

The Global Research Landscape of AI and Academic Integrity: A Bibliometric Analysis

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Abstract: The growing application of artificial intelligence (AI), especially technologies based on machine learning, has changed how academics write in higher education and raised issues with academic honesty. This study looks at current research trends on the application of AI to thesis writing worldwide and the ways in which scholarly literature addresses academic integrity. A systematic literature review and bibliometric analysis were performed following the PRISMA framework. The Scopus database was used to gather data using with the keywords “machine learning” and “academic integrity.” A total of 52 peer-reviewed journal articles published between 2016 and September 2025 were examined to determine publication trends, key research themes, and the distribution of scholarly contributions across countries and institutions. The results show that since 2022, publications have significantly increased, demonstrating the increasing scholarly focus on ethical concerns in AI-assisted thesis writing. Themes that predominate include plagiarism detection, authorship and originality, ethical AI use, and pedagogical strategies to preserve academic integrity. The study highlights the necessity of institutional regulations and explicit ethical standards to promote ethical and long-term AI integration in higher education.

Keywords: Academic Integrity, Artificial Intelligence, Bibliometric Analysis, Machine Learning, Thesis Writing

A. Introduction

The integration of Artificial Intelligence (AI) in higher education has rapidly expanded, with academic writing emerging as one of its most prominent applications. Recent studies highlight that AI-powered tools, such as generative language models, grammar checkers, and paraphrasing applications, are increasingly employed by students to improve linguistic accuracy, coherence, and critical thinking in their writing processes (Bozkurt, 2024). For English as a Foreign Language (EFL) learners, these tools provide essential scaffolding by mitigating language barriers and enhancing accessibility to academic discourse (Bouzar, Idrissi, and Ghourdou, 2024). Nevertheless, the growing reliance on AI has sparked debates about authorship,

originality, and ethical responsibility, with concerns that excessive dependence may undermine students' academic integrity (Tripathi, 2024). Thus, while AI represents a transformative force in higher education, its pedagogical value must be balanced with critical awareness of its ethical implications.

Limited proficiency in academic English often constrains their ability to construct coherent arguments and maintain appropriate scholarly style (Academy, 2024). Moreover, gaps in academic literacy, including citation practices, critical reading, and research writing conventions, remain significant obstacles in higher education contexts (Wang, 2024). Access to digital resources and technological support is also uneven, with disparities across institutions and regions limiting students' opportunities to fully engage with global academic practices (Eager and Brunton, 2023). These challenges not only affect the quality of students' theses but also shape their attitudes toward adopting supportive technologies such as AI, which they often perceive as both a linguistic aid and a potential ethical dilemma.

While Artificial Intelligence (AI) provides notable advantages in academic writing, including efficiency, linguistic support, and accessibility, scholars have raised concerns regarding its broader academic implications. A major risk lies in the potential for plagiarism and overreliance on AI-generated text, which may undermine originality and critical engagement in students' writing (Ifenthaler et al. 2024). Moreover, the automation of language production raises ethical questions about authorship, accountability, and the authenticity of scholarly contributions ((Kowald et al. n.d.). For EFL learners in particular, the reliance on AI for language accuracy may inadvertently limit opportunities to develop essential writing competencies, thereby creating a dependency that conflicts with educational goals (Eager and Brunton, 2023). These concerns suggest that while AI enhances the writing process, it simultaneously introduces dilemmas that require careful negotiation of ethical standards and pedagogical practices in higher education.

