Artificial Intelligence for Academic Writing: A Bibliometric Analysis (2022–2026)

Siti Hajar Abd Hamid[1,2*], Norah Md Noor[1], Noor Dayana Abd Halim[1]
[1]Fakulti Sains Pendidikan dan Teknologi, Universiti Teknologi Malaysia,
[2]Kementerian Pendidikan Malaysia
**Corresponding author: Siti Hajar Abd Hamid (siti83@graduate.utm.my)*

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ABSTRACT

Academic writing practices in education have changed significantly since the advent of artificial intelligence. AI technologies provide new possibilities for fostering student learning, feedback mechanisms, and student engagement. However, studies of AI supported academic writing are still scattered in the education literature and have yet to be synthesized. Within this context, the present study adopts a bibliometric approach to explore research trends, thematic developments and the evolving knowledge structure of AI for academic writing. English-language journal articles published between 2022 and 2026 were identified through an initial Scopus search, after which 397 articles were retained for analysis. Scopus Analyser was used to identify publication trends and descriptive statistics, OpenRefine to clean and standardise bibliographic data and VOSviewer to visualise author collaboration networks, international research collaborations and keyword co-occurrence patterns. The results show a significant growth in publishing capacity after 2022 in line with the rapid development of generative AI technologies. Publication output and international collaborations are concentrated in China and the United States. Keyword co-occurrence analysis shows that the core thematic clusters include academic writing, formative feedback, metacognitive support, argumentation development and academic integrity. Although research on AI-supported academic writing has grown rapidly, attention to discipline-specific writing contexts is still relatively limited. Overall, the results suggest that AI can be leveraged to enhance academic writing pedagogy through technology integration, streamlined feedback mechanisms and greater student participation. Effective implementation still relies on informed direct instruction, ethics around AI use and the creation of AI toolkits to meet academic writing goals. This paper provides a systematic overview of previous research and evidence-based considerations relevant to future AI supported academic writing research.

Keywords
Artificial intelligence; Academic writing; Bibliometric analysis; Generative AI

Introduction

Artificial Intelligence (AI) represents a transformative paradigm in teaching and learning that has fundamentally changed the landscape of teaching and academic writing practices in educational settings. In particular, the addition of generative language models (e.g., ChatGPT, Grammarly, QuillBot) to support students with academic writing has grown. This help includes all aspects of writing, from idea generation and organization to language usage and style. (Goyibova et al., 2025; Mahapatra, 2024). These AI powered tools provide real-time feedback in the form of hints and step by step guidance while a user writes, thereby lowering cognitive burden and supporting users with its complex academic writing tasks. (Khampusaen, 2024; Mondal & Mondal, 2023). The advancement of AI models in writing industry builds on the recent theoretical progress made in cognitive (and metacognitive) science and linguistics, advancements that make language more accurate and thoughts better organized; and that foster critical thinking, scientific communication. (Kim et al., 2025; Nguyen et al., 2024). Apart from the natural educational challenges, growing use of AI in academic writing has led to concerns about violations of academic integrity, ethical issues (and the validity of student work) and calls for an ethical and responsible integration into education (Jarrah et al., 2023; Lendvai, 2025).

Although research on AI-powered academic writing has grown exponentially since 2022, there is little consensus across disciplines and technology platforms in understanding the intellectual structure and evolution of this emerging field. Most studies focus on individual AI tools or teaching settings, leading to fragmented views of the status and trends of overall publishing (Mangubat & Saeedi, 2026; Zapata et al., 2025).Existing bibliometric studies have given us a solid picture of publication growth in specific niches, but no comprehensive studies of the critical years 2022–2026 are available. This is because AI tools such as ChatGPT (and similar large language models) achieved mass adoption in those years. This lack is particularly notable because it is during this time that we see a revolutionary shift in the range of AI capabilities for academic writing with annual growth rates approaching 28% and fundamental changes in both research areas and practical applications (Goyibova et al., 2025). Therefore, a systematic bibliometric review of this critical period is necessary in a rapidly changing field to generate insights into intellectual structure, emerging trends and international collaborations.

