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THE PERCEIVED IMPACTS OF GENERATIVE AI ON INDONESIAN EFL MASTER'S STUDENTS' MOTIVATION IN ACADEMIC WRITING

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Abstract. Academic writing has undeniably become essential in higher education for Master's students of EFL who must publish their work in reputable journals. Unfortunately, maintaining motivation, developing scientific writing, and other independent learning skills remain challenges for many students. The current study examined the role of Generative Artificial Intelligence (Gen AI) in motivating EFL Master's students to write for academic purposes. A mixed-method design with an explanatory sequential approach was employed, involving 34 Master's students at Sanata Dharma University, Yogyakarta. The quantitative data were collected first through a questionnaire and followed by qualitative data, which were collected through semi-structured interviews. The findings revealed that Gen AI tools have a generally positive role in motivating students ($r = 0.774$, $p < 0.01$). It is reported that Gen AI helps students improve their writing skills, develop ideas, select vocabulary, and enhance their productivity. On the other hand, students encountered several challenges using Gen AI, such as inaccurate feedback, issues with subscription payment, and an inauthentic voice in writing. The current research uniquely examines Indonesian EFL Master's students, revealing the substantial motivational impact of Gen AI and previously unreported barriers, thereby surpassing prior studies that have focused mainly on cognitive gains or undergraduate contexts.

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INTRODUCTION

In the dynamic environment of higher education, where expectations of students to cultivate excellence in academic pursuits are amplified, writing engaging academic papers can be daunting. This is particularly true for an EFL (English as a Foreign Language) Master's student, who, notably, to overcome linguistic challenges, must also fulfil high expectations in academic writing. As outlined in Soge et al. (2025), writing scientific articles is a mandatory requirement where they strive to achieve the highest possible academic standards. In this case, not all students can construct sentences that meet scientific standards or are interested in writing articles. Bacha (2010) argues that their inability to build ideas in academic papers may be due to their unfamiliarity with writing structures, the lack of specific strategies to manage writing time effectively, and the lack of ability to find appropriate articles or previous research sources. To address the initial difficulties they face in improving and developing their writing skills, some technologies or tools are currently trending in the world of education, particularly in the field of writing technology (Johinke et al., 2023), enabling students to explore and utilize them as assistants for scholarly writing.

Intelligent systems, such as Generative Artificial Intelligence (Gen AI), have also been a turning point in academic writing, addressing linguistic and structural questions. Firoozabadi et al. (2023) report that several Gen AI-powered tools like ChatGPT, Gemini, Claude, Quill Bot, Grammarly, Consensus, Jenny AI, Cici, Perplexity, and Poe are increasingly prevalent in academic environments. Gen AI can process responses to human inputs and grasp evidence from assorted data from scholarly articles and online databases. Its existence in academic composition has transformed how students learn to compose, edit, and research. Based on Kamalov et al. (2023), its existence is always linked with human intelligence and cognitive abilities. Contemporary Gen AI technology, including grammar checkers, paraphrasing

software, and content generators, aims to reduce linguistic barriers and structural inefficiencies. For EFL learners, Grammarly and similar platforms offer real-time syntax and vocabulary feedback, lessening the cognitive burden of writing in a foreign language. Equally, Gen AI models such as ChatGPT aid in formulating research questions and structuring arguments, a great advantage for students with new disciplinary norms (Guba et al., 2024).

Academic writing is a key competency that master's students must master, but it is also one of the most difficult aspects of academia (Barasa, 2024). Unlike ordinary writing, academic writing is a unique style of communication that goes beyond simply expressing personal opinions. It involves scientific discourse, critically analyzing existing knowledge, and presenting arguments supported by strong evidence. In accordance with Ho (2024), postgraduate EFL writers frequently face difficulties with coherence, cohesion, and argument development, which often results in writing that lacks clarity and persuasiveness. This situation will lead students to find other resources that help them work on their papers.

Regarding this, recent studies highlight that effective academic writing support must address both technical and affective dimensions. Following Khotaba (2022), academic writing development only happens if the writer always writes, looking for feedback and socially learning from many tools. In this case, Hanafi et al. (2024) state that following a writing workshop, research group discussion, and using the support from technology will contribute to students' confidence and autonomy in scholarly writing. In the EFL context, they must master English academic discourse and develop research competence; therefore, these things will be beneficial for students. Such evidence suggests that innovations, including AI-based tools, should be understood not as isolated aids but as part of a broader ecosystem of academic writing development that integrates feedback, motivation, and reflective practice.

