



Review article

Scientific mapping of research on English as a foreign language (EFL) reading instruction: A thirty-year perspective

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ABSTRACT

In recent years, English as a foreign language (EFL) reading instruction has emerged as a prominent and recurring research theme in the realm of education. Despite this growing interest, prior studies have not outlined the research status of EFL reading instruction from a bibliometric lens. Addressing this gap, the present study aims to provide valuable insights into the research landscape of EFL reading instruction by using scientific mapping analysis on documents sourced from the Web of Science Database between 1994 and 2023. The study found that: 1) The analysis of publication trends suggests that the field of EFL reading instruction continues to evolve, with a foreseeable ongoing increase in research output. 2) Asian countries, specifically Iran, China, and Saudi Arabia emerge as leading contributors and collaborators in terms of research on EFL reading instruction. 3) Authors mainly from Asian countries demonstrate the highest levels of productivity and citation impact. 4) The most productive and cited journals primarily originate from developed countries, notably the United Kingdom and the United States. 5) The research foci identified cover various aspects such as “technology-based instruction,” “critical thinking,” and “literacy skills.” However, there is an emerging shift in research focus towards themes “English proficiency,” “Covid-19,” “technology,” “blended learning” and “mobile-assisted language learning (MALL).” By shedding light on the significant concepts and trends of the research field, this study adds to the burgeoning body of literature and provides valuable guidance to new scholars seeking to enrich their knowledge and perspectives on this particular topic.

1. Introduction

English as a foreign language (EFL) reading instruction which plays a vital role in fostering learners' development [1,2] has been a prominent and recurring research topic within the field of education [3]. It is widely recognized that EFL reading teachers face considerable challenges in their instructional practices [4]. These challenges arise from the need to not only comprehend the complexities of reading and instructional methods but also to possess a profound understanding of their students' characteristics and the educational context [5]. In general, the realm of EFL reading instruction has been extensively explored through various approaches, and some studies have sought to assess previous research in this domain from different perspectives. However, it is important to note that, to date, bibliometric analysis has not been utilized in investigating this particular area.

In the field of English language education, the importance of reading proficiency is widely acknowledged, as it is regarded as a

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crucial factor in knowledge acquisition [6] and individual progress [7]. This significance is consistently emphasized in the Program for International Student Assessment (PISA) conducted by the Organization for Economic Co-operation and Development (OECD). The essential nature of reading competence in English language education extends beyond language acquisition, as it also plays a vital role in promoting learners' personal and academic growth [8,9]. Empirical studies have further corroborated the strong association between learners' reading competency and their overall academic performance [10–12]. Given the substantial impact of English language reading on educational attainment and academic success, it becomes imperative to explore the instructional approaches of EFL reading that contribute to students' comprehensive development [13,14].

A considerable body of literature has delved into the theoretical and practical aspects of EFL teachers' reading instruction, with the ultimate goal of enhancing their instructional approaches. Bibliometric data analysis concerning research topics in foreign language publications reveals a notable prevalence of terms such as "EFL" and "reading instruction" [15]. Notably, previous investigations have predominantly centered around teachers' instructional strategies concerning vocabulary acquisition [16,17], reading strategies [18, 19], reading comprehension [20,21], and critical thinking skills [22,23]. Moreover, there have been studies examining how EFL teachers conceptualize reading instruction within diverse cultural contexts [24–26]. These endeavors not only facilitate teachers' self-reflection on their pedagogical practices but also contribute to the overall enhancement of teaching quality in this domain.

Notwithstanding the availability of various effective approaches aimed at enhancing learners' reading skills and language proficiency, the literature consistently highlights the challenges faced by EFL reading teachers in their instructional practices [4,27]. A growing body of research underscores that conventional teacher-centered reading instruction methods impede the development of EFL learners' reading abilities [26,28,29], as they fail to provide students with effective reading strategies [30,31] and offer them sufficient opportunities to actively engage in literacy activities [32,33]. Consequently, such inadequate instructional approaches hinder EFL learners' ability to "read effectively, think independently, and develop their problem-solving abilities" [34]. To address this concern, embracing a student-centered approach to reading instruction becomes paramount for EFL teachers, which involves the adoption of non-traditional methods like flipped classrooms [35,36] and technology-assisted instruction [37,38]. Through this transformation, teachers can work towards creating a more conducive learning environment and reshaping the current instructional landscape for the benefit of EFL learners.

Bibliometric analysis, acknowledged for its advantageous similarities to meta-analysis [39], holds significant value as a tool for researchers to discern research priorities and gain novel perspectives [40]. Employing such analysis becomes crucial for attaining a more profound understanding of the research landscape concerning EFL reading instruction. Although certain aspects of EFL reading instruction have received attention, limited efforts have been made to quantitatively profile the global research landscape in this domain through a bibliometric lens. As understanding the developmental trajectory of this research field, collaboration networks, influential authors and journals, and the keyword structure are indispensable indicators for comprehending the overall research outlook [41], this study aims to offer comprehensive insights into the current state of research in EFL reading instruction, facilitate knowledge dissemination, and guide future research endeavors. To achieve this, the study addresses five key research questions, which are outlined below.

RQ 1. What development trajectory can be identified in the EFL reading instruction field during the past three decades?