This gap is addressed in current research through a systematic bibliometric analysis of citation practices covering scholarly works on AI for academic writing targeting education, based on materials indexed in Scopus for 2022-2026. As a structured and evidence-based method for mapping the intellectual landscape of a research field, bibliometric analysis helps answer questions about publication growth, citation impact, collaborative networks and thematic trends (Donthu et al., 2021). We conduct empirical studies of publication trends, citation impact, keyword co-occurrence patterns and international collaborative networks and proceed with a general analysis of the dynamics and structures in the research field. By integrating data from multiple bibliometric metrics, this study aims to identify key articles, dominant and emerging research themes, international collaboration structures and evidence-based strategies for future research and pedagogical practices in teaching AI-based academic writing. These findings address current research gaps and offer an evidence-based foundation for future studies on the integration of AI into academic writing.

Accordingly, this study is guided by the following research questions:

1. What are the temporal publication trends and growth patterns of research on AI for academic writing from 2022 to 2026?
2. Which publications constitute the most influential works in this research area based on citation impact and what thematic focuses do these highly cited studies reflect?
3. Which countries are the leading contributors to research on AI for academic writing in terms of publication output?
4. What are the dominant and emerging research themes in this field as revealed through keyword co-occurrence analysis?
5. How are international research collaborations structured, and what co-authorship patterns among countries characterise the global research network in this domain?

Literature Review

Artificial intelligence (AI) has dramatically transformed the landscape of academic writing since the emergence of large language models (LLMs) such as ChatGPT in late 2022, creating a new paradigm in the scientific writing and research process. Mangubat and Saeedi (2026) define AI for academic writing as the application of machine learning technologies and natural language processing to assist researchers and students in various aspects of scholarly writing, including idea generation, content structuring, grammar correction, and writing style refinement. A study by Zapata et al. (2025) shows that research on generative AI in scientific writing has grown rapidly as evidenced by the exponential growth of publications in the period 2014 to 2024. A study by Goyibova et al. (2025) reports that generative AI tools such as ChatGPT, Grammarly and QuillBot have evolved from grammar correction functions to collaborative partners in academic writing, capable of supporting the process of generating, analysing and refining scientific content in stages.

The integration of AI technology in academic writing has increased the productivity and quality of scholarly writing while also expanding accessibility for students and researchers who face language and writing structure constraints. Mahapatra (2024) found through a mixed-methods study that incorporating ChatGPT as formative feedback resulted in significant improvement in the academic writing skills of ESL students. Hence echoing the role AI has to play in supporting linguistic equity in academic writing. In the same way, Khampusaen (2024) found that using AI writing is

supportive of writing for 16 weeks will enhance student EFL writers in elaborating more structured, evidence based and synthesized argumentative writing. Mondal and Mondal (2023) demonstrated that AI reduces the inequality of individuals in accessing quality academic writing support for students. It brings possibilities of allowing students without traditional support system or language issues to produce academic writing at an international level. Furthermore, AI raises the level of writing output by automating repetitive work (formatting the document, correcting grammatical issues and generating first drafts). This then motivates students to question and reflect more deeply. However, despite these benefits, the use of AI for academic writing also raises ethical, epistemological, and pedagogical concerns that need to be taken seriously by the global academic community. Lendvai (2025) highlights challenges related to intellectual originality, particularly the production of fabricated research materials such as fake data and non-existent literature references. These issues raise fundamental questions about the definition of academic authorship and challenge traditional understandings of human creativity in the age of AI.

Qualitative research by Malik et al. (2024) similarly reveals substantial concern regarding increased plagiarism, the erosion of original writing skills, and the potential misuse of AI, all of which may undermine confidence in academic integrity. The study further argues that non-routine academic tasks requiring creativity and problem-solving remain domains where human intellectual capabilities are essential and cannot be fully replaced by AI. Khan et al. (2024) additionally note that significant knowledge and literacy are required to use AI tools appropriately in academic writing contexts. ChatGPT also underscores the necessity for transparent quality guidelines, ethical standards and institutional policies to support the responsible integration of AI in scientific publishing. From 2022 to 2025, research on AI in academic writing has grown rapidly, accompanied by increasing complexity which makes bibliometric analysis increasingly relevant for identifying emerging research trends and dominant themes in this evolving field. Previous bibliometric studies such as those by Mangubat and Saeedi (2026) and Zapata et al. (2025) have provided an initial overview of publication growth and patterns of international collaboration. However, a more detailed and up-to-date analysis covering the critical period of 2022–2026 is still required, as this timeframe marks the widespread adoption of ChatGPT and related large language models (LLMs) in educational and academic writing contexts. As highlighted by Goyibova et al. (2025), bibliometric studies can not only identify the most productive authors, institutions, and countries, but also reveal research gaps, dominant methodological approaches, and emerging directions for future research. Accordingly, this study provides a systematic and comprehensive mapping of the literature on AI in academic writing from 2022 to 2026 by examining publication trends, citation networks, main research themes and emerging ethical concerns. The findings aim to offer evidence-based insights to support future research, institutional policymaking and the ethical and effective integration of AI into academic writing practices in higher education.