Scholars stress that AI is improving technical precision. For instance, Setiawan & Alkhowarizmi (2025) discovered that feedback systems powered by AI enhanced students' grammatical accuracy by 30% relative to peer review. Nevertheless, critics object that extensive dependency on AI will diminish critical thinking. Syifauddin & Yuliansyah (2023) observed that students using AI paraphrasing tools often produced superficially polished texts lacking depth, reflecting a "copy-paste" mentality. Ethical concerns like plagiarism and data privacy further complicate AI's role (Mauti & Song, 2025). Despite these challenges, AI's potential to democratize access to academic writing resources, particularly for non-native speakers, remains undeniable. This situation will gradually impact their academic abilities, whether positively or negatively.

However, dependence on AI also has challenges. Such tools enhance productivity but can inadvertently stifle critical thinking and creativity because students risk prioritizing algorithmic feedback over developing their authentic voice (Dhimolea et al., 2022). Moreover, students will lose their activism in writing, reducing the potential for deep learning and mastery of academic conventions if they rely too much on AI (Al-khresheh, 2024). These interactions might compound motivation problems, particularly if students view AI as a crutch rather than a collaborator. Thus, students must sustain their desire to improve their writing expertise (Gloria & Mbato, 2023).

Academic motivation is usually categorized into internal and external attributes. Consistent to Ryan & Deci (2017), due to interest and satisfaction, intrinsic motivation strongly correlates with higher-quality work and persistence. Extrinsic drivers, such as grades or publication requirements, can engage students initially but fail to attract long-term engagement (Liu et al., 2020). For EFL students, motivation is usually turned off by language anxiety and fear of criticism (Alghofaili, 2022). AI's role in motivation is multifaceted. By providing scaffolded support, AI can enhance emotions such as self-efficacy, a key component of intrinsic motivation (Mohamed et al., 2024)**.** Notably, students using feedback from Gen AI tools reported increased confidence in their writing abilities (Fleckenstein et al., 2023). Conversely, dependency on AI may diminish perceived autonomy, a critical pillar of SDT (Self Determination Theory), leading to extrinsic regulation where students write solely to satisfy algorithmic metrics (Du & Alm, 2024). Sustaining the efficiency of AI with techniques that

foster intrinsic motivation, such as reflective writing procedures, is key to long-term academic progress.

Multiple studies have explored similar topics regarding the emergence of Generative Artificial Intelligence in various sectors. The first research was conducted by Kusumaningrum & Pertiwi (2021), which discussed how Gen AI can serve as a tutor for students in learning the TOEIC test. In the same year, the second research by Lestari et al. (2021) discussed Gen AI and students' reading skills achievements. In the next two years, Ericsson & Johansson (2023) employed the third research, which discussed Gen AI and students' speaking proficiency. In the same year as the previous study, Al-Kuwaiti et al. (2023) conducted research about the existence of Gen AI in the healthcare field. Moreover, Corcuera (2024) delved into topics about Gen AI and students' writing skills.

Those studies displayed how the era of Generative Artificial Intelligence has impacted human behaviour. Thus, it is crucial to acknowledge that these studies still reveal different findings. The first research Kusumaningrum & Pertiwi (2021) present that Gen AI can be applied to enhance listening skills in students facing TOEIC tests in SMK AAG Penerbangan Adisucipto Yogyakarta by implementing the cyclical AR model. Then, by employing a quantitative approach, the outcome of the second research (Lestari et al., 2021) indicated a substantial correlation with Gen AI in helping students improve their reading skills. Moreover, the third study (Ericsson & Johansson, 2023) revealed how conversational Gen AI positively affects students' educational experiences by allowing them to self-report their speaking experience in SDS (Student-CA interaction in spoken dialogue systems). The fourth research (Al-Kuwaiti et al., 2023) employed a library study where the researchers explored hundreds of studies to uncover the leveraging of AI in healthcare. The results exhibit that there is an impact of AI that can be observed in detecting clinical conditions in medical imaging and diagnostic services. Additionally, the fifth research (Corcuera, 2024) focuses on the emergence of QuillBot as an AI tool to enhance students' writing skills. By implementing a qualitative design, the results demonstrate that the features of QuillBot give various benefits and drawbacks for students' learning journey.