Despite the growing global attention on Artificial Intelligence (AI) in higher education These findings emphasize the necessity of more precise ethical standards, institutional regulations, and useful instructional strategies to promote ethical and sustainable AI use in thesis writing in a variety of higher education settings. (Crompton, 2021), yet little is known about how undergraduate students specifically employ AI in completing their theses. Furthermore, international scholarship has begun to address ethical concerns such as plagiarism, authorship, and academic integrity (Begum, 2024), but these debates often overlook localized perspectives where linguistic, cultural, and institutional challenges significantly shape students' practices. This gap highlights the need for context-specific investigations into undergraduate students perceive and negotiate the benefits and risks of AI use in thesis writing. By addressing this underexplored area, the present study contributes both to national policy discussions and to the broader global discourse on AI and academic integrity in higher

education. Specifically, this study seeks to answer the following two research questions (**RQ1**): *What are the dominant research trends and themes in global studies on AI-assisted thesis writing and academic integrity?* (**RQ2**): *How is research on AI-assisted thesis writing and academic integrity distributed across countries, institutions, publication sources, and authors?* By answering these questions, this study aims to provide a comprehensive and up-to-date literature review on the use AI on writing thesis in education. The results of this study can be useful for researchers, policymakers, and practitioners in the field of education to better understand the current state of research and identify areas for further research and development.

B. Methods

A systematic literature review to evaluate the literature in order to identify important research entities, trends, and patterns within a discipline (MaTahari et al, 2023). By using frameworks like PRISMA, this method guarantees a thorough and repeatable literature review, giving a clear and transparent image of the subject under study (Ahsan Riaz et al., 2023). These were the established inclusion criteria: (1) articles published up until September 30, 2025, (2) publications in English, and (3) using AI on writing thesis and how negotiating academic integrity.

Comprehension of the evolution, continuity, and future course of the topic of study, which makes it very helpful for obtaining deeper insights in multidisciplinary (Martínez et al., 2024). The first step in this research process is keyword selection, which can be done using a macro approach (top-down), moving from broad search paths to more focused studies and subjects. Therefore, after considering the shortcomings of previous research and the dearth of studies addressing on using AI in writing thesis: negotiating the academic integrity. This research includes the key words “machine learning and academic integrity” these terms as a central theme in the article's title, abstract, and keyword sections. Additionally, researchers use the Scopus database for a wide range of investigative tasks, such as conducting literature reviews, locating subject-matter experts, and keeping an eye on research trends.

