The Rise of Information Literacy in the Post-2020: A Global Bibliometric Synthesis (2020–2025)

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Abstract

This study presents a comprehensive bibliometric analysis of Information Literacy (IL) research conducted between 2020 and 2025, highlighting its sustained scholarly growth, thematic diversity, and evolving disciplinary intersections. Drawing on data from Web of Science and Scopus, the study analyzed 3,004 documents from 925 sources, revealing consistent annual publication growth and significant author engagement, albeit with limited international collaboration. The thematic mapping and keyword analysis uncovered a rich conceptual landscape, with IL intersecting fields such as digital literacy, health communication, AI ethics, and education. The co-occurrence networks and trend analysis confirmed that IL scholarship is responding dynamically to global challenges, including pandemic-induced transformations and digital misinformation. Despite modest citation averages, foundational works retain influence, and recent studies are gaining traction. This study underscores the need for deeper theoretical integration, enhanced global collaboration, and curricular innovation to align IL research with real-world information demands. The findings advocate for IL's centrality in educational policy and practice in an increasingly algorithm-driven, post-truth world.

Keywords: information literacy, web of science, bibliometric analysis, trend analysis, thematic mapping, media.

1. Introduction

Information literacy (IL) has evolved from a skills-oriented paradigm centered on locating and evaluating information to a broader, contested concept that is embedded in disciplinary practices, social infrastructures, and everyday life. Classic higher-education treatments defined IL as a learner capability tied to curricular design and graduate attributes (Bruce, 1998; Johnston, Webber, 2003). Recent work, however, shows a decisively sociocultural and critical turn: IL is entangled with issues of trust, doubt, and platformized information flows; it intersects with adjacent literacies (media, data, algorithmic) and with the politics of knowledge production (Haider, Sundin, 2022; Hicks et al., 2023; Kuehn, 2023). In short, IL has become both a pedagogical project and a way to make sense of the information ecosystems in which people live and learn. This conceptual diversification underpins the present bibliometric analysis: to understand how IL is discussed, who produces and influences the conversation, and where the field is heading, we need a panoramic, methodologically transparent map of the literature.

The discourse on IL has diversified across disciplines, reflecting its adaptability to evolving contexts. In educational settings, IL is often discussed as integral to curriculum design, fostering critical thinking and research abilities among students (Kolle, 2017). In the digital age,

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IL conversations increasingly incorporate elements of media and digital literacy, particularly in combating misinformation and navigating online environments (Islam et al., 2022). For instance, during global crises like the COVID-19 pandemic, IL has been framed as essential for discerning reliable health information and promoting digital self-efficacy (Baber et al., 2022). Moreover, in higher education, IL is debated in relation to mobile technologies, where it enables ubiquitous learning and personal knowledge management (Pinto et al., 2019). IL discussions have been delineated into thematic categories such as ability, technology, and application, illustrating how the concept evolves through interdisciplinary dialogues and temporal shifts (Li et al., 2021).

A substantial body of IL-focused bibliometric and scientometric studies already exists and provides a baseline for the present study. Global IL research from 2005-2014 has been profiled, documenting steady growth and identifying productive countries, outlets, and authors (Kolle, 2017). Comparative analyses have shown that IL is not monolithic but varies in productivity and conceptual emphasis across domains such as the social and health sciences (Pinto et al., 2013). Subsequent niche mappings capture diversification within the field, including mobile information literacy between 2006–2017 (Pinto et al., 2019), and visualizations of the intellectual structure and diffusion of IL literature from 1975–2018 (Onyancha, 2020). Most recently, the evolution and diffusion of IL topics across time were charted using dynamic topic modeling of 2005–2019 Web of Science articles (Li et al., 2021). Together, these studies confirm that IL research is internationalizing, branching into subfields, and engaging a wider array of disciplines and contexts.

Yet this same literature also reveals a timely gap, and therefore a need for one more, carefully designed bibliometric study. Most comprehensive mappings end in 2018 or 2019 (Onyancha, 2020; Li et al., 2021), just before the pandemic, the subsequent pivot to hybrid/online instruction, and the rapid mainstreaming of generative AI, developments that plausibly reshaped IL discourse, assessment, and collaboration patterns. Likewise, earlier studies either focus on particular disciplinary slices (e.g., social vs. health sciences) or on specialized niches (e.g., mobile IL), leaving open questions about how the field as a whole has reorganized during the 2020s (Pinto et al., 2013; Pinto et al., 2019). Moreover, the recent conceptualization of IL within "information ecosystems" (Kuehn, 2023) and the intensifying IL-misinformation nexus (De Paor, Heravi, 2020) suggest that new keyword clusters and co-citation neighborhoods have likely emerged. An updated, field-level synthesis is therefore warranted to (a) extend coverage through the mid-2020s, (b) examine geographic breadth and collaboration with attention to under-represented regions, and (c) identify emergent topics at the intersection of IL, data/media literacies, and AI.

In addition to the temporal gap, there is also a methodological one. Many earlier studies relied on a single index, often Web of Science, or used static snapshots of co-word structures based on a single time slice. As bibliometric research has matured, recommended workflows now emphasize transparent and reproducible pipelines, such as those available in the R-based bibliometrix/Biblioshiny suite. They also highlight longitudinal science mapping methods, including thematic evolution and historiographs, to trace how topics emerge and recombine (Aria, Cuccurullo, 2017; Donthu et al., 2021). By adopting such workflows and remaining mindful of database biases and the limits of network measures, researchers can overcome earlier constraints and produce maps that are both methodologically rigorous and substantively informative.

This study contributes by addressing these voids through a comprehensive bibliometric analysis of IL research up to 2025, drawing from multiple databases for broader coverage. It elucidates the ongoing discourse on IL (RQ1), maps distributions across years, countries, authors, citations, and collaborations (RQ2), and identifies emerging topics and trends (RQ3), offering fresh insights into post-2020 evolutions like AI-driven IL and equity issues. By highlighting interdisciplinary connections and future directions, this work advances scholarly understanding and informs policy for enhanced IL practices in education and beyond.

