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## Exploring Student Perceptions on Ai Integration in Academic English Writing Skill Development

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Paper received: June-2025; Accepted: July-2025; Publish: August-2025

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### Abstract

This study explores university students' perceptions of AI integration in academic English writing using a mixed-methods approach grounded in the Technology Acceptance Model (TAM). Conducted at Universitas Muhammadiyah Kalimantan Timur, it involved 65 questionnaire respondents and five interviewees. Findings revealed that students found AI tools useful for grammar correction, idea generation, and efficiency. However, concerns emerged regarding over-reliance, reduced critical thinking, and limited motivational impact. The study highlights that while AI tools are perceived as beneficial, their adoption lacks affective engagement, especially in contexts with minimal digital literacy training. Originality lies in combining TAM with students' emotional and contextual experiences in Indonesia, a perspective underrepresented in existing literature. The study recommends structured, reflective pedagogy to support ethical and autonomous AI use in writing.

**Keywords:** Artificial Intelligence; Academic Writing; Technology Acceptance Model; Student Perception

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## 1. Introduction

The digital age brought about profound changes in the educational scene, with artificial intelligence (AI) technology being one of the most transformational developments. The AI system examines learners' words and writing using language recognition and natural language processing to offer feedback on pronunciation, grammar, and vocabulary usage (Abimanto & Sumarsono, 2024). ELT utilized AI-powered technologies including speech recognition, grammar correction, and chatbots, which improved student academic performance (Tulasi & Rao, 2023; Aminah et al., 2019; Arbain et al., 2017).

The use of artificial intelligence technologies in higher education in Indonesia is on the rise, as is the worldwide need for digital literacy and competitive academic English abilities



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(Sitepu, 2025; Arbain & Nur, 2017; Arbain & Rohman, 2023). English academic writing abilities are essential for students' success in foreign studies and jobs. However, Indonesian students encounter distinct problems in acquiring these abilities, ranging from vocabulary and grammatical limitations to a lack of exposure to international standard writing standards (Batubara & Fithriani, 2023; Erliana & Arbain, 2020; Gracella & Rahman Nur, 2020). As a result, learning about how Indonesian students acquire and apply artificial intelligence is critical to comprehending the region's promise and limitations.

To examine students' perceptions of AI integration in academic writing, the study used (Davis, 1989) Technology Acceptance Model (TAM) paradigm. TAM is a widely used model to explain users' intentions to adopt new technologies, with two main constructs: perceived usefulness (PU) - to the extent that people believe that using a particular system improves their job performance; and perceived ease of use (PEOU) - to the extent that people believe that using a particular system requires no effort (Davis, 1989; Nur, 2020; Nur & Jamilah, 2022). In the area of education, TAM has demonstrated its effectiveness in predicting student adoption of various digital learning technologies. According to Scherer et al., (2019) TAM was quite accurate in explaining how instructors and students accepted technology in their studies. This study used TAM to determine how students' views of AI's utility and simplicity of use impact their attitudes and adoption in the development of English academic writing abilities.

Although several research have investigated the efficiency of AI in enhancing the technical parts of writing, the literature remains restricted in comprehending the emotional components and subjective experiences of students with its use. For example, (Nazari et al., 2021) discovered that AI feedback can boost self-efficacy and satisfaction while also decreasing anxiety when writing. However, (Chan & Hu, 2023) discovered certain student concerns about accuracy, privacy, and academic identity. These factors, such as the amount of confidence, irritation, or emotional pleasure experienced while dealing with AI, have a significant impact on AI's long-term acceptance and comprehensive integration into the learning process. Zhang (2023) found that motivation, self-efficacy, and contentment are



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essential factors in the continuous usage of AI technology. Without a thorough knowledge of these factors, the use of AI in academic settings may fall short of its full promise in helping the ongoing growth of writing abilities.