RQ 2. What are the international contributions and collaboration of the research on EFL reading instruction?

RQ 3. Which authors have exhibited the highest productivity and citation impact in their contributions to the research on EFL reading instruction?

RQ 4. Which journals have demonstrated the highest productivity and citation impact in their contributions to the research on EFL reading instruction?

RQ 5. What topical foci have attracted the greatest attention in the research on EFL reading instruction?

2. Methodology

The present study employs bibliometric analysis to investigate the historical research development in the field of EFL reading instruction. The analysis is based on data retrieved from the Web of Science database, which serves as the primary source of publications for this research. To ensure a comprehensive understanding of the trend, a 30-year timeframe has been selected, considering the well-established history of EFL reading instruction. Bibliometric analysis, also known as scientific mapping, is a quantitative and graphical method used to examine extensive literature within specific scientific domains [42,43]. This analytical technique offers the advantage of delineating research trends and foci, thereby contributing new knowledge to the respective fields and disciplines [44]. It is worth noting that bibliometric analysis facilitates a more systematic, transparent, and reproducible evaluation, as emphasized by Behl et al. [45]. In the realm of education, an increasing number of researchers [46–48] have recognized the utility of bibliometric analysis as a scientific tool to statistically assess research performance and gain valuable insights into the academic progress achieved by the research community.

Besides, the Web of Science database was chosen owing to its extensive interdisciplinary coverage of peer-reviewed scientific literature [49]. With a substantial collection of more than 8700 esteemed academic journals spanning various disciplines, the database offers an extensive repository of scholarly resources [50]. Notably, the database is recognized as a high-quality source of data [51] and is frequently relied upon as a reliable repository for conducting review studies [52]. Thus, the utilization of data from the Web of Science database is considered both suitable and reliable for conducting rigorous bibliometric analyses.

2.1. Search criteria

The study adheres to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines [53]. The results are meticulously refined by following the four sequential steps of identification, screening, eligibility, and inclusion, as outlined in the PRISMA flowchart (see Fig. 1).

In the process of identification, a meticulous search was performed by using the specified search terms: “TITLE-ABS-KEY (“teaching” or “instruction” or “teachers” or “instructors”) and (“reading”) and (“English as a foreign language” or “EFL”)”. As a result of this search, a substantial collection of 1433 documents was retrieved, all of which were extracted on the date of June 12, 2023.

During the screening phase, the search criteria were refined to include articles published after 1994, as the study focuses on EFL reading instruction in the past three decades. Moreover, exclusive consideration was given to documents written in the English language. Consequently, a total of 49 records were excluded from the dataset.

To ensure the eligibility of the remaining records, a thorough review was conducted on 1384 articles. Given the belief that peer-reviewed journal articles offer established and reliable scientific ideas [54], this study specifically focused on journal articles, thereby filtering out 292 documents such as conference papers, reviews, and book chapters.

Following this rigorous process, a total of 1092 documents met the inclusion criteria and were selected for further bibliometric syntheses.

2.2. Data analysis methods

The bibliometric data retrieved from the Web of Science database were compiled into a comma-separated value (.csv) file,

