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Mohammadamin Erfanmanesh

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RESEARCH ARTICLE

Artificial Intelligence in Scientific Publishing: Citation Impact and Thematic Trends

Mohammadamin Erfanmanesh
Independent researcher, New Brunswick, Canada
amin.erfanmanesh@gmail.com

ABSTRACT

Introduction: The rise of artificial intelligence (AI) has a significant impact on scientific publishing and librarianship. This study explores the citation impact and thematic patterns of AI-related research in scientific publishing through four objectives: (1) to analyze bibliometric characteristics; (2) to evaluate citation performance using normalized metrics; (3) to identify major thematic trends; and (4) to review AI-related publications that specifically address librarianship and examine their implications for library practices.
Methods: A bibliometric analysis was conducted on 295 AI-related publications indexed in the Web of Science Core Collection. Citation performance was assessed using two field-normalized metrics from Clarivate's InCites platform: the Category Normalized Citation Impact (CNCI) and the Journal Normalized Citation Impact (JNCI). To determine whether the median CNCI and JNCI values differed significantly from the category and journal benchmarks, a one-sample Wilcoxon signed-rank test was performed. Sub-themes within AI-related research were identified through thematic analysis. Additionally, to highlight important themes and professional implications, publications that specifically mention libraries, librarians, or librarianship were reviewed.
Results: The median CNCI was 2.7, and the median JNCI was 2.2, both significantly above the benchmark of 1.0 ($P < .001$). This indicates that AI-related research in scientific publishing receives significantly more citations than comparable publications within the same subject areas and journals. Seven sub-themes were identified, all showing above-average citation impact. Among these, themes focused on frameworks, policies, and ethical guidelines for AI integration achieved the highest normalized citation scores. Additionally, four publications focusing specifically on librarianship explored how AI intersects with open access and scholarly communication, ethics and governance, professional training, the development of machine-readable collections, and the integration of AI technologies into library services.
Discussion: These findings suggest that AI-related research has rapidly emerged as a highly influential area within scientific publishing. The variety of themes demonstrates the broad impact of AI technologies on scientific publishing.
Conclusion: Research on AI in scientific publishing is a rapidly growing and dynamic area, notable for its high citation impact, broad thematic scope, and growing influence on libraries and librarianship.

Keywords: artificial intelligence, scientific publishing, bibliometrics, citation impact, Category Normalized Citation Impact, Journal Normalized Citation Impact, librarianship

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IMPLICATIONS FOR PRACTICE

1. Publishers, editorial boards, and professional associations must establish clear and consistent guidelines for the ethical use of AI in peer review, editorial processes, and manuscript preparation.
2. Institutions, publishers, and libraries should develop training programs for authors, reviewers, and librarians to improve their knowledge of AI literacy, data ethics, and responsible AI tool use.
3. Libraries should expand their educational role by integrating AI literacy into their information literacy instruction and research support services for students and researchers, including workshops, consultations, and guidance materials on AI-assisted writing and research integrity.
4. Librarians should be recognized as advisors in institutional AI initiatives. Their responsibilities include assessing AI tools, creating AI-based discovery services, and ensuring that AI deployment remains transparent, fair, and ethically governed, particularly within institutional repositories, research support offices, and scholarly publishing services.

INTRODUCTION

The integration of artificial intelligence (AI) into scholarly publishing has attracted significant interest from academics, editors, and policymakers. AI tools, particularly large language models (LLMs) such as ChatGPT, are transforming scholarly communication by automating tasks including peer review, draft creation, editing, translation, and misconduct detection. These advancements provide opportunities to improve efficiency, accuracy, and transparency in publishing processes (Homolak, 2023; Curtis, 2023; Silverman et al., 2023). However, they also raise concerns regarding bias, research integrity, accountability, and the evolving role of human expertise in knowledge creation (Lund et al., 2023; Miao et al., 2023; Rahimi & Abadi, 2023; Carobene et al., 2024).

The academic community has developed a rapidly growing body of literature on AI's role in scientific publishing. This literature spans diverse areas such as ethical risks (Kendall & Teixeira da Silva, 2024), modifications to editorial workflows (Avital, 2024), author assistance systems (Pividori & Greene, 2024), forecasts of future impacts (de Winter, 2024), policy development (Lin, 2024), and editorial demand for AI research (Torabi et al., 2025). The literature includes empirical studies, conceptual discussions, policy statements from professional associations, and commentaries from scholars across various fields.

