

The Evolution of AI-Augmented Composition: A Scientometric Review of Intellectual Structures, Pedagogy, and Ethics

Mark Kevin Astrero¹, Saranay I. Doyaoen¹, Darius King A. Galo¹ & Aileen Melody M. de Vera-Galo¹

¹ Faculty, College of Education, Northeastern College, Santiago City, Philippines

Correspondence: Mark Kevin Astrero, Faculty, College of Education, Northeastern College, Santiago City, Philippines.

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Abstract

This study investigates the evolving language of AI-enhanced composing, maps the discipline's intellectual influence, and identifies key evidence-based strategies and ethical issues. The research used bibliometrics, specifically Price's Law, Bradford's Law, and Lotka's Law, to perform a statistical analysis of publication production and author productivity. Following the PRISMA methodology, 2129 documents were retrieved from the Scopus database (2023-2026) using Boolean search strategies and processed with VOSviewer for science maps and citation burst detection to support descriptive citation analysis. The results indicate a dramatic increase in publications culminating in 2025 and provide evidence of an evolving perspective on AI as a writing collaborator rather than merely a tool. Key themes identified in the investigation include human-AI collaborative writing, ethical issues, and academic integrity. Findings from this research can inform institutional policy and pedagogy related to AI literacy and provide a clear basis for the need for transparent authorship to maintain academic integrity. The study provides a bibliometric assessment of the cognitive and ethical impact of AI-based composition from a multidisciplinary perspective, resulting in a navigational framework.

Keywords: AI-augmented composition, bibliometric analysis, generative AI, academic integrity, linguistic landscape, scientometrics

1. Introduction

In the 21st century, academic writing has exploded, and data-driven discovery has reshaped how higher education defines writing expertise. As AI tools that incorporate large language models (LLMs) are becoming more widespread in the processes of composition, feedback, and revision, they create a challenge to our understanding of authorship, linguistic

competence, and standards of evaluation (Fagbohun et al., 2024; Ong et al., 2024; Yigci et al., 2024). This study recognizes a new linguistic landscape—an interdisciplinary reimagining of how language, cognition, and technology combine during the writing process (Florescio, 2025; Yan & Zhiping, 2023).

However, the rapid integration of AI into writing pedagogy presents another issue: an extremely

large, fragmented body of research across Applied Linguistics, Computer Science, and Educational Psychology that lacks systematic mappings of conceptual structures. Without a rigorous bibliometric audit, each group of researchers struggles to identify central evidence-based strategies, significant biases, and the distribution of expertise needed to develop policy and programs (Curry et al., 2025; Jang & Sawaki, 2025; Qadhi et al., 2024). This study provides a quantitative mapping and visual navigation of the AI-augmented writing research.

The macro-level synthesis is important because it clarifies the discipline's intellectual geography by identifying the leading researchers, institutions, and publications that have influenced the development of AI-assisted writing. Beyond identifying the influential contributors and their relationship across time, by analyzing the themes and evidence patterns from the past years; the analysis emphasizes areas of need for ethically reflective and cognitively based research in the areas of bias mitigation, transparency, data privacy, and the cognitive impact of generative feedback in writing education (Ong et al., 2024; Qadhi et al., 2024; Treder et al., 2024), thus informing institutional policy, resource allocation across domains and the joint priorities among them (Harrer, 2023).

A key feature of the research is the quantitative analysis of how the linguistic landscape of AI-assisted writing has developed over the past years. The researcher applies bibliometric laws such as Lotka's, Singer's, and Bradford's, and science mapping techniques, co-citation, co-authoring, and term-trajectory, to synthesize a year's worth of research into a navigational framework for guiding future inquiry, curriculum development, and policy discussions by articulating how writing theory, AI capacity, and writing pedagogy intersect and differ over time (Cohen et al., 2024; Curry et al., 2025; Qadhi et al., 2024).

A main interpretive objective is to reconcile disagreement within consensus and across studies in disputed areas. On the one hand, many studies suggest that LLM systems could provide more effective forms of feedback and assessment, promote equity in under-resourced settings by providing automated assistance, and enhance professional behavior. Other sources suggest that systems may produce hallucinations or biased outputs, raise privacy concerns, harm individuals' personal lives, undermine academic

integrity, or create damaging behavior patterns among students. This study provides an explicit mapping of the points where there are disagreements, and a combination of multi-source documentation to create an overarching, integrated summary of perspectives, rather than an account from one perspective (Borji, 2023; Chen, 2025; Harrer, 2023; Ong et al., 2024; Yu et al., 2023).

