing assistance can confuse the distinction between legitimate academic help and plagiarism, triggering ethical concerns about the application of these technologies in educational settings.

Furthermore, while AI tools offer numerous opportunities for EFL learners to enhance their academic composition, the extent to which these tools foster creativity and critical thinking remains a topic of debate. Recent studies indicate that while AI tools may assist EFL learners in enhancing language structure, they may not significantly improve cognitive writing skills such as argumentation or conceptualization (Alzubi *et al.*, 2025). Therefore, it is essential to investigate not only the strengths and weaknesses of AI tools in academic writing but also the potential opportunities and threats that accompany their use. This comprehensive understanding will enable educators and learners to navigate the complexities of integrating AI writing tools into the language learning process effectively.

The aim of this research was to carry out a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis of EFL learners' adaptation to AI-based writing tools. By systematically examining these factors, the research seeks to provide insights into how these technologies can be effectively integrated into language learning environments. This analysis will not only highlight the potential advantages of AI writing tools but also address the challenges that educators and learners may face in their implementation. This research employed qualitative methods, including surveys and interviews with EFL learners, to acquire perspectives on their experiences and perceptions concerning AI writing tools.

While the significance of this research resided in its potential to inform educators, curriculum developers, and EFL learners about the multifaceted impact of AI writing tools. Through recognizing the strengths and weaknesses of these technologies, stakeholders can take informed decisions regarding their application in academic settings. Ultimately, this study seeks to contribute to the continuing discussion on technology in education, highlighting the necessity for an equitable approach that promotes both innovation and critical engagement in language learning. Ultimately, this study aspired to illuminate the path forward for EFL learners and educators, promoting a setting where AI tools improve learning without compromising the integrity of the writing process.

RESEARCH METHOD

This research implemented a qualitative research design to analyze how EFL learners adapted to AI-based writing tools in academic settings by applying SWOT analysis. A purposive sample of approximately 25 EFL learners, familiar with AI writing platforms such as Grammarly, QuillBot, or ChatGPT, was chosen from university language programs. Purposive sampling was conducted because this research aimed to explore specific experiences and insights EFL learners who have used AI-based writing tools such as Grammarly, QuillBot, or ChatGPT in academic contexts. The data were acquired using semi-structured interviews, enabling participants to express their viewpoints and perceptions, experiences, and challenges regarding the use of these tools. The interviews focused on identifying strengths, weaknesses, opportunities, and threats related to AI writing assistance.

1. Instruments

The instrument applied in this study was a semi-structured interview as the sole instrument which guided based on the SWOT analysis to analyze EFL learners' adaptation towards AI writing tools. The guide included the following categories:

- Strengths: Positive impact and benefits experienced by EFL learners by using AI writing tools.
- Weaknesses: Challenge or difficulties faced during the utilization of AI writing tools.
- Opportunities: New learning experiences and possibilities enabled by using AI writing tools.
- Threats: Potential risk, drawbacks or negative impact experienced by learners during using AI writing tools.

2. Data Analysis

The data gathered through the semi-structured interview were processed employing thematic analysis. Each response of the interview was meticulously analyzed and coded to extract key concepts and themes related to the Strength, Weakness, Opportunities and Threat affiliated with the adaptation and using of AI writing tools by EFL learners.

FINDINGS AND DISCUSSION

This section illustrates key findings of the study based on SWOT analysis about students' adaptation to AI writing tools. Data were gathered using semi-structured interview of 25 EFL learners and analyzed thematically to determine the Strengths, Weaknesses, Opportunities, and Threats acknowledged by EFL learners in their interaction with AI writing tools such as *Chat GPT*, *Grammarly*, *Quillbot*, *etc*. The findings represent not only the experiences of participants using these technologies, but also their perceptions of how AI has influenced their writing practices and academic engagement.

1. Strengths

One of the most notable ideas unfolded from the interview was the set of benefits the EFL learners experienced when using AI writing tools. Their positive response towards the using of AI writing tools were represented by the following interview result:

.... Grammarly helps me to fix my grammar mistakes and errors that I would never notice. It makes me feel more confident when submitting assignments from my lecturers. (P2)

...When I used Chat GPT to write my task, I felt that it's very helpful and my sentences flow better. Of course it increased my self-efficacy in submitting my assignment. (P6)

Chat GPT and Quillbot really helped to enhance my vocabulary. Sometimes I don't know which word that I have to use, but the suggestions help me find the most appropriate words for my writing. (P11)

The italic sentences informed that participants felt that the AI writing tools contributed positively to their writing development, especially in side of grammar accuracy, vocabulary enhancement, fluency and their confidence. Furthermore, instant feedback from tools like Grammarly and ChatGPT was highly valued.