Conceptual Evolution of Information Literacy. Information literacy (IL) has undergone a profound conceptual transformation, evolving from a narrowly defined skillset into a multidimensional, interdisciplinary construct that shapes how individuals access, evaluate, and produce knowledge in complex information environments. Initially grounded in library science, IL was viewed as a set of technical competencies required to locate and use information effectively, particularly in academic and professional contexts. However, scholars have progressively reconceptualized IL through a sociocultural lens. IL has been reframed not as isolated skills, but as "enacted practices" rooted in social contexts (Lloyd, 2006). Others have emphasized that IL practices vary significantly across disciplines and communities, reflecting the epistemological

norms of different fields (Limberg et al., 2012). These shifts signify a broader move from individual cognitive models toward practice-based and relational frameworks that emphasize context, identity, and power.

IL within STEM is a specialized competency beyond basic search skills, involving evaluating technical data in health sciences and engineering. It emphasises domain-specific critical engagement and practices that support evidence-based reasoning (Schirone, 2022). Its appropriation across disciplines such as management, nursing, public health, and psychology shows that IL is often redefined to meet professional needs, such as ethical decision-making – though this can risk stripping away its sociocultural depth through simplification in non-LIS contexts (Hicks et al., 2023). This shift illustrates both IL's adaptability and its vulnerability to reductionism.

As IL gained disciplinary traction, it was integrated into diverse domains including health sciences, engineering, education, and business studies, each adapting the concept to suit its own informational challenges. In clinical settings, IL has been shown to enhance evidence-based decision-making by enabling healthcare professionals to critically evaluate medical research (Jacobs et al., 2003). Within engineering education, IL has been contextualized to address the use of technical standards, patents, and grey literature (Zwicky, Phillips, 2018). In the field of management, IL has been positioned as central to organizational knowledge-building, supporting innovation, strategic planning, and risk analysis (Walton, Hepworth, 2011). In education, IL supports inquiry-based learning by fostering reflective and critical engagement with information (Lupton, 2008).

This theoretical expansion has been mirrored in the structure of published IL research, as mapped through bibliometric analyses. Bibliometric studies have been instrumental in visualizing IL's intellectual landscape, tracking publication trends, identifying influential authors, and revealing thematic shifts over time. For instance, co-authorship analysis of IL literature indexed in Web of Science demonstrated the formation of collaborative clusters and the dominance of Anglophone scholarship (Ardanuy, 2013). Building on the exploration of the "dark side" of information, where informational abundance leads to overload, disorientation, and anxiety (Bawden, Robinson, 2009), later bibliometric studies have documented a shift in IL discourse away from technical and instrumental understandings toward more critical, reflective, and context-sensitive approaches. These patterns are also evident in citation structure analyses that revealed the emergence of multiple knowledge domains, each with distinct citation practices and intellectual foundations (Gmür, 2003). To address gaps in earlier analyses, more recent studies have incorporated co-citation and bibliometric mapping to further chart IL's evolving trends (Shaheen et al., 2017).

The convergence of information literacy (IL) with adjacent literacies, particularly digital and media literacy, has gained growing attention in recent scholarship, reflecting its evolving conceptual boundaries. A co-citation network analysis of the top 100 most-cited IL articles in higher education between 2011 and 2020 identified four dominant research trends: students' IL beliefs and behaviors, the perspectives of educators and librarians, the relationship between IL and epistemic beliefs, and the web search behaviors of digital natives (Chen et al., 2022). Building on this, a scientometric analysis covering IL, ICT literacy, digital literacy, and media literacy identified overlapping disciplines and highlighted the need for context-specific and globally collaborative digital literacy frameworks (Park et al., 2021). Extending the conversation into media literacy, an analysis of 776 publications from 2000 to 2021 highlighted the growing intersection of media literacy with misinformation, digital citizenship, and critical thinking (Kutlu-Abu, Arslan, 2023). Collectively, these studies underscore how IL is increasingly intertwined with broader sociocultural and educational concerns, including epistemic agency, algorithmic exposure, and civic responsibility.

Furthermore, bibliometric research has brought attention to the regional disparities in IL scholarship, particularly in Latin America and the Caribbean (LAC). While global health literacy research spans diverse thematic areas, studies from LAC tend to focus more narrowly on public health and policy-related themes (Paucar-Caceres et al., 2023). The evolution of IL in Latin America has been traced through key phases of growth, with recent shifts emphasizing digital adaptation and AI integration (Uribe-Tirado, Machin-Mastromatteo, 2024). Earlier analyses documented the steady rise of Ibero-American IL publications, highlighting strong contributions from Spain and Brazil, but also revealing limited collaboration and global visibility (Pinto et al., 2015). These findings reinforce the need for more inclusive bibliometric approaches that reflect regional contexts and multilingual scholarship.

Collectively, these bibliometric findings offer a comprehensive view of IL's evolution as both a theoretical construct and a research field. The literature reveals the expansion of IL across domains, the broadening of its conceptual framework to include critical and digital dimensions, and its increasing convergence with global concerns, such as misinformation, surveillance, and information equity. At the same time, these analyses illuminate gaps in international representation, the need for broader data sources, and the importance of capturing emergent research clusters that reflect the current information challenges societies face. Therefore, bibliometric analysis functions not only as a descriptive tool but also as a means of setting the agenda for IL research. Based on the literature above, the following research questions have been formulated:

RQ1: How has the volume and thematic focus of information literacy research evolved between 2020 and 2025?

RQ2: Which countries, institutions, and authors have been most influential in shaping the IL discourse, and how has global collaboration developed?

RQ3: What emerging themes, particularly at the intersection of IL with media literacy, algorithmic literacy, and AI ethics, can be identified through co-word and citation network analysis?