Visually and metrically rendering the linguistically diverse landscape, this study aims to identify core evidence-based practices identified across studies in multiple disciplines, as well as new trends in LLM-based writing technologies that warrant further research and investigation. Much of the analysis focuses on the ethical and cognitive implications of AI in writing, the design of feedback systems, and governance and policy strategies related to data privacy and algorithmic fairness. The framework is designed to assist higher education decision-makers and researchers who wish to collaborate with one another, as well as policymakers, to create guidelines related to the ethical use of LLMs for teaching and learning in higher education (Baldassarre & Padovan, 2024; Mohamed, 2024; Ong et al., 2024; Taghandiki & Mohammadi, 2024).

The emergence of AI-assisted writing in the linguistic landscape requires an evidence-based mapping system that combines linguistic theory with what AI capabilities can deliver and with what educators and researchers want and need to accomplish. This work provides a literature review and associated maps that offer insight into how and where we have progressed with AI-assisted writing in composition, and where significant deficiencies remain, so that researchers can develop pertinent, ethical, cognitive, and pedagogical advancements in our work. This study aims to connect methodological integrity with practical policy requirements, guiding future investigations into ethically responsible and inclusive AI-assisted writing in education (Cohen et al., 2024; Florencio, 2025; Qadhi et al., 2024; Sun, 2025).

2. Theoretical Frameworks

This study uses bibliometric theory to situate AI-enhanced writing research through a three-pronged approach: Price's Law, Bradford's Law of Distribution, and Lotka's Law, covering the period 2023–2026. Researchers used Price's Law to identify when research into AI-augmented

writing became a global area of interest, given its rapid increase in production (Mohsen et al., 2023; Jaleniauskiene et al., 2023). Bradford's Law helps identify the disciplinary or subject hubs driving the development of AI-enhanced composition research, such as Computers and Composition, Journal of Writing Research, and others (Raman et al., 2023; Dou et al., 2025). Lotka's Law applies to prolific or highly productive primary authors of AI-enhanced writing, including those who have made transient or short-lived contributions to a rapidly growing subject (Mohsen et al., 2025; Borgohain, 2022). The three pillars mentioned above provide a statistically valid mapping of computational bibliometrics and disciplinary linguistics.

Predominant evaluation processes for academic research in the humanities are qualitative or narrative, limiting cross-disciplinary accessibility and overlooking temporal dynamics. Bibliometrics enables tracking systematic changes in authorship, collaboration, and thematic emergence over time, addressing citation lag and aligning theory and practice in linguistic theory. This study identifies key journals, significant authors, and institutional networks, and assesses the field's intellectual vibrancy as AI-enhanced writing evolves from a corrective to a more generative approach (Lim et al., 2023; Afolabi, 2024).

This study analyzes themes in AI-assisted writing through a review of Automated Writing Evaluation (AWE), predictive completion, generative co-authorship trajectories, and the language environment of AI-assisted writing. As normative issues change as technology evolves, the project demonstrates how technological capabilities impact ethical governance, cognitive load, authorship attribution, and quality assurance through the coding of the literature around these topics and by identifying discipline intersections and ruptures through network analysis and conducting triangulation with domain-specific literature in Applied Linguistics, Computer Science, and Educational Psychology.

Drawing on bibliometric signals, the literature on promoting AI literacy, transparent authorship, and creative governance frameworks offers recommendations for developing policies that foster integrity and innovation. The practical implications include developing AI-assisted writing courses, evaluation strategies, and peer review processes that account for AI contributions while maintaining accountability.

Higher education and educational technology institutional policies and practitioner guidelines address issues of prejudice, origins, and fair and equitable access to AI-assisted tools (Lendvai, 2025; Stofiana et al., 2025; Mohsen, 2023).

3. Methodologies

Using bibliometric and scientometric methods, this study provides a framework for research on AI-assisted composition by tracing its intellectual, thematic, and structural progression. This includes the following: quantitative indicators such as increases in publications and author/source citation metrics, as well as a more in-depth analysis of intellectual relationships between authors/institutions using the scientometric method. Therefore, using both quantitative and qualitative measures allows us to provide a more thorough examination of trends in this area of scholarship over the period 2023-2026.

To promote transparency and reproducibility, this research followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) methodology in developing the research design and process. The research methodology comprised four phases: establishing research parameters, collecting bibliographic data, processing bibliographic data (i.e., refinement/normalization), and completing science mapping.

Data retrieval was completed in April 2026, with data collected primarily from Scopus. This database was selected because it is considered the pre-eminent database for academic research and has been shown to be a reliable source of quantitative data in academic literature. A Boolean search strategy was developed to identify and analyze the linguistic/compositional aspects of AI-assisted composition.

TITLE-ABS-KEY (("AI" OR "LLM" OR "ChatGPT" OR "Generative AI") AND ("Composition" OR "Linguistics" OR "Writing" OR "Digital Rhetoric"))

The search was restricted to English-language, double-blind, peer-reviewed literature and conference proceedings published between 2023 and 2026, covering the key period of transition from early neural networks to large language models. The subject areas identified were social sciences, arts/humanities, psychology, and multidisciplinary. The original yield of 2,494 records was reduced to a final curated dataset through manual screening for thematic

relevance. The final dataset consisted of 2129 documents.

