Thematic research trends in education for English Language Proficiency: A bibliometric study from 2015 to 2023

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Abstract. The global demand for English proficiency among educators has never been greater, yet most English teachers worldwide speak English as a second or third language, not as a first language. Many educators need help to meet English pro-ficiency benchmarks set by their employers, raising questions about the effective-ness of English education in this context. This study conducted a bibliometric analysis of the published literature on thematic research in education for English proficiency from 2015 to 2023 using a bibliometric analysis platform and the Scopus database. The study analyzed 1,052 documents from the Scopus database, with the search period ranging from January 1, 2015, to October 4, 2023, corresponding to the study's time. This study aimed to assess trends and chal-lenges related to English language proficiency among English language educa-tors. Through a comprehensive review of existing literature and data analysis, this study aims to shed light on current knowledge in this field and identify trends in keywords, prolific sources, scholarly production, and global citations worldwide. The publication results and global trends show a steady increase in scholarly arti-cles from 2015 to 2020. However, concerns were raised about a decline in the annual growth rate in 2021 and a significant drop in 2023. The average number of citations per year also decreased from 2019 to 2023, raising questions about the impact and relevance of published papers. In addition, word-cloud visualiza-tions and keyword frequencies emphasize a consistent focus on "English profi-ciency" in publications, indicating continued interest in the subject over the years.

Keywords: Bibliometric Analysis, Educators, English Language Proficiency, English Teach-ers, Language Education.

1   Introduction

English language proficiency is an imperative of global significance within educa-tion. Its importance in an increasingly interconnected world extends beyond a valua-ble skill to becoming a prerequisite for academic and professional success. Educa-tional institutions at domestic and international levels have set stringent benchmarks for English language proficiency, expectations that educators must meet. The con-cept of "proficiency" seems complex and hard to apply in a way that entirely pro-vides for students' engagement in the language learning processes, even though it has an important impact on the educational trajectories of students and educators.

According to numerous studies, the level of English Language Learners' (ELLs') profi-ciency is a key factor in determining how much they participate in class and, ulti-mately, how well they perform academically [1], [2], [3], [4], [5], [6], [7]. Neverthe-less, few studies have examined how this proficiency is developed in educational contexts. McDermott [8] argues that we must consider the interactional circumstanc-es that position people in the world to gain a deeper understanding of the categoriza-tions assigned to students, such as their language ability or proficiency level.

Achieving better teaching quality is intricately linked to teachers' proficiency in the language they use for instruction. However, understanding the nuanced concept of teacher language and its distinctive features demands further research and develop-ment. The connection between teacher language proficiency and teaching effective-ness underscores the importance of educators possessing a high competence in the language of instruction. Better teacher language proficiency leads to better teaching quality, but defining teacher language and its distinctive features requires further research and development [9].

Canh [10] highlighted that a teacher's proficiency in English significantly influ-ences their language utilization within the classroom to facilitate learning. Notably, the study underscores that a teacher's classroom-specific proficiency is equally im-portant to their language proficiency. This introduction lays the foundation for a comprehensive examination of research trends in thematic research concerning Eng-lish proficiency among English educators. Therefore, this research will investigate the trend using a comprehensive bibliometric analysis of existing literature, shedding light on key themes, prolific sources, and knowledge gaps in developing English language proficiency among educators.

Ultimately, this study provides insights into the research advances made so far to contribute constructively to the worldwide conversation on English language teach-ing. By analyzing keywords, global publication trends, annual growth rate, annual citation, and world scientific production over the years, the study aims to unravel patterns and trends that will inform future directions in language education research.

2   Method

2.1   Data Collection

The paper's bibliometric analysis relied on Elsevier's Scopus database, which is known as the world's largest abstract and citation database of peer-reviewed literature (Chi, 2003), and the search period spanned from January 1, 2015, to October 4, 2023, when the study was conducted. The search query employed the keywords Language Proficiency and School. This search retrieved a total of 1,247 articles, adhering to the following criteria: (1) Limit to English articles; and (2) Limit to publications categorized as "articles" and "conference papers". After screening, 1,052 documents met the inclusion criteria, and these selected documents were then exported in document format for subsequent analysis. A visual representation of data extraction criteria is shown in Figure 1.
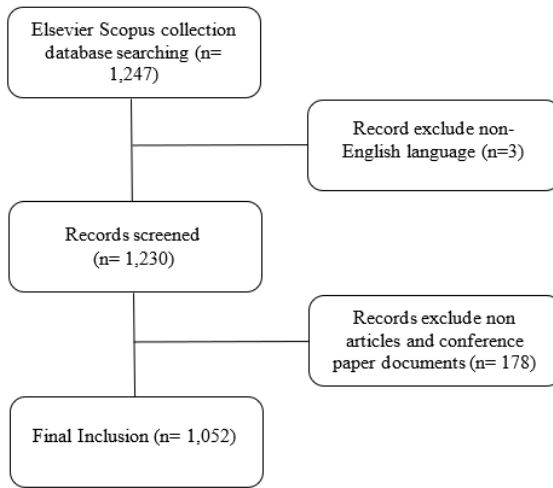
Fig. 1. Visual representation of data extraction criteria.