From a bibliometric perspective, citation analysis provides a reliable method for assessing the visibility and impact of emerging research fields (Bornmann & Daniel, 2008). Normalized indicators such as the Category Normalized Citation Impact (CNCI) and Journal Normalized Citation Impact (JNCI) are widely used because they adjust for differences across disciplines, publication years, and document types (Clarivate, 2025a; 2025b). These metrics are especially useful in identifying 'hot fields' characterized by above-average citation rates and rapid growth (Small, 2006). In scholarly publishing, such areas often reflect technological innovations or paradigm shifts, and AI represents a clear example.

Despite the rapid growth of this literature, no comprehensive bibliometric study has systematically evaluated the citation impact of AI-related publications in scientific publishing using normalized metrics. Although prior work has examined technical applications and ethical considerations, less attention has been paid to how this field fits into the wider scholarly communication landscape. Specifically, there has been limited focus on the link between AI research and librarianship, despite librarians' crucial roles in supporting research integrity, managing repositories, advising on publishing policies, and promoting AI literacy. To address these gaps, this study provides a bibliometric analysis of AI-related research in scientific publishing with four primary objectives:

1. To analyze the bibliometric characteristics of AI-related publications in scientific publishing.
2. To assess whether these publications have a higher citation impact relative to category and journal benchmarks.
3. To identify the main thematic areas within the literature and examine their citation performance.
4. To review AI-related publications that explicitly discuss librarianship and to determine the themes they address.

LITERATURE REVIEW

Bibliometric studies have extensively mapped AI as a rapidly growing and structurally evolving research field. Longitudinal analyses using Web of Science and Scopus revealed exponential increases in AI publications, greater international collaboration, and evolving thematic areas (Niu et al., 2016; De la Vega Hernández et al., 2022). These studies showed that AI research was not only growing in number but also developing internally. Key methods like machine learning, deep learning, and natural language processing were driving new research areas. Bibliometric mapping techniques, such as co-authorship network analysis, co-word clustering, and co-citation analysis, were frequently used to reveal the structure and progress of AI

research (Ho & Wang, 2020; Gao & Ding, 2022). A common finding across these studies was that output and influence were concentrated in a few countries and institutions. At the same time, there was growing cross-disciplinary diffusion as AI methods were adopted more broadly in fields such as medicine, education, engineering, and social sciences (Bircan & Salah, 2022; De la Vega Hernández et al., 2022). Overall, this body of work established AI as a rapidly evolving, globally interconnected field characterized by quick thematic diversification, centralized structures, and high citation visibility.

Parallel to the bibliometric mapping of AI as a research area, numerous studies examined scientific publishing and related topics through bibliometric methods. These covered publishing models, scientific journals, predatory, hijacked, and questionable publishing practices, peer-review processes, publication ethics, retractions, and post-publication corrections. For example, Yan and Zhiping (2023) examined academic publishing literature in Web of Science (1970–2020) using co-citation and keyword co-occurrence mapping to show how publishing-related scholarship has developed and to identify major themes such as open access, bibliometrics, and editorial governance. Similarly, Augustyn (2022), using Scopus data and VOSviewer network analysis, identified a core group of "publishing studies" journals across various academic, professional, and educational publishing platforms. The results indicated that the author community was fairly small, characterized by a few highly central contributors and limited co-authorship networks. Magadán-Díaz and Rivas-García (2022) conducted a bibliometric analysis of the publishing industry in Scopus, highlighting leading journals, geographic clusters, and major institutions that influence research on publishing processes and business models. A key focus of bibliometric research in scientific publishing is on publishing models and their effects on access and dissemination. For example, Laakso et al. (2009) provided an early quantitative assessment of the growth of open access (OA) publishing, documenting its expansion across disciplines, while Björk et al. (2010) further examined the spread and characteristics of OA journals.

In addition to publishing models, bibliometric methods have been extensively used in peer-review systems and to identify questionable publishing practices. Shen and Björk (2015) quantified the scale and features of potentially predatory OA journals, while Frandsen (2017) examined citation behavior toward suspected predatory journals to assess their impact on the wider scholarly record. More recently, Richtig et al. (2023) conducted a large-scale bibliometric analysis of journals previously listed in Beall's database, showing their ongoing citation presence and complex positioning within academic databases. Research integrity issues were also examined quantitatively through analyses of retractions and corrections, revealing disciplinary variation and increasing retraction rates over time (Ribeiro & Vasconcelos, 2018).

Although quantitative approaches have been widely used in both AI research and scientific publishing separately, little research has systematically examined their intersection. A review of the literature found no previous study that assessed the citation performance and thematic structure of AI-focused research in scientific publishing using field- and journal-normalized indicators. Therefore, this study contributes to this emerging area and is one of the first to systematically combine bibliometric mapping of AI with scientometric analysis of scientific publishing, thereby addressing a methodological and topical gap in the literature.

