

Beyond Assistance: Unpacking Pre-service EFL Teachers' Ethical Dilemmas in AI-Mediated Writing

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ABSTRACT

The rapid emergence of Artificial Intelligence (AI) tools has profoundly reshaped the landscape of academic writing in English as a Foreign Language (EFL) classrooms. These technologies have enhanced language accuracy and strengthened learners' confidence; however, they have also blurred the boundaries between human cognition and machine-generated output, raising complex ethical and pedagogical questions. This study investigates how Indonesian pre-service EFL teachers negotiate these ethical tensions while engaging in AI-mediated writing practices. Using a qualitative interpretive design, data were collected through semi-structured interviews and reflective journals from twelve participants who had prior experience using AI tools in their writing. Thematic analysis revealed four major ethical dilemmas: (1) authenticity, which questions the originality of AI-supported writing; (2) dependency, reflecting concerns about cognitive passivity and overreliance on technology; (3) assessment, relating to fairness and validity in evaluating AI-assisted texts; and (4) pedagogy, centring on the tension between leveraging AI for learning and upholding ethical standards in teaching. The findings suggest that while AI integration enhances accessibility and efficiency, it simultaneously challenges pre-service teachers' ethical readiness and pedagogical accountability. This study contributes to ongoing discussions on digital ethics in language education and argues for embedding explicit AI ethics and reflective pedagogy modules within EFL teacher education programs to cultivate ethical literacy, critical awareness, and professional integrity.

Keywords: *AI, writing, ethical dilemmas, EFL, pre-service teacher.*

1) INTRODUCTION

In recent years, generative artificial intelligence (AI) has significantly reshaped academic writing practices in English as a Foreign Language (EFL) contexts. AI-powered writing assistants are increasingly used to support students' writing development, contributing to improvements in vocabulary use, syntactic accuracy, and overall text organization (Dou et al., 2025; Farhan, 2025; Nazari et al., 2021). While these technologies can enhance writing fluency, they also raise fundamental questions concerning authorial ownership, textual authenticity, and the evolving relationship between

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human cognition and machine-generated input in the writing process (Dwivedi et al., 2023). Although empirical studies report measurable gains in students' writing performance following AI integration, critical concerns remain unresolved (Kasneci et al., 2023). Consequently, the expanding role of AI in academic writing calls not only for pedagogical innovation but also for closer scrutiny of its ethical, cognitive, and assessment-related implications.

Despite the growing effectiveness of AI tools, the literature reveals a persistent imbalance between technological advancement and users' ethical preparedness in AI-mediated writing. A recent systematic review notes that, although AI enhances linguistic performance, issues related to teacher readiness, AI literacy, and ethical guidance remain insufficiently addressed (Crompton & Burke, 2023; Zawacki-Richter et al., 2019). Studies conducted in Indonesia echo these concerns: students acknowledge the benefits of AI support but continue to question textual authenticity, fear overreliance on technology, and highlight the absence of clear institutional policies (Suryani & Fithriani, 2024). At the same time, teachers report difficulties in identifying AI-mediated revisions and in adapting assessment practices in ways that are both fair and transparent (Mijwil et al., 2023). Together, these findings reveal a critical gap. Existing research has largely examined tool effectiveness or student perceptions, while paying far less attention to how pre-service EFL teachers navigate the ethical dilemmas emerging from AI-mediated academic writing. Without such understanding, teacher education risks producing practitioners who can operate technologies but lack the ethical grounding to guide their responsible use.

Within the Indonesian context, the preparation of pre-service EFL teachers adds further complexity and urgency to this issue. These future educators occupy a dual position: they are students who rely on AI tools to support their own academic writing, yet they are also prospective teachers responsible for guiding learners in using such technologies judiciously. Empirical attention to this group, however, remains limited. While several studies have explored university students' use of AI more broadly, few have examined the ethical reasoning, emerging professional identities, and practical dilemmas experienced by Indonesian pre-service EFL teachers (Kohnke et al., 2023; Zawacki-Richter et al., 2019). Addressing this gap, the present study explores how these pre-service teachers interpret, experience, and respond to ethical tensions when AI mediates their academic writing.