2.2   **Data Analysis**

In this study, the literature retrieved by the Scopus database was imported into Mi-crosoft Excel and then analyzed using RStudio bibliometrix packages in biblioshiny libraries for visual analysis. R-packaged (Bibliometrix) were developed by Aria and Cuccurullo [11], who conducted comprehensive science mapping analysis using bib-liometrics. These packages increase the relevance of bibliometrics across various academic disciplines, especially in managing the growing volume of empirical re-search, which can be fragmented and contentious. The H-index (the number of pub-lications having a citation number H) and Impact Factor (IF) in 2023 were examined in this study, along with the countries/regions, organizations, authors, journals, refer-ences, keywords, citations, and H-index. Knowledge maps were created using R-packaged "bibliometrix."

Table 1 presents the summary information of the dataset. This dataset, which fo-cuses on recent advancements, represents a vibrant and expanding field of study. It involves numerous authors coming together on various subjects, focusing mostly on research articles. The dataset's average citation rate indicates that the research is influential and significant. This dataset includes 653 different research sources, such as books, journals, and other publishing kinds, published between 2015 and 2023.

This collection has 1,052 distinct research documents, and their yearly growth rate of 12.76% indicates that the body of work is developing. With an average age of only 3.09 years, these documents emphasize recent research. Furthermore, 39,721 refer-ences are cited from outside sources in the texts taken as a whole. A wide variety of Keywords Plus (ID) and Author's Keywords (DE), with 3,219 and 3,001 unique terms, respectively, indicate the dataset's contents, showing a broad spectrum of targeted themes. The dataset involves the contributions of 3,356 authors, with 222 authors having single-authored documents, showcasing both individual and

collaborative research efforts. Collaboration is a key theme, with an average of 3.61 co-authors per document, and approximately 11.5% of co-authorships are international. Most of the dataset comprises articles (969), with 83 conference papers representing diverse document types.

Table 1. Criteria for problem-solving abilities.

Description	Results
Timespan	2015-2023
Sources (journals, books, etc)	653
Documents	1,052
Annual Growth Rate %	12.76
Document Average Age	3.09
Average citations per doc	8,867
References	39,721
DOCUMENT CONTENTS	
Keywords Plus (ID)	3,219
Author's Keywords (DE)	3,001
AUTHORS	
Authors	3,356
Authors of single-authored docs	222
AUTHORS COLLABORATION	
Single-authored docs	234
Co-Authors per Doc	3.61
International co-authorships %	11.5
DOCUMENT TYPES	
Article	969
Conference paper	83

3 Findings and Discussion

3.1 Global Publications and Trends

In this section, we begin by presenting the annual scientific production of articles in the field of English Proficiency in Education. By analyzing the change in the number of publications in a certain field over time, we can effectively evaluate the historical process and current research status and predict future development trends [12]. The distribution among publication years published for research in education for English Proficiency is shown in Table 1. The number of scholarly articles published increased steadily and significantly during the six years from 2015 to 2020. Publications increased, with 62 papers published in 2015 and 140 in 2020. This rising number indicates an increasing level of interest and production in the study or research encompassed by these articles.

The top three annual publications are 188 related articles in 2022, 162 related articles in 2023, and 160 related articles in 2021. The analysis shows that the field of English Language Proficiency in Education has a 12,76% annual growth rate of scientific production from 2015 to the end of 2023 (see Figure 1). The standout year within this time frame was 2020, where the project achieved a significant milestone with the number of articles surging by 37.25% compared to the preceding year. However, there is a noticeable decline in the annual growth rate beginning in 2021. While the quantity of articles kept growing, the growth rate slowed. When there was a real drop in articles in 2023, worry increased as concerns over the project's growing potential were raised.

Table 2 shows the average citation count for articles about Language Proficiency in Education per year. A citation index is a bibliographic database, an index of citations between publications, allowing the user to easily establish which later documents cite which earlier documents [13]. It is the annual impact of the publication on the field over the past nine years. During the first phase, which ran from 2015 to 2018, there was a noticeable variation in the average annual number of citations. The range of these variations was 2.24 to 3.61, with the greatest average citation rate in 2018. This fluctuation could point to changing dynamics in the importance and influence of the scholarly articles released in this time frame. The variations could be influenced by factors such as the changing subject matter of the papers, varying research quality, or shifts in scholarly interests, which need further investigation and reflection.