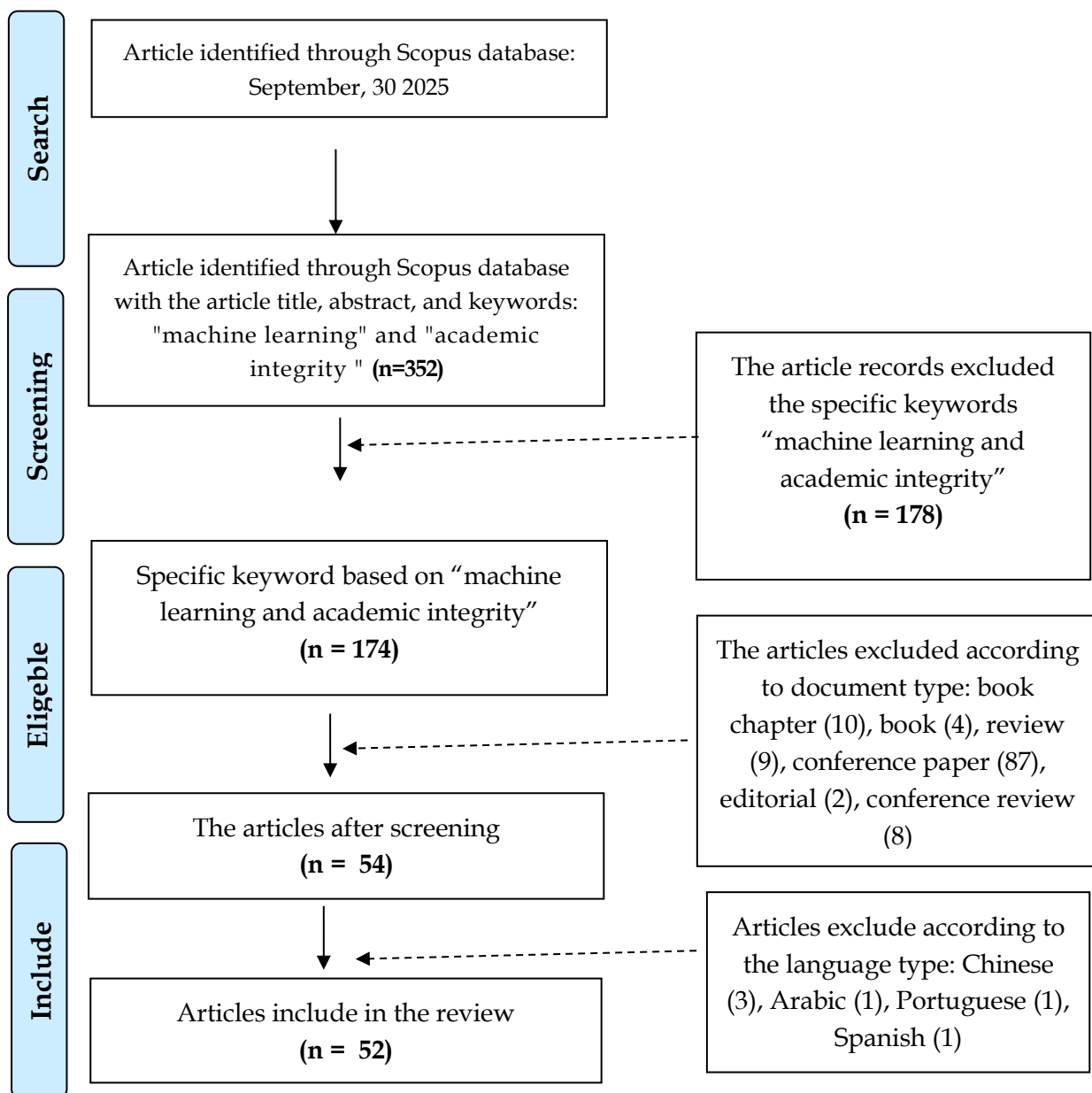


Figure 1. Systematic Literature Review information flow using PRISMA

Based on the results of the search that were obtained on September 30, 2025, from the scopus database utilizing the article title, abstract, and keywords: "machine learning and academic integrity" across a variety of academic fields, starting with the first publication in 2017 to the most recent in 2025, the total number of articles about machine learning and academic integrity is 352 documents (refer to Figure 1). Following these findings, a screening process filters documents according to their classification. Articles are removed according to the type of document.: book chapter (10), book (4), review (9), conference paper (87), editorial (2), conference review (8),

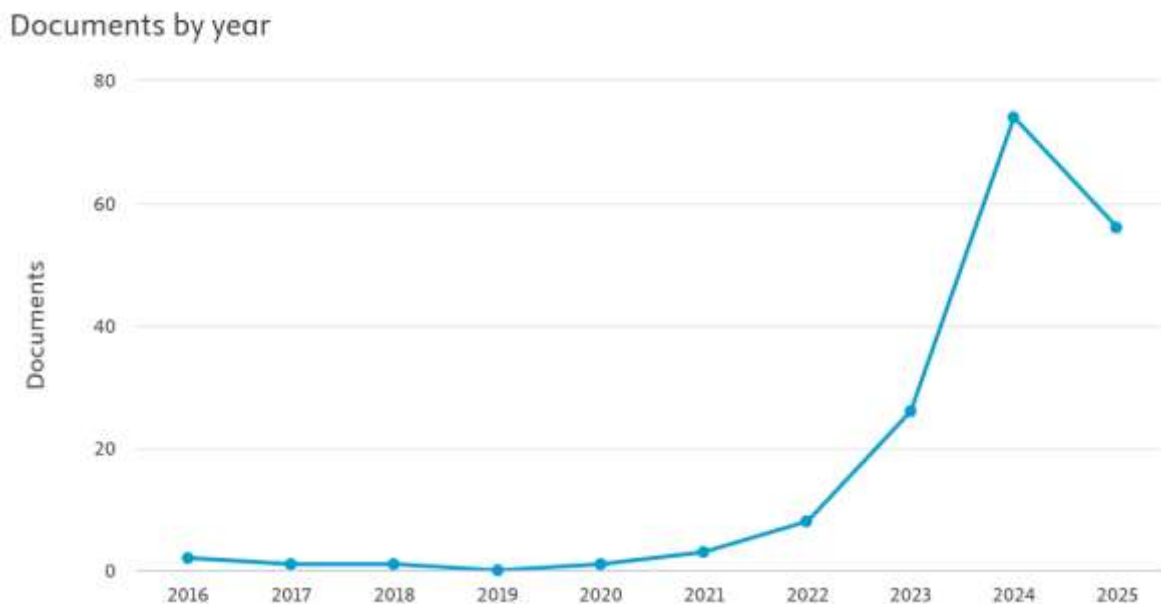
and non-English (6), culminating in a total of 126 documents. The screening results, categorized by document types, yielded 52 articles. This document is then further analyzed in two research questions (**RQ1**): *What are the dominant research trends and themes in global studies on AI-assisted thesis writing and academic integrity.*, (**RQ2**): *How is research on AI-assisted thesis writing and academic integrity distributed across countries, institutions, publication sources, and authors?*

