

# Beyond the Benefits: Ethical Considerations for AI in L2 Doctoral Writing and the Role of Higher Education

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**Abstract:** This paper examines the multifaceted ethical challenges arising from the integration of generative AI in academic writing, with a specific focus on the second language (L2) PhD students. While AI tools offer benefits like personalized feedback and content generation, they also raise concerns about privacy risks (stemming from data collection and potential misuse), plagiarism issues (particularly unintentional plagiarism among L2 writers), and algorithmic bias (potentially impairing critical thinking and perpetuating societal inequities). The study emphasizes the need for a holistic approach to cultivating AI ethical awareness within higher education, encompassing students, faculty, and institutions. This includes the development of practical strategies for L2 writers-navigating linguistic and cultural nuances, preserving original voice, preventing unintentional plagiarism through diligent verification, and fostering critical AI literacy. Ultimately, the paper advocates for the establishment of clear ethical guidelines, proactive institutional policies promoting responsible AI integration, and supportive learning environments. These measures are crucial for upholding academic integrity, fostering ethical scholarship, and ensuring the quality and originality of L2 doctoral students' research in the age of AI.

**Keywords:** AI Ethics, Ethical Concerns, L2 Doctoral Writing, Higher Education.

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## 1. Introduction

The transformative development of generative AI has permeated social, economic, and educational spheres globally. In particular, AI offers significant potential to enhance teaching and learning in higher education, assisting students, researchers, and instructors alike. While these advancements promise to improve the quality and efficiency of academic work, significant ethical concerns surrounding AI in academic writing are emerging, including privacy risks, plagiarism issues, and algorithmic bias. These concerns are particularly acute for PhD students, for whom Academic writing is a foundational skill throughout higher education field, is undergoing considerable transformation due to these technological innovations[6]. While generative AI offers several advantages, such as personalized feedback, content generation, grammar assistance, and iterative learning processes, potentially reducing time burdens and assisting with the writing process, these tools also present potential risks, particularly for international PhD students who rely on English to navigate their academic journeys. The quality of their essays and dissertations, their individual creativity, and their critical thinking skills are all potentially at risk. Thus, a central question arises: How can generative AI be ethically integrated into academic writing to support PhD students, particularly L2 learners, without compromising their core competencies and academic integrity? Addressing this question necessitates a multi-faceted approach that considers the responsibilities of students in cultivating AI ethical awareness, instructors in reshaping AI ethical guidelines, and institutions in constructing a supportive and responsible AI-driven learning environment. This paper argues that a proactive, ethical framework is crucial, outlining key strategies for L2 students and emphasizing the vital role of higher education institutions in fostering responsible AI adoption.

## 2. Ethical Concerns of AI in L2 Writing

### (1) Privacy risks

Generative AI platforms, designed to collect and store extensive user data – including voice recordings, writing samples, and learning patterns[9]– inherently raise privacy risks. In this case, users may unwittingly expose sensitive information when interacting with these tools (e.g., ChatGPT, DeepSeek), potentially without explicit consent. The privacy of individuals whose data is used to train, test, or run AI system is at significant risk, which may compromise their sled-hood, psychological well-being, or social standing[4]. This is particularly critical for PhD students, who may input original essay assignments and research data into Generative AI systems. It may effect their originality and creativity of essay assignments which is significant for their academic career. Thus, the absence of robust digital regulations and individual consent protocols creates a vulnerability where their intellectual property could be reused or altered without authorization. This phenomenon is also recalled “Matthew Effect”[2], further exacerbates this issue, potentially transferring ownership of original student work to third parties.

