ChatGPT as a Scaffold for Strategic Academic Reading in Tertiary Education: A Bibliometric Study

Noor Hanim Rahmat

Akademi Pengajian Bahasa, Universiti Teknologi MARA, Shah Alam, Malaysia

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ABSTRACT

The rapid integration of generative artificial intelligence, particularly ChatGPT, into higher education has sparked growing scholarly interest in its potential to support strategic academic reading and critical engagement with complex texts. While empirical studies on AI-assisted learning are increasing, the intellectual structure, research trends, and collaborative patterns surrounding ChatGPT as a scaffold for academic reading in tertiary education remain fragmented. Addressing this gap, the present study conducts a bibliometric analysis to systematically map the development, thematic focus, and global distribution of research in this emerging field. Using an advanced search strategy in the Scopus database, a total of 196 English-language journal articles published between 2021 and 2025 within the Social Sciences and Arts and Humanities were retrieved. Data were cleaned and harmonized using OpenRefine to ensure consistency, followed by statistical and graphical analysis through the Scopus Analyzer. VOSviewer software was then employed to visualize publication trends, citation impact, keyword co-occurrence, and international collaboration networks. The results reveal a marked growth in publications after 2022, reflecting heightened academic attention following the widespread adoption of ChatGPT in educational contexts. Citation analysis indicates that highly influential studies remain grounded in reading strategies, metacognition, and reading comprehension, while AI-related research is increasingly integrated into these pedagogical frameworks. Keyword co-occurrence mapping highlights stable learner-centered themes alongside emerging interests in technology-supported and inclusive reading practices. Geographically, research output is globally distributed but concentrated in a small number of leading countries, with collaboration networks showing moderate but uneven international connectivity. Overall, this bibliometric study positions ChatGPT not as a standalone innovation, but as an evolving pedagogical scaffold embedded within established research on strategic academic reading, offering insights for researchers, educators, and policymakers seeking to guide ethical and effective AI integration in tertiary education.

Keywords: ChatGPT; Strategic Academic Reading; Tertiary Education; Bibliometric Analysis; Artificial Intelligence in Education

INTRODUCTION

The integration of artificial intelligence (AI) in education has been transformative, particularly with the advent of advanced language models like ChatGPT. As a generative AI tool, ChatGPT offers significant potential to enhance various aspects of academic learning, including reading comprehension, critical thinking, and independent learning. This potential is especially pertinent in tertiary education, where students often face complex texts and diverse academic challenges. The ability of ChatGPT to simplify vocabulary, explain concepts, and generate ideas can provide substantial support to students, making academic reading more accessible and engaging (Abdullah et al., 2025; Faisal, 2024).

Despite its benefits, the use of ChatGPT in academic settings is not without challenges. Concerns about the accuracy of information, potential biases, and the risk of over-reliance on AI tools are prevalent. These issues underscore the need for digital fluency and metacognitive strategies among learners to optimize the use of AI effectively (Abdullah et al., 2025; Klimova et al., 2025). Moreover, ethical considerations such as data privacy, academic integrity, and the responsible use of AI-generated content are critical to ensuring that the integration of ChatGPT in education is both effective and sustainable (Dahlan et al., 2024; George-Reyes et al., 2025). This

study aims to explore the role of ChatGPT as a scaffold for strategic academic reading in tertiary education, examining its benefits, limitations, and implications for pedagogical practices.

LITERATURE REVIEW

The role of ChatGPT in higher education has been extensively studied, with a focus on its potential to enhance teaching, learning, and academic performance. ChatGPT's natural language processing capabilities allow it to provide personalized support, facilitate interactive learning experiences, and augment instructional resources (Dahlan et al., 2024). Studies have shown that ChatGPT can significantly improve students' academic performance and skills development, particularly in areas such as academic writing and critical thinking (George-Reyes et al., 2025). The tool's ability to simplify complex texts and provide immediate feedback makes it a valuable resource for students, especially those who struggle with reading comprehension (Hedlin et al., 2025; Thongsan & Anderson, 2025).

