

EFL students' perceptions about the benefits and challenges of using AI tools in writing skills at university level

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ABSTRACT

INFO ARTIKEL

Sejarah artikel:

Diterima 02 Desember 2025

Disetujui 15 Desember 2025

Diterbitkan 07 Januari 2026

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This study investigates EFL students' perceptions of the benefits and challenges of integrating AI tools such as ChatGPT and Grammarly into academic writing. Using a Sequential Explanatory Mixed Methods Design, perceptions were measured through a questionnaire (N=50) and further explained with semi-structured interviews. Quantitatively, students showed strong positive perceptions of benefits ($x = 3.90$) and moderate concerns about challenges ($x = 3.39$). The highest-rated benefit was AI's ability to rephrase for clarity and style ($x = 4.12$), while the strongest challenges were concerns about skill degradation/dependency ($x = 3.74$) and unnatural-sounding output ($x = 3.72$). Qualitative analysis revealed three benefit themes: Linguistic and Structural Acceleration, Efficiency and Instant Feedback, and Affective Confidence Booster and three challenge themes: Fear of Skill Degradation and Dependency, Unnatural Voice and Editing Burden, and Managed Ethical Risk. The findings highlight a paradox in which AI enhances quality and efficiency, yet its unnatural output and fears of dependency push students to revise actively to maintain naturalness and preserve their writing skills. The study recommends that educators focus on self-regulatory strategies and critical editing skills in AI-supported academic writing.

Keywords: EFL, AI Tools, Perceptions, Writing Skills, Mixed Methods

INTRODUCTION

The integration of artificial intelligence (AI) into English language learning has transformed university students' academic writing practices. Tools such as ChatGPT, Grammarly, QuillBot, and Perplexity assist with grammar correction, vocabulary development, idea generation, and text organization. Research shows that these tools positively affect students' motivation, confidence, and productivity (Kohnke et al., 2023; Fitria, 2023; Safitri & Fithriani, 2024). Students generally perceive AI as a helpful and time-saving resource that supports their writing process (Chan & Hu, 2023).

However, studies also reveal challenges, including irrelevant feedback, confusion, overreliance, and reduced writing autonomy (Alwi, 2024; Wardat & Akour, 2025). Prolonged AI use may lead to formulaic writing and dependence (Gholami & Araste, 2023). Students' academic backgrounds and digital literacy significantly influence how they interact with AI tools, while usability and interface design affect sustained engagement (Hasan & Rizwan, 2024; Nguyen & Chen, 2024).

Despite extensive research, gaps remain due to the dominance of single-method studies and limited contextual comparisons. Therefore, this study adopts a mixed-methods approach involving surveys and interviews across two universities to explore EFL students' perceptions of the benefits and challenges of using AI tools in academic writing. The findings are expected to provide a comprehensive understanding of students' experiences and offer practical insights for educators and institutions in developing effective and ethical AI-assisted writing practices in higher education.

METHODS

This study employed a sequential explanatory mixed-methods design combining quantitative and qualitative approaches (Creswell & Plano Clark, 2018). Quantitative data were collected first through an online Likert-scale questionnaire distributed via Google Forms to measure students' perceptions of the benefits and challenges of AI tools in writing using a 5-point scale (1 = Strongly Disagree to 5 = Strongly Agree). This phase was followed by semi-structured online interviews conducted via Zoom or Google Meet to explore students' responses in greater depth. The participants were university students, with 50 completing the questionnaire and 15 participating in interviews, selected through convenience sampling based on criteria of active enrollment in English courses and experience using AI tools such as Grammarly (Creswell, 2012). The instruments consisted of a questionnaire containing demographic and perception items and an interview guide with open-ended questions that allowed flexible exploration of emerging themes.

Quantitative data were analyzed using descriptive statistics (mean, standard deviation, and frequency distribution), while qualitative data were examined through thematic analysis (Braun & Clarke, 2006). Both datasets were then integrated to provide a comprehensive interpretation of the findings. Ethical procedures were strictly followed through informed consent, confidentiality, and voluntary participation, in accordance with the ethical guidelines of Universitas Negeri Surabaya and Universitas 17 Agustus 1945 Surabaya. The conceptual framework guided the study by illustrating the relationship between key variables and the sequential data collection process to achieve an integrated understanding of EFL students' perceptions.