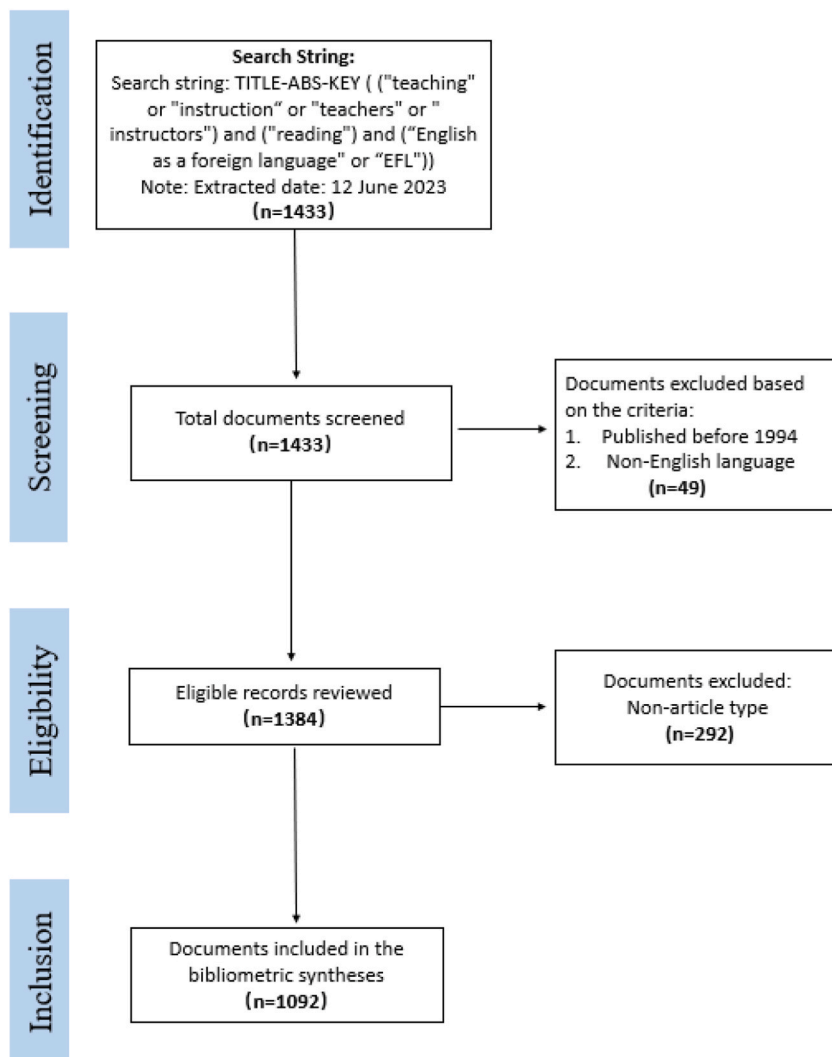


Fig. 1. PRISMA flowchart of document identification on EFL reading instruction.

containing a comprehensive set of bibliographic details, including author names, article titles, publication years, source titles, citations, affiliations, abstracts, and author keywords. This extensive dataset was utilized to address the five research questions posed in this study. For data analysis, VOSviewer, a widely recognized computer software known for its ability to generate maps and visualize bibliometric networks based on co-occurrence matrices [55] was adopted. The software employs specific terminology to enhance its functionalities. Notably, the term “cluster” refers to a visually distinct group of items on the generated map, distinguished by various colors. Furthermore, the software incorporates two standard weight attributes: “link strength” and “total link strength.” The former quantifies the strength or intensity of connections between two respective items, while the latter represents the cumulative strength of links connecting a specific item with others within the network [56]. To visualize the findings, we also utilized Microsoft Excel and Tableau. These tools collectively facilitated an in-depth examination and interpretation of the data.

To be specific, the study began by indicating the publication trajectories in the field of EFL reading instruction research, utilizing the data of publication numbers from the dataset. Subsequently, the data were graphically depicted by using Microsoft Excel, offering a visual representation of the annual frequency of publications in the field.

To address the second research question, Tableau was employed to generate a world map that visually represents the geographical distribution of publications, offering valuable insights into the contributions of various countries. Moreover, the analysis of country collaborations was conducted by using the network visualization map in VOSviewer.

Furthermore, tables were created to present the authors and journals with the most productivity and citation impact in this field. These tables encompass essential bibliometric details, such as author names, journal titles, affiliations, number of publications, total citations, and journal quartiles.

Finally, a network visualization map was generated by using VOSviewer to explore the co-occurrence of keywords. Two figures were presented: one depicting the network visualization of keyword co-occurrence based on frequency analysis within the same dataset, enabling users to visually discern co-occurrence relationships and patterns. The other figure demonstrated the overlay visualization of keyword co-occurrence, which delineated the evolving research trends over time, facilitating the identification of prominent keywords that have garnered increasing scholarly attention. To ensure accuracy, duplicates in the keyword dataset were meticulously eliminated through a rigorous refinement process by using a thesaurus file. For example, when duplicates such as “English for academic purposes” and its abbreviation “EAP” were identified, the former was replaced with “EAP”. Additionally, to enhance clarity and cohesion, key terms such as “EFL” and “English as a foreign language” were excluded from the keyword lists. Ultimately, out of an initial pool of 2741 keywords, a total of 59 keywords were identified, with the minimum occurrence of a keyword set at six. The detailed literature descriptive statistics are presented in Fig. 2.

