

Ethical Integration of Generative AI and Students' Motivation in Academic Writing: An Exploratory Practice in an Islamic Higher Education Context

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Abstract

This study investigates the ethical integration of generative Artificial Intelligence (AI) and its impact on students' motivation and academic writing in an English for Academic Purposes (EAP) course at an Islamic higher education institution in Indonesia. The study conceptualizes Islamic values, particularly academic integrity, responsibility, and authorship, as essential competencies in second language academic writing. Forty undergraduate students were divided into experimental and control classes. In the experimental class, students collaboratively formulated classroom guidelines for responsible AI use through focus group discussions. These guidelines were implemented over seven sessions using an Exploratory Practice (EP) approach. Reflective essays written before and after the integration of AI were analyzed thematically,

and students' writing performance was assessed using IELTS criteria. The findings indicate that generative AI supported surface-level writing skills such as grammar, vocabulary, and coherence; however, higher-order skills, including critical thinking, idea development, and appropriate use of references, declined when AI was employed without sufficient pedagogical guidance. Students reported increased efficiency but expressed concerns about over-reliance on AI, emphasizing that it should function as a supportive tool rather than a substitute for individual effort. Comparisons with the control class show that conventional instruction led to steady improvement in writing, whereas AI integration produced mixed outcomes, highlighting the need for ethical guidance. The study demonstrates the importance of thoughtfully integrating AI in Islamic higher education to promote both academic proficiency and ethical responsibility. It also contributes to ELT research by linking Islamic academic values with responsible language learning and authorship practices.

Keywords: *AI, Exploratory Practice, Islamic Higher Education, Motivation, Writing Skills*

INTRODUCTION

This study was initiated in response to certain questions that arose for the first author while teaching an English for Academic Purposes (EAP) writing course in an Islamic higher education institution in Indonesia. In this regard, Islamic higher education distinguishes itself from conventional universities by not only prioritizing academic knowledge but also fostering ethical, moral, and spiritual development (Cahaya, 2024). Students are expected to embody Islamic values, such as honesty, responsibility, and reflective decision-making in all aspects of learning (Suhartini & Fajri, 2025).

The ethical integration of AI is particularly important in this context, as it must support both skill development and adherence to ethical and moral standards. First, as students increasingly rely on on generative Artificial Intelligence (AI) tools, such as ChatGPT, Poe AI, or Co-Pilot for writing tasks, we questioned whether these tools can be used to improve students' writing skills while maintaining academic integrity. This includes avoiding plagiarism, contract

cheating, purchasing customized essays from freelance writers, or accessing exam questions prior to tests (Finchilescu & Cooper, 2018). This concern is especially relevant within EAP writing courses in Islamic higher education, where ethical and moral responsibility is emphasized. Second, the repeated use of generative AI may lead to students becoming overly dependent on technology. As argued by Zhai et al. (2024), such over-reliance can reduce students' critical thinking abilities if they opt to use AI tools instead of solving tasks independently.

Additionally, there is a concern that excessive dependence on AI may hinder the development of essential academic skills, including writing and research abilities. These considerations led us to question whether generative AI can be integrated into an EAP writing course ethically and in a way that also fosters students' motivation without undermining critical thinking or academic skill development, particularly in an Islamic higher education context.

Within Islamic higher education institutions, EAP is situated within a broader educational mission that extends beyond linguistic competence to include the cultivation of knowledge (*'ilm*) and ethical reasoning. English language learning in this context aims to prepare students for participation in both local and global academic communities while simultaneously fostering reflective thinking (*tafakkur*) and a commitment to the common good (*maṣlaḥah*) through educational practices (Dipta et al., 2025).

From a theoretical perspective, Islamic values of academic integrity, responsibility, and authorship can be understood through ELT frameworks on academic literacy and sociocultural theory, which emphasize that knowledge and ethical practices are socially mediated and embedded in language learning communities. Consequently, EAP instruction is not treated merely as a technical component of academic literacy but as an integral part of holistic intellectual and moral formation.