METHODOLOGY

This study used bibliometric methods and thematic analysis to examine the research output and citation impact of AI-related publications in scientific publishing, as well as to identify key thematic areas in the literature. Data were gathered from the Web of Science Core Collection (WoS-CC) on July 20, 2025. It was selected because it is a curated, multidisciplinary database that indexes high-quality, peer-reviewed literature and offers standardized metadata. The search query contained keywords related to AI, including "AI," "Artificial Intelligence," "ChatGPT,*" "LLM," and "Large Language Model,*" combined with terms associated with publishing, such as "scientific publishing," "academic publishing," "scholarly publishing," and "peer review."

These keywords were used to search the Title and Topic fields to find documents primarily related to AI and scholarly publishing. The search was limited to journal publications, including research articles, review articles, editorials, and letters, as these are the primary types of documents that receive citations. Non-journal sources, such as conference proceedings and book chapters, were excluded. Publications from 2025 were excluded to minimize bias from incomplete citation data. The detailed search strategy is outlined in Appendix 1 to ensure reproducibility. The initial search retrieved 408 documents. Each record was manually screened for relevance by examining abstracts and, when necessary, full texts to confirm their focus on AI in scientific publishing. After excluding 113 documents that covered peripheral or unrelated topics, 295 publications were retained for the final analysis. The metadata for the 295 documents was uploaded to Clarivate's InCites Benchmarking and Analytics platform for further analysis. InCites provides field- and journal-normalized citation metrics, which are useful for comparing research performance across disciplines and publication years (Clarivate, 2025c). Two normalized citation metrics were used:

CNCI measures a publication's citation count relative to the global average for similar articles, matched by document type, publication year, and subject category. A CNCI value of 1.0

indicates the expected citation rate. Values above 1.0 show above-average impact, while values below 1.0 indicate below-average impact (Clarivate, 2025a).

JNCI compares a publication's citation count to the average citations of articles published in the same journal and year. As with CNCI, a JNCI value of 1.0 indicates the expected citation rate, while values above 1.0 show above-average impact and values below 1.0 indicate below-average performance (Clarivate, 2025b).

Out of 295 papers, 224 had both CNCI and JNCI values available and were included in analyses addressing the second and third research questions. To determine whether AI-related research had a significantly higher citation impact than the global average, a one-sample Wilcoxon signed-rank test was performed in SPSS (Version 28). This non-parametric test was selected because citation distributions are often skewed and deviate from normality. Both CNCI and JNCI distributions were compared against the benchmark value of 1.0. Data visualizations were generated with Python.

To address the third research question, a manual thematic classification was performed on publications with available abstracts ($n = 286$). Themes were identified by reading the abstracts and grouping publications based on their main topical focus. Recurring conceptual patterns related to peer review, ethics, policy frameworks, workflow integration, writing assistance, content detection, and general discussions of AI in publishing guided the development of themes. Each publication was assigned to a single primary theme to ensure consistency and avoid overlap between categories. To address the fourth research question, four publications explicitly mentioning libraries, librarians, or librarianship were identified within the dataset. Their full texts were systematically reviewed. Given the limited number of explicitly LIS-focused publications, this review was intended to provide contextual insight rather than a comprehensive representation of the field.

RESULTS

Bibliometric characteristics of AI-related research in scientific publishing

Between 2009 and 2024, the WoS-CC indexed 295 publications on AI in scientific publishing. The annual output remained low and relatively steady, with fewer than ten publications per year from 2009 through 2022, until a sharp rise occurred in 2023. In that year, 107 publications were recorded, increasing further to 143 in 2024. These two years together account for more than 84.8% of all publications. The dataset consisted of four document types: original research articles (49.9%), editorial materials (26.4%), review articles (14.9%), and letters

(8.8%). The substantial presence of editorials and letters indicates active discussions on AI's impact on scholarly publishing.

AI-related publications in scientific publishing covered a wide range of academic disciplines. The leading fields were Information Science and Library Science (15.9%), Computer Science (11.5%), and General Internal Medicine (10.2%). Other notable fields were Education and Educational Research (8.8%) and Social Sciences, Other Topics (5.1%). The majority of the publications were in English (94.9%), with smaller portions in Spanish (2.7%), Portuguese (0.7%), and Italian (0.7%). Publishing journals were diverse and multidisciplinary. *Learned Publishing* accounted for the largest share (3.4%), followed by *Science Editing* (3.1%). Other prominent journals included the *Journal of Medical Internet Research* and *Scientometrics* (each 1.7%), and the *Journal of the Association for Information Systems* (1.4%).