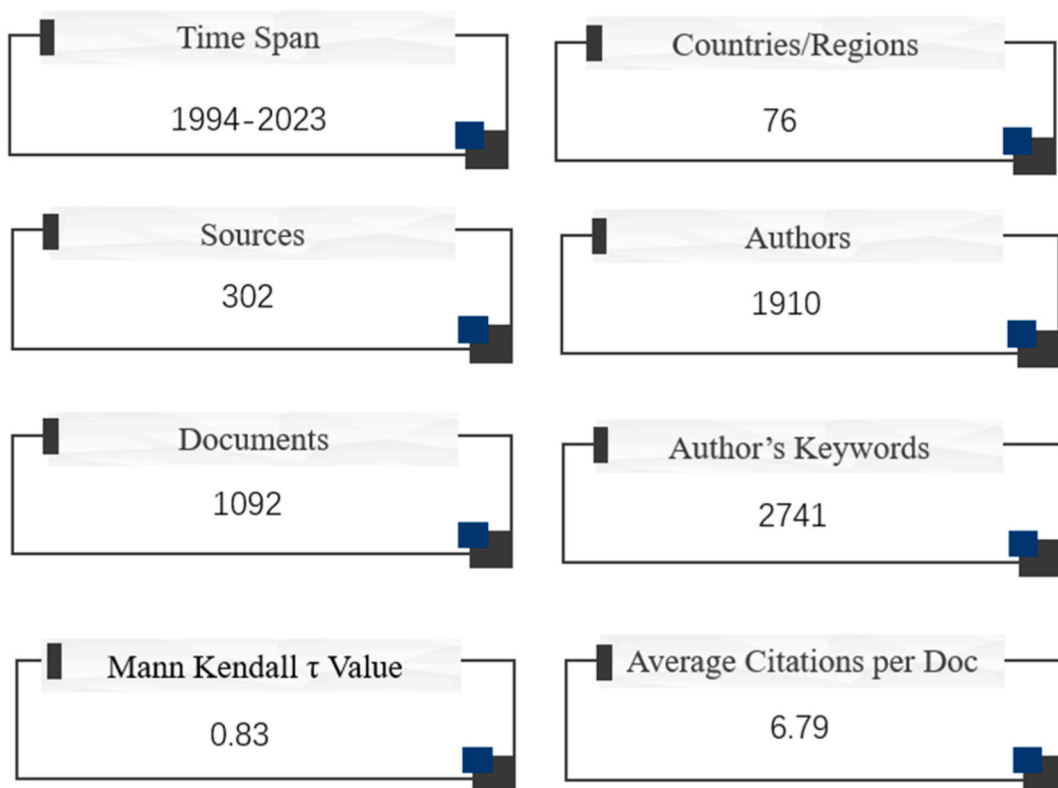


Fig. 2. Literature descriptive statistics.

3. Results

The scientific mapping was conducted based on the 1092 publications gathered from the Web of Science database from 1994 to 2023.

3.1. Publication trajectory of EFL reading instruction

Fig. 3 provides an overview of the publication trajectory in the field of EFL reading instruction from 1994 to 2023. Notably, the year 2022 stands out as the most prominent, witnessing the highest publication count of 129 research articles. This was closely followed by 107 publications in 2020 and 103 in 2016. On the contrary, before 2008, the number of publications remained relatively low, with less than 10 articles published. However, from 2014 onwards, a substantial increase in the number of publications is evident, with some fluctuations observed during this period. Overall, the trajectory exhibits a positive trend in research output in this domain.

To validate the observed positive trajectory, we employed the Mann-Kendall test, which yielded a τ value of 0.83 when analyzing data up to and including 2023. To ensure analytical integrity, we excluded the incomplete year of 2023, leading to a revised τ value of 0.88. This revised outcome indicates a strong and positive trend throughout the observed timeframe. Furthermore, as the τ value serves as an indicator of both the strength and direction of the trend, it suggests a continuous rise in the publication rate over time.

3.2. Country contributions and collaborations

Tableau was utilized to visualize the geographical distribution of publications by country in the field of EFL reading instruction. The magnitude of publications within a given country is depicted by the depth of shades of color. Fig. 4 displays the findings for 76 countries examined, highlighting the top 10 contributors to research in this area. Iran emerges as the most significant contributor, with 272 publications, accounting for 24.91 % of the overall corpus. China closely follows with 240 documents, and Saudi Arabia ranks third with 78 publications. The remaining seven countries, namely the United States, Spain, Japan, Indonesia, Turkey, Malaysia, and South Korea, have each contributed more than 30 publications to the field.

Moreover, when comparing the research engagement in EFL reading instruction across different regions, it is apparent that Asia, North America, and Europe have taken on prominent roles, while researchers from Oceania and Africa have shown limited involvement in this specific research domain. This is evident from the relatively low number of publications, specifically 26 from Oceania and 39 from Africa. Furthermore, it is worth noting that a significant majority of African nations have not contributed any articles in this field of study.

The co-authorship figure representing the collaborative network among countries was generated by using VOSviewer. Out of the 76 countries analyzed, 54 countries were found to have engaged in collaborative efforts with one another. Countries that lacked connections in terms of collaborative networks were not included in the visualized graph. Fig. 5 portrays the network visualization of country collaborations in this field, revealing eleven clusters represented by distinct colors. The largest cluster, highlighted in red, encompasses ten countries primarily from Europe, including Turkey, Germany, Poland, and Sweden. Another cluster depicted in green comprises six countries, such as Malaysia, Jordan, Pakistan, Yemen, Bangladesh, and Libya. The third largest cluster, shown in blue, consists of countries from different continents, including Austria, Spain, Switzerland, the United Kingdom, Lebanon, and Venezuela.

Fig. 5 reveals that Iran is the most prominent node in terms of collaborative connections, with 23 lines linking it to other countries. This finding highlights Iran's significant engagement and close collaborations with multiple nations, including Saudi Arabia, Indonesia, and the Russian Federation. In comparison, China has established collaborations with 20 countries, with the United States serving as its primary research partner in this field, as evidenced by a total link strength of 17. Another noteworthy contributor is Saudi

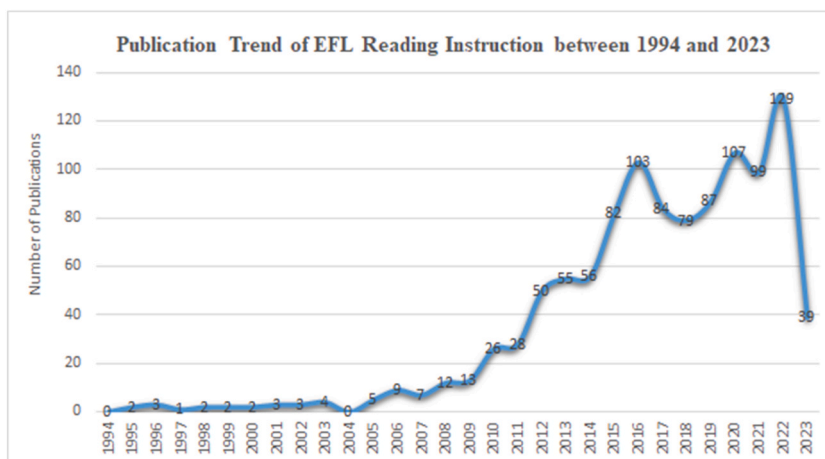


Fig. 3. Publication trajectory of EFL reading instruction from 1994 to 2023.