2. Materials and methods

Research Design. This study employed a quantitative bibliometric research design to systematically map the global scholarly output on *information literacy* (IL) from January 2020 to March 2025. The primary objective was to chart the structural, geographical, and thematic landscape of IL research during this period, offering a focused and updated perspective on how the field has evolved in the immediate post-pandemic and AI-emergent era. Bibliometric analysis was deemed appropriate for this purpose because it provides measurable indicators of scholarly productivity (e.g., publication counts), influence (e.g., citation metrics), and intellectual structure (e.g., co-citation, co-authorship, and keyword networks) (Aria, Cuccurullo, 2017; Zupic, Čater, 2015). Unlike prior bibliometric studies that conflated IL with related literacies such as digital, media, or algorithmic literacy (Kutlu-Abu, Arslan, 2023; Pinto et al., 2019), this research deliberately isolated *"information literacy"* as a standalone term to preserve the conceptual integrity of the field and enable a more precise examination of its disciplinary trajectory in the past five years.

Data sources and retrieval strategy

Two authoritative bibliographic databases, Web of Science (WoS) Core Collection and Scopus, served as the primary data sources. WoS is widely recognized for its curated, citation-rich indexing and is frequently used in bibliometric research (Mongeon, Paul-Hus, 2016), while Scopus offers broader coverage, particularly in social sciences and interdisciplinary domains (Pranckutė, 2021). The search strategy involved querying the exact phrase *"information literacy"* in the title, abstract, and author keywords fields to ensure conceptual precision and avoid conflation with related terms. Boolean operators were not used to combine IL with other concepts, thereby maintaining terminological specificity. The search was restricted to documents published between 1 January 2020 and 31 March 2025, limited to journal articles and review papers, and refined to English-language publications to ensure consistency in metadata analysis. Editorials, letters, book chapters, and conference proceedings were excluded.

Records retrieved from both databases were exported in BibTeX and CSV formats. Deduplication was performed using R scripts, followed by manual verification to exclude documents that mentioned IL tangentially but were primarily focused on other domains (e.g., digital skills or online safety). Author names, institutional affiliations, and country identifiers were standardized to correct spelling variants and unify regional classifications (e.g., "England" and "Scotland" were aggregated under "United Kingdom"), following established bibliometric normalization protocols (Donthu et al., 2021).

Analytical Techniques and Software Tools. The cleaned dataset was analyzed using the Bibliometrix R package and its web interface Biblioshiny (Aria, Cuccurullo, 2017) for descriptive statistics, science mapping, and network visualization. Annual scientific production trends were calculated to reveal growth dynamics in IL research. Citation-based metrics were used to identify the most influential authors, journals, institutions, and countries.

Collaboration patterns were examined through co-authorship network analysis at the author, institution, and country levels, enabling the detection of both domestic and international research partnerships. Co-citation analysis was applied to identify foundational works and intellectual clusters within the field, while bibliographic coupling was used to uncover thematic linkages

among recent publications (Boyack, Klavans, 2010). Keyword co-occurrence analysis was conducted to detect thematic structures and conceptual relationships, with author-supplied keywords serving as the primary analytical basis. Network visualizations were generated in VOSviewer (Van Eck, Waltman, 2010), which uses distance-based algorithms to map and cluster related nodes for clearer interpretation.

Geographical, Institutional, and Journal-Level Analysis. Geographical patterns were mapped using author affiliation data, with countries ranked by total publication output and total citations. International collaboration rates were determined by calculating the proportion of multi-country authored papers. Institutional productivity was assessed by aggregating publications by university or research organization, and leading institutions were compared on both output volume and citation impact. Journal-level analysis examined where IL research is most frequently published, ranking journals by number of articles, total citations, and average citations per article. Co-citation networks of journals were also mapped to assess disciplinary anchoring and identify diversification into related fields such as education, information science, and communication studies.

Validity and Ethical Considerations. To ensure validity and reliability, the study drew from two leading bibliographic databases, applied precise search terms and inclusion criteria, and implemented both automated and manual cleaning procedures. The use of established bibliometric software enhanced reproducibility and methodological transparency. Nevertheless, bibliometric indicators can be influenced by disciplinary citation practices, database coverage, and time-lag effects (Moed, 2005). Restricting the analysis to English-language publications may underrepresent contributions from non-Anglophone contexts. This research relied solely on publicly available bibliographic metadata and did not involve human participants or sensitive personal data. All analyses complied with academic citation ethics and open-source software licensing requirements.

3. Discussion

The bibliometric analysis of information literacy research spanning the early to mid-2020s highlights a field that has matured significantly amid digital advancements and educational shifts following global disruptions. This period witnessed sustained scholarly engagement, with publications emerging across numerous sources, reflecting the field's interdisciplinary nature in areas such as education, digital media, and health communication. A similar upward trajectory in IL literature during earlier decades was attributed to evolving pedagogical needs (Kolle, 2017). The modest growth rate observed during this recent timeframe suggests a consistent rather than rapid expansion – possibly indicating a phase of consolidation in which foundational concepts are being refined for contemporary applications. Keyword diversity signals an expansion beyond core information-seeking skills into sociotechnical domains, including misinformation mitigation and artificial intelligence integration. This evolution positions information literacy as a multifaceted discipline marked by broad author involvement and meaningful academic influence, though opportunities remain for enhanced international partnerships to enrich contextual adaptations.

As illustrated in Figure 2, annual scientific output in information literacy experienced an initial surge in the early 2020s, likely driven by the transition to digital learning environments and heightened awareness of information competencies during widespread challenges. This aligns with previous research that identified transformative themes in digital literacy amid similar disruptions (Baber et al., 2022). Subsequent years showed relative stability with a peak toward the mid-decade, followed by a slight decline, which may reflect a recalibration of research priorities toward emerging technologies like artificial intelligence. Despite fluctuations, the trend underscores the field's adaptability, contributing to critical thinking and well-being in dynamic contexts (Li et al., 2021). Such patterns emphasize the necessity for ongoing support to maintain momentum in addressing technological transformations.

Geographically, as depicted in Figure 3, information literacy production is concentrated in regions with strong investments in digital infrastructure, such as North America, East Asia, and parts of Europe. The United States and China stand out as key contributors, reflecting national emphases on educational technology and competence-building. Similar dominance in mobile information literacy research has been linked to institutional resources (Pinto et al., 2019). Underrepresentation in areas such as Africa and Central Asia likely results from barriers in funding and access, highlighting the need for inclusive initiatives to develop region-specific frameworks.