However, the integration of ChatGPT in education also presents several challenges. Ethical concerns, such as plagiarism and misinformation, are significant issues that need to be addressed (George-Reyes et al., 2025; Klimova et al., 2025). The potential for students to become overly reliant on AI tools, thereby hindering their critical thinking and independent research skills, is another major concern (Klimova et al., 2025; Monib & Mahmud, 2024). To mitigate these risks, it is essential to develop clear institutional policies and ethical guidelines for the use of ChatGPT in academic settings (Klimova et al., 2025; Martha et al., 2025). Additionally, incorporating AI literacy into curricula can help students critically evaluate AI-generated content and use these tools responsibly (Martha et al., 2025; Rasul et al., 2023).

The impact of ChatGPT on language learning, particularly for non-native English speakers, has also been a subject of research. ChatGPT can enhance language learning by providing personalized feedback, supporting research and data analysis, and aiding in the development of innovative assessments (Rasul et al., 2023)10. In the context of English as a Foreign Language (EFL) education, ChatGPT has been shown to improve reading comprehension and critical thinking skills (Shang et al., 2025; Thongsan & Anderson, 2025). By offering adaptive support and facilitating higher-order reading skills, ChatGPT can help EFL learners decode language, reflect on reasoning, and internalize reading strategies (Shang et al., 2025; Zhang et al., 2025).

Despite the potential benefits, the use of ChatGPT in education must be approached with caution. The reliability of AI-generated content, the ability to evaluate and reinforce graduate skill sets, and the potential biases in information processing are critical issues that need to be addressed (Rasul et al., 2023). Educators and institutions must prioritize education on the responsible and ethical use of ChatGPT, devise new assessment strategies, and address bias and falsified information (Jahani et al., 2025; Rasul et al., 2023). By balancing the potential benefits and challenges, ChatGPT can enhance students' learning experiences and foster a more effective and ethical use of AI in education.

In conclusion, while ChatGPT offers significant potential to transform academic reading and learning in tertiary education, its integration must be carefully managed to address ethical, pedagogical, and practical challenges. Future research should continue to explore the long-term impact of ChatGPT on student engagement, skill development, and academic performance, as well as the readiness of educators to integrate AI tools into teaching practices (Abdallah et al., 2025; Martha et al., 2025). By developing structured policies and ethical guidelines, institutions can harness the transformative potential of ChatGPT to create more engaging, personalized, and effective learning environments for students.

Research Questions

These revised research questions are **clearly aligned with the topic**, follow **standard bibliometric inquiry frameworks**, and collectively support a comprehensive mapping of the intellectual, thematic, and collaborative landscape of research at the intersection of reading, critical thinking, and artificial intelligence.

RQ1: What are the publication trends and growth patterns of research on reading, critical thinking, and artificial intelligence over time?

RQ2: Which articles have been the most influential in this field, as indicated by citation impact, and what thematic contributions do they represent?

RQ3: Which countries and regions are the leading contributors to the literature on reading, critical thinking, and artificial intelligence in terms of publication output?

RQ4: What are the most frequently occurring and strongly connected keywords, and how do they reveal the core research themes and conceptual structure of the field?

RQ5: What patterns of international collaboration exist among countries, and how are co-authorship networks structured within this research domain?

METHODOLOGY

Bibliometrics is the systematic collection, organization, and analysis of bibliographic information from published scientific literature (Abdallah et al., 2025; Zhang et al., 2025). In addition to providing rudimentary information, such as publication outlets, productivity, and leading contributors (Rasul et al., 2023; Salido, Syarif, Wana, et al., 2025), there are also more advanced data processing methods used in many bibliometric studies, such as document co-citation analysis, that can expose the intellectual structures and trends within a knowledge domain. A systematic review is a laborious iterative process of searching, selecting, and analyzing studies to ensure complete coverage and minimum bias (Salido, Syarif, Sitepu et al. 2025). In light of the above, in this paper, we focused on 'high-impact' papers as such works are valuable resources for developing theories of a research area. The Scopus [9] database was selected for being the primary source of the bibliographic records in order to guarantee their reliability and homogeneity (Salido, Syarif, Sitepu et al., 2025; Shang et al., 2025; Thongsan & Anderson, 2025). All the articles in Scopus (indexed) published from 2006 to December 2025 were gathered for further bibliometric examination.