C. Results and Discussion

The findings from 52 papers in the scopus database about the use of AI in thesis writing and academic integrity negotiation are the main subject of this study. This information is derived from journal sources, publications throughout years, and the quantity of articles published. This study will also emphasize the factors such as the authors, affiliations, and participating countries that have the greatest impact on the use of AI in theses and academic integrity negotiations.

RQ1: *What are the dominant research trends and themes in global studies on AI-assisted thesis writing and academic integrity?*

According to the data retrieved from the Scopus database, scholarly work about the use of AI in thesis writing and academic integrity negotiation comprises 52 articles, as illustrated in Figure 1. its progressive development during the last decade, specifically from 2022. The inaugural study was executed by Alexander et al. (2016) and his study was about *Machine Learning Aided Framework for Academic Integrity*, which signified the advent of the term now recognized artificial intelligence (AI). At present, the evolution of research on artificial intelligence has begun to captivate a substantial number of scholars, concentrating on the enhancement pedagogical intervention for ethical AI use, Academic dishonesty and trustworthy, instructional approach on AI in higher education, and understanding impact on academic writing (Sağın et al. 2022) & (Osadchyi and Osadcha 2022) & (Masrom et al. 2023); (Alsabhan 2023); (Gómez et al. 2024); (Batista, Mesquita, and Carnaz 2024). Furthermore, Artificial intelligence contributes significantly to the future education technology (Nikolic et al. 2025); (Kohnke, Zou, and Su 2025); (Kostikova et al. 2023).



Source: Scopus database

Figure 2. Number of Academic Integrity

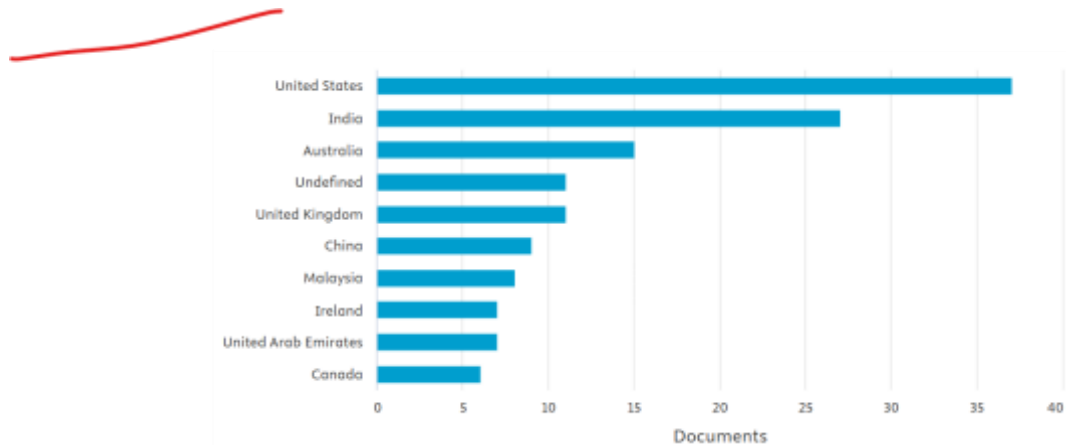
Since 2016, there has been limited literature on the use on AI particularly in higher education due to the lack of research published in reputable journals, creating an opportunity for future researchers to fill this gap. This research is significant for advancing insights into maximizing the risk and minimize the benefit the use in education environment. This may facilitate a more profound comprehension of using AI in practical and sustainable application in diverse sectors.

