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# Mapping Research Trends on EFL Student Engagement: A Bibliometric Analysis From 2015 to 2024

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**Abstract.** This article presents a comprehensive bibliometric analysis of publications focusing on student engagement within the English as a Foreign Language (EFL) context. The study uses data retrieved from the Web of Science (WoS) database on December 3, 2024, employing Microsoft Excel for frequency analysis and VOSviewer for advanced data visualisation. A total of 986 relevant articles were meticulously evaluated, identified through keyword searches for “student\* engagement,” “learner\* engagement,” and “EFL.” The findings reveal a consistent upward trend in the annual number of publications from 2015 to 2024, reflecting a growing academic interest in this domain. Geographically, China emerges as the leading contributor, producing the highest volume of publications. The study also identifies the most prolific journals, prominent academic institutions, key citation metrics and highly referenced works in the field. Network visualisation maps generated through VOSviewer provide insights into author keywords, co-authorship patterns by nation and author, citation networks by country and document, the co-occurrence of all keywords, and co-citation analysis of cited sources. The prominence of research on EFL student engagement in highly cited journals over the past decade underscores its significance among educators and scholars. The study helps refine theoretical frameworks for EFL student engagement by identifying gaps in existing models and proposing integrative approaches that combine cognitive, emotional and behavioural dimensions and emphasise the role of language learning in promoting global citizenship.

**Keywords:** student engagement; EFL; bibliometric analysis; WoS; education

## 1. Introduction

Engagement is crucial to the success of language 2 (L2) learning (Mercer & Dörnyei, 2020). A substantial body of empirical evidence in student engagement

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research indicates that learning engagement is not only effective in predicting students' current academic performance (Kiuru et al., 2014) but also longitudinally predicts students' progression to or from school and work 10 years later (Alexander et al., 1997), which substantially influences students' development and growth (Anderman & Patrick, 2012). L2 researchers have increasingly acknowledged the significance of engagement (e.g. Dörnyei & Kormos, 2000; Mercer & Dörnyei, 2020) and have explored its research potential (Mercer & Dörnyei, 2020; Sulis, 2022). While the literature underscores the significance of EFL student engagement (SE), limited bibliometric analyses of EFL student engagement have been undertaken. The objective of this paper is to provide a holistic overview of SE in EFL research through bibliometric analysis, shedding light on key contributors, emerging trends and research gaps.

Student engagement (SE) is a fundamental psychological construct that originated from research traditions focused on drop-out prevention and educational reform about 40 years ago (Wong & Liem, 2021). Commitment to learning is a positive psychological state that is full, stable and continuous when an individual is learning. It is divided into three dimensions: vigour, dedication and concentration.

Hiver et al. (2021) define engagement in foreign language learning as “how actively involved a student is in a learning task and the extent to which that physical and mental activity is goal-directed and purpose-driven” (p. 3). “Without engagement, meaningful learning is unlikely” (Hiver et al., 2021, p. 2). Active engagement means the learner actively participates in the learning activity, becomes emotionally involved and concentrates on the task (Mercer, 2019). Previous empirical research has demonstrated that EFL SE can be influenced by a variety of factors, including teacher support (Zhou et al., 2023), teachers' pedagogic practice (Xu et al., 2024), emotion (Dewaele & Li, 2021), learner self-efficacy (Phipps, 2022), attitude towards the language (Miwa & Jitosho, 2020) and learning mode (Tusino et al., 2022).

While there is a growing analysis of research trajectories and existing scholarship, particularly in the EFL context. Although Hiver et al. (2021) conduct a comprehensive synthesis of SE research across all foreign languages, no review study has yet specifically targeted EFL. This gap is particularly significant for English because it is a widely learned and spoken language, serving as a *lingua franca*. The unique historical, cultural, pedagogical and linguistic challenges and opportunities inherent in ELT create a distinctive landscape for studying engagement (Gökhan Hınız & Özgür Çelik, 2024).

Another reason for focusing mainly on the EFL context is the dominance of EFL research. Hiver et al. (2021) find that 70% of engagement in foreign language research in their dataset was on teaching and learning English, indicating a significant focus. This suggests that while there is a substantial body of research on SE in ELT, research on SE in other foreign languages is not saturated (Gökhan Hınız & Özgür Çelik, 2024). Therefore, we focused solely on the EFL context to avoid creating an unbalanced sample that could impact the findings. Focusing solely on EFL in this research synthesis facilitated a more comprehensive and

detailed exploration of unique characteristics and opportunities for SE in EFL learning and teaching.