Previous studies indicate that Islamic higher education institutions intentionally integrate Islamic values into their curricula, including within English language programs. Chamisah (2025) reports that Islamic principles are systematically embedded

in instructional design and classroom practices. In EAP courses, values such as honesty, responsibility, and accountability are emphasized throughout teaching, learning, and assessment processes (Gumelar & Jubaedah, 2025), guiding students to exercise ethical responsibility (*amānah*) in their academic work. At the same time, educators are encouraged to maintain students' agency and effort (*ikhtiar*), ensuring that reliance on technological or external supports does not diminish personal initiative, critical engagement, or responsibility for learning. By linking these values to ELT theory, we highlight the potential theoretical contribution of this study, showing how ethical principles in Islamic education can inform responsible AI use in language learning.

Despite apprehensions regarding academic integrity and the potential for over-reliance on AI, forbidding generative AI may not be the best solution, as the technology is likely to persist in educational settings (Alharbi, 2023). Instead of banning AI, an ethical and responsible integration of the technology, accompanied by a careful examination of its long-term effects, seems more productive for supporting students' development of academic skills, motivation, and critical thinking (Daniel et al., 2025). Experts suggest that educators need to identify suitable strategies for utilizing generative AI in language classrooms to help students learn how to use AI ethically and responsibly (Carvalho et al., 2022). Consequently, finding strategies to integrate AI into classroom instruction appears more viable than a complete ban, particularly in the Islamic higher education context, where ethical awareness is an integral part of the learning process.

Educators must identify effective strategies for integrating generative AI into the classroom. Alharbi (2023) argues that AI-powered writing tools can enhance students' writing skills through transforming their learning process. However, these enhancements require careful study to understand the broader effects of AI integration in EAP writing courses (Hellmich & Vinall, 2021). For example, educators can involve students in discussions about the appropriate use of AI throughout the writing process, with the outcomes formalized into classroom guidelines to inform future

cohorts. In this study, we also explore how such practices influence students' motivation to engage in writing tasks ethically and effectively within an Islamic higher education context. To address these issues, we adopt Exploratory Practice (EP), an approach that integrates research and pedagogy by enabling teachers and students to collaboratively reflect on their learning and teaching experiences, thereby bridging the gap between research and classroom practice (Hanks, 2015).

Within this framework, the lecturer assumes a dual role as both instructor and researcher, which may shape students' reported motivation, perceptions of AI, and reflective writing outcomes. As participants engage not only with classroom tasks but also with the research process itself, this dual role can potentially enhance engagement while simultaneously influencing how students respond and reflect (Allwright, 2005; Allwright & Hanks, 2009; Bergmark, 2020). By working collaboratively with students, this study seeks to generate deeper insights into the ethical and motivational dimensions of AI integration in EAP writing courses in an Islamic higher education setting. Following are the central puzzles that form the background of this study: First, how can generative AI be effectively and ethically used by students during the academic writing process in an Islamic higher education context? Second, how can generative AI be used to improve students' writing skills while supporting their motivation to engage in writing?

RESEARCH METHODS

Research Context, Participants, and Instruments

Before data collection, formal permission was obtained from the Islamic higher education institution where the study was conducted. The research took place in an English for Academic Purposes (EAP) writing course at an Islamic university in Bekasi, Indonesia, where the first author served as the course lecturer. The participants were undergraduate students majoring in English Literature.

All ethical procedures followed established guidelines (Vanclay et al., 2013), including ensuring participant anonymity,

clearly communicating the research objectives and procedures, guaranteeing that participation would not affect students' academic scores, and securing voluntary informed consent. Participants signed consent forms prior to data collection.

A total of 40 students from two parallel classes participated in this study. They were divided into a control group and an experimental group. The control group received conventional EAP writing instruction, while the experimental group participated in an AI-integrated EAP writing course. The participants were aged 20–22, demonstrated upper-intermediate English proficiency (approximately CEFR B2), as indicated by their performance on the English Score test administered prior to the study. At this proficiency level, students were capable of comprehending and producing basic academic texts, such as essays and short research reports.

The course focused on general academic writing skills, including paraphrasing, understanding academic text structure, planning, proofreading, and editing. The selection of instructional materials was guided by the Common European Framework of Reference for Languages (CEFR), while the assessment of students' written outputs utilized IELTS writing band descriptors (IELTS, 2023).

While the IELTS descriptors provide a standardized measure of technical writing proficiency, they may not fully capture broader dimensions such as ethical engagement, critical thinking, or context-specific values in Islamic education, including *amānah* (responsibility) and *ikhtiar* (personal effort). To address this limitation, the course incorporated reflective writing tasks and classroom discussions to examine these additional dimensions of students' academic development.