RQ2: *How are current research efforts distributed regarding the use of AI in thesis writing and the negotiation of academic integrity?*

The analysis of the distribution of the use AI on writing theses and what the infect of academic integrity research in the 138 articles was executed by categorizing the articles according to classifications such as nation, region, affiliation, source, and author, with a constraint of solely the top 10 articles in each classification. Argument regarding the allocation of scholarship pertinent to the writing on AI & academic integrity will be advantageous for scholars and practitioners in elucidating the forthcoming research agenda, particularly in the sustainable advancement of the use on AI in education environment paradigm.

First, the allocation of scholarly inquiry pertinent to the use AI on writing thesis & negotiation academic integrity categorized by nation or geographical area is dominated by United States with 37 articles, India with 27 articles, the Australia with 15 articles, Undefined with 11 articles, United Kingdom with 11 articles, China with 9 articles, Malaysia with 8 articles, and Ireland with 7 articles, United Arab Emirates 7

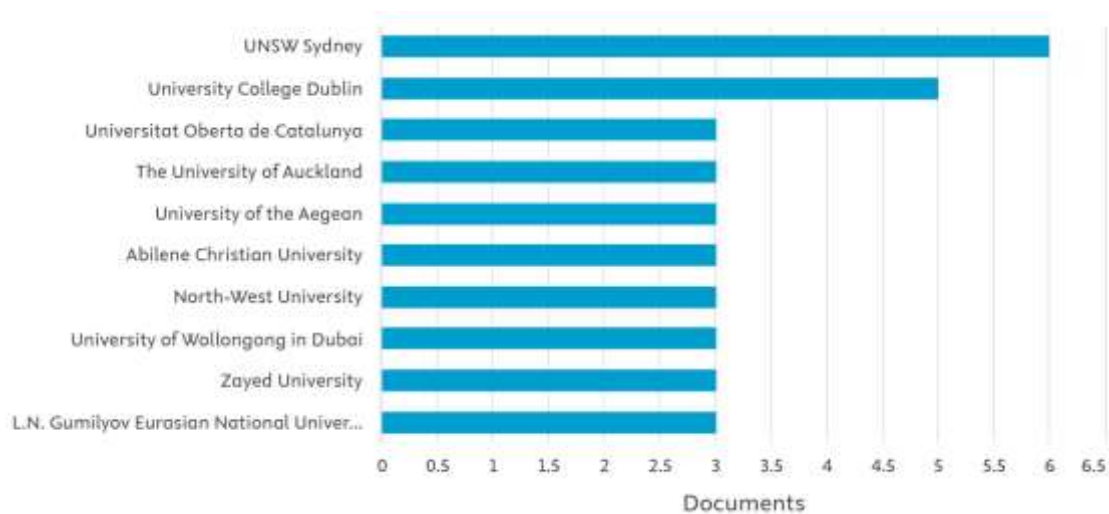
articles, Canada with 6 articles (see Figure 3).