Contributions came from a wide range of international locations. The United States accounted for 28.1% of publications, followed by the United Kingdom (15.3%), China (10.5%), Australia (7.1%), and Germany and Italy (6.4%). At the institutional level, the top contributors were Harvard University (2.7%), Harvard University Medical Affiliates (2.4%), the National University of Singapore (2.0%), the University of California System (2.0%), and the University of Wolverhampton (2.0%). Among individual authors, Kayvan Kousha was the most productive (1.7%), followed by Jaime A. Teixeira da Silva and Haiyang Wu (1.4% each).

Citation impact of AI-related research in scientific publishing compared to category and journal norms

Two normalized citation metrics, CNCI and JNCI, were analyzed to determine whether AI-related research in scientific publishing achieves higher citation impact than the category and journal benchmarks. Figure 1 shows the distribution of CNCI scores across the 224 publications for which normalized data were available. About 80% of these publications had a CNCI of 1.0 or higher, indicating they were cited more frequently than the global average for similar studies, after adjusting for discipline, document type, and publication year. The median CNCI was 2.7, indicating that AI-related publications received nearly three times the expected number of citations within their subject category. A Wilcoxon signed-rank test confirmed that the median CNCI was significantly above the benchmark value of 1.0 ($W = 2157.0$, $P < .001$), as reported in Table 2. Dergaa et al.'s (2023) study, "*From Human Writing to Artificial Intelligence-Generated Text: Examining the Prospects and Potential Threats of ChatGPT in Academic Writing*," achieved the highest CNCI score of 69.7, nearly 70 times higher than the expected citation rate for articles in Sport Sciences.

Category	*n*	%	Category	*n*	%
Publication Years			**Document Types**		
2024	143	48.5	Article	147	49.9
2023	107	36.3	Editorial material	78	26.4
2022	10	3.4	Review article	44	14.9
2021	10	3.4	Letter	26	8.8
2020	7	2.4			
Research Areas			**Languages**		
Information Science Library Science	47	15.9	English	280	94.9
Computer Science	34	11.5	Spanish	8	2.7
General Internal Medicine	30	10.2	Portuguese	2	0.7
Education Educational Research	26	8.8	Italian	2	0.7
Social Sciences Other Topics	15	5.1	Chinese; German; Russian	1	0.3
Journals			**Countries**		
Learned Publishing	10	3.4	United States	83	28.1
Science Editing	9	3.1	England	45	15.3
Journal of Medical Internet Research	5	1.7	Peoples R China	31	10.5
Scientometrics	5	1.7	Australia	21	7.1
Journal of the Association for Information Systems	4	1.4	Germany, Italy	19	6.4
Affiliations			**Authors**		
Harvard University	8	2.7	Kousha, K	5	1.7
Harvard University Medical Affiliates	7	2.4	Teixeira da Silva, JA	4	1.4
National University of Singapore	6	2.0	Wu, H	4	1.4
University of California System	6	2.0	Rahimi, F; Thelwall, M; Abadi, ATB; Huh, S	3	1.0
University of Wolverhampton	6	2.0			

Table 1 Bibliometric characteristics of AI-related research in scientific publishing

Similarly, the analysis of JNCI (Figure 2) showed that 78% of publications had a JNCI of 1.0 or higher, meaning they received more citations than the average article published in the same journal and year. The median JNCI was 2.2, indicating AI-related publications were cited more than twice as often as comparable works in the same journal. A Wilcoxon signed-rank test revealed that the median JNCI was significantly above the benchmark value of 1.0 ($W = 2376.0$, $P < .001$). As shown in Table 2, the median CNCI and JNCI values were significantly higher than their respective benchmarks, with median differences of +1.7 and +1.2, respectively. The highest JNCI score, 39.9, was for "*Artificial Intelligence*