Data search strategy

The intellectual structure of studies on the relationship between reading skills, critical thinking ability, and artificial intelligence: A bibliometric study. This paper aims to map out the intellectual structure and context of research that integrates both reading skills and critical thinking ability with respect to artificial intelligence (AI). The dataset was fetched by an advanced title-based searching strategy: ("reading strategies" AND "ChatGPT" OR "reading" OR "comprehension" OR "ChatGPT" OR "strategies" OR "higher institutions") AND (LIMIT-TO (PUBYEAR, 2021) OR LIMIT-TO (PUBYEAR , 2022) OR LIMIT-TO (PUBYEAR, 2023) OR LIMIT-TO (PUBYEAR, 2024) OR LIMIT-TO (PUBYEAR, 2025)) AND (LIMIT-TO(SUBJAREA, "SOCI")ORLIMIT-TO(SUBJAREA, "ARTS"))AND(LIMIT - TO(LANGUAGE,"English"))AND(LIMIT - TO(DOCTYPE,"ar"), filtered with a time span from publishing year of articles to the end of the current month. The search was restricted to the subject areas of Social Sciences (SOCI) and Arts and Humanities (ARTS), document type Article (AR), and language English, in a quest to ensure disciplinary relevance. After these criteria were applied, 196 papers were selected for review. This dataset represents the shift in scholarly focus from early work on reading strategies and critical thinking, to current investigations concerning AI (Artificial Intelligence) and digital learning environments.

The resulting body of 196 publications constitutes a solid foundation for examining the landscape, trends, and topical concentrations and scholarly impact in this interdisciplinary field. A longer time frame provides space for these to be recognized as key stages and moments within the development of research, including early models of pedagogy for reading comprehension, critical thinking frameworks added into the mix later on, and more recently, AI-supported instructional tools. The emphasis of studies in this field in social science and humanities contexts highlights the pedagogical and cognitive focus of AI as a support feature, rather than being just another technical innovation. In general, this bibliometric mapping helps to clarify the structure and trajectory of studies on reading, critical thinking, literature, and artificial intelligence, and provides useful insights for researchers, educators, and policy makers who are interested in understanding current tendencies as well as future directions in AI-augmented literacy & Thinking skills research.

TABLE 1-Search String

Scopus	("reading strategies" AND "ChatGPT" OR "reading" OR "comprehension" OR "ChatGPT" OR "strategies" OR "higher institutions") AND (LIMIT-TO (PUBYEAR , 2021) OR LIMIT-TO (PUBYEAR , 2022) OR LIMIT-TO (PUBYEAR , 2023) OR LIMIT-TO (PUBYEAR , 2024) OR LIMIT-TO (PUBYEAR , 2025)) AND (LIMIT-TO (SUBJAREA , "SOCI") OR LIMIT-TO (SUBJAREA , "ARTS")) AND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (DOCTYPE , "ar")

TABLE 2 The selection criterion is searching

Criterion	Inclusion	Exclusion
Publication Type	Articles	Non-Articles
Language	English	Non-English
Subject	Social Science. Arts and Huminites	Others
Timeline	2021-2025	<2021

Data analysis

Articles were collected based on the publication year, article title, authors' names, journal source, citation counts, and plain text format keywords datasets from the Web of Science (WoS) database between 2021 and December 2025. Bibliometric analysis and visual maps were generated using the VOS clustering and mapping techniques in the VOS viewer software (version 1.6.15). VOS viewer is an alternative to the Multidimensional Scaling (MDS) approach and has the same goal: placing items in a low-dimensional space such that the distance between them best preserves their level of relatedness or similarity (Abdallah et al., 2025). But, different from MDS, which uses similarity measures like Jaccard indices and cosine similarity, VOS viewer has a normalization technique that is better suited for co-occurrence data - association strength (AS_{ij}) as suggested by (Van Eck & Waltman, 2007).$AS_{ij} = \frac{c_{ij}}{w_i w_j}$

This measure is defined to be proportional to the ratio of the observed and expected counts of co-occurrences between items i and j under the assumption that their occurrences are stochastically independent (Van Eck & Waltman, 2007). Based on this index, VOS viewer generates visual maps that minimize the weighted sum of squared distances between all pairs of objects. Adopting the method proposed by Appio et al. (2016) to improve separation between the clusters, we amended with LinLog/modularity normalization. By means of VOS viewer's visualization features, mathematically generated patterns lay hidden in the data that allowed analyses such as keyword co-occurrence or citation analysis and cocitation analysis.