Source: Scopus database

Figure 3. Number of articles by country or territory (top 10 countries)

Second, the allocation of scholarship pertinent to the use AI on writing thesis & negotiation academic integrity predicated on institutional affiliations is predominantly characterized by UNSW Sydney (Australia) with 6 articles, University College Dublin (Ireland) with 5 articles, Universitat Oberta de Catalunya (Barcelona) with 3 articles, The University of Auckland (New Zealand) with 3 articles, University of the Aegean (Yunani/Greece) with 3 articles, Abilene Christian University (USA) with 3 articles, North-West University (South Africa) with 3 articles, University of Wollongong in Dubai (Australia) with 3 articles, Zayed University (United Arab Emirates) with 3 articles, and L.N. Gumilyov Eurasian National University (Kazakhstan) with 3 articles (see Figure 4).



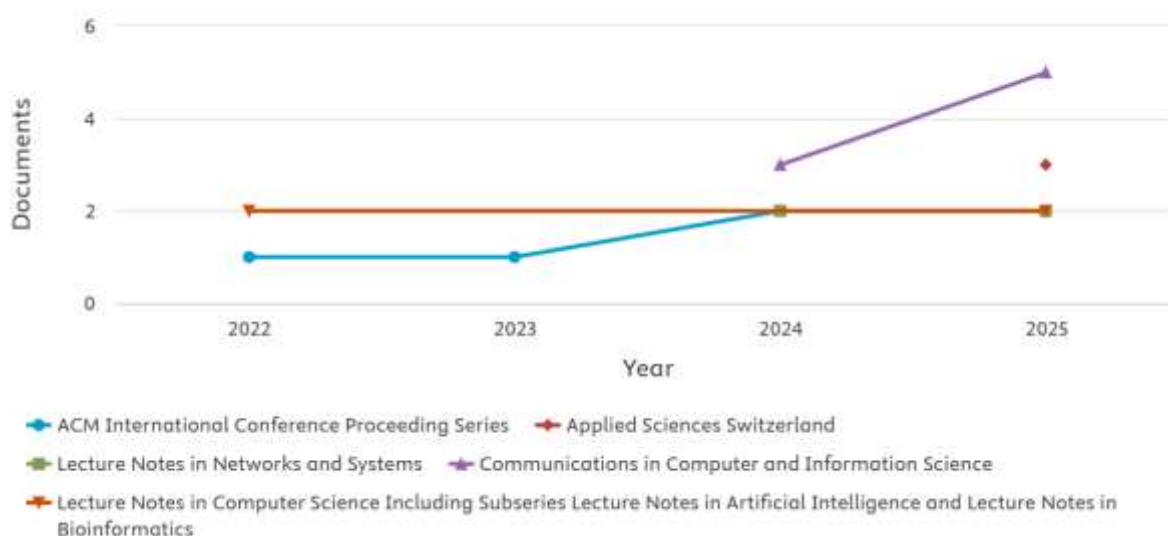
Source: Scopus database

Figure 4. Network country visualization

The dissemination of the use AI on writing thesis & negotiation academic integrity in

the premier 10 publications predicated on affiliations elucidates that it is solely of scholarly interest in academic institutions situated in nations.