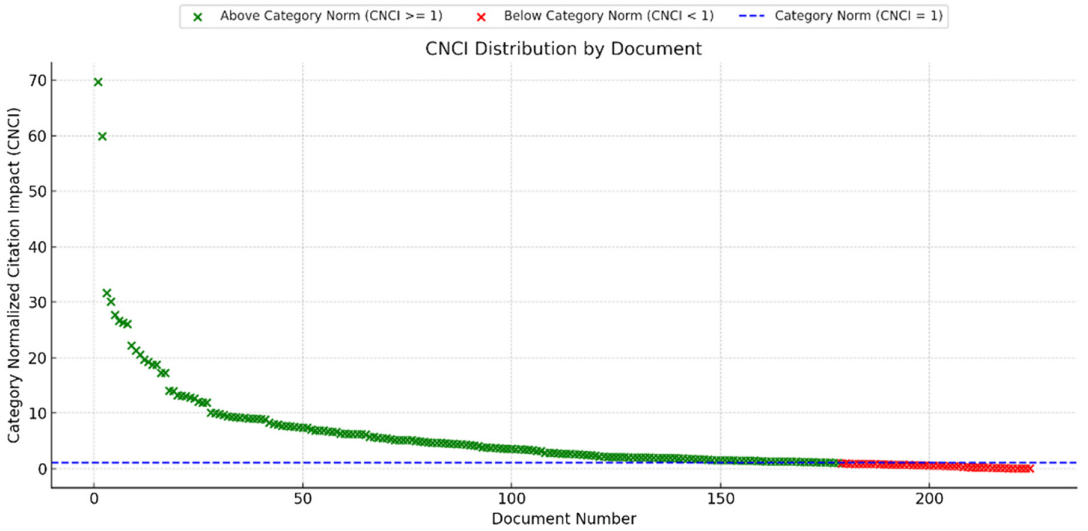

Figure 1. Distribution of CNCI values across AI-related research in scientific publishing

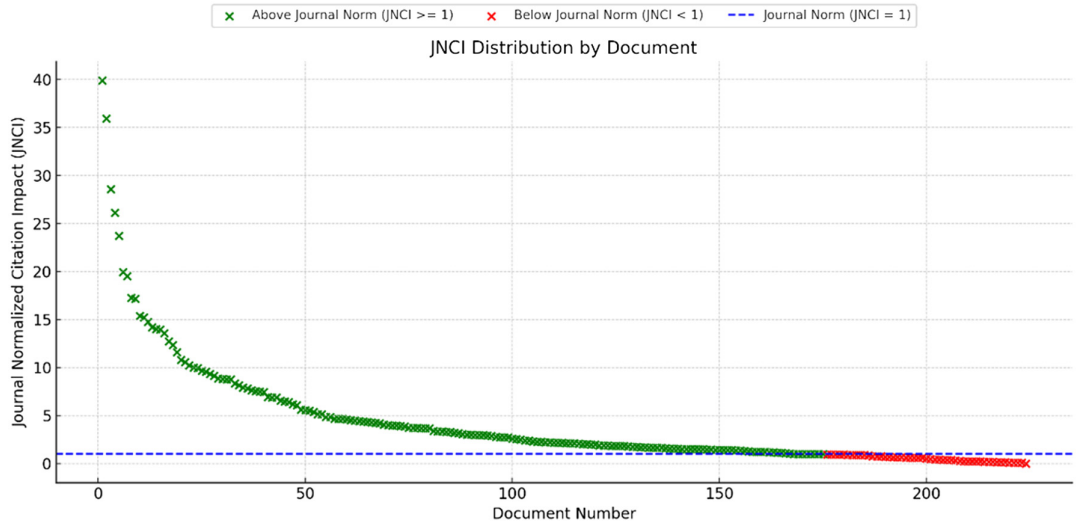

Figure 2. Distribution of JNCI values across AI-related research in scientific publishing

Metric	Observed Median	Expected Value	Median Difference	Wilcoxon W	*P* value
CNCI	2.7	1	+1.7	2157.0	< 0.001
JNCI	2.2	1	+1.2	2376.0	< 0.001

Table 2. Wilcoxon Signed-Rank test results comparing CNCI and JNCI values to normalized benchmarks

in Healthcare and Education" by Dave and Patel (2023), cited nearly 40 times more than the average article in the *British Dental Journal* in 2023.

THEMATIC TRENDS IN AI-RELATED RESEARCH IN SCIENTIFIC PUBLISHING AND THEIR CITATION IMPACT

To answer the third research question, a manual thematic classification was performed on publications with available abstracts ($n = 286$; Figure 3). Seven distinct sub-themes were identified, representing the main areas of scholarly focus in AI-related research. Each theme was evaluated using its median CNCI and JNCI to compare citation impact.

1. AI in the peer-review process

This sub-theme ($n = 65$) examined how AI supports peer-review processes, including reviewer suggestions, manuscript quality assessments, and plagiarism detection. The median CNCI and JNCI were both 2.0, indicating citation rates approximately twice the expected benchmarks at both category and journal levels. This citation impact underscores the crucial role of peer review in scholarly communication and the potential of AI to enhance the peer-review process. The most-cited paper in this theme was "*AI-Assisted Peer Review*" by Checco et al. (2021), with 108 citations in the WoS-CC.