Accordingly, this study investigates the ethical dilemmas encountered by pre-service EFL teachers in Indonesia as they engage with AI in academic writing practices. It examines how such dilemmas emerge and how they are negotiated within authentic classroom contexts. By situating AI ethics within teacher education rather than viewing it solely from the perspective of general users, this study offers a distinct contribution to the field. The findings are expected to inform curriculum development, institutional policy, and pedagogical strategies that promote responsible AI use in EFL teacher preparation. Ultimately, the study argues that ethical literacy in AI-mediated writing is not an optional addition but a central component in preparing reflective, responsible, and future-ready EFL professionals.

2) METHODS

This study adopted an interpretive qualitative design to explore the ethical dilemmas experienced by pre-service EFL teachers when using AI in academic writing. An interpretive approach was chosen because it allows for an in-depth understanding of subjective experiences and ethical reasoning processes that cannot be adequately captured through numerical indicators or measurable variables (Creswell & Poth, 2017). This design enabled the researcher to examine the meanings participants constructed as they engaged with AI technologies in academic contexts. Moreover, qualitative inquiry provides the flexibility needed to investigate emerging phenomena, such as the integration of AI in language education. Accordingly, this approach was considered most appropriate for uncovering the tensions, dilemmas, and ethical considerations arising from participants' lived experiences.

The participants were twelve pre-service EFL teachers enrolled in an English language education program at a public university in Indonesia. They were selected through purposive sampling based on the criterion that they had previously used various AI tools for academic writing. This criterion ensured that all participants had direct and relevant experience with AI-assisted writing. The participants represented diverse levels of academic achievement and varying degrees of familiarity with AI, which enriched the depth and variation of the data. Prior to participation, all individuals provided informed consent, and their identities were kept confidential to ensure ethical compliance.

Data were collected through semi-structured interviews and participants' reflective journals. The interviews were conducted to elicit detailed accounts of participants' experiences, perceptions, and ethical dilemmas associated with AI use in academic writing (Kallio et al., 2016). The interview guide

remained flexible, enabling the researcher to probe further into emerging issues during the conversations. In addition, reflective journals were used to capture participants' ongoing experiences and ethical tensions encountered during the writing process. These journals provided supplementary insights that complemented the interview data. The combination of interviews and reflective journals enhanced the credibility and transferability of the findings through methodological triangulation

The data collection process was carried out in three stages. First, an information sheet and consent form were distributed to prospective participants, along with a detailed explanation of the study. Second, semi-structured interviews were conducted, lasting between 45 and 60 minutes, and were audio-recorded with participants' permission. Third, participants were asked to maintain reflective journals over a two-week period, documenting their experiences each time they used AI for academic writing. All interview recordings were transcribed verbatim, and the reflective journals were compiled for integrated analysis.

The data were analysed using thematic analysis following (Braun and Clarke's (2021) six-phase framework: familiarisation with the data, generation of initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the analytic narrative. Thematic analysis was selected due to its flexibility and its suitability for identifying patterns of meaning within participants' subjective experiences. Coding was conducted manually to maintain close engagement with the data. To enhance interpretive consistency, the resulting codes and themes were reviewed collaboratively with a second and third researcher. These procedures strengthened the study's dependability and confirmability.

3. RESULTS AND DISCUSSION

This section presents the findings derived from thematic analysis of semi-structured interviews and reflective journals from twelve pre-service EFL teachers. Four major themes emerged as the most salient representations of participants' experiences when using AI in academic writing: authenticity, dependency, assessment, and pedagogy. These themes are interconnected, indicating that ethical dilemmas arise not merely as technical challenges but as epistemological and professional tensions that shape how participants understand the writing process. The findings are integrated with global literature to identify gaps, relationships, and pedagogical implications. In doing so, this section

provides a comprehensive account that informs recommendations for teacher education and future research.