Methodology

Bibliometric analysis consists of the systematic organization and quantitative analysis of bibliographic information taken from scientific publications, which allows the identification of publication patterns, influential contributors, and thematic structures within a research domain (Zupic and Čater). A comprehensive literature review process requires careful and iterative selection of key terms, systematic literature searches, and thorough examination of identified records to ensure that a complete and reliable reference base is built (Fahimnia et al., 2015). In line with this methodological approach, special focus is placed on peer-reviewed journal publications, including high-impact studies, as they offer valuable contributions to the theoretical foundations of the research field. To maximize data quality and reliability, the Elsevier Scopus database was used as our primary data source (Al-Khoury et al., 2022; Di Stefano et al., 2010; Khiste & Paithankar, 2017). As a result, journal articles indexed in Scopus can be collected from 2022 to January 2026 and analysed using bibliometric techniques.

Data Search Strategy

This bibliometric review analysed publications related to artificial intelligence for academic writing. The literature search was conducted using the Scopus database, covering publications published between 2022 and 2026. A total of 397 journal articles meeting the inclusion criteria were identified and analysed. Table 1 presents the search string used in the Scopus database, while Table 2 summarises the inclusion and exclusion criteria applied in this study.

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Table 1
The Search String

SCOPUS	TITLE-ABS-KEY (("ai" OR "artificial intelligence") AND ("ACADEMIC WRITING")) AND (LIMIT-TO (PUBYEAR , 2022) OR LIMIT-TO (PUBYEAR , 2023) OR LIMIT-TO (PUBYEAR , 2024) OR LIMIT-TO (PUBYEAR , 2025) OR LIMIT-TO (PUBYEAR , 2026)) AND (LIMIT-TO (SUBJAREA , "SOCI")) AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English"))

Table 2
Selection Criteria

Criterion	Inclusion	Exclusion
Language	English	Non-English
Subject	Social Science	Others
Document Type	Article	Conference paper, Review, Book chapter, Editorial, Note, Letter, Erratum
Timeline	2022-2026	<2022

Data Analysis

VOSviewer, a user-friendly and widely used mapping software for bibliometric analysis was developed by Nees Jan van Eck and Ludo Waltman at Leiden University in the Netherlands (van Eck & Waltman, 2010, 2017). The software is specifically designed for the analysis and visualization of scientific literature, enabling researchers to generate network visualizations, identify clusters of related items and create density maps. VOSviewer supports the examination of various bibliometric relationships, including co-authorship, co-citation and keyword co-occurrence networks, thereby facilitating a comprehensive understanding of research structures and trends. Its intuitive interface and continuous development make it accessible for analysing large bibliometric datasets. A key strength of VOSviewer lies in its ability to transform complex bibliometric data into meaningful visual representations, particularly for identifying thematic clusters and patterns of keyword co-occurrence through network-based visualisation techniques.

In the present study, bibliometric records were retrieved from the Scopus database in PlainText format, including publication year, article titles, authors' information, journal sources, citation counts and keywords, covering publications from 2022 to January 2026. These data were analysed using VOSviewer software (version 1.6.19) to examine publication trends, international collaboration networks, and keyword co-occurrence patterns in AI for academic writing research. Using VOS-based clustering and mapping techniques, bibliometric maps were constructed and analysed to visualise structural relationships within the dataset. Unlike Multidimensional Scaling (MDS), which positions items based on overall distance representation, VOSviewer organises items such that the distance between any two items reflects the strength of their relationship (van Eck & Waltman, 2010). While conceptually related to MDS (Appio et al., 2014), the VOS method differs in its methodological foundation by applying a normalisation approach tailored to co-occurrence data. Specifically, association strength (AS_{ij}) is used, calculated as:

$$AS_{ij} = \frac{C_{ij}}{w_i w_j}$$

where C_{ij} represents the observed frequency of co-occurrence between items *i* and *j*, and w_i and w_j denote the total occurrences of items *i* and *j*, respectively. This measure reflects the ratio between observed and expected co-occurrences under the assumption of statistical independence (van Eck & Waltman, 2007).