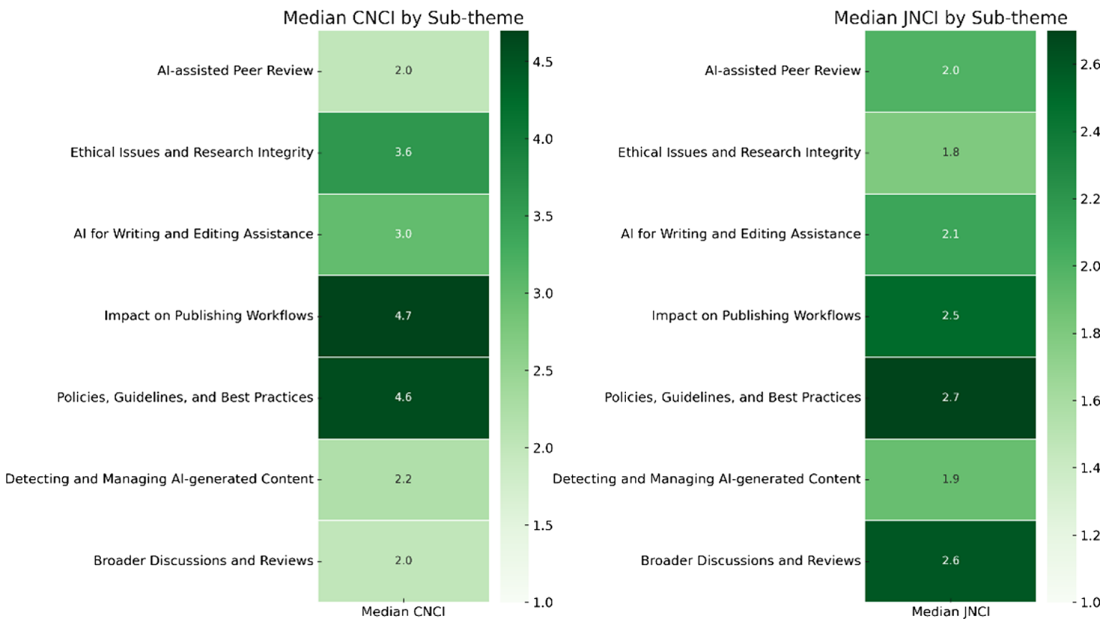

Figure 3. Median CNCI and JNCI values across AI sub-themes in scientific publishing

2. Ethical issues and research integrity

This theme ($n = 61$) addressed topics including algorithmic bias, misinformation, authorship ethics, and the maintenance of trust in the scientific record. It had a median CNCI of 3.6, the second highest among all themes. In contrast, the median JNCI was 1.8, suggesting that although these papers performed well within their subject area, their impact within individual journals was comparatively more moderate. The most-cited paper in this theme was "*ChatGPT and a New Academic Reality: Artificial Intelligence-Written Research Papers and the Ethics of the Large Language Models in Scholarly Publishing*" by Lund et al. (2023) with 339 citations in the WoS-CC.

3. Frameworks, policy, and guidelines for AI integration

This theme ($n = 31$) focused on formal frameworks, policy recommendations, and ethical guidelines for integrating AI into scholarly publishing. It achieved the highest CNCI (4.6) and the second-highest JNCI (2.7). Policy-focused publications often attract citations from a variety of stakeholders, including researchers, editors, and policymakers, which may explain their high normalized citation performance. The most-cited article in this theme was by Ganjavi et al. (2024), titled "*Publishers' and Journals' Instructions to Authors on Use of Generative Artificial Intelligence in Academic and Scientific Publishing: Bibliometric Analysis*," which had received 86 citations in the WoS-CC.

4. AI in writing and editing assistance

This theme ($n = 25$) examined AI applications in writing support, editing, translation, and summarization. The median CNCI was 3.0, and the median JNCI was 2.1, indicating strong citation performance at both disciplinary and journal levels. This pattern may reflect the widespread adoption of AI writing tools across various fields and their immediate relevance to researchers. The most-cited paper in this theme was by Jarrah et al. (2023), titled "*Using ChatGPT in Academic Writing Is (Not) a Form of Plagiarism: What Does the Literature Say?*" which received 76 citations in the WoS-CC.

5. Detecting and managing AI-generated content

This emerging theme ($n = 14$) focused on methods for detecting AI-generated text and addressing related editorial challenges. The median CNCI was 2.2, and the median JNCI was 1.9, indicating moderate but above-average citation performance. Though highly technical, this theme is expanding as detection techniques and tools become increasingly crucial to academic publishing workflows. The most-cited paper in this theme was "*Accurately Detecting AI*

Text When ChatGPT Is Told to Write Like a Chemist" by Desaire et al. (2023), which received 20 citations in the WoS-CC.