3.1 Authenticity: Tensions Between Authenticity and AI-Assisted Writing

The findings indicate that authenticity was the ethical dilemma most frequently expressed by participants, particularly as they attempted to maintain their academic identity in environments shaped by generative technologies. Participants acknowledged that AI helped produce more polished sentence structures; however, they often felt that the resulting text was “not entirely theirs.” One participant explained that when AI substantially revised her paragraph, she felt that “my voice disappeared,” raising concerns about the boundary between assistance and legitimate authorship. This tension echoes recent scholarship suggesting that generative AI blurs the distinction between human work and machine contribution, thereby complicating efforts to uphold academic integrity (Cotton et al., 2024). In this sense, authenticity extends beyond plagiarism concerns to encompass issues of writer identity and epistemic agency.

Participants also described a dilemma between improving writing quality and preserving authentic academic expression. Several reported using AI primarily for grammar and vocabulary checks; nevertheless, AI frequently suggested reorganizing paragraphs, which made their work appear “too perfect.” Such conditions complicate lecturers’ efforts to accurately assess students’ actual writing abilities. This finding aligns with Kohnke et al. (2023), who notes that although EFL students recognize ethical risks, they still feel compelled to use AI to remain academically competitive. Increasing academic demands may therefore encourage the standardization of writing styles through technology, potentially diminishing individual voice.

Moreover, participants expressed unease when AI generated ideas they had not previously considered. They questioned whether such ideas could still be regarded as their own or merely as algorithmic reproductions. This concern supports arguments that AI influences not only the form but also the content of writing and the writer’s thought processes (Cui et al., 2025). Consequently, debates about authenticity in the AI era extend beyond technical concerns to philosophical questions regarding the boundaries of human creativity. Authenticity, in this context, emerges as a negotiated construct rather than a fixed binary.

Conversely, some participants argued that authenticity should not be equated with writing “without assistance,” but rather with the critical use of AI during the writing process. They maintained that authenticity remains intact when they manually revise AI outputs and selectively adopt relevant suggestions. This perspective aligns with pedagogical approaches that view AI as ethically acceptable when users retain reflective control over the writing process (Zhu et al., 2025). However, many participants admitted difficulty in determining the ethical boundary between thoughtful revision and excessive reliance. This ambiguity suggests that authenticity requires reconceptualization within AI-integrated writing environments.

Overall, the findings suggest that authenticity dilemmas arise not only from AI functionality but also from institutional expectations and academic cultures that shape how pre-service teachers position themselves as academic writers. The absence of clear guidelines exacerbates this uncertainty, leaving participants without formal references to determine legitimate AI contributions. This supports Tsao's (2025) assertion that educational institutions have yet to provide coherent ethical frameworks for AI use, forcing students to navigate these dilemmas independently. Authenticity thus serves as a critical entry point for understanding broader ethical challenges in AI-mediated academic writing.

3.2 Dependency: Concerns About Overreliance and the Erosion of Independent Thinking

The second theme concerns dependency—participants’ concern that repeated AI use may weaken critical thinking and independent writing abilities. Most participants reported that they had grown accustomed to initiating their writing by asking AI to generate outlines or preliminary ideas, resulting in a noticeable decline in traditional brainstorming practices. This pattern aligns with Chen et al. (2025), who argue that AI may reduce higher-order cognitive engagement when used as the primary source of ideas. Participants further acknowledged that the more they relied on AI to construct arguments, the less effort they invested in reading scholarly literature or developing personal interpretations. This shift suggests that technology can reshape students’ engagement with academic content.

Several participants described a sense of “psychological dependence” on AI, particularly when facing tight deadlines or complex assignments. They reported feeling less confident in their own writing abilities without AI confirmation or revision. This observation resonates with Tao et al. (2024) report on the growing phenomenon of cognitive outsourcing, in which students transfer substantial

cognitive tasks to AI tools. Such dependence may create a negative feedback loop: the more frequently AI is used as a support mechanism, the more likely students are to lose confidence in writing independently. Over time, this dynamic may hinder the development of an autonomous academic identity.