Bridging these disparities could foster a more equitable global discourse, as emphasized in studies on international scientific productivity (Gong et al., 2025).

Figure 4 showcases highly cited documents that underscore information literacy's interdisciplinary reach, intersecting with behavioral sciences, educational technology, and health domains. Leading works address fake news detection, teacher competencies, and infodemic management, demonstrating the field's relevance across journals. For instance, foundational studies often accumulate greater influence over time, a pattern observed in bibliometric surveys of related literacies (Yan et al., 2024). Emerging scholarship gains rapid recognition, reinforcing information literacy's role in psychological resilience and innovative learning (Hsieh et al., 2013). This citation distribution affirms the domain's evolution, blending traditional and contemporary applications.

Table 2 reveals prominent sources rooted in library and information sciences, with extensions into education-oriented outlets. Journals focused on academic librarianship and information literacy are at the forefront, facilitating cross-disciplinary exchanges. This reflects trends observed in content analyses, where open-access platforms have been shown to enhance knowledge accessibility (Chen et al., 2021). The diversity of publication venues supports the democratization of information literacy insights, aligning with global pedagogical goals. Institutional affiliations in Figure 5 highlight contributions from robust academic systems in the United States, as well as in South Asia and Europe. Leading universities demonstrate collaborative efforts between libraries and faculties, a dynamic explored in curriculum integration studies. Similar institutional roles in promoting data-driven learning have been noted, offering potential pathways for broader scholarly impact (Dong et al., 2023).

The keyword co-occurrence network in Figure 6 centers on core terms like information literacy, interconnected with education, libraries, and critical thinking, forming pedagogical clusters. Emerging themes in health and artificial intelligence indicate interdisciplinary growth, addressing societal concerns such as misinformation. This structure echoes topic diffusion analyses, highlighting shifts toward technology-driven competencies (Li et al., 2021). Figure 7's collaboration map positions major hubs like the United States in extensive networks with partners in Europe and Asia yet reveals gaps in underrepresented regions. Enhancing these linkages could promote culturally sensitive practices, as recommended in global bibliometric overviews (Kolle, 2017).

Trend topics in Figure 8 illustrate persistent foundational elements alongside rising interests in artificial intelligence and creativity, signaling adaptation to digital shifts. Earlier instructional focuses evolve into qualitative explorations, diversifying methodologies (Yan et al., 2024). Finally, Figure 9 categorizes themes with education-centric concepts as basic yet requiring deeper development, while niche areas like health literacy suggest specialized potential. This configuration reinforces information literacy's educational core, with scope for innovation in ethics and technology (Gong et al., 2025). Overall, the analysis depicts information literacy as a vital, adaptive field poised to empower societies in complex information landscapes through integrated, collaborative advancements.

4. Results

The bibliometric analysis of Information Literacy (IL) research from 2020 to 2025 reveals a total of 3,004 published documents across 925 distinct sources, reflecting sustained scholarly attention to the field during a period marked by digital acceleration and post-pandemic educational restructuring (see Table 1). These publications were produced by 9,103 unique authors, with international co-authorship accounting for 11.42 % of the total, suggesting that while IL is globally recognized, cross-border research partnerships remain relatively modest. The annual growth rate of IL publications stands at 2.07 %, indicating a steady but moderate increase in research output during these five years. With an average of 6.31 citations per document, the dataset demonstrates that IL research continues to garner academic visibility and impact, particularly in interdisciplinary contexts such as education, digital media, and health communication.

Keyword analysis shows remarkable thematic diversity, with 7,964 author-assigned keywords pointing to a wide spectrum of IL-related topics ranging from digital literacy and misinformation to AI integration and critical pedagogy. This breadth highlights the conceptual expansion of IL beyond traditional information-seeking skills into more complex sociotechnical and cultural domains. Overall, the results suggest that IL research has evolved into a mature and multifaceted academic field with broad author engagement, a solid citation footprint, and an increasingly

diverse knowledge base, though there remains untapped potential for deeper international collaboration and longitudinal thematic consolidation.

Table 1. Primary information data of Information Literacy Research

Description	Results
Timespan	2020–2025
Sources (Journals, Books, etc)	925
Documents	3004
Annual Growth Rate, %	2.07
Average citations per doc	6.306
Author's Keywords (DE)	7964
Authors	9103
International co-authorships, %	11.42

Figure 2 illustrates the annual scientific output on Information Literacy (IL) from 2020 to 2025. The number of publications rose sharply from just under 300 articles in 2020 to over 600 in 2021, indicating a rapid surge in scholarly interest likely driven by global shifts to digital education and increased focus on information competencies during the COVID-19 pandemic. The years 2022 and 2023 maintained relatively stable production levels, with a slight increase leading to a publication peak in 2024, where scientific output reached its highest level. However, a noticeable drop occurred in 2025, with the number of articles falling back close to the 2020 baseline. This fluctuation may reflect a post-pandemic stabilization of academic agendas or shifting research priorities toward emerging areas such as AI literacy and data governance. Despite the decline in 2025, the overall trend from 2020 to 2024 demonstrates that IL remains a critical area of inquiry, consistently attracting scholarly contributions. The sustained output over multiple years highlights the field's relevance across disciplines and its adaptability in response to global educational and technological transformations.
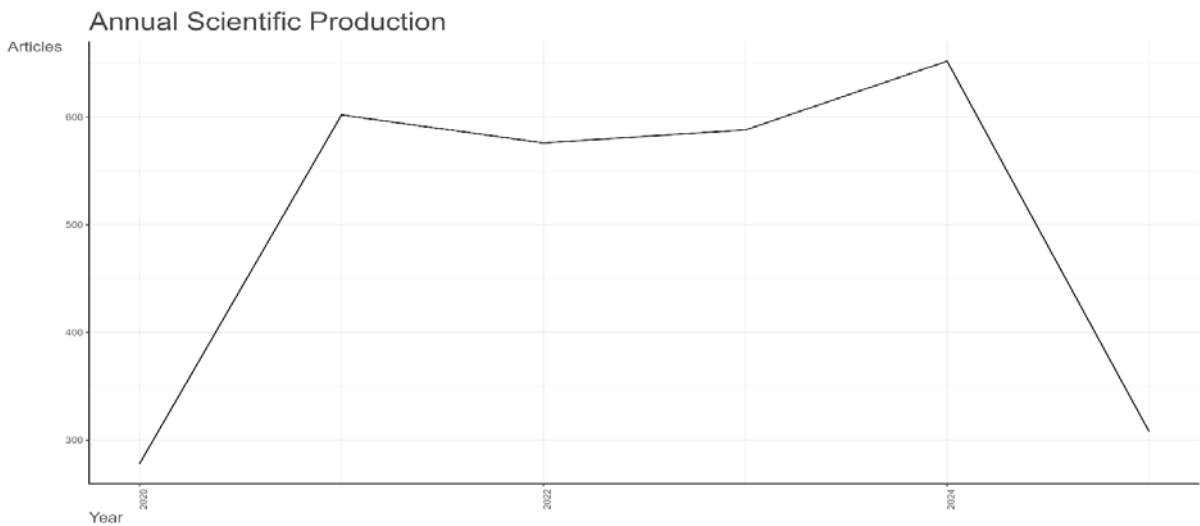