To validate and assess reliability, the scientometric overview was conducted using primary digital instruments. The researcher constructed distance-based network visualizations and calculated keyword association strength using VOSviewer (v.1.6.20). Burst detection and descriptive statistical analysis were performed on citation counts to identify sudden changes in researchers' interest. All citation counts were normalized for publication age. The results were cross-verified across databases to ensure the cluster's consistency. Using both quantitative data and qualitative content analysis, this study presents a solid, reliable overview of the global research trajectory of AI-assisted composition.

4. Results and Discussions

This section provides an overview of both its intellectual topology and its temporal evolution from 2023 through 2026. By combining quantitative bibliometric measures with advanced science-mapping techniques, the analysis found that scholarly output on this topic increased dramatically between 2023 and 2025, peaking in 2025. Further, the analysis revealed that the various thematic clusters in the AI-assisted writing landscape were highly interconnected. Importantly, results from this analysis provide insights into how perceptions regarding the nature of artificial intelligence have shifted from simply being perceived as an automated writing tool to being viewed as a collaborative writing partner; however, there are still critical areas that lack transparency, accountability, and whole new definitions for authorship in the digital era.

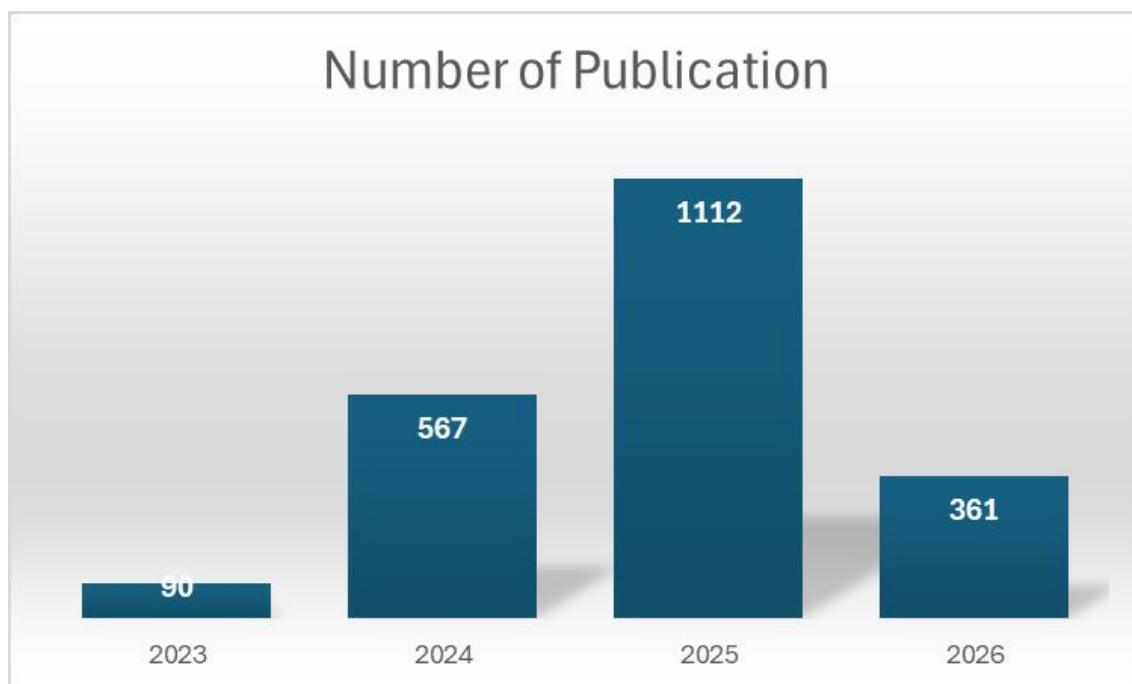


Figure 1. Number of publications per year in the linguistic landscape of AI-augmented composition

Figure 1 shows the analysis of scientific output on writing composition supported by artificial intelligence over the past four years, showing a substantial increase in scholarly interest. According to Figure 1, 90 articles were published on this topic in 2023, indicating that this was the beginning of research in this emerging area. By 2024, there were 567 articles, an increase of over six times, indicating a significant response from the academic community to emerging generative AI technologies and writing composition

formats.

2025 was the most prolific year in the database, with 1,112 publications; this peak in research volume demonstrates a “boom” in scholarly investigations into the intersection of language and artificial intelligence. In contrast, by March 2026, the number of published works fell to 361, suggesting that the publication volume was only approximately a quarter of the 2025 volume. The decline in numbers must also be contextualized, as the 2026 figure is an incomplete yearly total; it

should not be taken to indicate a decline in interest. The data, from 2023 through the first quarter of 2026, suggest that AI-augmented

writing has shifted from an emerging field to a prominent area of focus in education and linguistics.