Additionally, several participants also mentioned about the improvement on independence proofreading and faster writing process due to AI writing tools. The responses were represented by the following interview result:

...I used to spend so much time trying to find out the mistakes of my writing assignment, and I still wasn't sure. Now with Grammarly, I can write and edit way faster without bothering my friends. (P5)

... When I use ChatGPT, I can fix things right away. It's like having someone guide me while I write. So, I don't need to ask my classmates all the time anymore. (P8)

...I always asked my older sister to check my essay, but sometimes she was busy. But now I used Chat GPT that can fix my mistakes instantly. (P 17)

The italic sentences illustrated how AI based writing tools have substantially grown the students' efficiency and independence in writing process. The participants consistently conveyed a transformation from being dependent on peers or relatives for proofreading to being able to independently identify and rectify errors and mistakes immediately. Based on the interview result, it is evident that AI writing tools such as Chat GPT, Grammarly, or Quillbot not only minimized the time spent, but also nurtured self-regulation and independence in their writing process. The result suggested that beyond acting as correctional aids, AI writing tools also have significant roles in empowering resources which support self-directed learning, especially in proofreading and revising writing.

The findings of this study indicated that AI based writing tools provide significant strength for EFL learners, particularly in enhancing learners' writing quality and efficiency, and also empowering their self-efficacy. Furthermore, in writing development, most of them had similar ideas that those tools supported their improvement in grammar accuracy, vocabulary usage, sentence fluency, and also self-confidence. These strengths align with the perspective of Widiati (2023), who elaborated that the use of AI writing tools such as *Grammarly*, *QuillBot*, *Wordtune* have indicated remarkable potential in assisting students to

improve their writing abilities. These tools applied advanced technology to analyze the students, common mistakes in grammar, punctuation or syntax. They also offer offers suggestion for enhancing the students' clarity and style in learning.

While the participants response towards the students' self-efficacy and independence was connected to Lam and Moorhouse (2022) finding that underscore AI tools efficiently helped learners in analyzing their areas of difficulty in writing, leading to the enhancement of independent assessment and learning. This tool surpasses basic-syntax adjustment and focuses on the writing style aspects. Thus, the result related to the strength of using AI writing tools for EFL learners reached several conclusions that the tools the learners used not only deal with common linguistic challenges encountered, but also supported them to be more confident, productive and independent in writing process.

2. Weaknesses

Despite the recognized benefits and advantages (strengths), the interview results also revealed numerous internal challenges and drawbacks faced by EFL learners. The weaknesses frequently emerged from an excessive dependence toward AI tools, which seemed to influence their motivation and independent writing improvement effort. Their negative response towards the using of AI writing tools were represented by the following interview result:

...Honestly, If the task is close to the deadline, I just click accept on Grammarly. I don't even double-check anymore. It's faster that way, but I'm not really learning what the mistake was. (P4)

I used to write my essays and writing task from the beginning, but now I just type the topic into ChatGPT and modify the answer a bit. It saves my time, especially when the task is close to deadline. But I feel like I'm skipping the learning part. (P10)

...I always ask my lecturer or friends about my writing errors, especially about sentence structures and grammars. Now I just copy the whole thing into Grammarly and trust it to fix everything, even though I don't always get why the suggestions are made. (P14)

Before using AI, I would search grammar rules and try to understand them. But now I just let the tools to finish my task. I'm starting to forget what I learned, but actually, it's really helpful. (P16)

The italic sentences above highlight several significant internal issues faced by participants during their experiences in using AI writing tools. As mentioned by (P4) who highlighted the proclivity to accentuate speed over understanding in doing task, which eventually hinders learning outcomes. A similar statement was also made by (P10) who

prioritized efficiency and convenience in writing process by using AI writing tools but sacrificing meaningful learning.

Likewise, (P14) reflected the shift on her revising process that signified to a passive acceptance of correction without understanding, which may impede long-term grammatical mastery. Lastly, (P16) admitted regression in his grammar skills. He stated that AI tools undeniably helpful, but unintentionally diminish his long-term language retention.

Based on the interview results, the issues predominantly caused by the EFL learners' overreliance towards AI technologies, which has encouraged them to a reduction of motivation, passive learning behavior, and lack of contribution and effort in actual writing process.

In addition, several participants also responded about their lack of confidence in writing without the aid of AI tools as represented in this following interview result:

...When I write by myself, sometimes I worry too much about making errors of my writing. Using AI makes me relieve and confident, but it also makes me doubt my ability to write on my own. (P24)

...Before knowing AI tools, I spent hours just for checking my writing grammars and sentence structures. It's so helpful to make AI tools like Grammarly and Chat GPT to be my guide. Now I can't imagine writing without them. (P25)

The italic sentences above illustrated the participant responses on how AI writing tools usage has contributed to their self-efficacy in producing texts. As (P24) stated that there was an emotional tension between the convenience of AI tools and a diminishing sense of her personal writing competence. Although AI boosts her temporary confidence, it simultaneously raises doubts about her independent writing ability. In line with what (P25) stated, AI tools now became his essential guide in writing, whereas previously always relied on manual checking. The dependence on these tools reflects comfort, but also reveals an erosion of self-trust and editorial independence.