In light of diverse research on education settings such as listening, speaking, reading, writing skills, and healthcare, there are still limited studies on how the existence of Generative AI and its perceived impacts on students' motivation in writing adventure. To address this gap, the objective of this research is to explore the perceived impacts of Generative AI on Indonesian EFL Master's students' motivation in academic writing, particularly how AI contributes to their motivation to produce academic papers. To this end, this current study addresses the following research questions: (1) What are the perceived impacts of Gen AI on Master's students' academic writing? (2) To what extent can Gen AI motivate EFL master's students to write? (3) Is there a correlation between Gen AI and students' motivation toward academic writing?

The study further tests the hypothesis of whether there is a significant correlation between the use of Generative Gen AI and students' motivation in academic writing. The null hypothesis will be rejected if there is no such relationship. The findings of this research will add a new nuance to the impacts of Generative AI on students' writing motivation and contribute to pedagogical theory as well as its practical application by analyzing how AI can function as a motivational and productivity tool for academic writing for EFL master's students. Studies about the relationship between technology and motivation, such as the current one, should be conducted to provide valuable information to educators so that they can support student learning more successfully, resulting in a more socially conscious and constructive writing pedagogy paradigm and practices.

RESEARCH METHODS

The current research presents the data's validity, reliability, comprehensiveness, and objectivity through an explanatory sequential mixed methods design. The data for this method were collected in stages, first through quantitative data, followed by qualitative data (Creswell, 2014). The quantitative data were collected first through a questionnaire and followed by

qualitative data, which were collected through semi-structured interviews. The semi-structured interview was used to answer the second research question regarding students' perceived impacts of using AI. Moreover, the questionnaire was used to answer the first and third research questions and test the hypothesis as follows.

H0: There is no significant relationship between Generative Artificial Intelligence and Master's students' motivation in academic writing.

H1: There is a significant correlation between Generative Artificial Intelligence and Master's students' motivation in academic writing.

This methodology was chosen for its capacity to provide a comprehensive understanding of both numerical and descriptive data. By implementing in-depth analysis, the researchers presented a more comprehensive perspective from participants for this research. The existing research has been conducted within the Master's program of English Language Education at Sanata Dharma University, Yogyakarta, from May to June 2025. The preferred Master's program openly provides opportunities for students to access learning technologies such as Gen AI as learning partners. By applying an understanding that Gen AI is intelligence assistance, this study program emphasizes that students must first become intelligent individuals and then be assisted by technology so that the learning process can be more effective and efficient. Thirty-four Master's students in English Education, sixteen from batch 2023 and eighteen from batch 2024, aged 23-51, participated in this study. The participants were students from Western Indonesia, Eastern Indonesia, and abroad. Then, for interview sessions, ten students were involved. They were selected because they are EFL master's students who actively accessed Gen AI, had studied motivation theory in their first semester, and had experience writing academic papers for publication. In sync with Maxwell (2012), participant selection based on criteria established by the researchers is called purposive sampling. This technique allowed the researchers to select specific situations, people, or areas. It was applied to present more valuable data than other methods can obtain. The researchers are curious about the influence of Generative Artificial Intelligence in fostering students' writing for scholarly purposes. As part of this study, informed consent forms were disseminated to prospective participants (Table 1), enabling them to follow or decline participation. In order to uphold research ethics, the names of the participants were also pseudonymized (Participants A to J).

Table 1. Participants Demographic Information

No.	Gender	Total Participants
1.	Male	11
2.	Female	23

The researchers utilized two modalities to collect data: questionnaires and semi-structured interviews. In compliance with Taherdoost (2021), a questionnaire is a set of questions used to collect information, which is one of the best tools for capturing data related to the topic in question. The questionnaire was divided into two parts: 1) Generative Artificial Intelligence in developing academic writing, and 2) Generative Artificial Intelligence's role in motivating students' academic writing. The questionnaire was distributed to 21 participants using Google Forms via WhatsApp to determine the perceived impact of Gen AI on their motivation to write academic papers. Data related to AI in academic writing development was adapted from Khan et al. (2024). There are 25 statements, where the first section, associated with EFL Master's students' perceptions regarding AI for writing development, contains 14 statements, and the second section, related to challenges faced by EFL Master's students regarding AI for writing development, includes 11 statements.