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Results

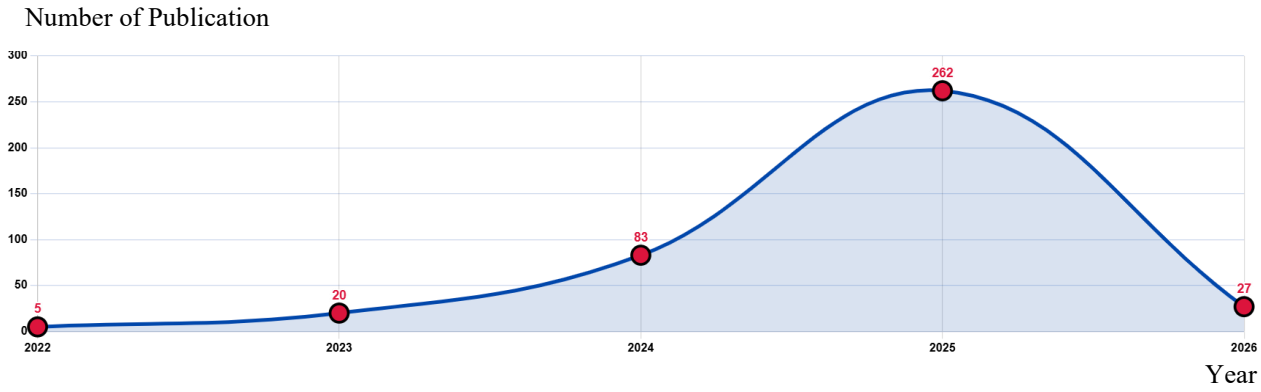
The data collected in this study were systematically analysed and interpreted to address five research questions.

The Temporal Publication Trends and Growth Patterns

The pattern of publication of research related to artificial intelligence in academic writing for the period 2022 to 2026 shows rapid but uneven growth. At the initial stage, publication output was quite low with only 5 publications (2022) then increased to 20 publications (2023). This increase reflects the early phase of academic exploration following the initial use of generative AI tools in educational contexts. A more significant increase appeared in 2024 where the number of publications increased sharply to 83. This shows that interest in this field is growing with AI-supported writing practices in education. The most significant growth occurred in 2025 with the highest output of 262 publications. This sharp increase corresponds to the widespread integration of generative AI technologies and large language models, especially ChatGPT, into the teaching, learning, and research of academic writing. This surge indicates a shift in the focus of AI research as a technical aid to its role in supporting feedback provision, revision processes, metacognitive scaffolding and student engagement in academic writing. The number of publications for 2026 appears lower (27 publications), due to incomplete indexing for the latest year rather than a real reduction in research activity. Overall, this trend shows that research on AI for academic writing has grown rapidly and is emerging as an important and increasingly established domain in educational technology research. Figure 1 shows the temporal publication trend for this period.

Figure 1

Temporal Publication Trends of Research on AI for Academic Writing (2022-2026).



Publications Constitute the Most Influential Works in This Research Area

The top 10 most cited articles indicate that the emerging knowledge base on generative AI in academic writing is primarily grounded in empirical investigations examining pedagogical implications, user perceptions, and feedback-related processes. Highly cited studies such as Malik et al. (2023), Nguyen et al. (2024) and Mahapatra (2024) explore how generative AI tools, particularly ChatGPT, influence writing processes, learner engagement and perceptions of writing support in higher education and language-learning contexts. Their high citation counts suggest strong scholarly interest in understanding how generative AI functions as a support mechanism for idea generation, organisation, and revision in academic writing. Furthermore, several influential studies foreground student and teacher perspectives (Utami et al., 2023; Johnston et al., 2024), highlighting acceptance, trust and perceived usefulness as recurring themes shaping the adoption and impact of generative AI in academic writing practices. Table 3 shows the most cited publications shaping the adoption and impact of generative AI in academic writing.

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Table 3
Most Cited Publications on AI for Academic Writing