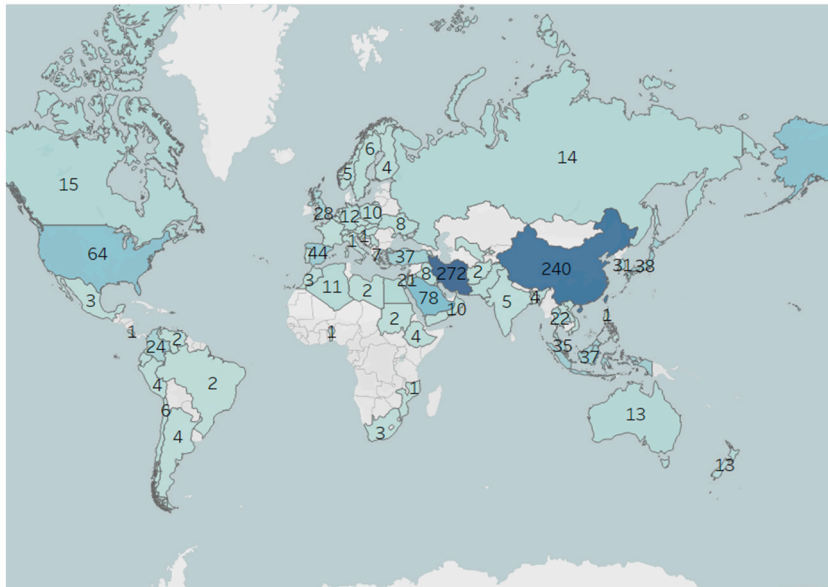


Fig. 4. Geographical distribution of publications by country.

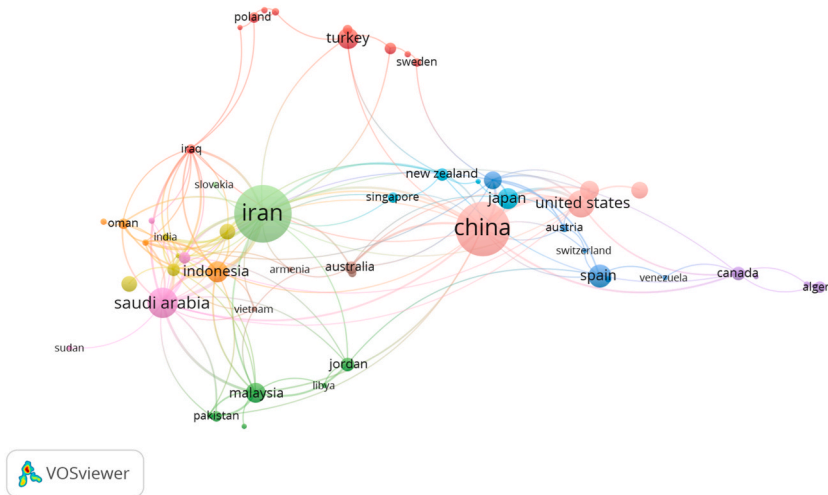


Fig. 5. The network visualization map of country collaboration.

Table 1
Top 10 productive authors in the EFL reading instruction research.

Rank	Author	Nation/Institution	NoP	TC	ACPC
1	Reynolds B.L.	China/University of Macau	11	94	9
2	Kahn-horwitz J.	Israel/Oranim College of Education	10	76	8
3	Namaziandost E.	Iran/Yazd University	7	57	9
4	Gorjian B.	Iran/Islamic Azad University	7	5	1
5	Yang Y.-F.	China/National Yunlin University of Science & Technology	6	134	22
6	Lee J.	South Korea/Gyeongsang National University	6	78	13
7	Shih, Y. -C.	China/National Taipei University	5	61	12
8	Bagheri M. S.	Iran/Islamic Azad University	5	23	5
9	Katzir T.	Israel/Haifa University	5	17	4
10	Zhang L. J.	New Zealand/University of Auckland	4	239	60

Note. NoP=Number of Publications, TC = Total Citations, ACPC = Average Citations Per Article.

Arabia, which has also established 20 connections with other countries, showing pronounced collaborations with Iran, Indonesia, and Malaysia.

3.3. Authors with the highest productivity and citation impact

Table 1 provides an overview of the top ten authors who have made significant contributions to the field of EFL reading instruction, drawn from a total of 1910 authors. Notably, Reynolds B.L., affiliated with the University of Macau, stands out as the most prolific author with 11 research papers published in this domain. Close behind is Kahn-horwitz J. from the Oranim College of Education, who has contributed ten publications. Ranking third are Namaziandost E. and Gorjian B., each having published seven papers. Remarkably, a majority of these highly productive authors originate from Asian countries, particularly Iran and China.