In the section on Generative Artificial Intelligence's position in motivating EFL scholarly writing, the researchers adapted from three different studies Song & Song (2023), Mohammad et al. (2024), and Li et al. (2025). Here, 21 statements were selected. Here, the researchers used a five-point Likert scale, and 45 statements were used for the pilot test. The researchers adapted statements from previous studies by using the same items but changing the wording to verify that the items implied are appropriate for EFL Master's students' motivation in academic papers using Gen AI. After the participants completed the questionnaire, the researchers analyzed and

identified the participants based on their answers. Three participants from low, medium, and high motivation levels were selected to proceed to the interview stage to capture their in-depth perspectives.

The researchers provided the main questions throughout the interview, and further questions were developed based on the participants' answers. In line with Adeoye & Olenik (2021), semi-structured interviews, as part of qualitative methods, allow the researchers to get greater responsiveness from participants and are grounded on three issues: asking open-ended questions, exploring ideas with follow-up questions, and allowing participants to go off track and explore different avenues or topics.

Furthermore, the researchers conducted a pilot test with 30 participants from the English Education undergraduate program at Nusa Nipa University in Maumere, East Nusa Tenggara. Although the undergraduate population's familiarity with or writing experience might differ from master's students but undergraduate students are already familiar with using Gen AI as a learning partner. Preliminary research was conducted with them because the researcher was there for some time, and the distance was quite far from the Special Region of Yogyakarta Province. Therefore, before conducting research with Master's students at Sanata Dharma University, a pilot test was conducted first. The end goal of the pilot test was to further enhance the adapted questionnaire's validity, reliability, and correlation. The results can be seen in the Table 2.

Table 2. The Questionnaire Validity

No.	Item section	Items number	
		Valid	**Invalid**
1.	The perceptions and challenges of EFL Master's Students using Generative Artificial Intelligence for writing development	1,2,3,4,5,7,8,10 11,12,13,14,15,16,20,25	6,9,17,18,19,21,22, 23,24
2.	Academic Writing Motivation using Generative Artificial Intelligence	26,27,28,29,30,31,32,35, 36,37, 39,40,41 43,44,45	33,34,38,42

Table 2 above reveals that the researchers presented 45 statements in two sections. Based on the validity test results using SPSS 25, 9 items on Generative Artificial Intelligence for Writing Development were found invalid, while the other 16 items were valid. Then, in the questionnaire related to Academic Writing Motivation in using Gen AI, there were 16 valid items and four invalid items. To authenticate the reliability of a questionnaire, its coherence can be examined through the correlation between particular items and the average score. A correlation is considered weak if it is below 0.3, moderate between 0.3 and 0.5, and vigorous above 0.5 (Heale & Twycross, 2015). The researchers only used 32 statements for measurement analysis.

Table 3. The Questionnaire Reliability

No.	Variable	N of items	Cronbach's Alpha	Classification
1.	Generative Artificial Intelligence	16	.859	Reliable
2.	Academic writing motivation	16	.895	Reliable

After the researchers discarded 13 invalid items, the alpha coefficients on Generative Artificial Intelligence for writing development and the Academic Writing Motivation in using Gen AI were found to be .859 and .895 (Table 3). The coefficients from the questionnaire on Gen AI for writing development portray that those statements provided were significantly associated with consistently quantifying the same latent factors. Furthermore, using Gen AI, Cronbach's alpha for Academic Writing Motivation also demonstrated excellent internal reliability within items. In this reliability test, it can be seen that the questionnaire coefficient for motivation was higher than that for Gen AI. However, both were reliable because they were above 0.8 and followed the standards to determine their specific parameters.

After obtaining quantitative and qualitative data, the researchers analyzed the evidence to gain comprehensive insight into the role of Generative Artificial Intelligence in motivating students to write for academic writing. Because numerical and descriptive data were used in this study, quantitative data will be analyzed using SPSS Statistics 25. The numerical data from the

adapted questionnaire will be presented in tabular form. From the 45 statements, the pilot test results will indicate which statements are valid and which are not. After obtaining the validity results, the researchers will return to the questionnaire and select statements appropriate for the section on the topic, which will later be given to the primary target.

Qualitative data were analyzed carefully. Huberman and Miles (1983) state that researchers can apply familiarization, coding, data filtering, data visualization, and the key takeaways regarding the topic to examine the outcomes of the interview session. In the familiarization section, the participants' answers were reviewed during the interview through recordings and transcripts to understand the data in depth. Here, the researchers examined the data from the participants' perspective to understand the interview data more deeply. In the coding section, the researchers classified the information into several sections to obtain meaning. In the data reduction section, researchers assessed similar questions and their development, which could result in similar answers from participants. That is why data reduction was applied. The researchers performed a reduction of similar or identical data by evaluating the existing information to avoid repetition. In the last section, the analyzed data were presented in a way that could be easily understood and accepted scientifically through tables.