Table 1. Most productive journal

Name of the Journal	Publisher	Number of Publications	Citations
Lecture Notes in Computer Science	Springer Science and Business Media Deutschland GmbH	53	62
Conference On Human Factors in Computing Systems - Proceedings	Association for Computing Machinery	32	371
Lecture Notes in Networks and Systems	Springer Science and Business Media Deutschland GmbH	27	18
Ai And Society	Springer Science and Business Media Deutschland GmbH	23	154
Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)	Springer Science and Business Media Deutschland GmbH	22	82
Proceedings of the Annual Meeting of the Association for Computational Linguistics	Association for Computational Linguistics (ACL)	16	76
Proceedings of the Annual Conference of the International Speech Communication Association, Interspeech	International Speech Communication Association	15	32
ICASSP, IEEE International Conference on Acoustics, Speech, and Signal Processing - Proceedings	Institute of Electrical and Electronics Engineers Inc.	11	77
IEEE Access	Institute of Electrical and Electronics Engineers Inc.	10	25
Information (Switzerland)	Multidisciplinary Digital Publishing Institute (MDPI)	9	35

The scientific analysis presented in Table 1 shows that AI-assisted writing is a cross-disciplinary collaboration, with scholarship produced at high-impact conferences and in specialized journals. According to Table 1, Springer Science and Business Media Deutschland GmbH's Lecture Notes in Computer Science published 53 pieces of AI-PBL (augmented writing) research. This output, coupled with its 62 citations, indicates significant foundational research on the application of AI in writing, but likely less than there will be in the future. The ACM Conference on Human Factors in Computing Systems produced the most AI-related publications, with 32 articles and 371 citations, indicating that the human-computer interface (HCI) for AI-assisted

writing is critical to academic discourse and peer influence.

Data indicates that specialty publishers and journals in the field are playing a large role in shaping research on AI-assisted writing. The Springer Lecture Notes in Networks and Systems and AI and Society together accounted for 27 and 23 publications, respectively. AI and Society has the most citations (154), highlighting the social and ethical implications of using AI to generate language. Lecture Notes in Computer Science has published 22 articles on AI and bioinformatics; these have accumulated 82 citations, indicating that these types of organized computer science publications help promote AI-focused research.

The ACL annual meeting and Interspeech conference both cover research on linguistics and signal processing. The ACL has published 16 papers and is cited 76 times, while Interspeech has 15 publications and has received 32 citations. These numbers indicate that computational linguistics and voice communication are very important in research about augmented composition. IEEE Access, along with the IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), is responsible for 21 published articles that have received 102

citations in this domain. Thus, the IEEE journals contribute a technical engineering approach to research within this field. Information (Switzerland), published by MDPI, is included among the top ten, with 9 articles referenced 35 times, illustrating that open access and multidisciplinary research have a global reach. Therefore, Springer publications have the largest total volume of articles; however, venues on human-centric computing and social effects have the highest number of citations and the greatest intellectual impact.

Table 2. Most influential papers

Citations	Authors	Year	Title
1310	Tlili, Ahmed; Shehata, Boulus; ...	2023	What if the devil is my guardian angel: ChatGPT as a case study of using chatbots in education
408	Bankins, Sarah; Ocampo, Anna Carmella; ...	2024	A multilevel review of artificial intelligence in organizations: Implications for organizational behavior research and practice
396	Stahl, Bernd Carsten; Eke, Damian	2024	The ethics of ChatGPT – Exploring the ethical issues of an emerging technology
294	Strzelecki, Artur	2024	Students' Acceptance of ChatGPT in Higher Education: An Extended Unified Theory of Acceptance and Use of Technology
252	Kim, Jinhee; Yu, Seongryeong; Detrick, Rita; Li, Na	2025	Exploring students' perspectives on Generative AI-assisted academic writing
194	Strzelecki, Artur; ElArabawy, Sara	2024	Investigation of the moderation effect of gender and study level on the acceptance and use of generative AI by higher education students: Comparative evidence from Poland and Egypt
167	Cheng, Szu-Wei; Chang, Chung-Wen; ...	2023	The now and future of ChatGPT and GPT in psychiatry
160	Garg, Ravindra Kumar; Urs, Vijeth L...	2023	Exploring the role of ChatGPT in patient care (diagnosis and treatment) and medical research: A systematic review
154	Bozkurt, Aras; Xiao, Junhong; Farrow, ...	2024	The Manifesto for Teaching and Learning in a Time of Generative AI: A Critical Collective Stance to Better Navigate the Future
143	Hosseini, Mohammad; Resnik, David B; Holmes, Kristi	2023	The ethics of disclosing the use of artificial intelligence tools in writing scholarly manuscripts

According to the scientometric map of the linguistic context in which AI writing augmentation occurs, numerous important papers have received many citations quickly, covering a wide range of topics. The leading paper is by Tlili et al (2023), which has received 1310 citations, and is titled: "What if the devil is

my guardian angel? ChatGPT as a Case Study of Using Chatbots for Education." This article addresses the complexities of generative AI in academic contexts, how it can promote learning through pedagogical opportunities, and the ethical issues surrounding its algorithmic use. Therefore, an important finding is that

academicians view writing with AI as an innovative disruption and an essential advancement within educational linguistics.