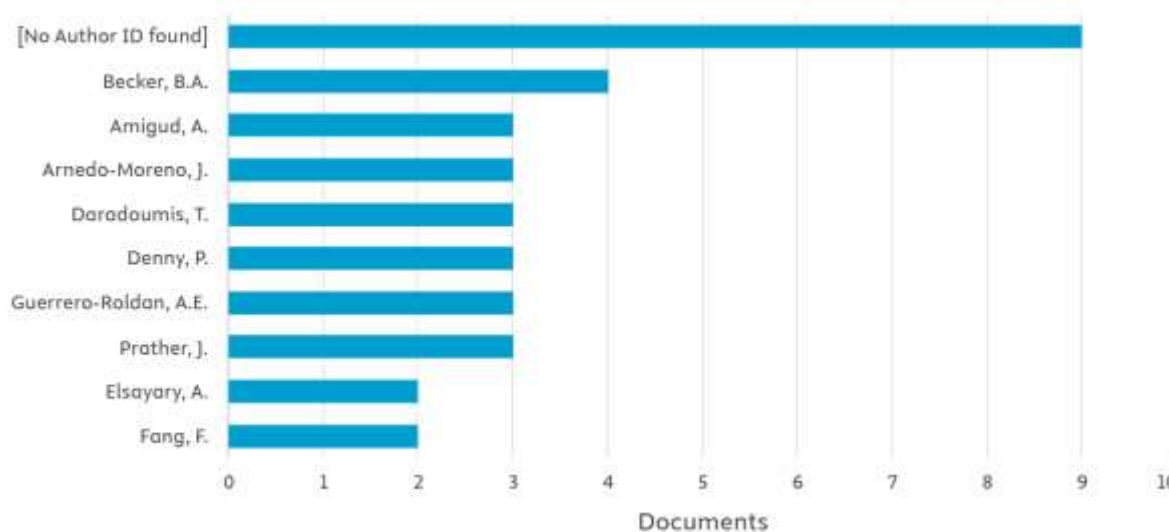
Third, the allocation of inquiries about the use AI on writing thesis & negotiation academic integrity based on the source is predominant characterized by Communication in Computer and Information Science with 8 articles, ACM International Conference Proceeding Series with 4 articles, Lecture Notes in Computer Science including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics with 4 articles, Lecture Notes in Networks and Systems with 4 articles, Islamic Quarterly with 2 articles, Revista de Gestão Social e Ambiental with 2 articles, Applied Science Switzerland with 3 articles, Ceur Workshop Proceedings with 3 article, Proceedings Frontiers in Education Conference Fie with 3 articles, and ASEE Annual Conference Expositisn Conference Proceedings with 2 article and Computers and Education Artificial Intelligence with 2 articles. (see Figure 5).



Source: Scopus database

Figure 5. Number of articles by sources (top 10 sources)

Fourth, the distribution of research related to the use AI on writing thesis & negotiation academic integrity based on authors reveals no clear dominance. Among the top 10 authors, one of them was No Author ID Found; Becker, B.A.; Amigud, A.; Arnedo-Moreno, J.; Daradoumis, T.; Denny, P.; Guerrero-Roldan, A.E.; Prather, J.; Elsayary, A.; Fang, F.) the maximum number of articles that have been written around by no author ID found 9 articles and at the rest around 4, 3, and 2 number has been written, (see Figure 6).



Source: Scopus database

Figure 6. Count of Publication by Authors (top 10 authors)

D. Conclusions

The increasing incorporation of Artificial Intelligence (AI) into undergraduate thesis writing represents a pivotal moment in the evolution of academic literacy within Indonesian EFL higher education. This study underscores the dual nature of AI as both an empowering pedagogical resource and a potential threat to academic integrity. On one hand, AI technologies facilitate linguistic precision, enhance rhetorical organization, and support students' cognitive engagement in the writing process. On the other hand, their unregulated use risks undermining originality, critical reasoning, and the authenticity of authorship core values that define scholarly integrity.

The findings emphasize the necessity for a balanced, pedagogically grounded framework that situates AI as an instrument of intellectual augmentation rather than substitution. Institutions must articulate transparent guidelines, integrate AI ethics into academic writing curricula, and foster critical digital literacy to prepare students for the realities of AI-mediated scholarship. Equally, supervisors and educators should adopt a formative mentoring approach that encourages reflective engagement with AI tools, ensuring that technological affordances complement rather than compromise academic honesty.

In conclusion, negotiating the intersection of AI use and academic integrity requires an ongoing, context sensitive dialogue between technological innovation and ethical accountability. By embedding principles of responsible AI use within institutional and pedagogical practices, education can transform AI from a contested challenge into a catalyst for sustainable academic development and integrity centered scholarship.

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