RESULTS AND DISCUSSION

This study explores the perceived impacts of Generative Artificial Intelligence (Gen AI) on Indonesian EFL master's students' motivation in writing for academic purposes to answer three research questions. The first research question, "What are the perceived impacts of Generative AI on Master's students' academic writing?" will be answered in the first section. Then, the second research question, "To what extent can Generative AI motivate Indonesian EFL master's students to write?" will be answered in the second section. Furthermore, combining both sections will explore the third research question, "Is there a correlation between Generative Artificial Intelligence and students' motivation toward academic writing?". The initial questionnaire can be seen in the appendix.

EFL Master's students' perception of the impacts of Generative Artificial Intelligence on their academic writing

Regarding implementing Generative Artificial Intelligence (Gen AI) for writing development, EFL (English as a Foreign Language) Master's students frequently face benefits or limitations. Thus, Tables 4 and Table 5, as part of the first section of the questionnaires, were employed to explore EFL master's students' perceptions and challenges linked to the use of Gen AI for scientific scholars by presenting the statistical variables such as the mean, total score, and standard deviation based on the outputs of SPSS 25.

Table 4. Perception of using Generative Artificial Intelligence on academic writing, adapted from Khan et al. (2024)

No.	Items statement	Mean	Standard Deviation
1.	Artificial Intelligence (AI) tools support my English writing development	3.90	0.803
2.	AI tools improve my vocabulary knowledge	3.87	0.629
3.	AI tools boost my confidence in writing	3.50	0.861
4.	AI tools help strengthen my writing skills.	3.67	0.802
5.	Grammarly improves my grammar and punctuation.	3.90	0.960
6.	QuillBot helps paraphrase academic content.	3.23	0.935
7.	AI tools aid non-native speakers in writing better.	3.57	0.858
8.	AI tools reduce academic writing time.	3.57	0.774
9.	AI tools increase interest in writing practice.	3.67	0.959
10.	Regular AI use improves writing performance.	3.63	0.669
11.	AI tools' feedback is often accurate and helpful.	3.40	0.968
12.	AI tools' output supports peer or instructor discussion.	3.73	0.740
	Average	**3.63**	**0.822**

In this first section, thirty-four students' perceptions were favorable. Table 4 above unveils that the average score is 3.63 with a standard deviation of 0.822. From the 12-item statement, it can be seen that the first statement, "Artificial Intelligence (AI) tools support my English writing development," and the fifth statement, "Grammarly improves my grammar and punctuation," got a mean score of 3.90. It was consistently echoed in the interview results. All participants were highly interested in how artificial intelligence supports the writing process more smoothly. As the representative, Participant J said:

"I have been using AI since last year, and all of them have supported me in generating ideas for my paper writing." Moreover, Participant E mentioned, *"I used Grammarly to correct my errors, like misspelling or wrong verbs, etc."*

The statement from participants J and E above is in line with Firoozabadi et al. (2023), who expose that several AI-powered tools like ChatGPT, Gemini, Claude, Quill Bot, Grammarly, Consensus, Jenny AI, Cici, Perplexity, and Poe are increasingly prevalent in academic environments. Before using artificial intelligence, the participants went through the references for writing academic papers within Google, online databases, and offline books from the library. However, since Generative Artificial Intelligence is easy to access, every challenging issue is simpler to discover.

Then, the statements "AI tools increase interest in writing practice" got a mean score of 3.67, and "Regular AI use improves writing performance" got a mean score of 3.63. Participant C said:

"I have to say that writing is still hard for me. Fortunately, I have AI, which makes me want to write when the suggestions match my ideas." Participants H also added: *"Previously, I worried about finding errors one by one. Now I enhance my writing performance through AI."*

Answers from Participants C and H support the statement from Setiawan & Alkhowarizmi (2025), who emphasize that AI tools provide significant linguistic scaffolding for EFL learners. Furthermore, ten participants revealed that Gen AI enhances their knowledge. Although it takes time, paraphrasing is so effective for expanding ideas, especially for writing the literature reviews and discussion part of a journal submission.