Research on AI in writing has shifted throughout 2024/2025 from uses in teaching/learning to corporate use, ethical issues, and user acceptance. Bankins et al. (2024) used 408 citations to explain how to indicate the integration of AI into organizational systems, while Stahl and Eke (2024) used 396 citations to determine the ethical implications of using ChatGPT. Researchers are now increasingly critically evaluating the broader effects of systems and structures arising from the use of AI writing tools, rather than simply acknowledging their use. Additionally, Strzelecki (2024) evaluated students' acceptance of these tools and how gender and level of study moderated their perceptions of how different populations interact with or view these language tools.

The latest research (2025) indicates an increasing emphasis on literacy mechanics. Kim et al. (2025) analyzed students' perspectives on their interactions with generative AI writing, resulting in 252 citations. This research reflects heightened interest in student representation (voice) and how students connect with AI technologies. The inclusion of study-specific work, such as Cheng et al. (2023) in the psychiatry field and Garg et al. (2023) in patient care, supports the claim that AI-assisted composition is vastly changing how technical and medical communication occurs. These influential studies are representative of the rapid changes taking place today regarding the notion of creating a "The Manifesto for Teaching and Learning in a Time of Generative AI: A Critical Collective Stance to Better Navigate the Future" by Bozkurt et al. (2024) and Hosseini et al. (2023), which includes that the transparency of creating AI tools is part of a code of ethics concerning the publication of scientific work.

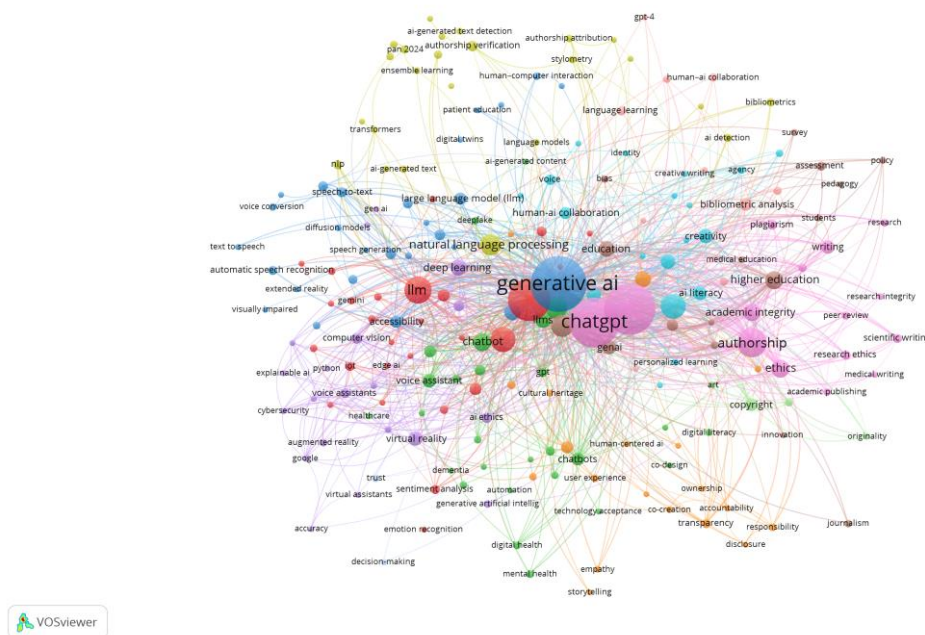


Figure 2. The VOSviewer map showing the co-occurrence network of keywords

The VOSviewer keyword co-occurrence network in Figure 2 is a sophisticated visualization of the architecture of AI-augmented writing composition research. The anchor nodes in this network include “generative AI”, “ChatGPT, and “natural language processing,” demonstrating a focus on large language models and automated text generation. These keywords reflect how transformer-based systems are shaping the language environment, including both their

strengths and weaknesses.

The central core radiates out to unique, connected clusters that represent an aspect of the writing process influenced by AI. A cluster representing the technical and cognitive frameworks of AI-augmented writing contains terms such as “llm,” “deep learning,” and “computer vision” (shown in purple and red in the cluster to the left of the central hub). This part of the globe shows how the use of “augmented” devices (voice assistants,

speech recognition, virtual reality) is enabling language composition across multiple formats, not just through text-based interfaces. Additionally, with the terms “accessibility” and “visually impaired” appearing in this cluster, there is a clear research trajectory exploring how AI-driven linguistic tools may democratize writing for diverse user groups and redefine what inclusivity means in academic and professional life.