### 1.1 Benefits of AI in Academic Writing

Previous research has consistently demonstrated that artificial intelligence (AI) has great promise for assisting students with academic writing, particularly in terms of speeding up the text drafting process and enhancing their grammatical correctness. For instance, in a mobile learning setting, Dizon & Gayed, (2021) study found that the usage of Grammarly, an AI-based writing tool, greatly enhanced the grammar and sentence structure of L2 learners. Furthermore, using a quasi-experimental method in one research program, Hardinansyah & Hamidah, (2024) discovered that with the inclusion of AI tools like QuillBot and Grammarly, students' involvement in academic writing rose. The methodological limitations of both research should be noted, though, since Hardinansyah & Hamidah focused solely on one field and ignored long-term perceptions and the variety of learning environments, while Dizon & Gayed did not investigate students' motivational components. Therefore, a better comprehension of AI's educational and psychological ramifications is still required, even though its technological advantages have been well documented.

### 1.2 Challenges and Concerns of Using AI

The employment of AI in academic writing presents considerable hurdles, notably in terms of cognitive dependence and academic ethics. Malik et al., (2023) found that certain students had a propensity to passively accept AI ideas without critical examination, which might possibly impede the development of autonomous thinking abilities. This study, while giving useful first insights, has limitations because it only employed a descriptive survey technique without triangulation and direct observation of the students' writing process. In contrast, Roe et al., (2023) stressed the significance of monitoring plagiarism, intellectual ownership, and literary originality concerns that arise as a result of the usage of AI-based solutions. However, because the study lacks empirical data from direct users, it fails to properly capture the ethical quandaries that students face in academic practice. A deeper knowledge of



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how students negotiate the line between valid AI aid and potential ethical transgressions is critical for developing balanced instructional rules and practices.

### 1.3 Research Gaps and Rationalization of This Study

While a number of studies have investigated the effectiveness of AI in improving technical aspects of writing, such as writing scores or time efficiency (Utami et al., (2023; Rahmi et al., (2024); Phan, (2023), the majority of these studies have been quantitative and have not delved deeply into users' affective and subjective experiences. Recent research indicates that characteristics such as confidence, frustration, and emotional pleasure when using AI have a major influence on the long-term adoption and comprehensive integration of these technologies in learning (Zhang (2023). Unfortunately, this issue has received little attention in the context of higher education in Indonesia. The majority of research has been undertaken in the West (Lee et al., 2024) which has distinct social, cultural, and educational infrastructures. Local studies, such as those conducted by Sumakul et al., (2022) and Syahira et al., (2023), have raised general perceptions of university students' attitudes toward the use of AI, but have not comprehensively integrated theoretical frameworks such as the Technology Acceptance Model (Davis, 1989) and digital literacy (Ng, 2012), nor have they delved in depth into the emotional nuances and contextual challenges that Indonesian students may face. To fill this gap, the research questions are: How do students perceive the benefits of integrating artificial intelligence (AI) tools into their academic English writing skills? What challenges do students face with the integration of artificial intelligence (AI) tools to develop their academic writing skills in English?

## 2. Method

### 2.1 Research Design

This study employed a mixed-methods research design that combines both quantitative and qualitative approaches to obtain a comprehensive understanding of students' perceptions regarding the integration of AI in academic English writing skill development. This design is appropriate for capturing both numerical trends and deeper insights. The



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theoretical framework used is the Technology Acceptance Model (TAM) developed by (Davis, 1989), which explains technology adoption through two key perceptions: perceived usefulness and perceived ease of use. TAM helps contextualize students' acceptance of AI tools in the academic writing process.

## 2.2 Research Participants

This research was conducted at Universitas Muhammadiyah Kalimantan Timur, particularly within the English Education Study Program. Participants were second- and fourth-semester students who had completed the Academic Writing course and had experience using AI-based writing tools. A purposive sampling technique was used to select 65 participants for the quantitative phase. For the qualitative phase, five participants were chosen based on the richness of their survey responses and willingness to be interviewed. The decision to limit the number of interview participants to five was based on the qualitative principle of depth over breadth. This approach allowed for more focused, detailed, and manageable analysis of individual experiences while ensuring thematic saturation within the scope and timeline of the research. According to Creswell, (2012) suggests 5–25 people for qualitative interview research, but Braun and Clarke (2013) highlight that the richness of individual data is more important than the number of participants in theme analysis. This mix resulted in the collecting of both broad trends and specific experiences.