The findings of this study are context-specific and not intended to be broadly generalizable due to the relatively small sample size, short intervention period, and participants limited prior experience with AI-assisted writing. Consistent with Exploratory Practice (EP), which emphasizes context-sensitive and collaborative inquiry (Allwright, 2005; Allwright & Hanks, 2009;

Hanks, 2017), the study provides situated insights relevant to similar EAP contexts while offering directions for future research.

Exploratory Practice and Procedures

This study was guided by Exploratory Practice (EP), which integrates research and pedagogy through collaborative inquiry between teachers and students. Within this framework, the lecturer assumed a dual role as both instructor and researcher. This positioning may have influenced students' reported motivation, perceptions of AI, and reflective writing outcomes, as participants engaged not only with classroom tasks but also with the research process. While this may have enhanced engagement, it may also have shaped how students articulated their responses.

The study was motivated by a shared pedagogical puzzle concerning the ethical use of generative AI in academic writing. Although participants had not previously used tools such as ChatGPT or Poe AI to produce full academic texts, many reported using AI for locating or paraphrasing sources. Both the lecturer and students questioned whether AI could be used ethically in academic writing, particularly within the framework of Islamic values emphasizing integrity, responsibility, and authorship. This shared concern informed the design of the intervention and encouraged active student participation.

Over the course of seven instructional sessions, generative AI was integrated into the EAP writing course to examine its impact on students' writing skills and their perceptions. The following pedagogical procedures and data collection activities (PEPAs) were implemented.

Focus Group Discussion (Week 0)

A 15-minute focus group discussion (FGD) was conducted prior to the intervention to explore students' initial perceptions of AI. The findings indicated that while most participants held positive views of AI, they emphasized the need for responsible use and cautioned against over-reliance on the technology. Students agreed that AI should function as an assistive tool—for example, for outlining, editing, and paraphrasing—rather than generating complete texts. They also suggested improvements to classroom

practices, including allocating more time for group discussions, clarifying assessment criteria, and providing strategies for interpreting essay prompts. These suggestions informed subsequent lesson planning.

Reflective Essays (Weeks 0 and 7)

Students completed reflective essays before and after the intervention. The initial reflections explored their expectations and concerns regarding AI use, while the final reflections examined their experiences and evolving perspectives. These essays also served as a valuable source of writing assessment data.

Group Discussions (Weeks 1–6)

Structured group discussions were incorporated into each session, focusing on essay structure and writing strategies. These discussions supported collaborative learning and encouraged critical engagement with the writing tasks.

Open-Ended Questionnaire

At the end of the intervention, students completed an open-ended questionnaire to provide additional insights into their perceptions of AI integration in the course.

AI Integration in Writing Instruction (Weeks 1–6)

Generative AI tools, such as ChatGPT, Scribbr, and Mendeley, were incorporated into writing activities as assistive resources. These tools assisted students in idea generation, organization, revision, and referencing, all in accordance with ethical guidelines developed collaboratively with the students. The following table shows the details of AI integration to the writing class:

Table 1. AI Integration to the EAP Writing Course

Week	Student/teacher activity
1	The lecturer introduced IELTS (2023) assessment criteria and examples of writing errors. Students analyzed sample essays using ChatGPT, then applied it to identify errors in their own essays.
2	The lecturer demonstrated how to use ChatGPT to generate essay structures. In groups, students created outlines based on a given prompt, wrote essays accordingly, and peer-assessed them using IELTS (2023) criteria.

Week	Student/teacher activity
3	The lecturer taught paraphrasing strategies and integrating sources into essays. After manual practice, students used Scribbr to paraphrase selected academic texts and incorporated them into an essay response.
4	The lecturer introduced Mendeley for citation and source searching. In groups, students developed essay outlines using ChatGPT and supported their arguments with sources from Mendeley.
5	Students wrote informal essays, then used ChatGPT to revise them into academic style. They identified differences between informal and formal writing.
6	Students selected a controversial topic, worked in pro–contra groups, gathered sources via Mendeley, presented arguments, and developed them into essays.
7	Students completed the second reflective essay as the final assessment.