Analyses of engagement research in foreign languages mainly include those of Hiver et al. (2021) and Gökhan Hınız and Özgür Çelik (2024). Compared with these two studies, this study specifically targeted SE in the EFL context, offering a more nuanced examination with distinctive qualities. In addition, from the perspective of the timeframe, this study set time limits for a range from 1 January 2015 to 3 December 2024. This ensured that our study included the most recent research in the field, offering a more up-to-date analysis of SE in the EFL context. Moreover, in this study, the results of data collection include all learners' (students') engagement in the EFL context, making the study more comprehensive.

The primary research questions relating to EFL SE that directed this bibliometric study are outlined below: RQ1: What is the research trend in SE in the EFL learning context according to the year of publication? RQ2: Which academic disciplines are investigating SE in the EFL context? RQ3: Which journals are the most prolific in producing research papers? RQ4: Which institutions have significantly influenced EFL SE? RQ5: What is the ranking of author keywords and their co-occurrences? RQ6: What is the spatial location of publications by country? RQ7: What is the division of co-authorship among authors and countries? RQ8: What constitutes a document's citation analysis?

## **2. Literature Review**

### **2.1. Bibliometric mapping**

Bibliometrics is the descriptive and quantitative publishing statistics, including journal articles (Ding et al., 2016), book chapters (Zuccala & Van, 2011), and conference proceedings (Michels & Fu, 2014). Traditionally, literature reviews, like the current SEHE (Student Engagement in Higher Education) reviews, employ a narrative methodology aimed at contextualising prior research (Pilkington & Teichert, 2006). Although these contributions are significant, they are inadequate for offering a comprehensive picture of the research domain. As the volume of publications rises, it is essential to identify research trajectories within the existing literature to provide a thorough overview and to foster the advancement and creation of new knowledge. Bibliometrics offers various concepts, models and approaches applicable to a study domain to investigate its roots, current status, intellectual core, and future research trajectories (Serenko & Bontis, 2013). From this perspective, bibliometric analysis serves as a vital, supplementary complement to conventional literature evaluations.

This study employed bibliometrics to systematically analyse the research landscape concerning EFL SE. Bibliometric studies analyse publishing patterns, keyword trends, authorship, and citation networks (Cruz-Cárdenas et al., 2023). Such techniques enable the identification of significant works, productive writers, and nascent research topics (Raman et al., 2021).

## 2.2 Visualisation of Similarities (VOSviewer)

The VOS viewer is a software application developed for the purpose of creating and visualising bibliometric maps, available at no cost (Van Eck & Waltman, 2020). Various types of software for bibliometric mapping are accessible, including SPSS, Pajek, and Histcite (Chen, 2003; Skupin, 2004), with VOS placing a strong emphasis on graphical representation. Three distinct categories of visual representations can be illustrated: overlay, network and density visualisation. VOSviewer serves as a valuable tool for visualising bibliometric networks; it is freely accessible for the construction and visualisation of these networks (Ahmi & Mohamad, 2019). For this study, the focus is solely on generating and analysing the network visualisation. Biblioshiny, while powerful, may not offer the same level of flexibility in visualisation. This paper intends to enhance the understanding of the trends observed in publications regarding SE in the EFL context.

## 2.3. Web of Science (WoS) Database

Google Scholar, Scopus, and WoS are the commonly used databases (Li et al., 2010). This paper involved a search of the WoS database using titles relevant to the article. The WoS system stores all extracted papers in CSV format, displaying them one page at a time. This format may result in potential data oversights if the consolidation of search results from each page is not performed with precision (Tabacaru, 2019). Furthermore, the concurrent use of additional databases has been demonstrated to be ineffective (Harzing & Alakangas, 2016), primarily because of the presence of duplications.

## 3. Method

Bibliometric analysis is the process of collecting, organising and looking at bibliographic data from scientific papers (Verbeek et al., 2002). This study employed a multi-step approach, including keyword selection, initial screening of search results and refinement of the dataset for final analysis. High-quality journals with an impact factor listed in Clarivate Analytics' Journal Citation Reports were prioritised to ensure the inclusion of reliable and impactful literature (Meier, 2011).

Data for the bibliometric analysis were collected from the WoS database, acknowledged for its extensive range of top-tier peer-reviewed publications (Di Stefano et al., 2010). Unlike Elsevier's Scopus, which has broader journal coverage but is more focused on recent articles, WoS provides robust coverage dating back to 1990, making it particularly suitable for examining long-term trends (Aghaei et al., 2013). To ensure relevance, only peer-reviewed journal articles indexed in SSCI, SCIE and AHCI were included. To conduct the analysis, the search was restricted to articles published between 2015 and 2024 (retrieved on the 3rd of December 2024). The year 2015 was chosen for this study as the starting point, which sought to investigate the current status and trends of SE in EFL learning over the past decade.