## 2.3 Research Instruments

### 2.3.1 Closed-Ended Questionnaire

The questionnaire consisted of 20 items—10 measuring students' perceptions of the benefits of AI and 10 measuring challenges faced while using AI tools. All items were measured using a 4-point Likert scale ranging from 1 (Strongly Disagree) to 4 (Strongly Agree). The instrument was adapted from previous validated studies Utami et al., (2023); Phan, (2023), which had undergone expert validation to ensure the clarity and relevance of the items. As the context of this study is aligned with the original research, the instrument was adopted without further modification. Although this study did not



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perform an additional reliability analysis such as Cronbach's Alpha, the use of a previously validated instrument supports the credibility of the measurement tool.

### **2.3.2 Semi-Structured Interview Guide**

To gather qualitative data, a semi-structured interview guide was developed consisting of 10 open-ended questions focused on students' experiences, perceived benefits, and challenges in using AI tools for academic English writing. Five participants were selected from the survey respondents. Each participant was coded P1 through P5 to ensure confidentiality. Interviews were conducted, recorded with consent, transcribed verbatim, and analyzed thematically.

### **2.4 Data Collection & Analysis**

Quantitative data were analyzed using descriptive statistics (mean, median, and mode) to summarize the students' perceptions of benefits and challenges in using AI tools. As this study relied on a previously validated instrument, no additional statistical reliability analysis was conducted.

For the qualitative data, thematic analysis followed Braun & Clarke, (2006) six-phase approach: (1) familiarization with the data through reading and re-reading the transcripts, (2) generating initial codes based on recurring statements and patterns, (3) searching for themes by grouping similar codes, (4) reviewing themes to ensure they represent the data accurately, (5) defining and naming themes to reflect the essence of the coded data, and (6) producing the report.

In this study, coding was performed manually. Initial codes such as "time efficiency," "AI for grammar correction," "lack of critical thinking," "technical barriers," and "AI language limitations" were identified. These were then categorized into broader themes: (1) Perceived Benefits of AI, (2) Challenges and Limitations, and (3) Strategies for Responsible Use. Each theme was supported by multiple participant quotes and aligned with the quantitative findings. The process ensured consistency and allowed the data to reveal meaningful patterns in student perceptions of AI tools in writing. Triangulation was achieved by integrating findings from



both quantitative and qualitative sources to ensure greater validity and trustworthiness. by integrating findings from both quantitative and qualitative sources to ensure greater validity and trustworthiness.

### 3. Findings and Discussion

This section presents the combined results of the quantitative and qualitative analyses, structured around the two main research questions: (1) students' perceived benefits of AI tools in academic English writing, and (2) challenges they encounter in using such tools. The integration of descriptive statistics with thematic interview analysis aims to provide a comprehensive understanding of students' perceptions.

#### 3.1 Perceived Benefits of AI Tools

Table 1 Analysis Quantitative

No	Benefits of Using AI	Mean	Median	Mode
1	Learners' writing skills are improved with the help of AI-based learning aids.	3.03	3.0	3
2	The use of AI helps me accomplish my learning goals.	3.12	3.0	3
3	AI improves my vocabulary and grammar.	2.97	3.0	3
4	AI enhances the quality of my writing.	2.97	3.0	3
5	AI is easily accessible.	3.26	3.0	3
6	AI interfaces are user-friendly.	3.08	3.0	3
7	AI can be customized to my needs.	3.14	3.0	3
8	AI provides a wide range of features.	3.12	3.0	3
9	AI makes me more interested in writing.	2.83	3.0	3
10	AI increases my motivation to write.	2.83	3.0	3

The quantitative results show that students generally held positive perceptions of AI tools in academic writing. Items such as “AI is easily accessible” (Mean = 3.26), “AI can be customized to my needs” (Mean = 3.14), and “The use of AI helps me accomplish my learning goals”





(Mean = 3.12) received the highest mean scores, indicating strong agreement on the functional usefulness of AI in supporting writing tasks.