Data Analysis

Students' essay were evaluated using a rubric-based approach, which specifies assessment criteria and levels of performance (Brookhart, 2018, p. 1). IELTS writing band descriptors (IELTS, 2023) were applied to assess the technical quality of the essays.

In addition, reflective essays and qualitative responses were analyzed using reflexive thematic analysis (RTA) (Braun & Clarke, 2019). RTA involves identifying, analyzing, and interpreting patterns of meaning within qualitative data. The analysis followed an iterative process of familiarization, coding, and theme development, allowing themes to emerge inductively rather than being pre-defined (Braun & Clarke, 2013; Braun & Clarke, 2019).

Codes were generated to capture recurring patterns in the data and subsequently grouped into broader themes based on conceptual similarity. In line with Braun and Clarke (2019), themes were treated as interpretative constructs reflecting the researchers' engagement with the dataset rather than purely objective categories. This approach enabled the study to capture not only students' technical development in writing but also their

perceptions of AI, ethical considerations, and engagement with learning processes.

FINDINGS AND DISCUSSION

Findings

Table two below presents a comparison of students' academic writing performance in the experimental and control classes before and after the AI-integrated EP sessions, based on IELTS writing criteria.

Table 2. The Results of Reflective Essays

IELTS Criterion	Experimental Class		Control Class	
	Before the integration of AI	After the integration of AI	Before the integration of AI	After the integration of AI
Average Score	6.55	6.25	5.0	5.4
Task Response	Fully addresses all parts of the task; ideas are well developed with relevant examples.	Addresses the task but ideas are often underdeveloped or too general.	Addresses the task but position is sometimes unclear; ideas are partially developed.	Addresses the task more clearly; ideas show slightly better relevance but remain limited in development.
Coherence & Cohesion	Clear progression of ideas; cohesive devices are used effectively and naturally.	Some organization present, but cohesion may be faulty or mechanical.	Organization is weak; ideas are not always logically sequenced; cohesive devices are limited or repetitive.	Some improvement in paragraphing and logical flow, though cohesion is still mechanical at times.
Lexical Resource	Wide range of vocabulary used flexibly and precisely;	Vocabulary is more limited and repetitive; some awkward	Limited range of vocabulary; frequent repetition and	Slightly wider vocabulary range; some improvement in topic-related

IELTS Criterion	Experimental Class		Control Class	
	Before the integration of AI	After the integration of AI	Before the integration of AI	After the integration of AI
Grammatical Range & Accuracy	natural collocations. Uses a variety of complex sentence forms with few errors.	or inaccurate word choices. Mostly simple sentence structures; more frequent grammar errors are noticeable.	basic word choices. Frequent grammatical errors; sentence structures are mostly simple.	words, but repetition persists. Errors remain noticeable; some attempts at complex sentences, but accuracy is inconsistent.
Examples and Support	Relevant and well-integrated examples support ideas clearly.	Examples may be included but are often general or not fully relevant.	Examples are often vague, personal, or insufficiently explained.	Examples are more relevant to the topic but still lack depth and elaboration.
Critical Thinking	Presents a clear position; shows evaluation of different views or implications.	Lacks deep analysis; tends to be descriptive rather than evaluative.	Writing is largely descriptive; little evaluation or comparison of ideas.	Some awareness of advantages and disadvantages, but analysis remains superficial.
Conclusion	Effective conclusions that summarize and add insight.	Conclusions are brief or merely repeat earlier points without added insight.	Conclusions often restate ideas without synthesis or insight.	Conclusions are clearer and more complete, though still mainly repetitive.

IELTS Criterion	Experimental Class		Control Class	
	Before the integration of AI	After the integration of AI	Before the integration of AI	After the integration of AI
Use of References	Occasional use of citations or paraphrased research strengthens argument credibility.	Rare use of sources; ideas mostly presented without external support.	No use of academic sources or external support.	Minimal or no use of references; arguments rely mainly on personal opinion.

Overall, the experimental class showed a slight decline in average score, decreasing from 6.55 before AI integration to 6.25 afterward. Before the integration of AI, students in this class demonstrated strong performance across most criteria. Their writing effectively addressed task requirements, showcased clear organization, employed a wide range of vocabulary, and used complex grammatical structures with relatively few errors. Furthermore, they demonstrated higher-order skills such as critical thinking and the ability to integrate examples and occasional references effectively.