Table 1. Number of Articles Published in Journal X from 2011 to 2016

NO	RQ	Objective	Data	Instru- ment	Analysist	Expected finding
1	What are EFL students' perceptions concerning the benefits of using AI tools in writing at university level?	To investigate EFL students' perceptions concerning the benefits of using AI tools in writing at university level.	Nu-meri-cal and tex-tual data	Close ended question-naire and semi struc-tured in-terview	Descriptive Statistics (Mean, Stand-ard Deviation, Frequency distribution). Thematic Analysis (Cod-ing, grouping, and interpre-tation of re-curring themes).	Students' perception about the benefits of using AI
2	What are EFL students' perceptions concerning the challenges of using AI tools in writing at university level?	To investigate EFL students' perceptions concerning the challenges of using AI tools in writing at university level.	Nu-meri-cal and tex-tual data	Close ended question-naire and semi struc-tured in-terview	Descriptive Statistics (Mean, Stand-ard Deviation, Frequency distribution). Thematic Analysis (Cod-ing, grouping, and interpre-tation of re-curring themes).	Students' perception about the challenges of using AI

RESULTS AND DISCUSSION

The quantitative data were collected from 50 EFL students using a Likert-scale questionnaire. The data were analyzed using descriptive statistics to calculate the Mean and

Standard Deviation (SD) for each perception item. A Mean score above 3.00 indicates a positive perception (Agreement), while a score below 3.00 indicates a negative perception (Disagreement). The semi-structured interviews with the participants provided depth and context to the quantitative findings.

The Students' Perceived Benefits of Using AI Tools in Writing

Quantitative Phase

Quantitative data were collected from 50 EFL university students (N=50) using a 15-item, 5-point Likert-scale questionnaire. Descriptive statistics, mean ($\bar{x}$) and Standard Deviation (SD), were calculated for all items. Students demonstrated a strong positive perception of AI benefits Overall Mean = 3.90, valuing its contribution to higher-order writing tasks and efficiency.

Table 2. Number of Articles Published in Journal X from 2011 to 2016

Item ID	Statement (Perceived Benefit)	Mean ($\bar{x}$)	SD
B2	I use AI tools to effectively rephrase sentences to improve clarity and style.	4.12	0.63
B3	AI tools help me structure my arguments and outline my essays more logically.	4.08	0.60
B4	Using AI helps me generate ideas when I experience writer's block on an assignment.	3.96	0.75
B7	Reviewing AI suggestions helps me learn and internalize better English writing rules.	3.84	0.77
B5	I find that AI feedback is faster and more accessible than waiting for human feedback.	3.80	0.76
B6	AI tools help me expand my academic vocabulary and use sophisticated language in my writing.	3.80	0.76
B8	The use of AI tools reduces my anxiety about making mistakes in my written English.	3.80	0.83
B1	AI tools significantly improve the accuracy of my grammar and mechanics (spelling, punctuation).	3.78	0.76

Qualitative Phase

Linguistic & Structural Improvement

This theme covers the practical benefits of AI in refining the final written product, specifically focusing on grammar, style, and vocabulary expansion. The high level of agreement on the questionnaire items confirms that students rely on AI to enhance the academic quality of their submissions.

S2, excerpt 1

"AI tools can help me expand my academic vocabulary and use sophisticated language in my writing to make my sentences more formal and coherent."

S1, excerpt 2

"...ChatGPT assists me in expanding ideas, developing vocabulary, and organizing content. These tools help me write more confidently and express my thoughts in a more fluent and academic way."

Excerpts 1 and 2 illustrate that the value lies in accessing sophisticated language and ensuring coherence that extends far beyond basic grammar. The interviews strongly supported this focus on style and coherence. Participants explained that AI acts as a sophisticated editor, helping them achieve the formal, academic tone required at the university level.

S4, excerpt 3

"For me, the biggest benefit of using AI is how it helps improve my writing. It gives useful suggestions for grammar, sentence structure, and how to make my writing sound formal."

S11, excerpt 4

"I use AI... to improve the clarity and quality of my writing, especially when I need to rephrase sentences to sound more natural and academic."

In excerpts 3 and 4, it shows a conscious effort to adjust the tone and style of their existing work to fit the required academic register, confirming the theme's focus on rapid linguistic refinement. In essence, the qualitative data explains that students see AI as a linguistic accelerator, allowing them to bridge the gap between their current EFL proficiency and the high expectations for formal academic discourse by instantly improving the clarity and complexity of their language.