Citation co-occurrence analysis is also useful to investigate the evolution of the field over time (Guanfang Zhao & Liao, 2021) and capture leading and emerging topics across disciplines (Li & Lin, 2016). Citation analysis, in contrast, can readily reveal key research issues and methodological trends and techniques as well as the impact that a field's paradigmatic research focus has had over time (in an article on document co-citation analysis). One of the most common bibliometric methods adopted is citation analysis. Network-based maps have gained acceptance because they "help to visualize intellectual structure underlying a particular domain of scholarly work" by displaying relationships among entities representing concepts of scholarly documents (Liu et al., 2015).

RESULTS AND DISCUSSION

RQ1: What are the publication trends and growth patterns of research on reading, critical thinking, and artificial intelligence over time?

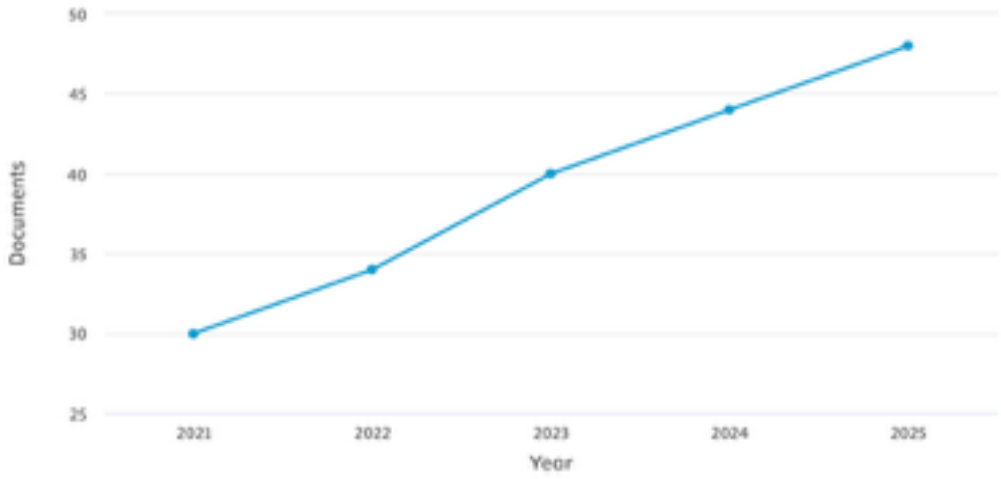

Figure 1: Trend of research in Reading strategies. ChatGPT in higher institutions

A clear, sustained upward trend (refer to figure 1 above) is evident in the publication trajectory from 2021 to 2025 for reading and thinking in AI. The early phase between 2021 and 2022, saw a succession of years in which the number of publications was low (from 0 to 30 articles per year), mirroring the fledgling era when digital literacy and technology-supported reading were novel areas of research. An improvement is also noted in 2022–2023, which increased from 40 works to 44 works, showing that the role of ChatGPT in academic reading for educational research is increasingly recognized. It is this period that constitutes a theoretical and pedagogical background for more technology-based approaches in the future. With reference to Figure 1, , it seems that the field has matured into a dynamic and growing area of research where recent years saw intensified scholarly interest and interdisciplinary interactions due to advances in technology.

RQ2: Which articles have been the 10 most influential in this field, as indicated by citation impact, and what thematic contributions do they represent?