After the integration of AI, however, the quality of writing in the experimental class became more inconsistent. While students continued to address the task, their ideas were often underdeveloped or overly general. Coherence and cohesion were present but tended to feel mechanical, and lexical choices became more repetitive with instances of awkward usage. Grammatical accuracy declined, marked by a noticeable shift toward simpler sentence structures. In addition, critical thinking abilities weakened, as responses became more descriptive rather than evaluative, with conclusions frequently repeated earlier points without adding new insights. The use of references also decreased, with many arguments relying more on personal reasoning rather than external support.

In contrast, the control class showed a modest improvement in average score, increasing from 5.0 before the treatment to 5.4

afterward. Before the treatment, students in the control class generally faced challenges across several criteria. Their task responses were often unclear, organizational structures were weak, and vocabulary usage was limited and repetitive, as well as grammatical errors were frequent. The writing tended to be descriptive, with minimal critical evaluation, vague examples, and limited use of external sources.

After the treatment, the control class demonstrated gradual improvement in several areas. Task responses became clearer and more relevant, with slight improvements in paragraph structure and logical coherence. There was a modest expansion in lexical range, and students began to employ more complex sentence structures, although their grammatical accuracy remained inconsistent. The examples presented were more relevant to the topic discussed, and conclusions were clearer and more comprehensive, albeit still largely repetitive. Despite these gains, the level of critical thinking and the use of references remained limited.

The findings indicate that while the control class benefited from conventional instruction with incremental improvements, the experimental class experienced a decline in several aspects of writing following AI integration. These findings suggest that the effectiveness of generative AI in academic writing is highly dependent on how it is pedagogically guided and ethically framed, particularly in supporting idea development, critical thinking, and responsible source usage.

In addition to the results of reflective essays, we analyzed the results of open-ended questionnaires distributed to the participants in the experimental class after the AI integration took place. Following table describes themes we found in the results of the open-ended questionnaires:

Table 3. The Results of Thematic Analysis

Theme	Description	Example Comments
Technical Assistance	AI helps correct grammar, improve vocabulary, paraphrase, and identify errors in writing.	"With AI tools like Quillbot or Scribbr, I can paraphrase more effectively." (Comment 1) "AI helps me correct structural errors in my writing, like Grammarly." (Comment 3)
Efficiency Gains	AI makes the writing process faster and more efficient.	"Nowadays, AI really helps human work because it makes processes faster and more efficient." (Comment 1) "The use of AI in writing class is very helpful and saves time." (Comment 10)
Learning Enhancement	Use of AI promotes improved writing skills, vocabulary expansion, and understanding of language nuances.	"AI has a positive impact because it helps me see where my mistakes are." (Comment 13) "I now better understand that language has levels and nuances." (Comment 2)
Concerns about Overuse	Warnings about overreliance on AI causing rigidity or laziness in writing.	"If AI is used too often, academic writing may appear stiff." (Comment 4) "Try not to overuse it because it can lead to laziness and bad habits." (Comment 6)
AI as an Assistant, Not a Substitute	Students view AI as a helpful tool that supports but does not replace human writing effort.	"If used correctly, AI can be good for developing general knowledge and writing." (Comment 17) "AI should only be used as a writing assistant." (Comment 13)

The thematic analysis of the student comments on AI use in writing revealed several key patterns reflecting their experiences and perceptions. Many students highlighted the role of AI tools, such as Quillbot, Grammarly, and DeepL in improving the accuracy and quality of their writing. Many noted that these tools helped them identify and correct grammar mistakes, enhance sentence structure, and discover more precise vocabulary, all of which contributed to clearer and more polished essays. Additionally, students appreciated the efficiency these AI tools brought to the writing

process, emphasizing that they saved time by offering quick feedback and facilitating tasks like paraphrasing and vocabulary searches.

Despite these positive perceptions, some students expressed a critical awareness of AI's limitations. They cautioned against over-reliance on such tools, warning that excessive dependence could lead to mechanical writing styles or hinder the development of independent thinking and writing skills. However, there is a shared understanding that AI should serve as a supportive learning aid, rather than a substitute for personal effort and critical engagement with one's work.