Fig. 2. Annual Production

Figure 3 presents the geographical distribution of scientific production in the field of Information Literacy (IL) from 2020 to 2025. The United States emerges as the most prolific contributor, underscoring its dominant role in global IL scholarship. This leadership can be attributed to the country's extensive investment in digital infrastructure, information science education, and research funding. China also features prominently, reflecting its growing academic output and strategic emphasis on digital competence and educational technology. Other significant contributors include the United Kingdom, India, Australia, and Spain, countries where IL has been integrated into national education frameworks and library science curricula.

Conversely, IL research appears to be underrepresented in much of Africa, Central Asia, and parts of Eastern Europe. Limited access to research funding, digital infrastructure, and academic publishing platforms may be key factors contributing to this uneven distribution. The visible concentration of IL publications in North America, Western Europe, and East Asia points to the need for more inclusive global research efforts. Encouraging scholarly exchange, capacity building, and regional partnerships could help bridge these disparities and support the development of context-specific IL frameworks in underrepresented regions.
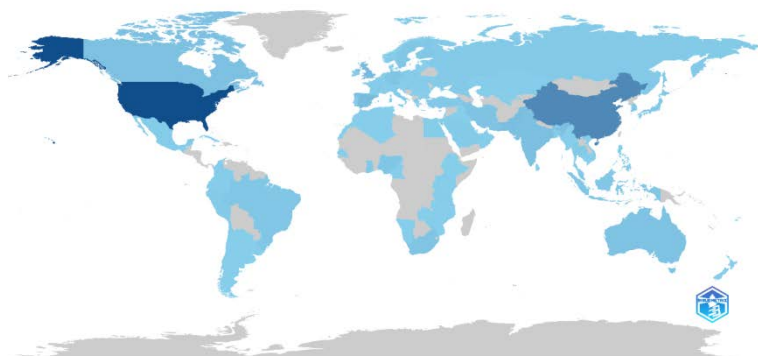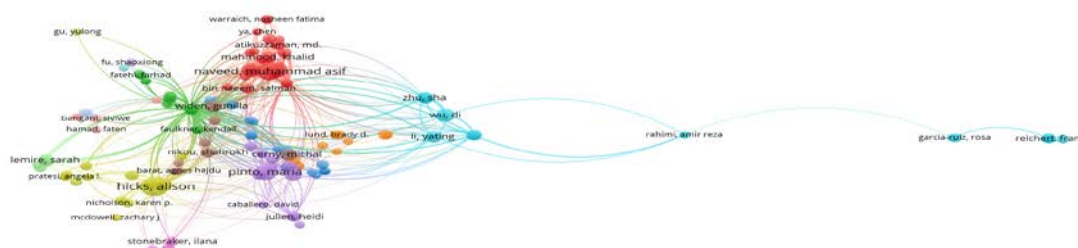

Fig. 3. Country-wise production

Research findings from the most influential academic journals that have contributed to Information Literacy (IL) studies between 2020 and 2025, highlighting the field's growing maturity and interdisciplinary scope. The *Journal of Academic Librarianship* emerged as the most prolific source with 134 publications, followed by the *Journal of Information Literacy* and *Library Philosophy and Practice*, both of which serve as foundational platforms for theoretical and applied IL discourse. Notably, open-access and practitioner-focused journals such as *Communications in Information Literacy* and *Library Philosophy and Practice* underscore the growing commitment to inclusive and practice-based scholarship. The inclusion of technologically driven journals like *Computers & Education* and *Education and Information Technologies* reflects IL's integration with digital pedagogy and EdTech innovation, while the presence of historically grounded publications such as the *Journal of Documentation* and *Journal of Librarianship and Information Science* signals sustained engagement with information behavior, critical frameworks, and methodological pluralism. Collectively, the distribution of articles across these diverse sources affirms IL's expanding academic footprint and its dynamic intersections with library science, educational technology, and higher education policy.

The Figure 4 represents the co-authorship network of the most influential researchers in the field of Information Literacy from 2020 to 2025, generated using VOSviewer.


Fig. 4. Top Influential Authors

The clusters indicate distinct collaborative groups, with dense interconnections among authors like Naveed Muhammad Asif, Mahmood Khalid, and Hicks Alison, highlighting regional or institutional collaboration hubs. Peripheral authors such as Garcia-Gue Rosa and Reichel Frank appear more isolated, suggesting limited integration into broader scholarly networks.