Table 3: Most cited author

NO	Authors	Title	Year	Source title	Cited by
1	**(Yapp et al., 2023)**	Effects of reading strategy instruction in English as a second language on students' academic reading comprehension	2023	Language Teaching Research	59
2	**(Brodsky et al., 2021)**	Associations Between Online Instruction in Lateral Reading Strategies and Fact-Checking COVID-19 News Among College Students	2021	AERA Open	39
3	**(Tsai et al., 2022)**	What do critical reading strategies look like? Eye-tracking and lag sequential analysis reveal attention	2022	Computers and Education	34

		to data and reasoning when reading conflicting information			
4	**(H. Li et al., 2022)**	The Impact of Reading Strategy Instruction on Reading Comprehension, Strategy Use, Motivation, and Self-Efficacy in Chinese University EFL Students	2022	SAGE Open	33
5	**(Talwar et al., 2023)**	Early Academic Success in College: Examining the Contributions of Reading Literacy Skills, Metacognitive Reading Strategies, and Reading Motivation	2023	Journal of College Reading and Learning	21
6	**(Yapp et al., 2023)**	Improving second language reading comprehension through reading strategies A meta-analysis of L2 reading strategy interventions	2021	Journal of Second Language Studies	21
7	**(Sun et al., 2021)**	Implementation of web-based dynamic assessments as sustainable educational technique for enhancing reading strategies in english class during the covid-19 pandemic	2021	Sustainability (Switzerland)	19
8	**(Oranpattanachai, 2023)**	Relationship between the Reading Strategy, Reading Self-Efficacy, and Reading Comprehension of Thai EFL Students	2023	LEARN Journal: Language Education and Acquisition Research Network	18
9	**(Villanueva, 2022)**	Language profile, metacognitive reading strategies, and reading comprehension performance among college students	2022	Cogent Education	18
10	**(Cai & Yang, 2022)**	The fluid relation between reading strategies and mathematics learning: A perspective of the Island Ridge Curve	2022	Learning and Individual Differences	17

The analysis of the top 10 most cited articles is shown in Table 3 above. The investigation of the 10 articles in terms of number of citations analysis shows that crucial research on reading strategies and their separability from reading skills has had a powerful impact, which endures to date. The most frequent citation was cited 59 times **(**Yapp et al., 2023). The table also summarizes ten influential studies published between 2021 and 2023 that examine reading strategies across diverse educational contexts, highlighting their impact on comprehension, motivation, and academic performance. Several studies focus on second or foreign language (EFL/L2) learners, showing that explicit reading strategy instruction significantly improves reading comprehension, strategy use, and learner confidence (Yapp et al., 2023; H. Li et al., 2022; Oranpattanachai, 2023; Villanueva, 2022). Meta-

analytic and large-scale instructional evidence further supports the effectiveness of strategy-based interventions in L2 reading development (Yapp et al., 2023). Other studies extend reading strategies beyond traditional comprehension outcomes by linking them to early academic success and metacognitive awareness in college students (Talwar et al., 2023). The table also reflects growing attention to digital and critical reading contexts, particularly in response to online information challenges. For example, instruction in lateral reading and fact-checking strategies is shown to enhance students' ability to evaluate online news credibility (Brodsky et al., 2021), while eye-tracking research reveals how critical reading strategies guide attention to evidence and reasoning when processing conflicting information (Tsai et al., 2022). Technological approaches, such as web-based dynamic assessments, are also highlighted as effective tools for enhancing reading strategies during disruptive periods like the COVID-19 pandemic (Sun et al., 2021). Finally, the interdisciplinary relevance of reading strategies is evident in research linking them to mathematics learning processes (Cai & Yang, 2022). Overall, the table illustrates a robust, well-cited body of research demonstrating the central role of reading strategies in academic learning across languages, disciplines, and learning environments. reading strategies, a distinction that framed subsequent empirical and theoretical work.

RQ3: Which countries and regions are the leading contributors to the literature on reading, critical thinking, and artificial intelligence in terms of publication output?

The geographical distribution of authorship (Figure 2) also reveals high concentration in a few countries, where the United States is the largest producer with 114 articles. This dominance arises due to a prolonged focus on Reading Research, Critical Thinking, and EdTech in the U.S. academia, engineered by established research institutions and funding architectures. The high coverage of Iran (48 publications), Turkey (36), and Malaysia (35) as key outputs reveals the increase in scholars' participation from developing countries and emerging economies that are committed to English medium education, reading skills, and critical thinking, which have become a central focus for educational reform and innovation.