No.	Authors	Title	Source title	Cited by
1	Malik et al. (2023)	Exploring Artificial Intelligence in Academic Essay: Higher Education Student's Perspective	International Journal of Educational Research Open	252
2	Nguyen et al. (2024)	Human-AI collaboration patterns in AI-assisted academic writing	Studies in Higher Education	191
3	Mahapatra (2024)	Impact of ChatGPT on ESL students' academic writing skills: A mixed methods intervention study	Smart Learning Environments	188
4	Kim et al. (2025)	Exploring students' perspectives on Generative AI-assisted academic writing	Education and Information Technologies	173
5	Johnston et al. (2024)	Student perspectives on the use of generative artificial intelligence technologies in higher education	International Journal for Educational Integrity	169
6	Khlaif, et al. (2023)	The Potential and Concerns of Using AI in Scientific Research: ChatGPT Performance Evaluation	JMIR Medical Education	136
7	Utami et al. (2023)	Utilization of artificial intelligence technology in an academic writing class: How do Indonesian students perceive?	Contemporary Educational Technology	91
8	Bašić et al. (2023)	ChatGPT-3.5 as writing assistance in students' essays	Humanities and Social Sciences Communications	86
9	Alexander et al. (2023)	Who Wrote This Essay? Detecting AI-Generated Writing in Second Language Education in Higher Education	Teaching English with Technology	86
10	Ou et al. (2024)	Academic communication with AI-powered language tools in higher education: From a post-humanist perspective	System	78

A prominent thematic trend among the most cited publications concerns generative AI and human AI collaboration, alongside ethical and integrity-related considerations in academic writing. Studies by Nguyen et al. (2024), Kim et al. (2025), Khlaif et al. (2023), Bašić et al. (2023), Alexander et al. (2023) and Ou et al. (2024) explore how generative AI mediates writing activities, affects cognitive engagement, and raises concerns related to plagiarism, authorship and responsible use of AI generated content. These citation patterns reflect a rapid shift in the literature from initial exploration of AI assisted writing toward a more critical examination of generative AI as a collaborative and ethically situated component of academic writing. From a bibliometric perspective, the most influential studies collectively map the dominant trends shaping contemporary research on generative AI in academic writing between 2022 and 2026 with a strong emphasis on higher education contexts.

Countries as Leading Contributors to Research on AI for Academic Writing

Based on the distribution of publications by country it is evident that a few leading contributors account for high ratio of research output, with China (60 publications) and the United States (40 publications) taking the lead, followed by the United Kingdom (24 publications). This trend represents significant national investment in AI research and educational advancements supported by strong research facilities and access to cutting-edge AI technologies. The significant contribution by Hong Kong (26 publications) further reinforces its presence as the regional knowledge hub,

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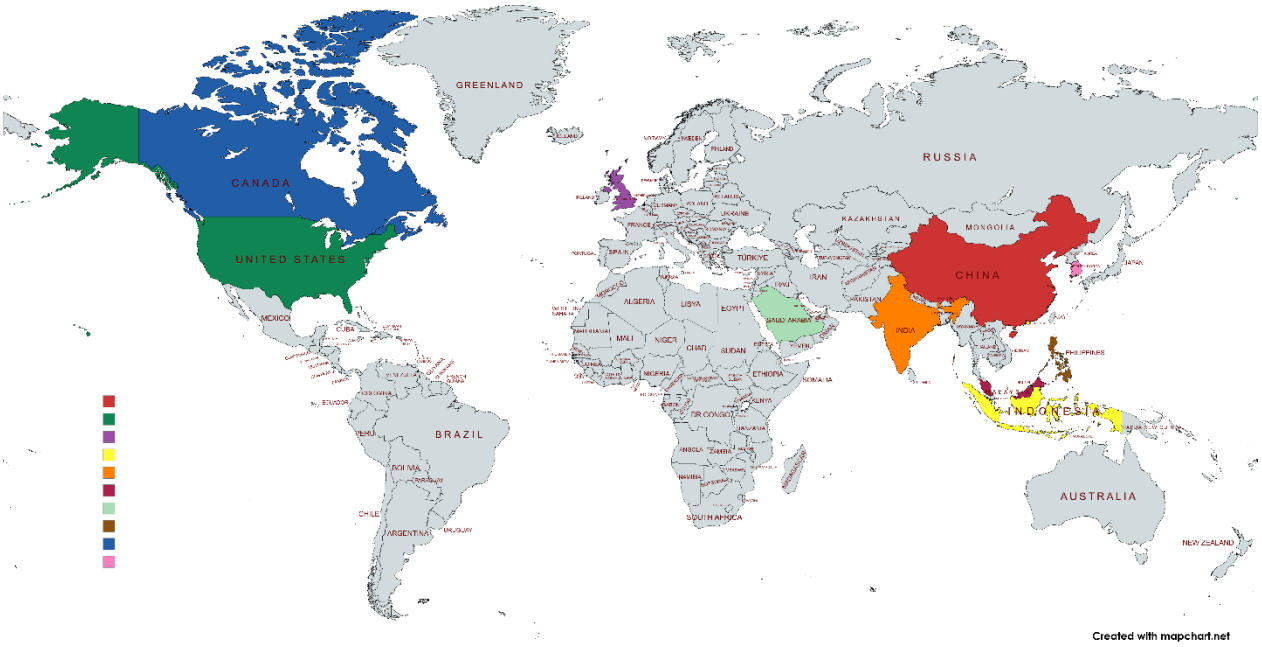
particularly on education and application of AI. This concentration indicates that efforts in AI for writing research in education are led by regions with extensive higher education systems and proven participation in interdisciplinary educational technology research as shown in Figure 2.