Figure 5 highlights the institutional affiliations contributing most significantly to Information Literacy (IL) research between 2020 and 2025. The University System of Ohio leads with 70 publications, establishing itself as the most influential institution in the field. Purdue University follows with 50 publications, while the University of the Punjab, based in Pakistan, ranks third with 45 articles, demonstrating notable representation from South Asia. Other top contributors include the Purdue University System and the University of London, each with 44 publications, and University College London with 42. These affiliations reflect a strong presence of IL research within both American and British higher education systems, as well as a growing scholarly footprint from non-Western regions.
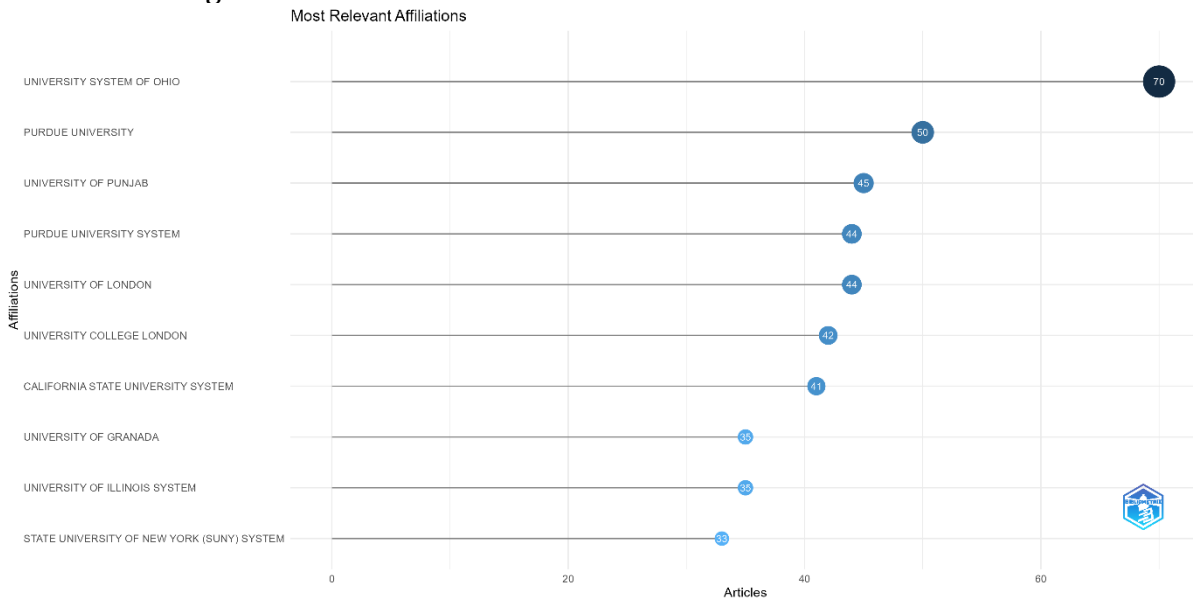
Fig. 5. Author's Affiliation

Figure 6 visualizes the co-occurrence network of keywords used in Information Literacy (IL) research, highlighting the conceptual structure and thematic clusters within the field.
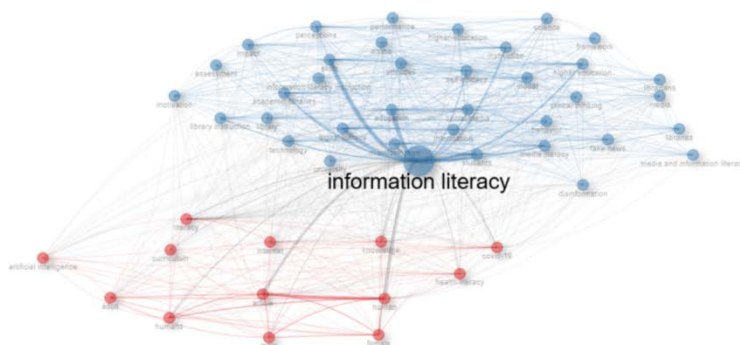

Fig. 6. Co-occurrence network

The central dominance of the term "information literacy" is evident, with strong associations to keywords such as "education," "students," "libraries," "higher education," "media literacy," and "critical thinking," forming a dense blue cluster focused on pedagogical and institutional contexts. In contrast, the red cluster introduces themes like "health literacy," "COVID-19," "internet," "curriculum," "gender," and "artificial intelligence," reflecting emerging and interdisciplinary areas

that intersect with IL. This network reveals how traditional educational perspectives are now integrated with broader societal and technological concerns, such as misinformation, AI, and public health communication. The dual focus underscores IL's evolution into a multidimensional competence that supports not only academic achievement but also informed civic participation in a complex digital ecosystem.

Figure 7 illustrates the global collaboration network in Information Literacy (IL) research between 2020 and 2025, revealing key transnational partnerships and research hubs. The United States appears as the most central node, engaging in collaborative work with a wide range of countries including the United Kingdom, China, Australia, India, and several European and African nations. This demonstrates its pivotal role in facilitating international IL discourse. Other prominent collaboration centers include China, the UK, and Australia, all of which maintain active cross-border linkages that strengthen knowledge exchange and joint authorship. However, notable gaps remain in parts of South America, Central Asia, and sub-Saharan Africa, where collaboration appears sparse. IL scholarship is characterised by its global nature, which is highlighted by the map. Furthermore, it emphasises the importance of creating more inclusive partnerships, particularly in regions that are underrepresented in international academic networks.
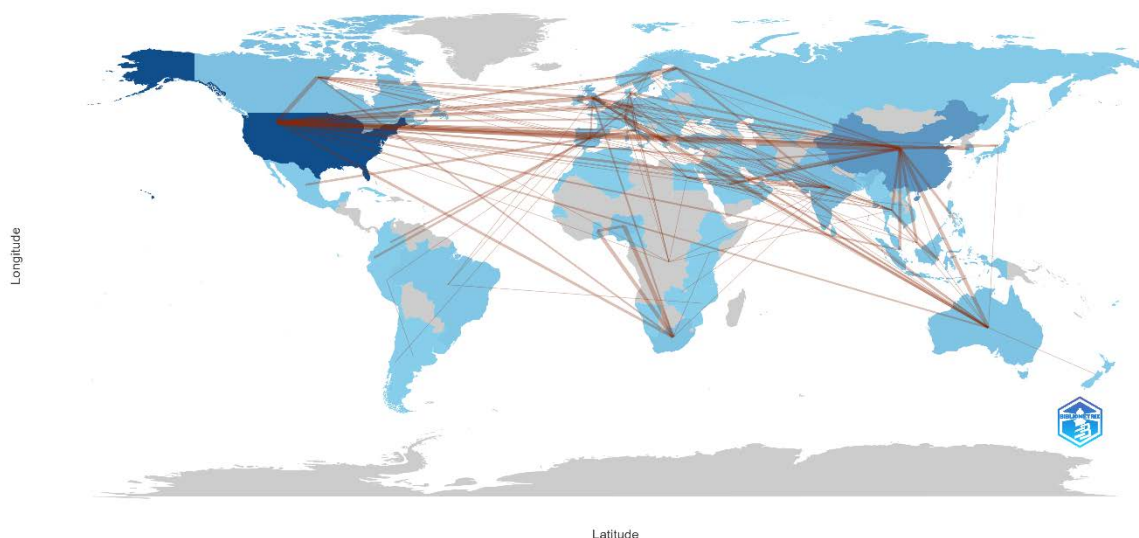