Therefore, addressing privacy risks is paramount when utilizing AI-driven digital tools in academic writing. To mitigate the potential for AI to retransmit or reuse users' original work without consent, AI designers bear a significant responsibility to protect intellectual property. This includes re-evaluating the underlying algorithms and data storage patterns to incorporate robust privacy safeguards. Furthermore, establishing a comprehensive and ethically sound AI-driven environment requires the active participation of faculty and institutions. González-Esteban & Calvo (2022) advocate for the principle of “privacy by design,” emphasizing that privacy protection is not merely a technical approach but a fundamental responsibility focused on

proactive risk management and ensuring accountability. [4]Implementing privacy by design involves integrating privacy considerations into every stage of the AI system's development lifecycle, from initial design to deployment and ongoing maintenance. Applying these principles and methods is essential to effectively prevent privacy risks and foster a trustworthy AI ecosystem within academia.

#### (2) Plagiarism issues

Another significant ethical concern pertains to the risk of plagiarism in academic writing. While AI tools like ChatGPT and DeepSeek facilitate collaborative writing, aiding users in content creation and providing feedback for language and content revision, they can also inadvertently increase the risk of plagiarism, especially for non-native English speakers who may already face challenges in academic writing. Perkins (2023) argues that the use of AI-generated content in academic writing is acceptable, provided that it is critically evaluated, appropriately rephrased, and properly cited[1]. Therefore, AI-generated content should be treated as any other source material, requiring careful citation and attribution. Misuse, on the other hand, could easily result in a loss of originality. Because original scholarly work is essential for PhD students, they bear a significant responsibility to uphold academic integrity and protect their professional identities. Misuse undermines their credibility and the prestige of their publications. To combat this, higher education must implement robust ethical controls, such as establishing clear policies on academic misconduct and utilizing advanced plagiarism detection tools[5], to foster a responsible AI-driven environment.

#### (3) Algorithmic bias

A significant ethical concern arises from algorithmic bias inherent in generative AI models. Generative AI, such as DeepSeek and ChatGPT, learns from vast datasets of historical data, which can perpetuate and amplify existing biases, leading to unfair or discriminatory outputs. One source of this bias stems from "an over-emphasis on research and educational materials sourced from advanced countries, or from textbooks that neglect a comprehensive global perspective"[5], reflecting biases related to religion, race, gender, and equity. Therefore, users must critically evaluate the fairness and representativeness of AI-generated information. Furthermore, algorithmic bias can impair users' perspectives and perceptions in their own writing tasks. Kim et al. (2023) argue that engaging in essay assignments with AI tools can inadvertently influence users' decision-making processes[5]. Consequently, it is crucial to carefully scrutinize AI-generated content, maintain critical thinking skills, and safeguard one's own creative perception and independent judgment.

Algorithmic bias, as discussed, presents multifaceted challenges. This is particularly true for L2 doctoral students. Generative AI tools[3], as noted by Tlili et al. (2023), often generate content lacking the nuanced contextual understanding and emotional intelligence crucial for accurate and insightful academic work. Beyond the inaccuracies, L2 doctoral students may struggle with the very nature of academic work and risk. These tools often lack the ability to capture linguistic and cultural nuances, leading to content that may be grammatically correct but culturally insensitive or inappropriate for their intended audience. Consequently, L2 doctoral students must exercise even greater diligence when engaging with AI-generated materials. Students must critically evaluate the accuracy, cultural sensitivity, and

alignment with their research focus before incorporating it into their dissertations. To ensure academic integrity and cultivate original scholarship, it is crucial to verify the information through critical thinking and careful analysis. Simultaneously, AI developers have a responsibility to refine their algorithms by incorporating diverse datasets and actively addressing biases to create more trustworthy and ethically sound outputs.

### 3. Essential Strategies for Promoting Responsible AI use in L2 Writing

#### (1) Navigating linguistic and cultural nuances

In deeded, L2 writers often rely on AI tools for grammar correction, vocabulary suggestions, and stylistic improvements. While beneficial, this reliance can obscure the subtle nuances of academic discourse in English (or the target language). AI, lacking comprehensive cultural and contextual understanding, might inadvertently introduce unintended biases, inappropriate phrasing, or even misinterpretations of source material. PhD students must therefore develop a critical awareness of AI's limitations in handling linguistic and cultural complexities, actively verifying AI-generated suggestions against their own understanding and consulting with human experts when necessary. These experts could include native-English-speaking colleagues in their field, writing center tutors with experience working with L2 students, or cultural consultants who can provide insights into appropriate language use.