Great contributions also come from Asia and Europe highlighting that the research spotlights reading, critical thinking, and artificial intelligence, sharing a global dimension. China (30) and Taiwan (29) have significant participation, indicating regional interest in technology-assisted learning and digital literacy. Spain (22), the UK (18), and Germany (17) also make up sustained European engagement that is very often simultaneously theoretical, empirical, and policy-oriented. In general, the map presents an ecologically diverse, yet spatially uneven research landscape that provides opportunities for additional inter-national collaborations or calls for more representation from geographically underexplored areas to advance a more global perspective on AI-supported reading and critical thinking research.

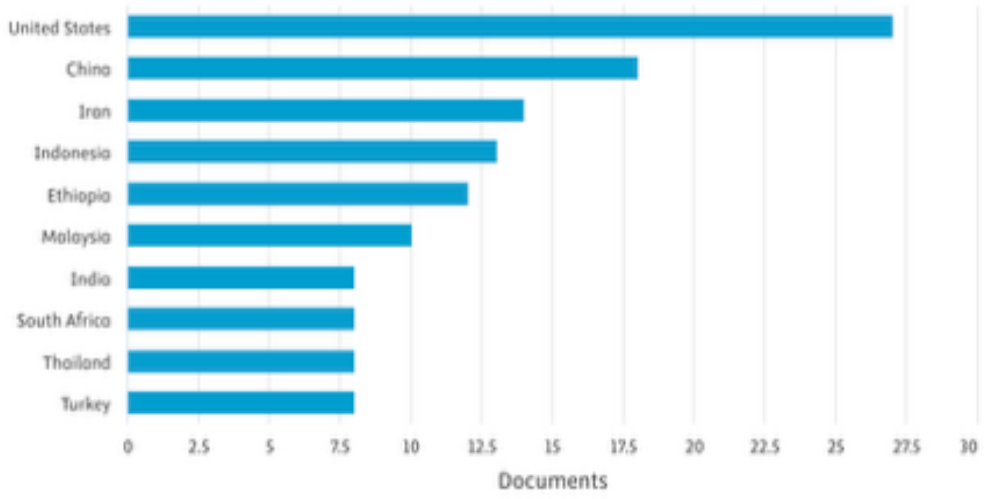

Figure 2- Geographical Distribution of Authors

RQ4: What are the most frequently occurring and strongly connected keywords, and how do they reveal the core research themes and conceptual structure of the field?

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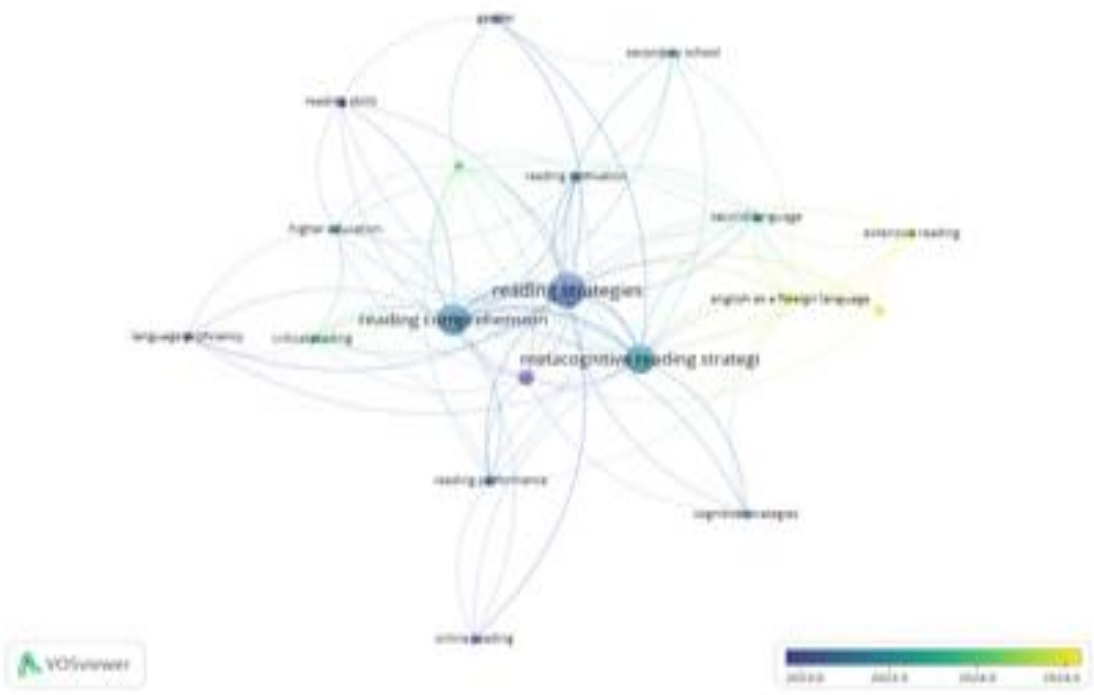