Table 2. Articles productions per year.

Year	Number of scientific productions
2015	62
2016	74
2017	80
2018	84
2019	102
2020	140
2021	160
2022	188
2023	162

A more striking observation is the steady decline in the average number of citations per year, commencing from 2019 and continuing through 2023. Between 2019 and 2023, the number of citations per paper steadily dropped from 2.21 to 0.90. The persistent decrease in the impact and relevancy of the papers published over this period begs significant concerns. This declining track may have been impacted by changes in the academic scene, shifting research goals, or the introduction of alternative information sources.

Regarding the downward trajectory of average citations, any academic community must undertake a comprehensive assessment of its research focus, methods, and dissemination tactics. The information highlights how crucial it is to be watchful and flexible to guarantee that the project continues to be significant and influential within the academic community.
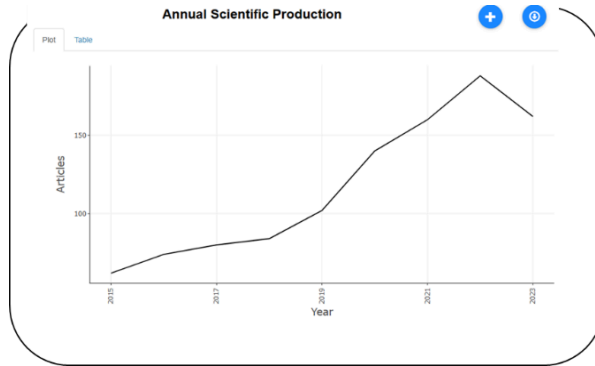
Fig. 2. Annual scientific production.

3.2   Relevant Sources and Documents of English Language Proficiency in Education

Scholarly publications serve as the basis for the dissemination of knowledge, the exchange of ideas, and the advancement of various disciplines [14]. Understanding the importance of choosing the right sources can make a huge difference in the quali-ty and depth of insight one gains in a particular subject area. Identifying and evaluat-ing relevant sources is essential to ensure their credibility and cover the research ob-jectives in an academic paper [15].

The "International Journal of Bilingual Education and Bilingualism" has emerged as the most prolific contributor, presenting a collection of 18 articles. This source is a major contributor to bilingual education and bilingualism. The high number of publi-cations indicates its significant role in disseminating research in this area. The second relevant source is the "Journal of Racial and Ethnic Health Disparities," which col-lected 12 articles. The presence of 12 publications in this journal signifies the im-portance of understanding racial and ethnic health disparities in the context of Eng-lish language proficiency in education. It shows that research in this area addresses issues of diversity and equity, which are crucial for education and health policy. The third relevant source is the "ACM International Conference Proceeding Series BMC Medical Education System," related to computer science and technology research. The presence of 11 publications in this series indicates the intersection of technology and English proficiency in education. This indicates a growing interest in utilizing technology for language education.

Table 3. Table average citation per year.

Year	Average citation
2015	2.24
2016	2.17
2017	2.39

2018	3.61
2019	2.21
2020	2.02
2021	1.59
2022	1.24
2023	0.90

Regarding the relevant document recorded in English proficiency in education, this study investigated publications' global and local citation. Global citation measures the number of citations a document has received from the entire database, in this case, the Scopus database. The global citation also measures the impact of a docu-ment, which, in most cases, could receive a larger number of citations from other disciplines. On the other hand, local citation measures the number of citations a doc-ument has received from documents included in the analyzed data. The local citation also measures the impact of a document in the analyzed collections [11]. In other words, global citations consider citations from a global perspective regarding disci-plines, while local citations focus only on citations within a discipline under study.

Table 4. Top 10th most cited references.

Paper	DOI	Total citations	TC per year
Aizawa i, 2023, lang teach res	10.1177/1362168820965510	42	42
Macaro e, 2018, lang teach	10.1017/s0261444817000350	639	106.50
Jiang l, 2019, int j biling educ bilingualism	10.1080/13670050.2016.1231166	158	31.60
Dearden j, 2016, stud second lang learn teach	10.14746/sllt.2016.6.3.5	130	16.25
Zuckerman ke, 2017, pediatrics	10.1542/peds.2016-3010	129	18.43
Probyn m, 2015, lang educ	10.1080/09500782.2014.994525	117	13.00
Ramírez-castañeda v, 2020, plos one	10.1371/journal.pone.0238372	113	28.25
Valentino ra, 2015, educ eval policy anal	10.3102/0162373715573310	105	11.67
Nguyen a, 2017, int j med informatics	10.1016/j.ijmedinf.2017.04.008	101	14.43
Aguilar m, 2017, int j biling educ bilingualism	10.1080/13670050.2015.1073664	100	14.29
O'dowd r, 2018, int j biling educ bilingualism	10.1080/13670050.2018.1491945	95	15.83