These findings were substantiated by qualitative data. Interview participants repeatedly mentioned that AI tools such as ChatGPT, Grammarly, and QuillBot helped them in organizing ideas, paraphrasing, checking grammar, and overcoming writer's block. For example, participant P1 stated, *"I use AI mostly when I need to find ideas or when I have to finish quickly."* Participant P5 emphasized, *"ChatGPT can help from beginning to end—from brainstorming to outline, even checking repetition."*

This agreement between survey and interview findings matches the TAM framework's perceived utility and ease of use aspects, implying that students value AI technologies not just for productivity but also for increasing autonomy and confidence in writing. While these findings are similar with earlier research (Phan, 2023; Utami et al., 2023), the specific ways in which students in this study contextualized AI tools—such as utilizing them to "brainstorm under pressure" or "check for repetition"—indicate a more task-oriented involvement. This distinction implies that, while AI technologies are seen as useful, their use is still influenced by students' time restrictions and job urgency, rather than intrinsic desire (Lee et al., 2024)

### 3.2 Challenges and Limitations in AI Use

Table 2 Analysis Quantitative

No	Challenges of Using AI	Mean	Median	Mode
1	Students only see recommendations for correcting errors, not specifics about usage.	2.85	3.0	3
2	Websites that feature only a single input form can become dull and uninteresting.	2.97	3.0	3
3	Translator apps provide a small number of alternative words.	2.97	3.0	3
4	Paraphrasing lengthy sections of text does not always produce precise results.	2.89	3.0	3
5	The translation work is not dependable.	2.88	3.0	3
6	AI translator apps lack cultural awareness, resulting in unnatural translations.	3.06	3.0	3
7	Students rely too much on tools while they are writing.	2.94	3.0	3





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8	Students face difficulties accessing the Internet while using different tools.	2.85	3.0	3
9	Students worry about not having enough digital skills to operate the tool.	2.97	3.0	3
10	Students lack the desire to utilize tools powered by artificial intelligence while composing their work.	2.83	3.0	3

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Despite the generally positive responses, the study also revealed several notable challenges. Quantitatively, lower mean scores were observed on items like “AI increases my motivation to write” (Mean = 2.83) and “AI makes me more interested in writing” (Mean = 2.83), indicating neutral to slightly negative perceptions in terms of affective engagement. This finding diverges from previous studies (Phan, 2023) which reported increased motivation among students using AI tools. When compared to previous studies conducted in Western contexts, such as Chan and Hu (2023) or Zhang et al. (2023), which reported increased student motivation and improved engagement through AI-supported writing tools, this study reveals a nuanced contrast. While students in this research acknowledged AI’s usefulness, the relatively low motivation scores (Mean = 2.83) and reported dependency issues suggest that Indonesian students may not experience the same level of affective engagement. This difference may stem from cultural and pedagogical differences. For example, Western classrooms often integrate AI tools within structured critical thinking frameworks and emphasize guided autonomy, while in Indonesian settings, AI use is still largely individual and unguided.

Moreover, studies in Indonesia such as Utami et al. (2023) and Sumakul et al. (2022) have found generally positive student attitudes toward AI, but they often employed quantitative approaches without exploring psychological and pedagogical tensions in depth. In contrast, this study uncovered emotional ambivalence, reliance concerns, and access limitations that contextualize the student experience more comprehensively. These divergences underline the need for localized pedagogical models that incorporate not only digital tools but also critical literacy training and teacher mediation to support effective and ethical AI use in academic writing.



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This difference indicates that, while students notice AI's effectiveness in completing writing projects, it may undermine their personal desire and ownership of the writing process. One probable explanation is that when AI handles a large portion of the work, students may feel alienated from their own thoughts and less intellectually engaged. Furthermore, the prescriptive or formulaic structure of AI-generated solutions may limit students' inventiveness, resulting in a decreased sense of success or engagement (Ju, 2023).

The interviews offered more information on this disparity. Several students voiced concern about becoming increasingly reliant on AI, which they said might impede their critical thinking growth. Participant P2 stated, *"I am worried that I am becoming lazy to think because I just follow whatever the AI suggests."* Participant P1 commented, *"Sometimes the AI's output is too generic and does not really match what I want."* These reactions indicate that, while AI enhances functional elements of writing, it may limit chances for deeper cognitive involvement (Liu et al., 2022).