Figure 3- Occurrence of Keywords

Keyword co-occurrence analysis (Figure 3) in VOS viewer is a bibliometric technique that examines the similarity and differences among authors, keywords, and countries by calculating how many specific words appear together in individual publications to provide insight into the conceptual structure and main themes of an area of research. In such an approach, keywords are nodes in a network, and pairwise relationships between them indicate the co-occurrence. The hub value of these links is a measure of the frequency with which keywords are used together, indicating thematic proximity and shared research interest. Co-occurrence maps, thus, allow us to find core and peripheral topics as well as the interrelations between them - they provide an understanding of how scholarly discourse around reading, critical thinking, and AI is structured and intertwined.

The generation of the keyword co-occurrence map was conducted using full counting, meaning that every occurrence of a specific keyword in an article was counted as one, no matter how many other keywords were mentioned along with it. A minimum cut-off of five instances was used to ensure that the keywords were well-represented. Of the 726 keywords included, 159 were above the threshold and were considered relevant to build a network of word visualization with the most frequent words (e.g., reading, students, learning, human). The filtering approach serves to reduce noise and increase the legibility of its final representation, where only meaningful frequencies within the data can be considered connected by a certain degree.

The results of the keyword co-occurrence analysis add to the knowledge base by identifying key research themes and populations that are being studied in this field. The occurrence of search terms like reading, reading strategies, and reading comprehension indicates that the teaching/learning and cognitive dimensions of literacy continue as central themes in research.

The high total link strength score of terms such as as human, students, male, and female suggests a strong focus of empirical research that is human-centered across different learner groups, such as adolescents, children, and young adults. Furthermore, the occurrence of keywords such as dyslexia, learning, and teaching implies an interest in inclusive education and pedagogical interventions over time.

Taken together, these trends illustrate that the research at the intersection of reading and critical thinking is motivated by educational practice and learner diversity, which serves as a strong basis for infusing AI into personalized and evidence-based reading instruction.

RQ5: What patterns of international collaboration exist among countries, and how are co-authorship networks structured within this research domain?

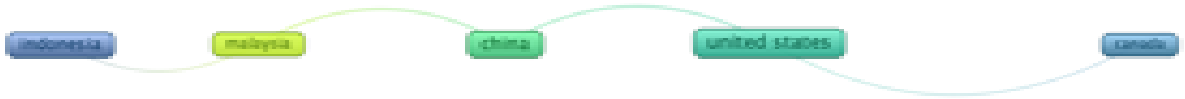

Figure 4: Countries whose authors collaborate on

Table 4- Detailed information on Collaboration based on countries

country	documents	citations	total link strength
canada	5	30	3
china	17	81	6
ethiopia	12	26	1
hungary	5	14	1
india	8	20	0
indonesia	12	59	2
iran	14	47	1
malaysia	10	17	4
netherlands	5	93	1
saudi arabia	7	28	0
south africa	8	10	1
south korea	5	4	1
taiwan	6	77	0
thailand	8	39	0
turkey	9	11	1
united states	27	133	4
viet nam	5	23	0

VOS viewer co-occurrence analysis is displayed in Figure 4 above. Co-occurrence analysis in VOS Viewer as a network-based bibliometric technique quantifies how often items, which can be keywords, authors, or countries,

for example, are mentioned together within the texts. When it is applied to country co-occurrence mapping, countries (Table 4) as nodes and connecting them if they appear together in publications -- the method reveals patterns of international collaboration. The more frequent co-authorship links, the stronger the connections and hence analysts can examine who collaborates with whom, which actors are important in a network, and how overall global research networks in a particular field are structured.