In terms of the total citations, Zhang L. J. emerges as the most cited author with 239 citations attributed to the four publications. Following closely is Yang Y.-F., who has accumulated a total of 134 citations across six publications. It is worth noting that a majority of the authors received an average of fewer than 10 citations per article.

Table 2 presents the ranking of the top 10 most cited authors in the specific research area being investigated. Among these authors, Zhang L. J. stands out as the most cited, with a cumulative total of 239 citations attributed to four articles. Following closely is Chang C.-K., whose publications have accumulated a total of 180 citations. Notably, Hsu, C.-K. leads in average citations per article with 167 citations for one publication. It is noteworthy that the majority of these highly cited authors originate from China.

3.4. Journals with the highest productivity and citation impact

Table 3 provides a comprehensive list of the top 10 journals, out of a total of 302, that have exhibited high productivity in publishing articles related to EFL reading instruction. Remarkably, *System*, a journal based in the United Kingdom, holds the highest position with 30 published articles in this research area. Close behind is the *Journal of Asia TEFL*, with 28 publications to its credit.

Nevertheless, despite the high productivity of these journals in terms of the number of articles published, their average citations per article are relatively low, suggesting a restricted level of citation impact for their published works. This phenomenon is particularly evident in the case of the *Journal of Asia TEFL* and the *Chinese Journal of Applied Linguistics*, both of which have received an average of only two citations per article. When compared to other journals that belong to higher quartiles, these two journals are situated in the third quartile, and this disparity in quartile ranking might be a potential reason for their relatively low citation rates.

In relation to the most cited journals, as depicted in Table 4, *Computers and Education*, a journal affiliated with the United Kingdom, emerges with a significant total citation count of 511. Closely trailing behind are *System* with 447 citations and *TESOL Quarterly* with 427 citations. However, it is worth noting that *Language Learning* stands out by obtaining the highest average number of citations per article, achieving a figure of 68 for each published article. Furthermore, it is noteworthy that the majority of these journals rank within the upper quartile, with the exception of *Reading in a Foreign Language* and *Instructional Science*, which are categorized under Q2. It is also evident that all the mentioned journals originate from developed countries, specifically the United Kingdom and the United States.

3.5. Topical foci

Author keywords are crucial for identifying the research focus and trends in a specific field [57]. Through the application of network visualization using VOSviewer, the topical foci within the realm of EFL reading instruction research were successfully identified. Out of a total of 2741 keywords, 59 were selected based on their occurrence frequency surpassing six times, thus representing prominent research areas in this domain (see Fig. 6). In the visualization, each node represents a distinct keyword, with larger nodes indicating higher occurrence frequencies in the dataset. Notably, the most significant node, labeled as “reading comprehension” in light blue, emerged with a frequency of 192 occurrences. Following this, the node representing “EFL learners” (colored in yellow and positioned closest to “reading comprehension”) displayed a frequency of 73 occurrences in the dataset. Similarly, the smaller node representing “reading strategies” (also depicted in yellow and located near “reading comprehension”) exhibited 53 occurrences.

As displayed, the identified keywords were grouped into seven distinct clusters, with each cluster assigned a specific color to denote

Table 2
Top 10 cited authors in the EFL reading instruction research.

Rank	Author	Nation/Institution	NoP	TC	ACPC
1	Zhang L. J.	New Zealand/University of Auckland	4	239	60
2	Chang C.-K.	China/National University of Tainan	2	180	90
3	Hsu C.-K.	China/National Taiwan University of Science and Technology	1	167	167
4	Hwang G.-J.	China/National Taiwan University of Science and Technology	2	167	84
5	Yang Y.-F.	China/National Yunlin University of Science & Technology	6	134	22
6	Chang Y.-J.	China/National Chi Nan University	1	128	128
7	Chen C.-J.	China/National Chiayi University	1	128	128
8	Liu P.-L.	China/National Chiayi University	1	128	128
9	Huang H.-C.	China/National Taiwan Ocean University	4	124	61
10	Hulstijn J	Netherlands/University of Amsterdam	1	119	119

Note. NoP=Number of Publications, TC = Total Citations, ACPC = Average Citations Per Article.