In conclusion, the interview results bring to the forefront several critical weaknesses faced by EFL learners in their adaptation to AI writing tools. Chief among these is an overdependence on such tools, which triggers passive learning, diminishes intrinsic motivation, and undermines an autonomous writing development. Most of them frequently claimed to skip the metacognitive process which very essential for their language mastery, opting instead for efficiency and automation. This phenomenon, while convenient, tend to diminished long term retention of their grammatical knowledge and writing strategies. Moreover, the EFL learners'

increasing dependence has slightly weakened their self-confidence, with many expressing doubts in their ability to write effectively without AI technologies.

The findings align with previous study, as Safitri & Fithriani (2024) emphasized that AI tools have potential to limit creativity, hinder critical thinking, and reduce editorial independence, as they may replace reflective learning with convenience. While Virlan & Tomak (2024) finding also supported the findings which highlighted the usage of AI tools by learners tend to be over excessive dependence, which can lead to issues like plagiarism and reduced originality.

3. Opportunities

In addition to strength, participants also acknowledged the potential for their progresses and writing ability improvement through the use of AI writing tools. Several participants highlighted that these tools have the ability to be learning aids which unveiled them to new vocabularies, varied sentence structures, and improved stylistic choices. The expected opportunities towards the using of AI writing tools were represented by the following interview result:

... Using AI especially Grammarly gives me examples of appropriate and well-structured paragraphs. I try to follow the structure, and I think my writing is getting more organized now. (P5)

...Sometimes when I have writing task or report, I don't know how to start my paragraph. But when I use ChatGPT, it gives me ideas that I didn't think of. It's not just correction and it helps me think more creatively. (P13)

...Our lecturers always split us for group assignments. In group discussion, we use AI to brainstorm together. We generate drafts with it, then each person edits and have their own job. It makes teamwork easier and more structured. (P19)

The italic sentences indicate that EFL learners acknowledged the AI writing tools as valuable opportunities for improving their writing development and language learning process. Those tools were considered as valuable resources that not only play a role as grammar correction tool, but they also assist learners organizing ideas and empowering their writing fluency.

The first participant (P5) emphasized how AI tools assist to analyze the appropriate and well-structured paragraph. This reveals that AI tools could promote learners in internalizing effective writing frameworks, contributing to better paragraph cohesion and structure. While (P13) concerned to how these tools help them in generating ideas that they had not previously

considered. It revealed that AI tools served as an initial spark or inspiration for them to begin writing and develop their ideas. On the other hand, (P19) highlighted the contribution of AI in promoting collaboration, increasing group productivity, and enhancing communication among members during academic collaboration.

Several interview results also drew attention to the feedback-providing feature of those technologies. The following are selected responses from the interviews:

...AI tools give me specific feedback on my writing. It really helps me to understand my mistakes especially my grammar errors and learn from them. (P17)

I appreciate how AI can highlight areas where I need improvement. It feels like having a personal tutor guiding me. (P22)

Based on the interview result regarding the feedback provided by AI tools, it could be emphasized that personalized feedbacks on AI tools can play role as opportunity that enhance the learning experience for EFL learners using AI writing tools. This features not only facilitate students' advancement but also aligns with the overarching purposes of enhancing writing proficiency and nurturing a more stimulating learning environment.

4. Threats

Whereas AI writing tools deliver a multitude of benefits and advantages, participants also expressed several issues about the potential risks linked to their use. The following are interview results that supporting the concern:

...I admit that AI especially Chat GPT helped me a lot in my writing, but sometimes I feel scared if my lecturer might think I cheated if my writing is suddenly better than before. I feel nervous every time I submit something I worked on with ChatGPT. (P6)

...Even though I edit the AI's suggestions, I still feel worry if it is considered as plagiarism. The rules are unclear, and I don't want to get into trouble. (P14)

...I used to try to improve my grammar, but now I just let the AI fix it. I'm not sure if I'm actually learning anymore (P21)

Excerpt of the interview result demonstrated that while AI writing tools offer various benefits, several participants expressed anxiety towards the utilization of those tools for their writing. As demonstrated by (P6), he acknowledged the value of AI-based writing tools, but on the other side, he also uncovered anxiety resulting from an immediate improvement in output which may not correspond with his previous work quality. While (P14) expressed concern about uncertainty of institutional policies toward AI tools. Although the participant

tried to maintain authenticity, he remained unsure whether the work aligned with academic standards.