Fig. 7. Collaboration of Authors

Figure 8 displays the emerging and evolving trend topics in Information Literacy (IL) research from 2020 to 2025. Core terms such as "information literacy," "education," "digital literacy," and "students" appear with high frequency and early onset, signaling their foundational role in the field. Over time, newer terms like "artificial intelligence," "self-management," "variables," and "creativity" have gained prominence, particularly from 2023 onward. This shift indicates a growing scholarly interest in the integration of IL with cognitive skills, AI technologies, and personalized learning strategies. Earlier trends focused more on instructional design elements like "flipped classroom," "writing," and "comprehension," while recent attention has moved toward interdisciplinary topics like "mobile information literacy" and "qualitative research." The increasing presence of AI-related terms in the most recent years suggests that the field is adapting to the digital transformation of knowledge environments, positioning IL at the intersection of education, technology, and critical inquiry.

Figure 9 presents the thematic map of Information Literacy (IL) research, categorizing key topics based on their relevance (centrality) and development (density). Positioned in the lower right quadrant, representing basic themes, are "information literacy," "students," and "education." These topics are central to the IL research landscape, signifying their foundational role in the field. Their relatively low density suggests these themes are often studied and linked to other concepts but still need more theoretical and methodological development. On the other hand, the upper left quadrant, home to niche themes, features terms like "human," "health literacy," and "article."

These are well-developed yet peripheral topics, suggesting specialized interest and depth but limited interdisciplinary influence or widespread application within IL scholarship.
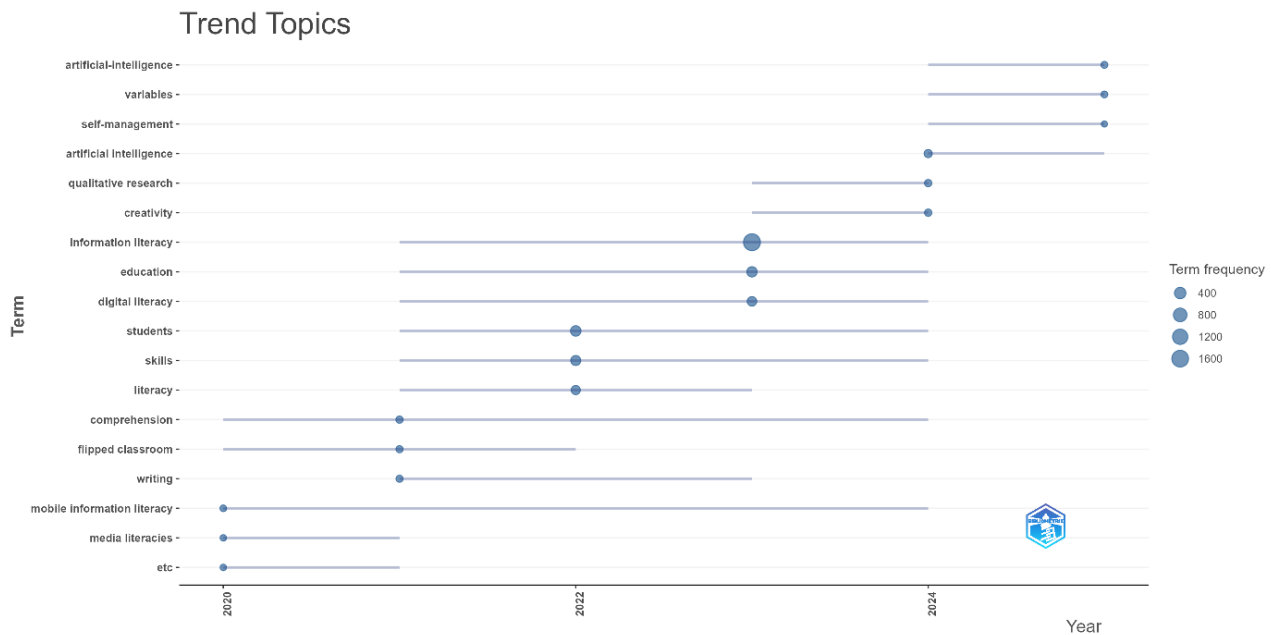
Fig. 8. Trent Topics in IL