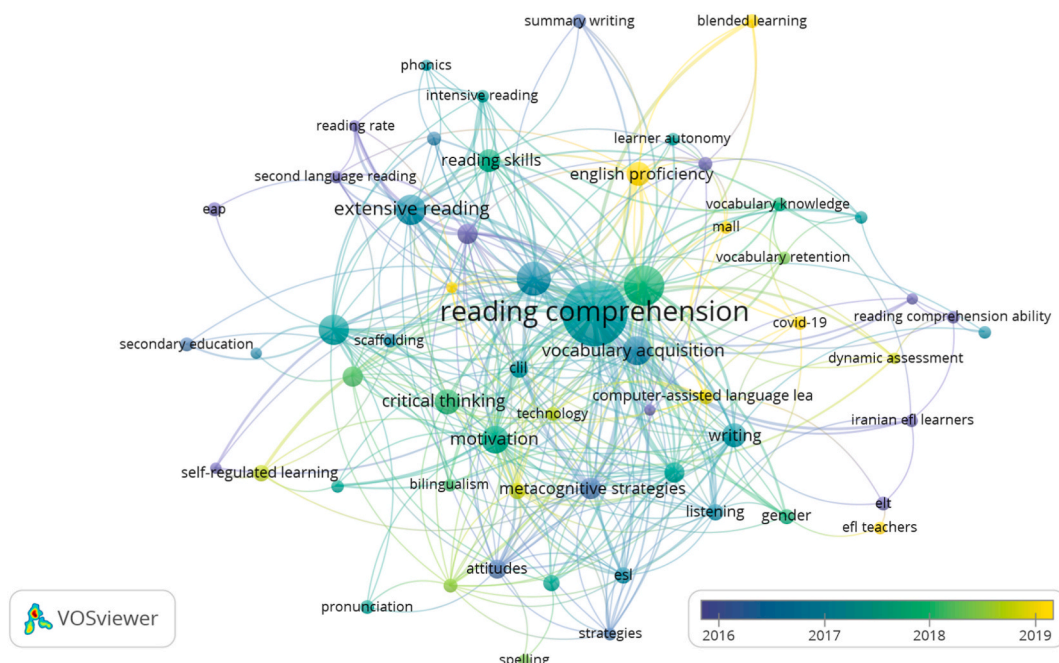


Fig. 7. The overlay visualization of keywords co-occurrence (Occurrence Threshold ≥ 6).

its thematic focus. The largest cluster, indicated by the color red, encompasses twelve items, including “vocabulary acquisition,” “English proficiency,” “blended learning,” “mobile-assisted language learning (MALL),” and “COVID-19,” indicating a research theme centered around technology-based instruction during epidemics. The second cluster, represented by the color green, exhibits larger nodes such as “critical thinking,” “motivation” and “attitudes,” signifying an emphasis on the effect of critical thinking in enhancing learning outcomes. In the dark blue cluster, the primary nodes of “reading comprehension ability,” “writing,” and “listening,” suggest that the research topic revolves around the literacy skills of EFL learners. The dark yellow cluster, comprising nodes such as “EFL learners,” “reading strategies,” “reading skills,” and “intensive reading” signifies the research domain pertaining to EFL learners’ reading skills.

The purple cluster consists of seven items, among which the node size of “foreign language education,” “teacher education,” and “bilingualism” is much larger than the others, reflecting the research focus on language education, and pedagogy in the context of bilingualism. Additionally, the cluster depicted in light blue, featuring nodes such as “reading comprehension,” “self-regulated learning,” “scaffolding,” and “cooperative learning”, indicates a research focus on different approaches to improving reading comprehension of EFL learners. Lastly, the smallest cluster depicted in orange primarily consists of nodes such as “extensive reading,” “reading fluency,” and “reading rate” suggesting that the research focus is on the scope of improving reading proficiency.

Fig. 7 provides a visual representation of the evolving research patterns in the field of EFL reading instruction over the years. Notably, the graphical depiction highlights a distinct shift in research focus from topics such as “attitudes,” “self-regulated learning,” and “reading comprehension ability” towards emerging themes like “English proficiency,” “COVID-19,” “technology,” “blended learning,” and “MALL.” This observed shift underscores the growing attention and significance of these novel areas within the context of EFL reading instruction.

4. Discussions

First and foremost, the findings indicate a growing scholarly interest in the research field of EFL reading instruction over the past three decades. The growing interest in English can be attributed to its widespread acceptance as an “international language” [58] or lingua franca [59], with many non-English speaking countries mandating English proficiency for their citizens [60,61]. Furthermore, the recognition of reading as a crucial skill for overall success in life [62] has driven further research in EFL reading instruction. Scholars worldwide [63,64] have stressed the significance of exploring various facets of this field. Given the consistent upward trend observed in the past three decades, it is reasonable to expect a continued rise in the number of publications in the coming years, surpassing the levels observed in 2022.

Another significant finding reveals that Iran, China, and Saudi Arabia lead in terms of publication output and collaboration within the investigated field. Iran stands out as the foremost contributor both in terms of international contributions and collaborations, emphasizing the importance of EFL teaching due to English’s crucial role as the primary foreign language [65]. Enhancing students’ academic reading skills remains a major objective in Iran’s language teaching system [66]. However, Iranian EFL reading teachers face challenges, such as a dominant teacher-centered teaching pattern [67], students’ demotivation in the classroom [68], and difficulties

integrating technology into teaching [69], underscoring the necessity for researchers to provide constructive suggestions to address these issues within the Iranian EFL context. Likewise, in China, the substantial increase in publications can be attributed to the country's significant emphasis on English language education [70]. English serves as a crucial medium for general education in China, given its vast population of EFL learners worldwide [71]. Consequently, China has dedicated considerable attention to EFL reading instruction, introducing the Chinese Primary and Middle School Students' English Reading Literacy Framework [72] to enhance reading skills among learners. Similarly, Saudi Arabia prioritizes the development of English reading skills within its education systems and programs [73,74], prompting research efforts to address the existing challenges of low English proficiency among students in the EFL reading domain.