Efficiency & Cognitive Support

This theme highlights AI's role in accelerating the writing process and assisting students with initial cognitive hurdles, such as idea generation and structural planning. The high means for B3 (Structure/Logic: 4.08) and B4 (Idea Generation: 3.96) confirm that AI is highly valued during the planning stage of writing. Critically, the speed and accessibility (B5, mean = 3.80) are key factors driving this adoption.

S6, excerpt 5

"I find that AI feedback is faster and more accessible than waiting for human feedback."

This quote directly explains the quantitative item B5, emphasizing that the accessibility and speed of the tool are superior to the logistical friction of seeking human help.

S3, excerpt 6

"AI shortens the time, so I can do assignments quickly."

S1, excerpt 7

"The AI provides instant, interactive, and personalized feedback, which is crucial when I'm under a tight deadline."

Excerpt 6 uses the word "quickly" to highlight the direct impact on productivity and managing a heavy academic workload. Respondent 1 and 3 emphasize the instant and interactive nature of the feedback, confirming that the tool allows for immediate changes and refinement, an invaluable feature under tight deadlines. These results suggest that students utilize AI as a "cognitive assistant" to accelerate the pre-writing and drafting phases, making the entire assignment process feel less laborious and more efficient.

Affective & Learning Value

This theme addresses the emotional (affective) and pedagogical impact of AI use, focusing on how the tool influences student confidence and learning. The strong agreement that AI reduces anxiety (B8, mean = 3.80) shows that the tool has a powerful affective benefit. This is directly linked to the learning value (B7, mean = 3.84), as a reduction in fear allows for greater focus on internalization.

S5, excerpt 8

"The use of AI tools reduces my anxiety about making mistakes in my written English. I am more confident when delivering it."

S12, excerpt 9

"I feel more secure about the accuracy and structure of my writing because the AI has double-checked my work before submission."

This quote 8 and 9 links anxiety reduction directly to increased confidence, demonstrating a positive shift in the student's affective state toward the writing task. The concept of "double-checking" shows AI functions as a final safety net, providing a reliable assurance

regarding both mechanical accuracy and structural integrity.

S10, excerpt 10

"Yes, I became more confident in writing because if I have any difficulties in the learning process, I can solve the problem with AI tools and it is very helpful."

The excerpt 10 data validated the link between reduced anxiety and improved confidence. Thus, the interviews confirm that the immediate, non-judgmental feedback from AI creates a "safe space" for writing, reducing the anxiety associated with error-making and fostering an environment where students feel more confident and receptive to learning through continuous, personalized correction.

The Students' Perceived Challenges of Using AI Tools in Writing

Quantitative Phase

Quantitative data were collected from 50 EFL university students (N=50) using a 15-item, 5-point Likert-scale questionnaire. Descriptive statistics, mean ($\bar{x}$) and Standard Deviation (SD), were calculated for all items. Students acknowledged significant concerns regarding the consequences of AI use. Overall Mean = 3.39, with the highest ratings linked to dependency and output quality.

Table 3. Number of Articles Published in Journal X from 2011 to 2016

Item ID	Statement (Perceived Challenge)	Mean ($\bar{x}$)	SD
C1	I am concerned that using AI tools will make me too dependent and weaken my own writing skills.	3.74	0.80
C2	The text produced or suggested by AI tools sometimes sounds unnatural or not like my own voice.	3.72	0.81
C3	I occasionally receive inaccurate or irrelevant suggestions from AI tools for my writing.	3.40	0.78
C4	I worry about the ethical issues (e.g., academic integrity) when using AI for my assignments.	3.30	0.93
C7	I often have to spend a lot of time editing the AI-generated text to make it suitable for my assignment.	3.24	0.87
C5	I find it difficult to check the information generated by AI to ensure its accuracy for research papers.	3.18	0.87
C6	Over-reliance on AI hinders the development of my critical thinking skills during the writing process.	3.14	0.86

Qualitative Phase

Skill Degradation & Dependency

This theme addresses the students' primary internal fear: that the convenience of AI directly undermines their ability to develop fundamental writing and critical thinking skills. This was the most intensely perceived challenge. The questionnaire results show that Dependency and Skill Weakening (C1, mean = 3.74) is the highest-rated challenge, revealing a strong consensus that the tool's benefits come with a personal developmental cost. While the concern about hindering critical thinking (C6, mean = 3.14) is lower, it still registers above the neutral point.

S5, excerpt 11

"I am concerned that using AI tools will make me too dependent and weaken my own writing skills."

S10, excerpt 12

"The potential for over-reliance on AI will reduce their ability to think critically and solve

problems independently."