6. AI in publishing workflows

This smaller theme ($n = 11$) examined the integration of AI into submission systems, editorial decision-making, and post-publication processes. The median CNCI (4.7) and the median JNCI (2.5) showed strong citation performance across both journals and disciplines. The high citation rates of these publications likely result from the novelty of integrated AI systems and their potential implications for the future of academic publishing. The most-cited paper in this theme was "*How ChatGPT and Other AI Tools Could Disrupt Scientific Publishing*" by Conroy (2023), which received 60 citations in the WoS-CC.

7. Broad discussions and reviews on AI in publishing

This was the largest theme ($n = 78$), covering general discussions, overviews, and commentaries on AI's role in scholarly publishing, as well as publications that did not fit into more specific categories. The median CNCI was 2.0, and the JNCI was 2.6. Although less specialized, these publications often serve as entry points into the field, which may explain their strong journal-level performance despite more modest category-level scores. The most-cited paper in this theme was "*Artificial Intelligence in Healthcare and Education*" by Dave and Patel (2023), which received 96 citations in the WoS-CC.

AI-RELATED RESEARCH IN SCIENTIFIC PUBLISHING WITH FOCUS ON LIBRARIANSHIP

Although many publications reviewed in this study were implicitly related to librarianship, only four works explicitly mentioned libraries, librarians, or librarianship. These four publications were carefully reviewed to identify their themes and to explore their implications for library practice. The first publication, by Upshall (2022), introduced an AI toolkit designed to assist non-technical decision-makers in evaluating AI applications before implementation. The framework highlights issues such as corpus bias, training data quality, and evaluation metrics. For libraries, it provides practical guidance on promoting transparency, fairness, and accountability in the selection of AI tools for services and workflows. Cox et al.'s (2019) publication documented interviews with sector leaders about the future role of AI in academic libraries. The study highlighted the increasing responsibilities of library professionals in areas such as data curation, AI-driven discovery systems, and user navigation. It also emphasized the importance of developing machine-readable collections and updating licensing policies to support text and data mining.

The third study by Morriello (2019) examined potential applications of AI, blockchain, and the Internet of Things (IoT) in libraries. While emphasizing opportunities for automation and enhanced services, the paper also identified risks, including privacy concerns, interoperability issues, and the relative immaturity of blockchain technologies. For libraries, the key implication is the need to prioritize standards, fairness, and cautious implementation when adopting new digital tools. Finally, Pierre-Robertson's (2023) publication explored how the evolving role of librarians is influenced by the rise of generative AI. It highlighted expanding responsibilities in knowledge discovery, research evaluation, and visibility enhancement, while also maintaining academic integrity. The author emphasized that generative AI supports rather than replaces librarians' advisory and teaching roles, and called for AI literacy education and ongoing professional development in fields like scholarly communication, intellectual property, and research metrics. Although limited in number, these four publications provide insight into how AI is conceptualized within librarianship and suggest that libraries are not just adopting AI but also actively evaluating technologies, guiding infrastructure development, and shaping ethical and educational standards.

DISCUSSION

This study provides a comprehensive bibliometric analysis of AI-related research in scientific publishing, combining normalized citation metrics with thematic classification to assess both relative citation visibility and topical orientation in the literature. The analysis reveals three key findings. First, the rapid increase in publications since 2023 reflects the accelerated adoption of AI tools in scholarly communication following the release of large language models such as ChatGPT in late 2022 (Lund et al., 2023; Homolak, 2023). Between 2023 and 2024, over 84% of all identified publications were produced, suggesting a "surge effect" commonly observed in emerging research domains (Small, 2006). Second, AI-related research in scientific publishing showed significantly higher normalized citation performance than category- and journal-level benchmarks. The median CNCI and JNCI values of 2.7 and 2.2, respectively, indicate that these publications were cited more than twice as often as comparable publications in the same subject categories and journals. Moreover, the high proportion of publications with CNCI and JNCI scores above 1.0 indicates that the observed citation advantage is not attributable only to a small number of highly cited outliers (Bornmann & Daniel, 2008).

Third, thematic analysis of publications revealed variation in citation impact among sub-themes, although all showed above-average performance. Publications addressing frameworks, policies, and ethical guidelines for AI integration achieved the highest normalized citation scores, consistent with prior research indicating that policy-related research generally attracts broad attention due to its institutional and cross-disciplinary relevance (Hicks, 2013).