The ethical and human-centered facets of the field are represented with green (lower left) and orange (lower right) color groupings on the map. Ideas such as “ethics,” “authorship,” and “academic integrity” indicate a serious concern about AI-generated text, including the evolving concept of authorship. The relationship between “authorship,” “academic publishing,” and “copyright” illustrates challenges in AI terminology, thereby revealing the complexities of intellectual property as it relates to the moral rights of human creators. The lower green cluster

represents growing interest in the sociolinguistic effects of AI tools, including how they may enable creative writing and storytelling without the subjective, human component.

In contrast, the blue and yellow sections of the network reveal a connection between the technological use of AI and pedagogical methods. Groupings (or nodes) connecting to “higher education”, “language learning,” and “writing” provide evidence that educational institutions use AI-enhanced composition. The findings suggest a positive correlation between “bibliometric analysis” and “linguistic landscape,” indicating that scholars are more reflective about themselves as they document the pace of technological evolution in the current era. The way in which we define the term “how” in terms of AI’s ability to generate text could alter our self-perception as authors. For example, authorship relates to “large language models,” “critical thinking,” and “pedagogy.”

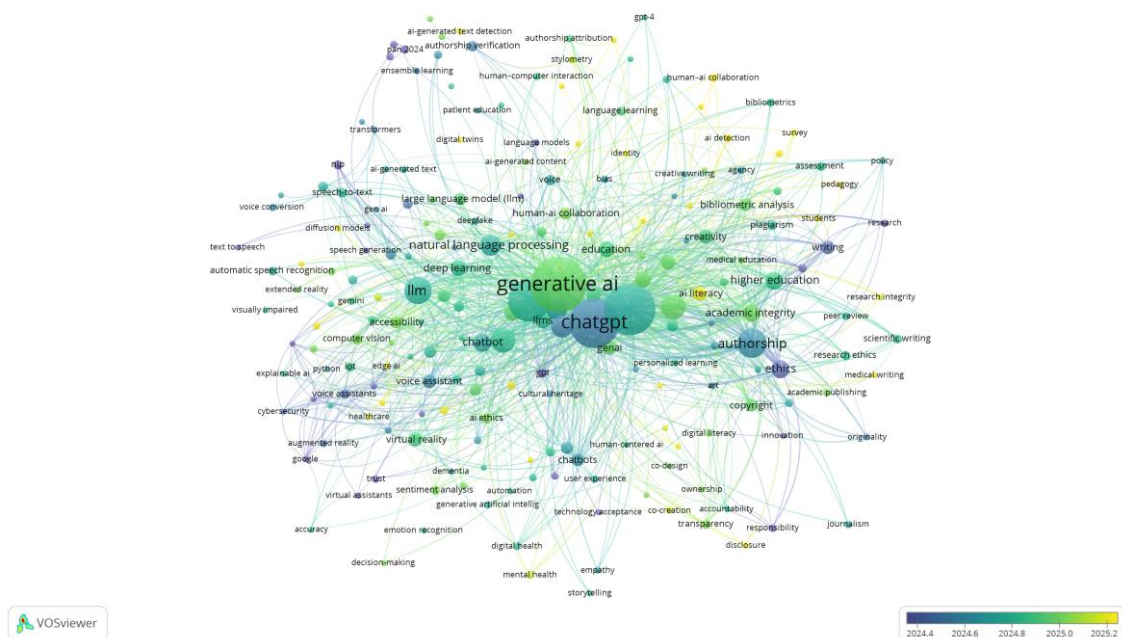


Figure 3. The VOSviewer map showing the co-occurrence network of keywords in overlay visualization

The visualization data presented in Figure 3 shows a closely related, rapidly evolving field of study, as measured by scientometrics, for AI-infused writing composition. In this discussion, as in most recent research on this topic, a central generative AI node is driving future developments. This node is significant because it indicates a transition from traditional rule-based

writing aids to new generative models of writing that can create both creative and structural forms. The generative AI node is directly connected to ChatGPT, which represents the merging of advanced natural language processing technology with academic and professional writing systems. Because transformer-based topological structures and linguistic models, both

natural language processing- and deep learning-based, are still being developed within those domains, the conversation continues to occur there as they progress toward real-world applications.

The landscape overlay in this figure spans the period covered by this body of knowledge and shows a temporal progression from cold to hot. The period around the end of 2024.4 includes research on writing tool infrastructure, such as voice and automated speech recognition, as well as machine learning infrastructure. The teal and green areas of the overlay diagram in the early to mid-2025 time period show a heightened emphasis on the instructional and human-related aspects of the technology, which are examples of how buzzwords such as higher education, academic integrity, and literacy had an increasing presence as AI-infused writing technologies became more available, and the academic community began examining the systemic implications of these technologies on learning environments and “original” student work.