In addition, participants identified limitations such as overly formal or template-like responses, lack of cultural nuances in translation, and technical barriers such as internet access and limited features in the free version of the AI tool. as mentioned by (P4) *"For me who do not use the premium application, there is usually an access limitation so it is a bit difficult because it cannot be used continuously"*. In addition (P3) also mentioned *"the obstacles I usually get are more non-technical such as a poor internet connection"*. These findings are consistent with the quantitative data where challenges related to internet access (Mean = 2.85) and lack of digital skills (Mean = 2.97) were also frequently reported. However, these technical and psychological challenges should not be viewed in isolation. Without proper scaffolding and guidance, students may experience dependency, which can jeopardize their writing autonomy (Vasquez, 2015)

These challenges may not solely arise from the AI tools themselves, but rather from limited institutional support, lack of teacher guidance, and the absence of structured AI integration in



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the curriculum. Students may be using AI in isolation without pedagogical direction, which could explain the variation in learning outcomes. Institutions need to develop targeted training sessions or workshops on critical and ethical AI use, and teachers should incorporate reflective AI tasks in writing instruction to foster responsible and motivated engagement (Jones, 2022).

While the qualitative sample size was limited to five participants, the depth of responses provided valuable insight. Nevertheless, this limitation should be acknowledged as it restricts the generalizability of findings. Furthermore, potential bias in self-reported data, such as social desirability bias—where students may respond based on what is perceived as socially acceptable rather than what they truly experience—should also be considered when interpreting the results.

### 3.3 Strategies for Responsible AI Use

Interestingly, students also reported adaptive strategies to mitigate dependency and enhance their learning outcomes. For instance, some used AI outputs only as references and rewrote the suggestions in their own words. Participant P2 explained, *“I usually just use it as an initial reference, and then I rewrite it in my own language to understand it better.”*

These reflective practices indicate a growing awareness among students regarding responsible AI use, aligning with the digital literacy component suggested in the literature. Participant P1 mentioned *“In my opinion, technology should be used as a tool, not as a substitute. So, teachers and lecturers should be able to teach how to use AI properly and responsibly, instead of forbidding it. Because technology is advancing, so it will always be side by side.”* Students were not merely passive users but attempted to integrate AI as a supplementary rather than a replacement tool in their writing process. This behavior reflects elements of self-regulated learning (Zimmerman, 2022), in which learners take active control of their learning strategies. The emergence of these behaviors suggests the need for explicit instruction in AI literacy, including critical evaluation, ethical considerations, and academic integrity (Ng, 2012).



## 4. Conclusion

This study investigated university students' perceptions of AI tool integration in academic English writing, employing a mixed-methods approach that combined questionnaire data and semi-structured interviews. The findings revealed that students generally perceive AI tools such as ChatGPT, Grammarly, and QuillBot as beneficial in enhancing the efficiency and organization of their writing processes. These tools were particularly valued for their ease of use, accessibility, and support in generating ideas and improving grammar.

However, despite these benefits, the study also uncovered challenges related to motivation, over-reliance, and technical limitations. Notably, lower motivation scores contrasted with prior literature, indicating that while AI may aid in task completion, it does not necessarily inspire engagement or creativity. Qualitative data further highlighted concerns about reduced critical thinking and dependence on AI-generated content, especially in the absence of institutional guidance or digital literacy training.

The research underscores the importance of integrating AI literacy and reflective pedagogy into the academic writing curriculum. To support meaningful and ethical AI use, educators and institutions should provide structured training that emphasizes not only technical skills but also cognitive, metacognitive, and ethical aspects of AI engagement. Furthermore, fostering self-regulated learning and critical evaluation strategies will help students maintain autonomy and originality in their writing.