Participants also expressed concern that their English proficiency had stagnated due to frequent reliance on automated corrections. They noted that AI-generated sentence structures often appeared overly complex and did not reflect their personal language style, making them difficult to internalize. This finding is consistent with Yang et al. (2024), who found that students who rely heavily on AI show limited improvement in core linguistic skills such as paraphrasing and cohesion. Consequently, overreliance on AI may constrain the development of essential writing competencies that pre-service teachers are expected to master.

In addition, participants described the tension between using AI for efficiency and preserving manual writing skills. While AI was perceived as accelerating the writing process, participants also recognized that excessive reliance could weaken analytical abilities. Recent literature supports this concern, suggesting that uncontrolled AI use may reduce metacognitive reflection and the quality of argumentation (Stofiana et al., 2025). Although participants expressed a desire to limit their AI use, academic pressures often made this difficult. This dilemma indicates that dependency is not merely an individual issue but a structural challenge requiring pedagogical intervention.

Taken together, dependency on AI emerges not only as a technical issue but as a psychological and pedagogical process shaping pre-service teachers' long-term writing development. Participants recognized that AI use is partly driven by increasing academic expectations; however, they also feared its potential impact on their intellectual autonomy. This concern supports Zhai et al. (2024) finding that EFL students occupy a vulnerable position when technologies intended to support learning inadvertently impede cognitive development. Addressing this dilemma therefore requires instructional strategies that reduce overreliance while maximizing the pedagogical benefits of AI.

3.3 Assessment: Fairness, Validity, and Policy Ambiguity

The third theme relates to assessment challenges in AI-mediated writing. Participants reported that grading practices became inconsistent and difficult to predict when AI was involved. Some lecturers permitted AI use for proofreading, while others prohibited it entirely. This inconsistency

reflects Ghimire and Edwards's (2024) observation that unclear AI policies create significant uncertainty for students. As a result, assessment dilemmas extend beyond writing ability to concerns about fairness and transparency.

Participants also worried that their grades no longer reflected their genuine abilities due to AI involvement. Some felt that high scores indicated proficiency in using AI rather than actual writing competence. This perception created discomfort, particularly among those who believed assessment should evaluate cognitive effort and personal engagement. Setiyowati (2024) similarly argues that AI-assisted evaluation raises serious questions about assessment validity in language learning. Participants thus questioned whether existing assessment systems adequately reflect the realities of technology-mediated writing.

Another concern involved the potential misclassification of student work by AI detection tools. Participants noted that some institutions had begun adopting such tools, yet these systems often produced inaccurate results and appeared biased against non-native English writers. Kalmani et al. (2025) found that AI detectors frequently fail to distinguish between well-edited human writing and AI-generated content that has been revised. This inaccuracy left students feeling vulnerable, as their work could be labelled "AI-generated" without valid evidence. Such dilemmas highlight the risk of unjust academic penalization associated with detection technologies.

Participants further argued that fair assessment should consider not only the final product but also the writing process and reflective engagement. Some suggested that lecturers adopt formative assessment approaches to monitor writing development over time rather than relying on AI detection tools. Woo et al. (2025) support this view, noting that process-based assessment better captures writing competence in the AI era. These insights suggest that assessment practices require redesign to align with digital transformations in education.

Overall, the findings indicate that academic assessment requires clear and consistent institutional guidelines. Participants felt trapped in an ethical grey area due to the absence of formal standards governing AI use in writing. This uncertainty undermined their confidence when submitting assignments. Mazaherian and Nourbakhsh (2025) similarly emphasizes the urgent need for comprehensive institutional policies to maintain academic fairness. Assessment dilemmas therefore represent a structural issue demanding institutional intervention.