The findings also revealed that the item statement "AI tools' feedback is often accurate and helpful" scored 3.40, and "QuillBot helps paraphrase academic content," with a mean score of 3.23. Participant E stated that;

"I realize that AI gives me proper feedback, sometimes accurate and helpful answers". Furthermore, Participant F also shared: *"I use Quillbot to help me paraphrase my words to enhance the quality of my writing."*

Both participants' statements point out that Gen AI, as an academic tool, presents good feedback and is helpful. It is aligned with Kamalov et al. (2023).

Table 5. Challenges in using Generative Artificial Intelligence for academic writing, adapted from Khan et al. (2024)

No.	Items statement	Mean	Standard Deviation
13.	Over-reliance on AI for writing is a concern.	3.07	1.048
14.	Some AI tools are not user-friendly.	3.20	1.063
15.	AI advice sometimes conflicts with the instructors' advice.	3.43	0.817
16.	AI tools' suggestions can sometimes be misleading.	3.47	0.819
	Average	**3.63**	**3.29**

Despite the overwhelmingly positive perceptions from EFL master students regarding using Generative Artificial Intelligence for scholarly writing, participants also reported several challenges of AI usage. As mentioned on Table 5 above, the average score for the challenge was 3.29, with a standard deviation of 0.937. The most prominent concern was the statement, "AI tools' suggestions can sometimes be misleading," with a mean score of 3.47. All participants shared similar thoughts related to that statement. Participant B said,

"I found NotebookLM provides the misinterpretation about the topic that sounds academic, which sometimes affects the way I understand the materials."

Participant B's statement aligns with Syifauddin & Yuliansyah (2023), who observed that students using AI paraphrasing tools often produce superficially polished texts lacking depth, reflecting a "copy-paste" mentality and sometimes misleading information. The participants explained that Gen AI is a tool made by humans; if a student does not have the integrity to read and re-check the information, the student will be dumb because of AI. Then, the statement from the questionnaire that got a mean score of 3.07 is "Over-reliance on AI for writing is a concern." Participants J added:

"I think I lost my voice. I know I paraphrase the sentence using my words, but I feel guilty."

Participant A said, *"Sometimes I cannot think if I do not access AI, because it is part of me now, so I feel I need its assistance to guide me."*

These challenges mentioned by participants showcase how significantly Gen AI impacts the human brain. Such tools enhance productivity but can inadvertently stifle critical thinking and creativity because students risk prioritizing algorithmic feedback over developing their authentic voice (Dhimolea et al., 2022). Moreover, students will lose their activism in writing, reducing the potential for deep learning and mastery of academic conventions if they rely too much on AI (Al-khresheh, 2024).

Beyond the questionnaire statement, this current study also revealed novel findings related to obstacles faced by EFL master students while writing their scholarly work, which had not been extensively documented in previous literature. Participant G mentioned:

"If I give the right instructions by giving a detailed prompt, the AI will answer just like I want. Sometimes, the challenge is also how I build the sentence."

Moreover, Participant C said:

"I feel exhausted when there is an announcement that an error occurred and required me to pay and subscribe to ChatGPT 4.o"

The statements from the participants above present feelings similar to those of the other eight participants. This brings forth that although multiple benefits are provided by the creator of Gen AI, it also needs payment. Students who need to benefit from AIs' feedback must pay and give a clear prompt so AIs can understand it. Therefore, students believe in fostering critical thinking by finding another way to escape this situation.

EFL Master's students' motivation in writing academic papers using Generative Artificial Intelligence

Table 6. Academic Writing Motivation using Generative Artificial Intelligence, adapted from Song & Song (2023), Mohammad et al. (2024), Li et al. (2025)

No.	Items statement	Mean	Standard Deviation
17.	I feel satisfied using AI for writing.	3.57	0.817
18.	AI tools help me understand the topic clearly.	3.57	0.971
19.	I feel confident using AI academically.	3.20	0.805
20.	AI tools make me more productive in writing.	3.00	1.017
21.	AI tools motivate me to develop my writing skills.	3.40	0.814
22.	AI tools help reduce the fear of writing mistakes.	3.53	0.937
23.	AI tools enhance my writing skills and knowledge.	3.63	0.809
24.	I enjoy writing with AI.	3.40	0.724
25.	Using AI makes academic writing fun.	3.27	0.868
26.	I find exploring AI in writing fascinating.	3.37	0.669
27.	I feel my fellow students expected me to learn writing with AI.	2.67	0.844
28.	I feel ashamed if I fail with AI.	3.03	0.850
29.	Writing with AI matters a lot to me.	3.23	0.971
30.	I want to spend time learning English writing.	3.00	0.788
31.	I prefer learning writing with AI over other topics.	2.93	0.868
32.	I actively try to improve my English writing.	3.90	0.803
	Average	**3.63**	**3.29**