#### (2) Maintaining original voice and authorship

A core tenet of academic integrity is the development and expression of one's original voice and ideas. For L2 writers, the temptation to over-rely on AI for stylistic refinement can lead to a homogenization of writing, obscuring their individual perspective and potentially diminishing the originality of their work. AI should be used as a tool to enhance, not replace, the writer's own voice. PhD students must consciously cultivate their own writing style, ensuring that AI-generated content is critically evaluated and integrated in a way that reflects their unique perspective and scholarly contribution. This includes resisting the urge to passively accept AI-generated phrasing and actively re-working suggestions to align with their intended meaning and stylistic preferences.

#### (3) Preventing unintentional plagiarism

L2 writers may face heightened risks of unintentional plagiarism when using AI tools. If AI generates content that closely resembles existing sources, students might unknowingly incorporate plagiarized material into their work. This risk is compounded by the fact that AI tools may not always accurately cite sources or properly paraphrase information. PhD students must therefore exercise extra caution when using AI for content generation, diligently verifying the originality of AI-generated text and ensuring that all sources are properly cited according to academic conventions. Utilizing plagiarism detection software and seeking feedback from advisors can further mitigate this risk.

#### (4) Developing critical AI literacy

The effective and ethical use of AI requires a high degree of AI literacy. L2 PhD students need to understand the strengths and limitations of AI tools, the biases embedded in AI algorithms, and the potential risks associated with AI use. This includes the ability to critically evaluate AI-generated content, identify potential biases or inaccuracies, and make

informed decisions about when and how to use AI tools responsibly. Furthermore, this includes the ability to advocate for ethical AI practices within their research communities and to understand the potential impact of AI tools on their careers. Institutions should provide targeted training on AI literacy, specifically addressing the unique challenges faced by L2 writers.

#### **4. The Role of Higher Education in Ethical AI Integration**

Maintaining unwavering ethical standards in the age of increasingly sophisticated AI is a critical concern for all stakeholders in higher education, demanding proactive and comprehensive solutions. To that end, the rapid rise of generative AI presents both transformative opportunities and unprecedented challenges, particularly for PhD students, who are expected to demonstrate not only intellectual rigor but also creativity, advanced academic writing skills, and sophisticated information literacy. While generative AI tools offer remarkable convenience, such as automated literature reviews and rapid content generation, they also pose insidious risks to these core competencies, potentially undermining the very foundations of doctoral-level scholarship. Over-reliance on AI can subtly impair advanced academic writing skills by diminishing students' capacity for critical analysis and nuanced argumentation, leading to a homogenization of style and a loss of original voice. The ease with which AI can generate content may diminish the quality of research papers by encouraging superficial engagement with complex ideas and hindering the development of deeper insights. Perhaps most concerning, the uncritical acceptance of AI-generated outputs can stifle the development of brainstorming and innovative thinking, ultimately undermining students' professional credibility and their ability to contribute meaningfully to their chosen fields. Thus, upholding academic integrity within the complex context of AI is of paramount importance, requiring a multi-faceted approach that includes not only clear institutional policies and robust ethical guidelines but, most crucially, cultivating a deep sense of AI ethical awareness among PhD students, equipping them with the critical thinking skills and ethical frameworks necessary to navigate this evolving landscape responsibly.