3.4 Pedagogy: Ethical Responsibility and Challenges in Teacher Education

The final theme concerns how participants interpreted their pedagogical responsibilities as future teachers in an AI-rich environment. Participants recognized that they were not only AI users but also future educators who would guide students in responsible technology use. Many viewed AI-related ethical competence as a core component of their emerging professional identity. This perspective aligns with Deshen et al. (2026), who emphasize AI literacy as an essential competency in 21st-century teacher education.

Participants also expressed concern that students' future use of AI would introduce new challenges in English language teaching. They questioned how to assess AI-assisted student writing and how to distinguish between legitimate use and misuse. This concern reinforces Zawacki-Richter et al. (2019) argument that AI integration requires redefining teachers' roles as facilitators of digital literacy. Pre-service teachers must therefore prepare to operate within increasingly automated and algorithm-driven learning environments.

Some participants acknowledged limited knowledge of AI ethics, reporting insufficient preparation to make informed decisions in ambiguous situations. This observation aligns with UNESCO's (2024) report highlighting the global shortage of digital ethics competence among pre-service teachers. Such gaps may hinder their ability to model responsible AI use for students. Consequently, teacher education programs must incorporate explicit training in AI ethics and literacy.

Participants also feared that excessive student reliance on AI could weaken pedagogical interaction. They emphasized the need to balance technological integration with the cultivation of students' critical thinking skills. Zhao et al. (2025) similarly argue that AI use in education must prioritize problem-solving and analytical development. Thus, pedagogical dilemmas extend beyond technical considerations to philosophical questions about the purposes of education. This underscores the need for deeper pedagogical reform in English language teaching.

Finally, participants emphasized the importance of integrating AI ethics modules into teacher education curricula. They argued that understanding the ethical, social, and pedagogical implications of AI should form part of professional competence for English teachers. Daher (2025) likewise contends that teacher education should promote critical reflection, technological understanding, and professional integrity. These findings suggest that pedagogical dilemmas present an opportunity to

strengthen teacher education in the digital era. Educational institutions must therefore play a proactive role in preparing future teachers to navigate increasingly complex technological landscapes.

Integrated Findings

Taken together, the four themes reveal that AI use in academic writing creates a complex ethical landscape for pre-service EFL teachers. **Authenticity** highlights how participants negotiate boundaries between human contribution and technological assistance. **Dependency** demonstrates the potential long-term effects of AI on writing competence and self-confidence. **Assessment** exposes structural dilemmas concerning fairness and validity in evaluating AI-assisted work. **Pedagogy** underscores the urgent need to develop AI ethical literacy within teacher education.

Overall, these findings align with global scholarship indicating that AI integration in language education offers both opportunities and complex risks. This study contributes new insights by foregrounding the ethical experiences of Indonesian pre-service English teachers—a population rarely examined in international literature. The findings also deepen understanding of how technology shape's professional identity within diverse cultural and institutional contexts. In doing so, the study addresses a critical gap in discussions of AI ethics in language education. The implications of these findings are elaborated in the conclusion section.

4. CONCLUSIONS

This study demonstrates that the integration of AI in academic writing extends beyond improving textual quality to shaping pre-service EFL teachers' cognitive processes, academic identities, and professional readiness. The four interconnected themes—authenticity, dependency, assessment, and pedagogy—reveal a complex ethical landscape in which pre-service teachers must continuously negotiate the boundaries between technological assistance and responsible authorship. The findings highlight that the absence of clear institutional guidelines exacerbates ethical uncertainty, leaving students to navigate AI use through personal judgment rather than shared standards. At the same time, the study underscores the urgent need for teacher education programs to embed AI ethical literacy, process-oriented assessment practices, and reflective pedagogies that balance technological efficiency with the cultivation of critical thinking and independent writing skills. By foregrounding the experiences of Indonesian pre-service EFL teachers, this research contributes to global discussions

on AI ethics in language education and provides a foundation for pedagogical and policy reforms aimed at preparing future teachers to engage with AI in ethical, reflective, and professionally responsible ways.

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