Regarding the role of Generative Artificial Intelligence (Gen AI) in academic writing motivation, EFL (English as a Foreign Language) Master's students frequently experience various conditions. Thus, the second section of the questionnaires was employed to explore EFL master's students' academic writing motivation using Gen AI. The researchers present the statistical variables such as the mean, total score, and standard deviation. Table 6 below displays the mean and standard deviation of the outputs of SPSS 25.

Across 16 item statements illustrated in Table 6, it shows the motivational impact of Gen AI towards EFL master's students writing for academic purposes is shown with an overall score of 3.29 and a standard deviation of 0.849. The item that got a mean score of 3.90 is "I actively try to improve my English writing." Followed by "AI tools enhance my writing skills and knowledge," with a mean score of 3.63. The interview results with participants also revealed that they all experienced how Gen AI highly contributes to their motivation for academic writing performance. As a representative, Participant J said,

"When I find difficulties writing my academic paper, I can get the idea through AI, and expand my knowledge related to my topic."

EFL master's student reports show the benefit of Gen AI to students' intrinsic motivation, where these scores indicate that AI plays a meaningful role in reducing writing anxiety, increasing confidence, and encouraging self-initiated learning behavior (Alghofaili, 2022; Mohamed et al., 2024). Following the mean score of 3.40, it presents the statement "AI tools motivate me to develop writing skills" and "I enjoy writing with AI," also playing a role in students' motivation. As representatives, Participants A, B, and E also mentioned:

"Before using AI, I would postpone my writing project, but now, when I use AI as an assistant, I feel more excited to begin writing because the task feels less overwhelming."

"It was a hard moment for me to find the literature reviews, but now I feel happy, safe, and confident because AI can make it easier to help me."

"I need to separate my ideas from AI's because day by day, I realize that it will affect my long-term critical thinking."

The findings above presented how enjoyment, interest, and satisfaction with using Generative Artificial Intelligence for writing significantly contribute to master's students' motivation. It is supported by Fleckenstein et al. (2023), who emphasized that using feedback from artificial intelligence tools reported increased confidence in students' writing abilities. Moreover, the statement from Participant E highlights that Gen AI will help her to be more aware of AI usage and reflective writing procedures for sustaining the efficiency of AI, which will become the key to long-term academic progress (Du & Alm, 2024).

On the other hand, two statements got a mean score of 2.94: "I prefer learning writing with AI over other topics," and "I feel my fellow students expected me to learn writing with AI," with a mean score of 2.67. The data presented previously exposed that students' learning process of writing academic papers using Gen AI was affected by both internal and external factors. With the lowest score of statistical data, students somehow show that Gen AI successfully affects their motivation, but does not make them stuck on AIs as a resource. Participants, I said that.

"For my research project, I still dive into several articles and tutorials from social media about the critical way to present the data for research articles."

The findings above show that students still read scholarly papers and other resources to guide their academic writing. Students still believe that scientific projects must be proven by scientific papers, not just words. Gen AI appears as a tool for generating or formulating research ideas and structuring arguments, not as the only resource (Guba et al., 2024). Then, Participant H added:

"I never feel ashamed if my fellow students see that I don't use AI. It is a good moment when I can use my own thinking, but I still use AI to support me."

The interview results with Participant H exposed how students can access Gen AI on their own, not because of other people's perceptions and willingness. If students use it unethically,

these interactions might compound motivation problems, particularly if students view AI as a crutch rather than a collaborator. Thus, students must sustain their desire to improve their writing expertise. The data also reflect confidence and self-regulation as key components in writing motivation among Indonesian EFL postgraduate students (Gloria & Mbato, 2023).

Generative Artificial Intelligence and students' motivation in academic writing

In this part, the researchers combine the quantitative data from the first and second sections of the questionnaire and then test the correlation of both variables within the bivariate analysis on SPSS 25.