To this end, the analysis shows that the most globally cited paper between 2015 and the end of 2023 was written by Aizawa [16], which has a relatively recent publi-cation year (2023) but has already received 42 total citations, indicating an average of 42 citations per year. Its normalized TC value of 46.60 suggests it has received many citations relative to its publication year. The title of the article is "Beyond the Threshold: Exploring English Language Proficiency, Linguistic

Challenges, and Aca-demic Language Skills of Japanese Students in an English Medium Instruction Pro-gramme," which explores the connection between Japanese undergraduate students' English language proficiency and the English language-related challenges they en-counter when studying an international business course in English.

The study aims to identify English language proficiency thresholds for different academic skills (reading, listening, speaking, and writing) that can help students expe-rience fewer linguistic challenges. Next is Macaro [17], with 639 global citations. His paper systematically reviews research on English medium instruction (EMI) in higher education (HE). This becomes evident when considering the rapidly expanding EMI phenomenon within the broader and language research contexts. This review encom-passed 83 studies in HE, shedding light on the global growth of EMI. The investiga-tions into university teachers' and students' beliefs contribute to the ongoing dis-course. This research investigates whether EMI can be a beneficial tool for improving English proficiency while studying academic subjects in a second language. In addi-tio'n, the result shows the ten most cited documents from the study dataset (see Table 4).

3.3   Scientific Publication Production by Region/Countries

The analysis also included a scientific production (i.e., number of publications) and a contribution to English Proficiency in education across regions/ countries. The result shows that 76 countries contributed to English language proficiency in education. The United States stands out as the leading contributor to scientific production, with a substantial output of 1904 research publications, followed by China and Australia, with 259 and 258 publications related to English language proficiency in education. Further analysis shows the first 20 countries with total and average citations. New Zealand, which only had 17 publications from 2015 to 2023, surprisingly became the top-cited country with a total citation of 205, and the average of article citations is 34.2.

Table 5. Top 10th most cited references.

Country	TC	Average Article Citations
New Zealand	205	34.20
Italy	88	29.30
Singapore	151	21.60
Spain	354	20.80
Israel	19	19.00
South Africa	192	17.50
United Kingdom	397	14.70
Norway	53	13.20
Portugal	13	13.00
Canada	274	12.50

This implies that although New Zealand only published a few scientific articles on English language proficiency in education, the few published ones have a huge impact. According to Ker [18], the condition occurs because New Zealand faces complex linguistic challenges. However, research into language teaching and learning

is vibrant, requiring greater collaboration, generalisability, and effective dissemination of findings. Furthermore, the output of the most cited references is in Table 5.

3.4   Keywords Analysis, Co-occurrence Network, and Trend Topics

Analysis of keywords used by authors in publications is an essential tool for investi-gating trending topics and scholars' focus in the field [19]. Publication keywords help to identify the topic and focus of that publication quickly. The word cloud in Figure 3 shows frequently used keywords in publications on smart learning environments. The data suggests a strong emphasis on English proficiency and language-related topics, appearing 75 times, particularly in education and healthcare. It emphasizes the im-portance of good communication and language skills, particularly for those with limited English proficiency and overseas students pursuing higher education. Specifi-cally, Figure 3 is a visualized word frequency of the authors' most used keywords over time.

As shown in the Figure 3, the keyword "English Proficiency" has been a prominent term with consistent growth from 2015 to 2023. This suggests an ongoing and growing interest in the subject. "English proficiency" is a consistent and prevalent topic, with increasing mentions from 2019 to 2022. Izzatullah [20] highlighted that higher english language proficiency is significantly associated with better academic performance in undergraduate students. This indicates a sustained interest in the subject and its importance, possibly within the context of education and language learning.

4   Conclusion

This study has tried to provide an extensive review of scientific publications on English Language Proficiency in Education over time using bibliometric analysis. The

results show that New Zealand has the highest number of English Language Proficiency in Education citations over the years. That suggests New Zealand remained the most relevant country in English Language Proficiency in education. By understanding the trends, key themes, and knowledge gaps in developing English language proficiency among educators, the research implications will be instrumental in informing educational policies, guiding professional development programs, and shaping curriculum design. Additionally, identifying prolific sources and collaboration patterns can build a more connected and supportive community of practice, fostering the global exchange of ideas and best practices among educators. These implications can positively impact the overall effectiveness of English language education, ensuring that educators are well-equipped to meet the evolving demands of language teaching in diverse contexts.

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