Studies examining innovations in publishing workflows also showed strong citation performance, highlighting the growing interest in operational integration of AI within editorial systems. More technically focused topics, such as AI-assisted peer review and AI-generated content detection, also received above-average citation attention, suggesting that problem-oriented and applied research generally attracts high scholarly interest from experts (Glänzel & Moed, 2002). It is worth noting that citation-based indicators represent trends in scholarly referencing and visibility, rather than direct measures of inherent quality, practical application, or lasting impact.

Several factors may contribute to the citation advantage of AI-related research. Novelty and topical relevance often enhance visibility, particularly when research themes intersect with active media and policy discussions (Bornmann, 2014). The interdisciplinary scope of AI in publishing likely expands its potential readership and citation impact across multiple fields. These publications are directly relevant to researchers, editors, and policymakers, which may increase their visibility and likelihood of citation. Also, the transferability of AI methods and tools across different fields enhances their visibility. Algorithms, datasets, and standards developed in one area are often easily adapted to new fields. The rapid pace of AI innovation may also influence citation dynamics, as scholars frequently cite recent work to remain current with evolving techniques and debates.

A focused examination of four publications that explicitly address librarianship provides insight for library professionals. Upshall (2022) presented structured approaches for evaluating AI tools; Cox et al. (2018) discussed the concept of the intelligent library and emphasized the role of machine-readable collections, licensing adaptations, and emerging competencies; Morriello (2019) addressed infrastructure considerations such as privacy, interoperability, and equity in implementing AI, blockchain, and IoT; and Pierre-Robertson (2023) examined the evolving professional role of librarians in the context of generative AI. Overall, these studies suggest that libraries are engaging not only in technological adoption but also in governance, infrastructure planning, and professional development related to AI.

The findings of this study have implications for various stakeholder groups. For researchers, the results identify areas with strong scholarly visibility, particularly at the intersection of policy, ethics, and workflow innovation. For publishers and editors, the prominence of policy and operational themes underscores the importance of developing robust governance frameworks and integrating AI responsibly within editorial processes. For librarians and scholarly communication professionals, the findings highlight specific areas where active involvement may be necessary, including AI policy advising, evaluation of AI-assisted authoring tools, guidance on responsible AI use in research support services, and assistance with text and data mining infrastructure. The emphasis on governance and workflow themes indicates that AI integration is

not just a technical challenge but also an institutional and educational issue, directly impacting training programs, information literacy efforts, and research consultation services.

Two methodological limitations of this study should be acknowledged. First, the analysis was limited to publications indexed in the WoS-CC, which may underestimate research published in non-English languages and regional journals. Second, although thematic classification followed a systematic approach, it involved interpretive judgment. Future research could broaden database coverage (e.g., Scopus, Dimensions, OpenAlex) and use automated topic modeling techniques to complement manual coding. Longitudinal analyses will also be important to determine whether the observed citation advantage reflects ongoing scholarly interest or a temporary novelty effect.

CONCLUSION

The integration of AI into scientific publishing is a rapidly evolving domain with substantial scholarly impact. The sharp increase in publications since 2023 reflects both the transformative potential of emerging technologies and a growing attention to AI's opportunities and risks in scholarly communication. This study shows that AI-focused research in publishing receives citation rates significantly above disciplinary and journal benchmarks, especially in areas related to policy development and workflow innovations. The focused review of publications explicitly addressing librarianship further highlights the evolving role of libraries in evaluating AI tools, developing machine-readable collections, addressing infrastructural considerations, and advancing AI literacy. These findings represent patterns within the indexed literature and should be interpreted within the methodological scope of citation-based and thematic analysis.

AUTHORSHIP

All aspects of the study, including conceptualization, data collection and analysis, interpretation of results, and writing, were completed by the sole author. Some sections of the draft were reviewed and refined using Grammarly and ChatGPT 5.2 for language editing and readability enhancement only. The author reviewed and approved the final version of the manuscript and accepts full responsibility for the content and integrity of the work.

CONFLICT OF INTEREST

The author states that there are no conflicts of interest related to this work.

FUNDING

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DATA AVAILABILITY

The dataset created for this research is available upon reasonable request.

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APPENDIX 1.
Search Query Used for Data Collection

((TI=("AI" OR "Artificial Intelligence" OR "ChatGPT*" OR "LLM" OR "Large Language Model*") AND TI=("academic publishing" OR "scientific publishing" OR "scholarly publishing" OR "peer review")) OR (TS=("AI" OR "Artificial Intelligence" OR "ChatGPT*" OR "LLM" OR "Large Language Model*") AND TS=("academic publishing" OR "scientific publishing" OR "scholarly publishing" OR "peer review"))) AND DT=(Article OR Review OR "Editorial Material" OR Letter) NOT DT=(Proceedings Paper OR "Book Chapter") NOT PY=2025