The absence of themes in the upper right quadrant (motor themes) and lower left quadrant (emerging or declining themes) suggests that no IL subdomains have simultaneously achieved both high centrality and high development, nor are there dominant declining or novel topics currently reshaping the field. Nevertheless, the positioning of health-related literacy and human-centered studies in the niche zone may indicate growing intersections between IL and public health or behavioral studies, especially post-pandemic. Meanwhile, the consistent presence of education-centric keywords in the basic quadrant affirms the enduring focus of IL within pedagogical contexts, particularly in higher education and student learning. This thematic configuration reinforces IL's status as a core educational competency while highlighting the potential for deeper exploration into its applications in health, civic participation, and digital ethics.
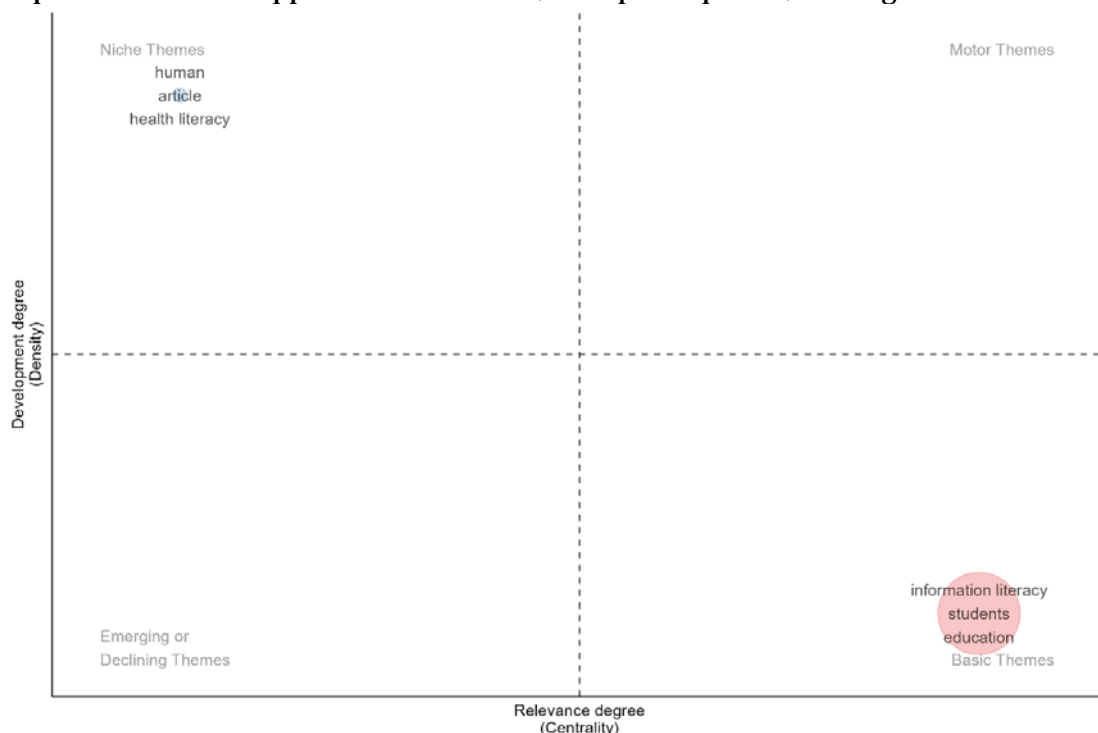
Fig. 9. Thematic Map

5. Conclusion

This bibliometric study affirms that Information Literacy research has not only endured but expanded in response to the evolving demands of digital society. The consistent publication growth, robust thematic clusters, and interdisciplinary reach reflect IL's transformation into a pivotal research frontier. However, the uneven geographic distribution and relatively low international collaboration rates signal an urgent need for inclusive and diversified scholarly networks. Core themes like education and student learning continue to shape the field's foundation, yet emergent areas, especially AI, health literacy, and misinformation, illustrate IL's capacity to evolve with technological and societal shifts. Thematic mapping and keyword co-occurrence further revealed that while IL maintains its educational roots, its relevance now extends to critical issues such as algorithmic governance, pandemic communication, and civic engagement. This underscores the imperative for both theoretical enrichment and practical integration of IL into curricula and policy across educational systems. Moving forward, fostering global research partnerships, adopting more sophisticated methodological tools, and embedding IL in interdisciplinary and cross-sectoral frameworks will be key to enhancing its impact. As the information ecosystem grows increasingly complex, the capacity to critically navigate, evaluate, and ethically engage with information, core tenets of IL, will remain indispensable to democratic participation and lifelong learning.

Limitations. The bibliometric analysis of information literacy research, utilizing both Web of Science and Scopus databases from 2020 to 2025, provides a solid foundation for understanding recent trends; however, several limitations persist that merit attention. The focus on these two databases, while comprehensive, may still exclude significant contributions from other indexing systems or gray literature, potentially introducing a selection bias despite the dual-database approach. Additionally, the temporal scope from 2020 to 2025, chosen to explore uncharted territory following prior studies, may limit the ability to trace long-term evolutionary patterns or the influence of foundational works predating this period. Language bias remains a concern, as the predominance of English-language publications could underrepresent scholarly efforts in non-English-speaking regions. Furthermore, reliance on quantitative metrics such as citation counts and publication numbers may not fully encapsulate the qualitative impact or practical application of research, potentially overlooking nuanced contributions due to factors like self-citation or disciplinary fragmentation. These limitations suggest that while the analysis is robust, its findings should be interpreted with an awareness of these contextual constraints.

Future Recommendations. To further advance information literacy research and address identified gaps, future endeavors should build on the current foundation by incorporating a broader range of data sources beyond Web of Science and Scopus, such as regional databases or open-access repositories, to enhance inclusivity and capture diverse perspectives. While the 2020–2025 timeframe effectively targets a novel research window, extending the analysis to include earlier decades could provide a richer historical context, enabling a more comprehensive understanding of the field's trajectory. Embracing multilingual research outputs would further diversify the evidence base, particularly from underrepresented regions such as Africa and Central Asia, thereby supporting equitable global discourse.

Integrating qualitative methodologies, such as case studies or ethnographic analyses, alongside bibliometric techniques could illuminate the practical implications and educational impacts of information literacy, addressing limitations in current metrics. Additionally, fostering interdisciplinary collaborations with fields such as artificial intelligence, health sciences, and digital humanities could drive the development of innovative frameworks to tackle emerging issues, including misinformation and digital citizenship. Targeted initiatives, including international research networks and capacity-building programs in low-representation areas, would further enhance global participation and relevance. These strategies promise to position information literacy as a dynamic, inclusive discipline responsive to the evolving demands of a digital society.

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