Figure 2

Country-Wise Publication Output on AI for Academic Writing (2022–2026)



Meanwhile the notable involvement of Indonesia (26 publications), India (22 publications), Malaysia (22 publications), Saudi Arabia (21 publications), the Philippines (18 publications) and Canada (14 publications) also show that there is increasing geographical coverage on this research arena. These countries are increasingly contributing to research on generative AI to support academic writing and learning often within multilingual and diverse educational contexts. The representation of both developed and developing nations among the top contributors suggests that research on generative AI in academic writing addresses global educational interests rather than being regionally confined. Overall, the country level publication pattern reflects the international relevance of the research topic and highlights the potential for increased cross-national collaboration and broader global participation in future studies on generative AI assisted academic writing.

The Dominant and Emerging Research Themes

The keyword co-occurrence analysis reveals that research on generative AI in academic writing is strongly centred on core concepts such as academic writing, artificial intelligence, ChatGPT, generative AI, higher education, students, learning and feedback. The high frequency and strong interconnections among these keywords indicate that the dominant focus of the field lies in the application of generative AI tools to support academic writing processes, particularly within higher education contexts. In addition, the prominence of keywords related to academic integrity, plagiarism, ethics, assessment, and technology acceptance reflects increasing scholarly attention to the responsible use and evaluation of generative AI in academic writing. This pattern suggests that alongside pedagogical considerations, ethical and evaluative dimensions constitute a central and well-established research focus in the field. Figure 3 presents the keyword co-occurrence network underlying research on AI for academic writing.

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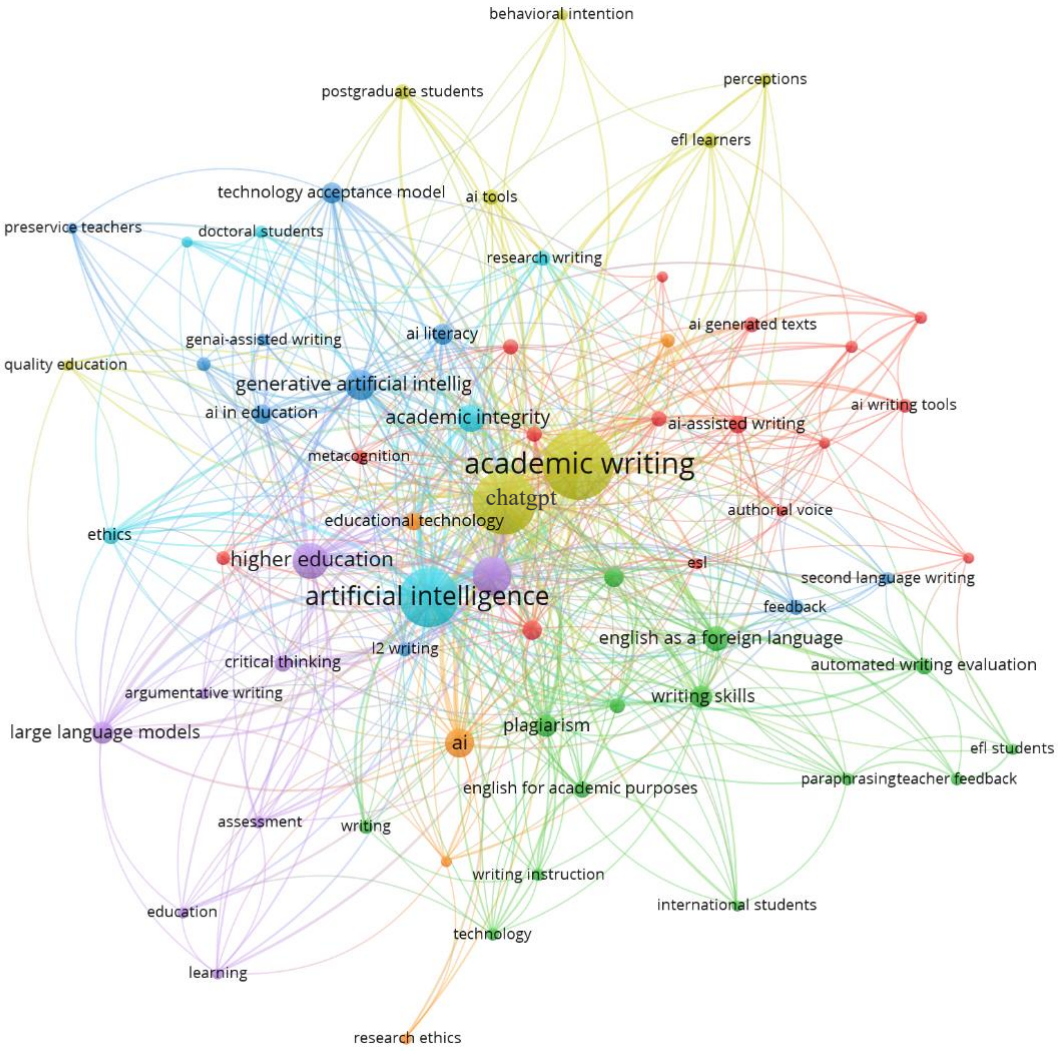
Figure 3
Keyword Co-Occurrence Network of AI for Academic Writing Research