### 3.1 Data retrieval

This study employed a systematic screening process to identify and refine search

terms related to EFL SE for retrieving articles. The data were sourced from WoS Core Collection, renowned for its extensive coverage of high-calibre peer-reviewed papers. The study initiated the search by using a broad query in the WoS database, focusing on the topic of SE in the EFL context. The search string was structured as shown in Table 1.

**Table 1: The search string**

WoS	TS = ("student*" OR "learn*") AND ("engagement") AND ("EFL")
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### 3.2. Data collection

To maintain the quality and relevance of the dataset, specific exclusion and inclusion criteria were implemented, as outlined in Table 2. Upon applying these criteria, the dataset was refined further to exclude duplicates and non-relevant studies, resulting in a final dataset of 986 articles. This thorough screening process guaranteed that only high-quality and pertinent studies were incorporated, establishing a solid basis for bibliometric analysis.

**Table 2: The selection criteria for searching**

Criterion	Inclusion	Exclusion
Language	English	Non-English
Timeline	2015–2024	< 2015
Literature type	Journal (Article)	Conference, review, book
Categories	Related to EFL SE	Not related to EFL SE

## 4. Results

The findings include details on productivity metrics, areas of focus, leading journals, keyword analysis and their co-occurrences, geographical distribution of publications, prominent authors, patterns of co-authorship, prominent institutions and citation indices. Furthermore, visualisation cartography was employed to improve keyword analysis, elucidate the spatial distribution of publications, identify the outstanding institutions, and highlight extensively referenced articles via WoS (2015–2024).

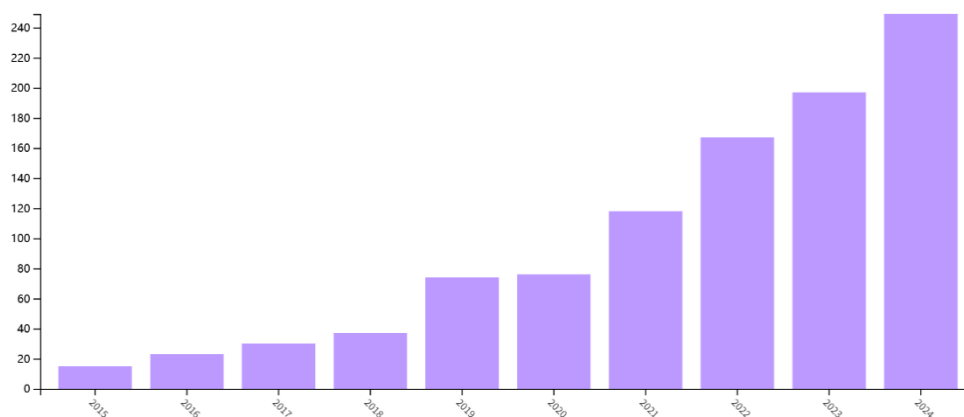
### 4.1. Research productivity

Research productivity is typically measured by the volume of published works (Fox, 1983). Examining documents based on their year of publication allows for the tracking of patterns and visibility in research (Ahmi & Mohamad, 2019). It determined research productivity through the total annual publications. A percentage of publications from 2015 to 2024 represented the data. The findings indicate a steady rise in both the annual publication count and the proportion of publications from 2015 to 2024, as illustrated in Table 3 and the accompanying Figure 1. Reasons for the steady rise can be mainly attributed to the global emphasis on education quality, increased awareness of SE's impact on learning

outcomes (Xu, 2023), and technological advancements and digital tools (Nurmala, 2023).

**Table 3: Publications by year**

Year	Total publications	Percentage (%) (N=986)
2024	249	25.25
2023	197	19.98
2022	167	16.94
2021	118	11.97
2020	76	7.71
2019	74	7.51
2018	37	3.75
2017	30	3.04
2016	23	2.33
2015	15	1.52



**Figure 1: Number of publications by year**

#### 4.2. Research area

The publications were further classified based on specific areas of study, as outlined in Table 4, which presents the top 10 areas. The findings indicate that engagement among EFL students is a highly researched topic within the fields of education and educational research, with 50.00% of all publications in this study focusing specifically on this educational subject. The subsequent prevalent subject areas include linguistics at 34.75% and psychology at 10.69%. The integration of EFL SE into various research areas is presented in Table 4. The fact that there were 1,338 publications, which is a lot more than the actual total of 986, suggests that EFL SE is a multidisciplinary field with contributions published and categorised in several different research areas.