## 5. References

- Abimanto, D., & Sumarsono, W. (2024). Improving English Pronunciation with AI Speech-Recognition Technology. *Acitya: Journal of Teaching and Education*, 6(1), 146–156. <https://doi.org/10.30650/ajte.v6i1.3810>
- Alvina Fridella Anggraini Br Sitepu. (2025). *Membangun Literasi Digital Pembelajaran Bahasa Indonesia: Strategi Dan Tantangan Di Era AI*. 2, 30–35.
- Aminah, S., Nur, D. R., & Ariyanti, A. (2019). An Analysis of Teacher Talk used by English Teacher at SMKN 5 Samarinda. *Borneo Educational Journal (Borju)*, 1(1), 22–28. <https://doi.org/10.24903/bej.v1i1.256>
- Arbain, A., & Nur, D. R. (2017). Techniques for teaching speaking skill in Widya Gama



- 
- Mahakam University. *Script Journal: Journal of Linguistics and English Teaching*, 2(1), 13–25. <https://doi.org/10.24903/sj.v2i1.80>
- Arbain, A., & Rohman, A. (2023). Dubbing as a Pedagogical Tool: An Experimental Study on Eleventh-Grade Students at SMAN 8 Samarinda. *EDUCASIA: Jurnal Pendidikan, Pengajaran, Dan Pembelajaran*, 8(2), 147–156. <https://doi.org/10.21462/educasia.v8i2.155>
- Arbain, A., Taufik, A., & Nur, D. R. (2017). *Daily English Phrases Book*. UWGM Press.
- Batubara, S. F., & Fithriani, R. (2023). Exploring Efl Stuednts' Challenges In Academic Writing: The Case Of Indonesian Higher Education. *Jurnal Onoma: Pendidikan, Bahasa, Dan Sastra*, 9(1), 704–709. <https://doi.org/10.30605/onoma.v9i1.2605>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Chan, C. K. Y., & Hu, W. (2023). Students' voices on generative AI: perceptions, benefits, and challenges in higher education. *International Journal of Educational Technology in Higher Education*, 20(1). <https://doi.org/10.1186/s41239-023-00411-8>
- Creswell, J. W. (2012). A Mixed-Method Approach. In *Writing Center Talk over Time*. <https://doi.org/10.4324/9780429469237-3>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, 13(3), 319–339. <https://doi.org/10.2307/249008>
- Dizon, G., & Gayed, J. M. (2021). Examining The Impact Of Grammarly On The Quality Of Mobile L2 Writing. *JALT CALL Journal*, 17(2), 74–92. <https://doi.org/10.29140/JALTCALL.V17N2.336>
- Erliana, U., & Arbain, A. (2020). The Effectiveness of Using Video Clip in Teaching English Vocabulary at SD Fastabiquil Khairat Samarinda. *IJOTL-TL: Indonesian Journal of Language Teaching and Linguistics*, 5(2), 123–134. <https://doi.org/10.30957/ijotl.v5i2.623>
- Gracella, J., & Rahman Nur, D. (2020). Students' Perception of English Learning through YouTube Application. *Borneo Educational Journal (Borju)*, 2(1), 20–35. <https://doi.org/10.24903/bej.v2i1.623>
- Hardinansyah, V., & Hamidah, F. N. (2024). *The Effectiveness of AI Technology in Improving Academic English Writing Skills in Higher Education*. 4(3), 579–593.
- Jones, R. G. (2022). Partnering with AI: Intelligent writing assistance and instructed language learning. *Language Learning & Technology*, 26(2), 5–24. <http://doi.org/10125/73474>
- Ju, Q. (2023). Experimental Evidence on Negative Impact of Generative AI on Scientific Learning Outcomes. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4567696>
- Lee, Y. J., Davis, R. O., & Lee, S. O. (2024). University students' perceptions of artificial intelligence-based tools for English writing courses. *Online Journal of Communication and Media Technologies*, 14(1), 1–11. <https://doi.org/10.30935/ojcm/14195>
- Liu, Y., Chen, L., & Yao, Z. (2022). The application of artificial intelligence assistant to deep learning in teachers' teaching and students' learning processes. *Frontiers in Psychology*,