Beyond these dominant themes, the analysis also highlights emerging research directions that emphasise learning-related and cognitive dimensions of academic writing. Keywords such as critical thinking, metacognition, self-regulated learning, writing skills, writing performance, and authorial voice indicate growing interest in how generative AI can support deeper engagement with writing processes and learner development. In parallel, the presence of terms related to English as a foreign language, EFL learners, second language writing and international students suggests continued attention to diverse learner populations and multilingual academic writing contexts. Taken together, the keyword co-occurrence patterns clarify the conceptual structure of the field, highlight its interdisciplinary connections across educational technology, linguistics, and learning sciences, and reveal evolving research priorities shaping current trends in generative AI assisted academic writing.

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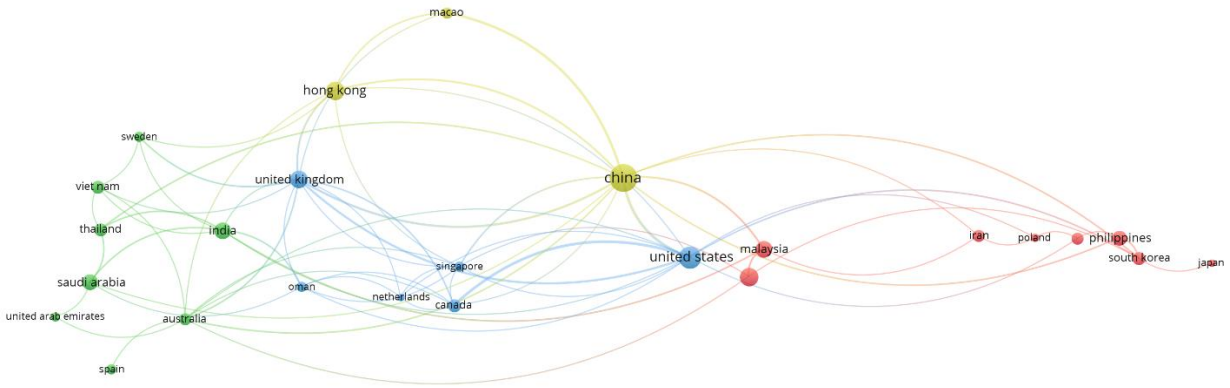
Structure of International Research Collaborations and Country-Level Co-Authorship Patterns

The country co-authorship network demonstrates a centred yet internationally connected collaboration pattern in research on generative AI in academic writing. China emerges as a key core node in the network, exhibiting the highest total link strength, which indicates extensive and sustained international collaboration. The United States also plays a prominent role, forming a large collaboration network with strong links to multiple countries, followed closely by the United Kingdom, which shows both high publication output and substantial collaborative connections. Figure 4 shows the network visualization of international co-authorship patterns in AI for academic writing research.

Figure 4

Network visualization of international co-authorship patterns in in AI for academic writing research



Together, these countries constitute the central hubs that structure global research collaboration in this field. Several other countries, including Hong Kong, Canada, India, Malaysia and Saudi Arabia, contribute to the network by maintaining moderate to strong collaborative ties, often acting as connectors between major research hubs and regional partners. The notable participation of emerging and developing countries such as Indonesia, the Philippines, and South Korea further reflects the expanding global engagement with research on generative AI–assisted academic writing. Overall, the co-authorship patterns indicate that while international collaboration is increasingly widespread, it remains concentrated around a relatively small group of core countries. These countries play a critical role in linking different regional research communities and facilitating the global dissemination of knowledge on generative AI in academic writing.