Excerpts 11 and 12 move the concern beyond writing skills to the broader intellectual capacity of critical thinking and independent problem-solving, showing a deep-seated worry about intellectual laziness. This directly validates the statistical concern regarding C6.

S5, excerpts 13

"If I rely too much on AI, I will lose my motivation to think critically and creatively."

This emphasizes the loss of motivation, the internal drive which is essential for learning, suggesting the long-term educational cost of dependency. To mitigate this, students establish rules for themselves.

S1, excerpt 14

"I use AI only as a tool for guidance, not as a substitute for my effort. After receiving suggestions from AI, I always rewrite the text in my own words and try to understand the reasoning behind the corrections."

The strong Mean for C1 is not a hypothetical fear; it reflects a conscious, managed risk. Students feel that the ease of AI is powerful enough to threaten their intrinsic learning motivation, forcing them to adopt defensive strategies to preserve their independent cognitive skills.

Output Quality and Authenticity

This theme focuses on the practical and linguistic friction created when students use AI-generated text, which often lacks the naturalness and stylistic fit required for academic assignments. The challenge of unnatural voice (C2, mean = 3.72) is ranked almost as highly as dependency, revealing it as a major practical hurdle. This is directly linked to the time spent editing the AI output (C7, Mean = 3.24).

S4, excerpt 15

"The text produced or suggested by AI tools sometimes sounds unnatural or not like my own voice."

S15, excerpt 16

"My lecturer commented that my writing was too stiff and looked like a machine, so I had to spend a lot of time editing the AI-generated text."

This is the core problem, the lack of authenticity and personalization in the AI's linguistic style. This quote 15 and 16 are particularly powerful as it shows the consequence of the "unnatural voice" is concrete, negative feedback from an instructor, forcing the student to invest significant time in editing.

S13, excerpt 17

"I have to rewrite it in my own words to make it suitable for my assignment."

S9, excerpt 18

"Even when I get information from AI, I still double-check its accuracy in other sources, such as journals or books."

Excerpts 17 and 18 indicate that students view AI as a starting point rather than a final solution, making rewriting essential. The high C2 and moderate C7 means show that although AI improves grammar and structure, its output lacks natural human expression. As a result, students must invest time in revising and personalizing the text, confirming that AI functions as an intermediary tool rather than a final writing product.

Ethical and Verification Risks

This theme examines the concerns surrounding academic integrity and the practical difficulty of ensuring the reliability of information, especially in research-heavy writing. The means for ethical issues (C4) and difficulty checking accuracy (C5) are the lowest of all challenges, sitting closer to the neutral point. This suggests that while these concerns exist,

they are not as central to the student experience as dependency or unnatural voice.

S3, excerpt 19

"I only use AI to generate ideas and organize content, not to write the final version."

This statement by S3 is a key policy adopted by students. They limit AI to the conceptual and organizational stages to ensure the final writing product is their own.

S1, excerpt 20

"I still have to paraphrase, recheck, and cite sources properly to avoid plagiarism and ensure accuracy."

S11, excerpt 21

"I also still don't understand plagiarism in the current use of AI... in the future, there may need to be clear regulations to protect personal copyright."

This answer illustrates the steps taken to mitigate both plagiarism and factual inaccuracy, showing a proactive, responsible approach to tool integration. This final quote demonstrates an awareness of the broader, unresolved ethical landscape and calls for external, clear regulations, indicating that the problem extends beyond individual action.

The low mean for C4 and C5 is largely a result of student-led risk management. By habitually rewriting AI output (as necessitated by C2), students simultaneously manage the ethical and accuracy risks. However, the qualitative insights underscore the need for clearer university guidelines regarding information verification and academic honesty in the age of generative AI

CONCLUSION

This study shows that EFL students view AI tools as highly useful for improving clarity, structure, and academic style, but they also recognize risks such as dependency and unnatural-sounding text. While AI helps them write more efficiently and reduces anxiety, students remain cautious about overreliance and the potential weakening of their own writing skills. Based on these findings, teachers are encouraged to shift from restricting AI use to teaching critical AI literacy. This includes guiding students on when AI should support the writing process, designing tasks that require students to revise AI-generated text, and encouraging self-regulated practices such as drafting ideas independently before using AI. For students, AI should be used as a revision aid rather than a replacement for core writing skills. They must verify, edit, and personalize AI output to maintain originality and accuracy. Future research should examine long-term learning outcomes and compare institutional contexts to better understand how AI affects writing development and academic behavior across diverse settings.

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