Table 7. Correlations

Variables		Generative Artificial Intelligence	Academic Writing Motivation
Generative Artificial Intelligence	Pearson Correlation	1	.774**
	Sig. (2-tailed)		0
	N	32	32
Academic Writing Motivation	Pearson Correlation	.774**	1
	Sig. (2-tailed)	0	
	N	32	32

The Pearson correlation statistic in Table 7 above shows a strong, statistically significant positive correlation coefficient between Generative Artificial Intelligence and academic writing motivation (r = 0.774, p < 0.01). Based on the data, considering that 0.000 is less than .05, the correlation is significant and not coincidental (Creswell, 2014). It is proven by the interview result where Participant C, as the representative, said,

"I finished my undergraduate studies fourteen years ago, when there was no intervention of Gen AI towards my academic writing, so it took a very long time for me to get literature reviews for writing papers. Now, I feel so impressed by how fast AI is helping me and forcing me to publish a scholarly work."

This suggests that students engaging more with AI tools are likely to report higher writing motivation. The finding supports the idea that AI tools offer mechanical support and play a central role in shaping students' attitudes, confidence, and enthusiasm for academic writing. The correlation above also supported the statement that using feedback from Gen AI tools reported increased confidence in their writing abilities (Fleckenstein et al., 2023).

The questionnaires, as the quantitative data, and the semi-structured interview, as the qualitative data mentioned previously, indicate how Gen AI is becoming an essential factor in motivating EFL master's students for their autonomous learning and productivity in conducting research and writing academic papers. It can be seen by the correlation test, which shows a strong positive relationship between AI use and motivation (r=.774, p <.01). It is aligned with ideas from Kamalov et al. (2023), who emphasize that its existence is always linked with human intelligence and cognitive abilities. Moreover, the descriptive results which can be seen from the item that got a mean score of 3.90 is "I actively try to improve my English writing." Followed by "AI tools enhance my writing skills and knowledge," with a mean score of 3.63. The empirical evidence above highlights that contemporary AI technology, including grammar checkers, paraphrasing software, and content generators, aims to reduce linguistic barriers and structural inefficiencies. For EFL learners, Grammarly and similar platforms offer real-time syntax and vocabulary feedback, lessening the cognitive burden of writing in a foreign language. However, the findings also underscore the importance of using AI as a supplement rather than a substitute for genuine cognitive and emotional engagement. It also shows that AI encourages students' intrinsic motivation, as explained by the self-determination theory (Ryan & Deci, 2017). It is stated that confidence and self-efficacy are the crucial aspects for persistence. Similar to Mohamed et al. (2024), participants in this research reported higher satisfaction and reduced writing anxiety after receiving AI feedback, aligning with Fleckenstein et al. (2023), who observed increased confidence from automated feedback.

Despite all the positive impacts of Generative Artificial Intelligence (Gen AI) on master's students' academic writing motivation, the results of the interview also revealed some opposites. They reported losing their authentic voice and showing desperation regarding the misleading Gen AI feedback or subscription cost. This situation has proven the concerns about how students ' reliance on Gen AI may shift their motivation from the intrinsic to the extrinsic aspects (Du & Alm, 2024).

Unlike previous research, which focused primarily on Gen AI's cognitive or structural benefits in EFL writing (e.g., Corcuera, 2024; Firoozabadi et al., 2023; Setiawan, & Alkhowarizmi, 2025) this study highlights the motivational and emotional transformations experienced by postgraduate learners. Focusing on Master's students engaged in high-stakes academic writing and combining quantitative and qualitative methods, this research presents Generative Artificial Intelligence (Gen AI) as a linguistic tool, a dynamic motivator, and a writing partner. The current research adds a novel dimension to the discourse on Gen AI integration in higher education.

CONCLUSIONS AND SUGGESTIONS

This study investigated the perceived impacts of Generative Artificial Intelligence on EFL master's students' motivation in their academic paper-writing. Employing a mixed-method research design with 34 students as participants, the current study provides insights into the intersection of technology and motivation in higher education. The findings revealed that Generative AI tools have a generally positive role in motivating students. It was reported that AI supports students in improving their writing skills, developing ideas, selecting vocabulary, and enhancing their productivity. Students also reported several challenges using Generative AI, such as inaccurate feedback, issues with subscription payment, and an inauthentic voice in writing. In general, the findings of this study offer practical insights into how AI can effectively support EFL master's students' writing for academic papers. However, the current study has limitations, such as a relatively small sample size and a focus on a single institution. Future research can involve larger participants from several institutions and deeply investigate the long-term impacts of Gen AI usage on students' academic writing motivation.

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