Discussion

This bibliometric analysis shows that research on using AI to help with academic writing has developed quickly from 2022 to 2026, and even faster after 2023. This pattern of growth is consistent with earlier studies that found that research interest in this field grew after major language models like ChatGPT became widely used in schools and colleges (Zapata et al., 2025; Mangubat & Saeedi, 2026). The moderate number of papers in 2022 and 2023 indicates that academics are still in the early stages of looking into how generative AI tools might help with writing. The speed-up that started in 2024 shows that empirical research is becoming more systematic. This is in line with Goyibova et al.'s (2025) findings that AI tools have changed from simple grammar checkers to collaborative partners that help with idea generation, feedback, and revision. The fact that there are so many highly cited empirical studies that focus on student perceptions, pedagogical implications, and feedback mechanisms suggests that the field has put a lot of emphasis on figuring out how generative AI is changing the way people write in school, especially in higher education and language learning (Mahapatra, 2024; Khampusaen, 2024).

Along with the rise in publications, the theme patterns and collaborations found in this study show that more and more scholars are interested in the moral, cognitive, and teaching aspects of AI-assisted academic writing. The fact that

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terms like academic integrity, plagiarism, ethics, and accepting technology are so common shows that there are worries about authorship, originality, and responsible use of AI that have been raised in other studies (Lendvai, 2025; Malik et al., 2024). At the same time, new ideas like metacognition, self-directed learning, and critical thinking suggest that more research is being done on how AI can help people learn more deeply instead of just automating writing tasks. This is in line with Mondal and Mondal's (2023) argument that AI can help reduce inequalities while still requiring human intellectual engagement. The concentration of publications and international collaborations between countries like China, the US, and the UK is in line with previous bibliometric findings (Mangubat & Saeedi, 2026). However, the fact that more developing and multilingual contexts are getting involved shows that generative AI is important for academic writing all over the world. In general, these results show that generative AI is not just a side technology, but an important and ethical part of academic writing research. This shows that the field needs more empirical research, strong institutional guidelines, and bibliometric monitoring as it continues to grow.

Conclusion

In this bibliometric review, we systematically visualized the intellectual landscape of research on artificial intelligence for academic writing by examining publication growth trends over time, leading contributing countries, dominant research themes, and international collaboration patterns. The articles analysed between 2022 and 2026 exhibit several clear patterns. Publication output increased markedly after 2022 with a particularly sharp rise during 2024 and 2025 reflecting heightened scholarly attention following recent advances in generative AI and large language model technologies. Geographic analysis indicates that research productivity is centred in China and the United States, with increasing contributions from countries such as Indonesia, India, Malaysia, Saudi Arabia, the Philippines and Canada, illustrating the expanding global engagement with this research area. Keyword co-occurrence analysis highlights dominant themes related to academic writing, artificial intelligence, ChatGPT, generative AI, feedback and higher education, alongside sustained attention to academic integrity, plagiarism and ethical considerations. Emerging themes further suggest growing interest in critical thinking, metacognition, self-regulated learning and the development of writing skills. The country co-authorship network reveals a centralised yet globally connected collaboration structure, in which a small number of core countries act as key hubs linking diverse research communities.

This study contributes by providing a comprehensive overview of the intellectual structure, key themes and collaborative patterns shaping current research on AI in academic writing. The findings show that recent research increasingly focuses on pedagogical, ethical and technological aspects of the use of AI to support academic writing, particularly in the context of higher education. However, most studies are still general and not specific to a particular discipline, thus opening up space for future research that explores the application of AI in a more contextual and aligned manner with disciplinary needs in academic writing. This study has several limitations, in particular the use of the Scopus database which only includes English-language journal articles and does not take into account conference proceedings that have the potential to report on recent developments in the field. Therefore, future studies could broaden the scope of the analysis by incorporating additional databases and using a longitudinal approach to track changes and developments in research themes over time. Overall, this bibliometric analysis demonstrates the importance of systematic mapping in identifying research trends and gaps, as well as providing a useful evidence base to support future research and practice in AI supported academic writing.

Conflict of Interest

The author(s) declare(s) that there is no conflict of interest regarding the publication of this paper.

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