A large cluster of ethical issues/institutional responses to AI-assisted writing appears on the right-hand side; researchers are attempting to redefine how intellectual property and authorship are credited in a text-assisted world,

linking authorship, ethics, plagiarism, and peer review. The numerous clusters within this area indicate research on academic/scientific writing; the linguistic environment of AI-assisted writing encompasses both student assemblies and the production and verification of scientific knowledge. The latest frontiers in these clusters have been denoted by bright yellow nodes (2025.2), where the concepts of “openness,” “accountability,” and “human-centered AI” have broadened the concept of human authorship to encompass collaborative relationships between human authors and generative systems, rather than just detecting text generated by machines.

Evidence can be found on the periphery of the map that supports the spread of AI-assisted writing across multiple disciplines (e.g., journalism, digital health, and cultural heritage), indicating that the changes in the linguistic composition generally associated with writing will also be experienced in writing that has more specific applications within specialized fields. Smaller clusters around user experience, empathy, and stories suggest that research on AI-assisted prose will evolve from functional/ethical to qualitative/emotional; thus, AI-assisted writing has become an interdisciplinary field combining technology with critical analysis of 21st-century authorship.

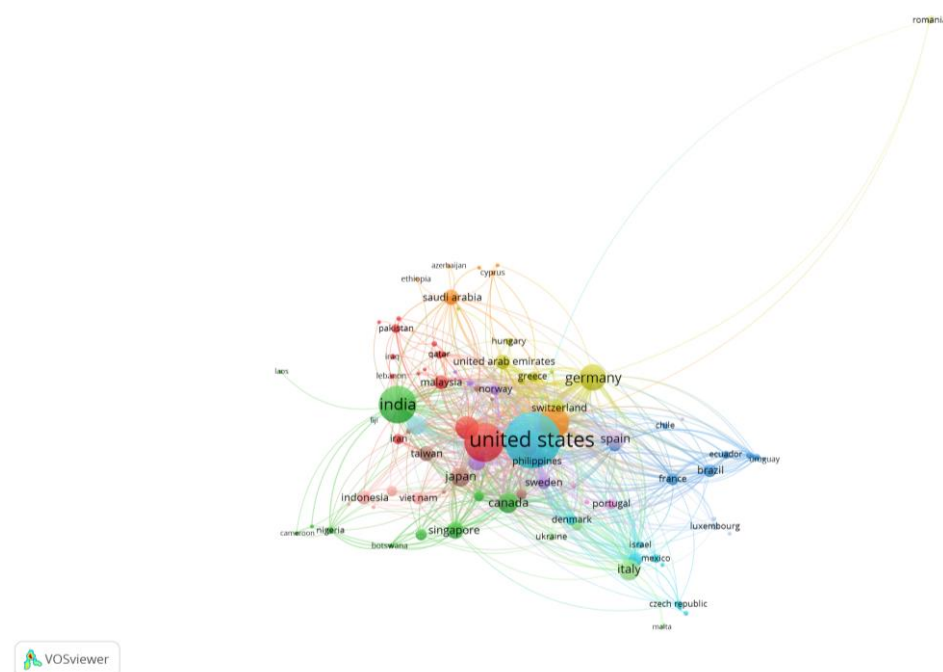


Figure 4. Geographic Distribution and International Collaboration Network of Countries

Scientific research on AI-assisted writing has created a fast-evolving, networked, worldwide

research community. The US is the largest node in this co-authorship network, suggesting high

academic output and research citation influence. Substantial collaboration exists among UK- and east- and west-based research sites across multiple languages and educational contexts, reflecting the US's central position within this research ecosystem. India and Germany follow the US, with India forming a group of related researchers that supports the large-scale integration of educational technology and a model of language for technical study.

The colors on this plot represent geographic and conceptual clusters of researchers who produce similar quantities of original research. The red cluster represents US-based researchers with a high degree of collaboration and co-authoring with researchers in Japan, Malaysia, and the UAE, suggesting that their shared research agenda includes common interests in EMI and the globalization of AI-based writing tools. The green cluster consists primarily of researchers based in India and Canada, but also includes many in Singapore and Nigeria, suggesting that these researchers are interested in studying the language environments of AI in Commonwealth nations and the emerging economies of digital commerce. Together, these geographic and historical clusters show that researchers worldwide are still strongly influenced by the historical, geographic, and linguistic connections they share, even in this modern, digital, globalized world.

Long-distance connections and peripheral units demonstrate the expanding frontiers and specialized niches of AI-augmented composition. Romania is an exceptional case, with close connections to the central cluster, indicating specialized or expanding contributions to the field from locations outside its home region. Italy, Mexico, and Spain are represented in the blue and cyan clusters and show an emerging Mediterranean and Latin American discourse on using AI writing tools for Romance languages to create content in non-English authoring contexts. Although Anglocentric research centers continue to dominate the linguistic map, researchers from diverse linguistic backgrounds are expanding the discipline by exploring generative AI and local writing styles.