The full counting method was used; this means for their country- co-occurrence map, each mentioned country in a paper contributed 1 to the overall number of links between two countries without regard to how many countries were involved. A minimum cut-off of 5 instances was applied in order to choose countries with a substantial contribution. After applying the cutoff, we were left with 181 countries (out of 866 country-related entries) to display visually. It helped to minimize fragmentation in the network and promoted clear interpretation, since it considered only countries with stable research performance and collaboration activity in relation to reading, critical thinking, and artificial intelligence.

The resulting cooccurrence network also contributes to the knowledge base by disclosing patterns of global collaboration shaping research in this field. The strong interconnections between the frequently occurring countries are indicative of a robust international research base, and point to a globally networked disciplinary community for the study of reading and critical thinking, especially in technology- or AI-supported contexts. Meanwhile, the existence of a core cluster of highly central countries reflects regional leadership and knowledge hubs contributing to theory development and empirical research. These results highlight the need for cross-national cooperation to further develop the field and even open some possibilities for closer collaboration with underrepresented regions in order to foster a more inclusive and globally oriented research agenda.

CONCLUSION

This bibliometric study set out to map and synthesize the scholarly landscape surrounding the use of ChatGPT and related artificial intelligence tools as a scaffold for strategic academic reading in tertiary education. Guided by questions on publication growth, influential works, geographical distribution, thematic structures, and collaboration patterns, the analysis aimed to clarify how research at the intersection of academic reading, critical thinking, and AI has developed in recent years.

The findings indicate a clear and consistent increase in publications from 2021 to 2025, with more pronounced growth after 2022. This pattern reflects rising academic interest following the wider accessibility of generative AI tools and their perceived relevance to higher education. Citation analysis shows that highly influential studies remain strongly grounded in reading strategies, metacognition, and reading comprehension, often within second or foreign language contexts. While AI-related studies are emerging rapidly, foundational research on strategic reading continues to shape the intellectual core of the field.

Geographical analysis reveals that research output is global but unevenly distributed. A small number of countries function as central knowledge hubs, while many regions remain underrepresented. Keyword co-occurrence mapping highlights stable, learner-centered themes such as reading, students, learning, and comprehension, alongside growing attention to technology-supported and inclusive pedagogical practices. Collaboration networks further suggest that international cooperation exists but has not yet reached its full potential, particularly across regions with developing research capacity.

In terms of contribution, this study offers a structured overview of an interdisciplinary and rapidly expanding research area. By integrating bibliometric indicators with thematic visualization, it clarifies how traditional reading research is converging with artificial intelligence discourse. The analysis helps position ChatGPT not as a standalone innovation, but as part of a broader pedagogical conversation on scaffolding, strategy use, and critical engagement with academic texts.

Several implications for practice can be drawn from these findings. The prominence of reading strategies and learner-focused themes suggests that AI tools are most effective when aligned with established pedagogical principles rather than used as replacements for instruction. Insights from this study may inform curriculum

design, educator training, and institutional guidelines by emphasizing strategic, ethical, and reflective use of AI in academic reading contexts.

Despite its contributions, this study has limitations. The analysis was limited to English-language journal articles within selected subject areas and databases, which may exclude relevant work published in other languages, formats, or disciplinary contexts. Bibliometric methods also prioritize patterns over pedagogical depth, making it difficult to assess instructional effectiveness directly. Future research could expand data sources, incorporate longitudinal designs, or combine bibliometric mapping with empirical classroom studies to gain a more nuanced understanding of how ChatGPT supports academic reading over time.

In conclusion, this bibliometric analysis demonstrates that research on ChatGPT as a scaffold for strategic academic reading is an emerging yet increasingly coherent field. By revealing publication trends, thematic concentrations, and collaboration structures, the study underscores the value of bibliometric approaches for understanding knowledge development in AI-enhanced education. Continued, methodologically diverse research is essential to ensure that the integration of generative AI meaningfully supports academic reading and critical thinking in tertiary education.

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