Given these complexities, faculty members, responsible for guiding students' academic development in this rapidly evolving digital landscape, face the critical challenge of balancing self-directed learning with the appropriate integration of AI tools within the classroom. While the emergence of AI presents both exciting opportunities and unprecedented challenges for instructors, it also requires them to adapt their pedagogical approaches and reinforce AI ethical guidelines for both themselves and their students. As highlighted previously, maintaining critical thinking, problem-solving abilities, and advanced writing skills remains paramount. Therefore, effective strategies for balancing AI integration with the cultivation of essential skills are needed. Hutson, J [8] suggests that instructors can leverage AI to generate example sentences related to course topics, emphasizing genre principles and prompting students to revise and explain the AI-generated outputs. This active learning approach not only enhances students' stylistic writing skills but also fosters their ability to critically analyze and adapt AI-generated content for both academic and professional contexts. Moreover, Hutson [8] also proposes

utilizing AI tools as peer reviewers, offering immediate feedback on student papers. This approach encourages students to develop their evaluation skills by analyzing the AI feedback they receive and identifying potential biases or inaccuracies. By promoting a critical approach to AI-generated content, students not only mitigate the risks of algorithmic bias but also assume a more active and engaged role in their own learning process. However, this raises a fundamental question: who is truly guiding the learning process – the human instructor or AI systems like ChatGPT and DeepSeek [7]? To address this dilemma, clear AI ethical guidelines for faculty are essential. These guidelines should emphasize the importance of avoiding over-dependence on AI, mitigating the risks of misinformation in research and teaching, and promoting the development of students' critical thinking and analytical skills.

Beyond the actions of individual faculty members, higher education institutions also have a vital role to play in navigating this increasingly complex landscape. They must develop forward-thinking policies that promote the responsible and ethical integration of AI tools, shifting from reactive measures to proactive strategies. Specifically, these policies should aim to foster comprehensive AI literacy among both students and faculty, safeguard students' creativity and advanced academic writing skills, and legally protect their intellectual property and professional identities in an AI-driven environment. The ultimate goal is to create a supportive and ethical AI ecosystem that encourages innovation, promotes effective and responsible AI utilization, and supports students' long-term learning, critical inquiry, and research capabilities. For instance, the European Network for Academic Integrity (ENAI), as recommended in the International Journal for Educational Integrity, provides valuable guidance for higher education institutions in developing educational policies, pedagogy, and the knowledge needed for the ethical use of AI tools. Beyond adopting existing frameworks, institutions must also proactively develop customized strategies, such as: (1) establishing clear guidelines on the appropriate use of AI in academic writing across different disciplines, (2) offering comprehensive training programs on AI ethics and responsible AI use for both students and faculty, and (3) investing in resources that support the development of students' critical thinking and analytical skills. By proactively addressing these challenges and embracing a holistic approach to AI integration, higher education institutions can harness the transformative power of AI while upholding the highest standards of academic integrity, student success, and responsible innovation.

#### **5. Conclusion**

The increasing integration of artificial intelligence (AI) in higher education presents several significant challenges for PhD students engaged in second language (L2) writing, necessitating careful ethical consideration. These challenges include privacy risks, the potential for plagiarism, and algorithmic bias. The privacy issue arises from the input of original writing assignments or research data into generative AI systems, raising concerns about the protection of intellectual property. The potential for plagiarism, stemming from the misuse of AI tools, threatens academic writing integrity and the student's professional identity. Finally, algorithmic bias, perpetuated by AI's learning from historical datasets, can impair users' perceptions, skew their

perspectives in their own writing, and negatively impact their decision-making processes. Therefore, fostering AI ethical awareness among PhD candidates is crucial. This imperative extends to faculty members and institutions, necessitating the development of clear AI ethics guidelines and the creation of supportive, AI-driven learning environments. Key ethical considerations that should guide PhD students' use of AI in their writing include: navigating linguistic and cultural nuances, maintaining an original voice and authorship, preventing unintentional plagiarism, and developing critical AI literacy. Consequently, while generative AI offers significant benefits to stakeholders in higher education, proactive ethical considerations and responsible regulatory frameworks are essential to harness its potential effectively while mitigating potential harms and upholding academic integrity.

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