Discussions

With over 1000 papers published in 2025 alone, there is now an abundance of research on AI-enhanced writing. As a result, there is a growing recognition that AI is no longer simply being

used as a neutral writing tool, but as an active collaborator in shaping and creating new forms of writing (Fagbohun et al., 2024; Ong et al., 2024; Yigci et al., 2024) across disciplines, changing not only how writing is constructed, but how authorship, literacy theory and evaluation operate.

This large body of research also highlights significant ethical, transparency, and governance issues associated with AI-enhanced writing. Therefore, it is crucial to consider how different policies, pedagogies, and practices of publishing relate to authorship, accountability, and data privacy, while keeping in mind the potential for bias and loss of integrity involved in the use of generative systems (Curry et al., 2025; Harrer, 2023; Jang & Sawaki, 2025; Qadhi et al., 2024). To develop a coherent discussion of AI use in writing, it is necessary to examine how technical capabilities and educational goals interact and align with existing scholarly norms (Chen, 2025; Cohen et al., 2024).

Advancements in AI-assisted writing support SDG 4 (Quality Education) and enhance learners' access to persuasive writing support, particularly for those with visual impairments or limited language skills. However, educators must ensure that AI supports critical thinking and information literacy rather than replacing them (Cohen et al., 2024; Jang & Sawaki, 2025; Mohamed, 2024; Treder et al., 2024). Various studies outline effective pedagogies that develop evaluative skills while using AI to provide learners with equitable educational opportunities (Mohamed, 2024; Ong et al., 2024).

AI also raises ethical concerns and challenges related to SDG 16 (Peaceful and Inclusive Societies), including transparency, authorship, and the governance of AI-generated content. Discussion in academia focuses on whether businesses should disclose AI assistance in their work, the need to avoid using AI as a co-author of content it assists with, and the necessity of clear protections against hallucinations and data breaches. Collectively, these topics highlight a need for definitive editorial and institutional policies that are informed by international guidelines and multidisciplinary practices to maintain trust in academic publishing and in educational practice (Baldassare & Padovan, 2024; Harrer, 2023; Qadhi et al., 2024; Sun, 2025; Taghandiki & Mohammadi, 2024; Yu et al., 2023).

This transition to qualitative and human-

centered discourses emphasizes user experience, empathy, and storytelling, all of which are seen as fundamental to AI-enhanced writing. Additionally, this transition is in keeping with Sustainable Development Goals (SDGs) three (good health and well-being) because it examines how technology-based writing impacts the socio-emotional and ethical aspects of creating documentation, as well as creating an atmosphere for holistic learning through empirical evidence. An overview of the emotional context of the user's story provides the basis for creating a responsible human-centered framework for the use of AI in education and research, which provides for innovative approaches to both technology development and humanistic aspects of writing for wellness and sustainability (Beg, 2024; Perkins & Roe, 2024; Yousaf, 2025; Zhu, 2025).

5. Conclusions

Using various methods, this research conducted a scientometric review of 2129 documents, resulting in effective quantitative mapping and visual navigation of the research area in the changing intellectual geography of AI-augmented composition. The results indicated that worldwide interest in AI-assisted writing research exploded (over six-fold) from 2023 to 2024, peaking in 2025. The enormous increase in publication volume reflects a major academic response to new-generation AI technology, shifting the perspective on AI from traditional rule-based writing aids to an active, collaborative partner in the writing process. Additionally, the cross-disciplinary approach is reflected in most academic research across a range of disciplines, including Human-Computer Interaction, Social-Ethical Discourse, and highly specialized journals in Applied Linguistics, Computer Science, and Educational Psychology.

In addition, the geographical analysis shows a strong, interconnected global research network, with the United States at its core, India second, and Germany third in research output. This research provides a crucial navigational framework for future research by synthesizing research from the past decade into a coherent approach to curriculum development and policy discussions. This paper's practical and theoretical implications emphasize the need for institutional guidelines to address critical areas of dispute, including the tension between automated processes and human input, data privacy, and the changing meaning of authorship in the digital

age. Finally, this research supports the alignment of advances in artificial intelligence with the Sustainable Development Goals—specifically, in relation to SDG 4 (Quality Education) and SDG 16 (Peace, Justice, and Strong Institutions)—by advocating for humane and ethical governance structures and human-centered frameworks that prioritize transparency, literacy, and equity in academic publishing and teaching.

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Author Profile

MARK KEVIN ASTRERO is a distinguished academic currently serving as a faculty member of the College of Education at Northeastern College in Santiago City, Philippines. A specialist in Rhetoric and Linguistics, Astrero's work sits at the intersection of traditional pedagogy and modern innovation, particularly in AI-augmented composition and institutional policy development.