Whereas another participant (P21) expressed in side of pedagogical threat: excessive dependence on AI tools may obstruct the EFL learners' enhancement of autonomous writing skills. The participant conveyed a sense of stagnation, being unsure whether the meaningful learning is still happening. This phenomenon may align the concern that AI tools could potentially replace rather than support cognitive effort in learning process.

In conclusion, while AI tools have undeniably elevated learners' capability to produce more polished academic writing, the interview result indicated several threats which required consideration. These threats are primarily external and forward-looking, including integrity issues, pedagogical issues, and institutional uncertainties. These concerns underscore the need for clearer institutional guidelines, enhance the digital literacy, and proportional application of AI tools in writing pedagogy to emphasize that EFL learners not merely advantageous to technological support, but also continue to stimulate their critical thinking and autonomous writing skills. Ultimately, dealing with these threats is fundamental to encourage a supportive, ethical, and pedagogically sound environment for EFL learners adapting to AI enhanced academic context.

The following SWOT matrix was constructed to summarize EFL learners' adaptation to AI-based writing tools obtained from the findings:

Strengths	Weaknesses
Improve learners' writing fluency, grammar accuracy, and vocabulary/word choices.	Excessive dependence may reduce learners' autonomy and self-regulation.
Stimulates learners' confidence and encourage self-directed learning.	Superficial response to the tools' feedback reduces long-term language retention.
Provides immediate and instant feedback, supporting real-time revision and error recognition.	Ignores metacognitive reflection; learners may not internalize corrections.
Enables independent drafting without external assistance.	Lack of confidence in personal writing skills when tools are unavailable.
Opportunities	Threats
Facilitates idea generation and structured academic writing.	Risk of academic dishonesty perception due to sudden writing improvement.
Functions as a personalized learning assistant, offering real-time support.	Lack of institutional guidelines may lead to confusion and fear of misconduct.

Encourages active participation and motivation through AI tools	Potential erosion of critical thinking and original writing skill.
experimentation.	
Encourages exploration of advanced vocabulary and stylistic variation.	May foster to passive learning habit if learners rely on AI-generated content blindly.

DISCUSSION

The transcribed and analyzed interview data that integrated to SWOT framework has led to several resolutions. The SWOT analysis uncovered an intricate interconnection of positive and negative aspects in EFL learners' adaptation to AI-based writing tools. The circumstance brought to light the fact that on the one hand the tools provide immediate progress in writing proficiency and learners' autonomy, but on the other hand, they concurrently introduce risks and threats of ethical misuse, ethical clarity and superficial involvement with the writing process. The participants' expressions of anxiety of being accused as plagiarism, self-doubt, and uncertainty regarding institutional policies indicate the broader impacts of AI tool usage in academic environment.

Based on the SWOT analysis perspective derived from interview data obtained from 25 EFL learners who are the EFL learners and active users of AI-based writing tools, it was found that: **strengths** include the ability of AI tools offer immediate feedback, improving their writing fluency including grammar accuracy and vocabularies, the occurrence of self-efficacy in proofreading and revising (Zhao, 2022; Salvagno et al., 2023). While from the perspective of **weaknesses**, the findings revealed issues such as overreliance that may weakened EFL learners' autonomy and self-regulation, ignored the metacognitive reflection that caused them may not internalized correction, and they may question their own writing abilities in the absence of AI tools (Virlan & Tomak, 2024).

Regarding the **opportunities**, it was found that AI tools facilitated idea generation and structured academic writing. They were also exposure to advanced vocabulary and stylistic writing variation. In addition, AI tools were considered as their personalized learning assistant that offering real-time support (Bista & Bista, 2025). While in the part of **threats** analysis, the findings covered the risk of academic dishonesty perception, especially plagiarism issue due to immediate writing development. Then the lack of institutional policies that may bring into confusion and anxiety of being misconduct. Lastly, the EFL learners may lead to passive learning when they rely on the AI writing tools content uncritically (Mohammadkarimi, 2023).

Under the lens of SWOT analysis, such insights are essential for the comprehension that the integration of AI tools in EFL writing should be reinforced with explicit regulations, sensitization, and deep consideration, to ensure its role remains beneficial rather than detrimental.

CONCLUSION

This study investigated the adaptation of EFL learners to AI-based writing tools in academic settings through a SWOT analysis framework. This study highlighted the double-sided effect of AI-based writing tools for EFL learners. While these tools facilitate and support writing for learners, they also present risks to critical engagement and academic integrity. The findings revealed a complex context of learner experiences influenced by both empowering and challenging aspects of AI-assisted academic writing. Educators are recommended to integrate AI literacy into curricula and emphasize responsible usage. Future research needs to expand to other regions and include comparative analyses across proficiency levels.

Taken together, the SWOT analysis illustrated that although AI-based writing tools provide significant pedagogical value, they need to be handled with critical awareness, pedagogical interaction, and institutional policies to guarantee that technology functions as a facilitating factor instead of a substitute for learning.

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