- 
13. <https://doi.org/10.3389/fpsyg.2022.929175>
- Malik, A. R., Pratiwi, Y., Andajani, K., Numertayasa, I. W., Suharti, S., Darwis, A., & Marzuki. (2023). Exploring Artificial Intelligence in Academic Essay: Higher Education Student's Perspective. *International Journal of Educational Research Open*, 5(September), 100296. <https://doi.org/10.1016/j.ijedro.2023.100296>
- Nazari, N., Shabbir, M. S., & Setiawan, R. (2021). Application of Artificial Intelligence powered digital writing assistant in higher education: randomized controlled trial. *Heliyon*, 7(5), e07014. <https://doi.org/10.1016/j.heliyon.2021.e07014>
- Ng, W. (2012). Can we teach digital natives digital literacy? *Computers & Education*, 59(3), 1065–1078. <https://doi.org/10.1016/j.compedu.2012.04.016>
- Nur, D. R. (2020). Virtual Reality adoption in Indonesia higher Education from lecturer's voice. *English Teaching Journal: A Journal of English Literature, Language and Education*, 8(1), 31–35. <https://doi.org/10.25273/etj.v8i1.6672>
- Nur, D. R., & Jamilah, J. (2022). English Language Imperative Level in Indonesia. *Intensive Journal*, 5(1), 36–43. <http://dx.doi.org/10.31602/intensive.v5i1.5986>
- Phan, T. N. Le. (2023). Students' Perceptions of the AI Technology Application in English Writing Classes. *Proceedings of the AsiaCALL International Conference*, 4, 45–62. <https://doi.org/10.54855/paic.2344>
- Rahmi, R., Amalina, Z., Andriansyah, & Rodgers, A. (2024). Does It Really Help? Exploring the Impact of AI-Generated Writing Assistant on the Students' English Writing. *Studies in English Language and Education*, 11(2), 998–1012. <https://doi.org/10.24815/siele.v11i2.35875>
- Roe, J., Renandya, W. A., & Jacobs, G. M. (2023). A Review of AI-Powered Writing Tools and Their Implications for Academic Integrity in the Language Classroom. *Journal of English and Applied Linguistics*, 2(1). <https://doi.org/10.59588/2961-3094.1035>
- Scherer, R., Siddiq, F., & Tondeur, J. (2019). The technology acceptance model (TAM): A meta-analytic structural equation modeling approach to explaining teachers' adoption of digital technology in education. *Computers and Education*, 128(September 2018), 13–35. <https://doi.org/10.1016/j.compedu.2018.09.009>
- Sumakul, D. T. Y. G., Hamied, F. A., & Sukyadi, D. (2022). Students' Perceptions of the Use of AI in a Writing Class. *Proceedings of the 67th TEFLIN International Virtual Conference & the 9th ICOELT 2021 (TEFLIN ICOELT 2021)*, 624, 52–57. <https://doi.org/10.2991/assehr.k.220201.009>
- Syahira, S., Kartini, K., Sulistiyahadi, S., & Prafiadi, S. (2023). Persepsi Mahasiswa Prodi Pendidikan Bahasa Inggris Tentang Penggunaan Ai Dalam Pengajaran Bahasa Inggris. *Jurnal Perspektif Pendidikan*, 17(2), 263–269. <https://doi.org/10.31540/jpp.v17i2.2630>
- Tulasi, L., & Rao, C. S. (2023). Integration of AI-Technologies into ELT: A Brief Study. *Journal for Research Scholars and Professionals of English Language Teaching*, 7(38). <https://doi.org/10.54850/jrspelt.7.38.003>
- Utami, S. P. T., Andayani, Winarni, R., & Sumarwati. (2023). Utilization of artificial intelligence technology in an academic writing class: How do Indonesian students





- 
- perceive? *Contemporary Educational Technology*, 15(4).  
<https://doi.org/10.30935/cedtech/13419>
- VÁSQUEZ, S. W. C. (2015). Web 2.0 and Second Language Learning: What Does the Research Tell Us? SHENGGAO. *Journal of Chemical Information and Modeling*, 53(9), 1689–1699.
- Zhang, P., & Kamel Boulos, M. N. (2023). Generative AI in Medicine and Healthcare: Promises, Opportunities and Challenges. *Future Internet*, 15(9), 1–15.  
<https://doi.org/10.3390/fi15090286>
- Zimmerman. (2022). *Becoming a Self-Regulated Learner: Beliefs, Techniques, and Illusions*. Routledge, 5841(JUNE 2002), 315. <https://doi.org/10.1207/s15430421tip4102>