Besides, the findings revealed that authors who display the highest productivity and citation impact primarily originate from Asian countries. Having been well aware of the indispensable role of EFL reading instruction in the contemporary educational arena as well as the problems of low reading skills of Asian EFL learners [75,76], Asian researchers have demonstrated exceptional dedication by actively contributing fresh theoretical insights and practical perspectives, thus expanding the existing knowledge base within this specific field.

Regarding influential journals, the inclusion of EFL reading instruction in esteemed publications like *Computers and Education*, *System*, and *TESOL Quarterly* underscores the acknowledgment and importance attributed to this topic within the academic community. Notably, these highly influential journals predominantly originate from developed countries such as the United Kingdom and the United States, signifying that EFL reading instruction has garnered substantial attention and has been deemed worthy of scholarly exploration and dissemination of research findings.

Furthermore, the identified topical foci shed light on the prominent areas of scholarly interest in EFL reading instruction. These findings align with the longstanding research emphasis within the EFL teaching field, as themes such as "technology-based instruction," "critical thinking," and "literacy skills" have been extensively explored and investigated in existing literature. Notably, the effectiveness of integrating technology into EFL teaching and learning remains a prominent and widely discussed topic in the current transformative era [46,77]. Given the widespread adoption of technology in EFL reading classrooms, both teachers and learners are increasingly becoming acquainted with the technology-based learning environment. Scholars such as Ebadi and Ashrafabadi [78] and Tümen Akyıldız and Çelik [79] advocate for the integration of technology as one of the most effective approaches to transform conventional EFL teaching methods. Another significant focus is "critical thinking" in EFL reading instruction. Lu and Xie [80] highlight a noticeable surge in interest regarding the incorporation of critical thinking into EFL instruction in recent years. By equipping learners with critical thinking skills, teachers can empower students to become critical readers and thinkers, enabling them to navigate the complexities of the English language and the world around them [81]. Therefore, there is a need for scholarly investigations focusing on critical thinking to enhance comprehension and address the challenge of integrating critical thinking within the EFL classroom [22]. Likewise, the observation that "literacy skills" emerge as a highly discussed topic aligns with the viewpoints expressed by Genlott [82], emphasizing the importance of creating a positive environment and integrating literacy skills in the English classroom to empower learners with English language literacy abilities. Literacy skills encompass multifaceted cognitive processes, including reading, listening, speaking, writing, and spelling, facilitating students to interact effectively in diverse environments and assume adult roles [83]. Enhancing literacy skills is critical in every country to provide children with more opportunities for success [84]. Given that a significant portion of EFL learners currently lack sufficient proficiency in EFL literacy [85], it becomes imperative to prioritize the enhancement of EFL learners' literacy skills.

Also, the study of EFL reading instruction highlights a significant interconnection among emerging themes, including "English proficiency," "Covid-19," "technology," "blended learning," and "MALL." The COVID-19 pandemic has undeniably exerted a substantial impact on the EFL teaching and learning landscape, presenting heightened challenges to both teachers and learners [86]. Moreover, given the increased emphasis on technology adoption in response to the challenges posed, particularly during the COVID-19 pandemic [87], further research is warranted to explore how technological affordances can transform traditional teacher-dominated settings into dynamic and constructive learning environments, as suggested by El Khairat [88].

5. Conclusion

This study employs scientific mapping techniques to comprehensively examine research in the domain of EFL reading instruction. It investigates the trajectory of publications, contributions and collaborations by countries, influential authors and journals in terms of productivity and citation impact, as well as the identified research foci over the past three decades. The key findings are as follows: 1) The analysis of publication trends indicates that the field of EFL reading instruction continues to evolve, with a foreseen increase in research output in the future. 2) Asian countries, particularly Iran, China, and Saudi Arabia, are prominent contributors and collaborators in EFL reading instruction research. 3) Authors mainly from Asian countries demonstrate the highest levels of productivity and citation impact. 4) The most productive and cited journals primarily originate from developed countries, such as the United Kingdom and the United States. 5) Research foci in EFL reading instruction identified cover various aspects, including "technology-based instruction," "critical thinking," and "literacy skills." However, there is an emerging shift in research focus toward themes such as "English proficiency," "Covid-19," "technology," "blended learning," and "MALL."

In addition to providing valuable insights into the growing body of literature on the EFL reading instruction domain, the study is an attempt to direct new entrants to this field by offering the guidance and direction required to discern the research areas that warrant attention in future investigations. Based on the identified gaps in existing research, the following recommendations are proposed: 1) Future studies should continue using multiple databases to conduct comprehensive bibliometric analyses. 2) Researchers are encouraged to explore additional facets within bibliometric analysis, such as bibliographic coupling and intellectual structure, to gain

deeper insights.

Limitation

This study provides valuable quantitative insights into the knowledge base of EFL reading instruction; however, it is essential to recognize its inherent limitations. One notable limitation is the reliance on a single database for data collection, potentially overlooking relevant information available from other sources. Additionally, the study's focus on English-language journal articles as the selection criteria may have excluded significant data related to key research focuses.

Data availability statement

Original data related to the current study can be obtained by making a reasonable request to the corresponding author.

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Additional information

No additional information is available for this paper.

CRedit authorship contribution statement

Feifei Chen: Writing – review & editing, Writing – original draft, Visualization, Validation, Software, Resources, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Rohaya Abdullah:** Supervision.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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