Furthermore, several students reported that using AI enhanced their understanding of language nuances, such as tone and word choice, helping them produce more nuanced and contextually appropriate writing. Overall, the themes illustrate a generally favorable attitude toward AI integration in academic writing, highlighting both its practical benefits and the importance of mindful usage. These insights suggest that while AI can significantly support students in improving their writing skills, effective guidance and balanced usage are essential to maximize its educational value.

Discussions

To enhance clarity and coherence in the analysis, the discussion is organized into sub-sections, allowing for a systematic examination of the study's findings, including the role of AI in learning, students' engagement and motivation, as well as the pedagogical implications for Islamic higher education.

Generative AI and Academic Writing Performance

The findings reveal a nuanced impact of generative AI on students' academic writing in the experimental class. While AI tools such as Grammarly, Quillbot, and ChatGPT facilitated improvement in grammar, vocabulary, and coherence, the experimental class exhibited a decline in higher-order writing skills, including critical thinking, idea development, and the effective use of references (Table 2). Prior studies suggest that over-reliance on AI may reduce

cognitive engagement and critical thinking (Civil, 2023; Warschauer et al., 2023). Zhai et al. (2024) highlight that students who depend on AI for idea generation may accept AI outputs uncritically, which can hinder their interaction with learning materials and inhibit independent thinking. Students' responses tended to be more descriptive rather than evaluative, reinforcing Alharbi's (2023), observation that insufficient pedagogical guidance can encourage mechanical writing.

It is important to clarify that this decline primarily reflects limitations in pedagogical scaffolding rather than intrinsic flaws of generative AI. AI has the potential to support higher-order thinking, but its effectiveness depends on structured guidance, reflection, and scaffolding. In contrast, the control class, which relied on conventional instruction, showed gradual improvement across most writing criteria, particularly in critical and evaluative skills (Dizon & Gayed, 2021; Kohnke, 2024). This comparison demonstrates that effective AI integration requires careful instructional design, highlighting the need for guided use to prevent cognitive disengagement.

Exploratory Practice as a Mediating Approach

The integration of Exploratory Practice (EP) in the experimental class provides a framework for both ethical and pedagogically sound AI use. EP emphasizes reflective collaboration between teachers and students as co-investigators of their learning environment (Allwright & Hanks, 2009; Hanks, 2015). Students reflected on AI's benefits, such as technical assistance and efficiency gains, while acknowledging risks of over-reliance and mechanical writing patterns (Table 3). These reflections align with Marzuki et al. (2023) and Kasneci et al. (2023), showing that AI can enhance language proficiency when used deliberately under guided conditions.

Within the context of Islamic higher education, EP provided a culturally and ethically relevant lens. Students engaged with AI while considering Islamic educational values, including *amānah* (trustworthiness) and *ikhtiar* (personal effort) (Dipta et al., 2025; Gumelar & Jubaedah, 2025). This approach ensured that AI served

as a supportive assistant rather than a substitute for intellectual engagement, aligning with Alharbi (2023) and reinforcing responsible, reflective academic practice.

Motivation and Engagement in AI-Enhanced Learning

Thematic analysis of student feedback (Table 3) indicates that AI can enhance motivation when paired with reflective practice. Students reported increased confidence, improved vocabulary, and time savings, while recognizing that over-reliance could result in rigid writing habits. These findings mirror Liu and Yushchik (2024), who emphasize that AI-enhanced learning promotes knowledge retention and skill development when students engage critically.

In Islamic higher education, motivation includes both cognitive and ethical dimensions. Students were encouraged not only to develop linguistic competence but also to exercise reflective judgment and uphold ethical standards, consistent with broader EAP goals in Islamic institutions (Chamisah, 2025; Gumelar & Jubaedah, 2025).

Comparing AI-Integrated EP and Conventional Instruction

Comparison between the experimental and control classes indicates that AI's educational value depends strongly on pedagogical design. In the experimental class, AI provided efficiency gains and technical support, however, the decline in higher-order skills highlights the need for reflective mediation. In contrast, while the control class experienced slower progress, conventional instruction supported the steady development of evaluative skills (Kasneci et al., 2023; Sinhaliz et al., 2023). EP addressed these risks by embedding reflective practices and facilitating discussions on the ethical use of AI. Overall, the findings suggest that the educational benefits of AI are fully realized only when it is integrated into structured, co-investigative learning environments (Ngo & Hastie, 2025; Carvalho et al., 2022).

Implications for Pedagogical Practice in Islamic Higher Education

AI integration in EAP writing courses should be framed as both a skill-development tool and a medium for cultivating ethical and reflective academic behavior. Islamic higher education

emphasizes moral, spiritual, and intellectual development (Dipta et al., 2025; Gumelar & Jubaedah, 2025), and students' use of AI must reinforce principles such as *amānah* (trustworthiness), *ikhtiar* (personal effort), and *tafakkur* (reflective thinking). Accordingly, students should critically assess AI suggestions rather than accept them uncritically, aligning technology use with academic integrity and Islamic ethical responsibility (Alberth, 2023).

EP operationalizes these principles by positioning students as co-investigators who collaboratively establish norms for responsible AI use, reflect on AI's impact on writing, and explore the boundaries between assistance and over-reliance (Allwright & Hanks, 2009; Hanks, 2015). For instance, students submitted reflective notes alongside AI-assisted drafts, detailing responsible AI use, their independent contributions, and how AI informed—but did not replace—their work. These reflections were assessed for both academic quality and ethical engagement, providing observable evidence of ethical AI use (Marzuki et al., 2023; Ngo & Hastie, 2025).

Pedagogically, AI should emphasize guided, reflective, and ethically informed practices. Students can use AI for drafting, vocabulary enrichment, and error correction, followed by reflective discussion or journaling to evaluate AI outputs against ethical and academic standards. This approach balances technological efficiency with moral and intellectual growth, supporting higher-order skills such as critical thinking, synthesis, and evaluation (Dizon & Gayed, 2021; Kasneci et al., 2023).

CONCLUSION

This study investigated the ethical integration of generative AI in an EAP writing course at an Islamic higher education institution in Indonesia. Forty undergraduate students participated, with the experimental class engaging in AI-integrated Exploratory Practice sessions to collaboratively develop classroom guidelines for responsible AI use. Reflective essays collected before and after the intervention were analyzed to examine changes in writing performance, critical thinking, and motivation. These procedures

allowed the study to capture both technical and higher-order dimensions of academic writing while considering the ethical and motivational contexts emphasized in Islamic higher education.

The findings indicate that AI tools effectively supported the technical aspects of writing, including grammar, vocabulary, and coherence, yet students in the experimental class demonstrated a decline in higher-order skills, such as critical thinking, idea development, and effective use of references. This reflects that although descriptive or mechanical writing may be useful in certain tasks, academic writing in higher education requires critical engagement, evaluation, and reflective reasoning to develop meaningful arguments and ethically integrate sources. At the same time, the application of Exploratory Practice appeared to mediate these challenges by fostering ethical awareness, guiding responsible AI use, and sustaining student motivation. Comparatively, the control class, which followed conventional instruction, showed modest improvements in writing performance without significant development in ethical awareness or critical engagement. These results highlight that the educational value of AI is highly contingent upon pedagogical mediation, particularly in Islamic higher education contexts that prioritize moral, reflective, and intellectual development.

This study has several limitations that should be acknowledged. First, the sample consisted of only 40 undergraduate students from a single Islamic higher education institution in Indonesia, which may limit the generalizability of the findings to other EAP learners at different universities or in other cultural contexts. Second, the AI integration occurred over only seven class sessions, which may not fully capture the long-term effects of generative AI on students' academic writing skills, critical thinking, or ethical awareness, particularly within the moral and reflective framework emphasized in Islamic higher education. Third, the study relied primarily on reflective essays and focus group discussions, which are self-reported and may be influenced by social desirability or limited student self-awareness. Fourth, the focus on academic writing in an EAP course means that the results

may not be directly transferable to other writing genres or disciplines, where the role and impact of AI could vary.

Finally, the first author's dual role as both instructor and researcher may have introduced bias in data collection and interpretation, despite efforts to maintain objectivity through the collaborative and reflective principles of Exploratory Practice. Future research involving larger, more diverse samples, longer AI integration periods, and multiple forms of data collection would help build a more comprehensive understanding of how ethically guided AI use can support writing development and motivation in Islamic higher education contexts.

By linking these findings to practical considerations, the study underscores the importance of carefully structured AI integration in EAP courses, illustrating how reflective, ethically informed practices can enhance both skill development and motivation while mitigating the risks of over-reliance on technology.

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