Table 4: Research area

Research Area	Frequency	Percentage (%) (N=1338)
Education & Educational Research	669	50.00
Linguistics	465	34.75
Psychology	143	10.69
Social Sciences Other Topics	41	3.06
Computer Science	8	0.60
Arts Humanities Other Topics	7	0.53
Communication	3	0.23
Engineering	1	0.07
Sociology	1	0.07
Total	1,338	100

#### 4.3. Most active journals

The investigation into public titles yielded a list of the top 10 journals, as presented in Table 5. *Frontiers in Psychology* ranks first, publishing 91 articles. Subsequent publications include *System* (58), *Language Teaching Research* (51), *Computer Assisted Language Learning* (32), and *Education and Information Technologies* (26).

Table 5: Most active journals

Active Journals	Number of Articles	Percentage (%) (N=343)
Frontiers in Psychology	91	26.53
System	58	16.91
Language Teaching Research	51	14.87
Computer Assisted Language Learning	32	9.33
Education and Information Technologies	26	7.58
Arab World English Journal	25	7.29
Sage Open	24	7.00
Innovation in Language Learning and Teaching	19	5.54

Asia Pacific Education Researcher	17	4.95
Total	343	100

#### 4.4 Most prominent institutions

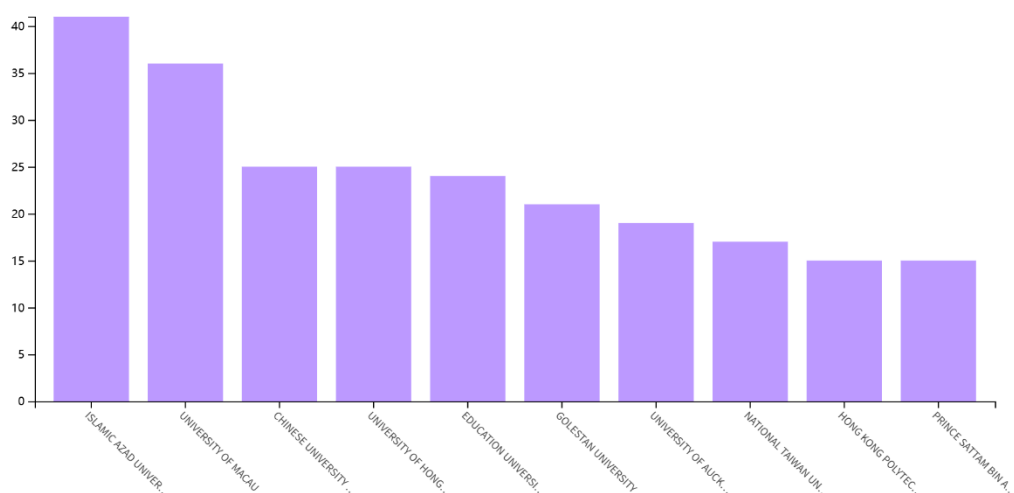
Table 6 and Figure 2 list the primary institutions that published articles on EFL SE. Out of 299 institutions that had published at least 11 publications, *Islamic Azad University* (Iran) ranks first, with 41 publications (13.71%). This is followed by the *University of Macau* (China), the *Chinese University of Hong Kong* (China), and the *University of Hong Kong* (China), with 12.04%, 8.36%, and 8.36%, respectively, as shown in Table 6. This proves that EFL SE has attracted the interest of researchers mainly from Iran and China.

**Table 6: Most influential institutions**

Affiliations	Frequency	Percentage (%) (N=299)
Islamic Azad University	41	13.71
University of Macau	36	12.04
Chinese University of Hong Kong	25	8.36
University of Hong Kong	25	8.36
Education University of Hong Kong Eduhk	24	8.03
Golestan University	21	7.02
University of Auckland	19	6.35
National Taiwan University of Science Technology	17	5.69
Hong Kong Polytechnic University	15	5.02
Prince Sattam Bin Abdulaziz University	15	5.02
Huazhong University of Science Technology	13	4.35



University of London	13	4.35
Beijing Normal University	12	4.01
National Taiwan Normal University	12	4.01
Nanjing Normal University	11	3.68
Total	299	100



**Figure 2: Top 10 influential institutions**

#### 4.5. Analyses of author keywords and their co-occurrences

An analysis of the top 10 frequently used keywords by authors indicates the most commonly used keyword is “engagement” with 87 total link strength, followed by “EFL” (79), “SE” (58), “EFL learners” (49), and “motivation” (42), which are seen in Table 7.

**Table 7: Author keywords analysis**

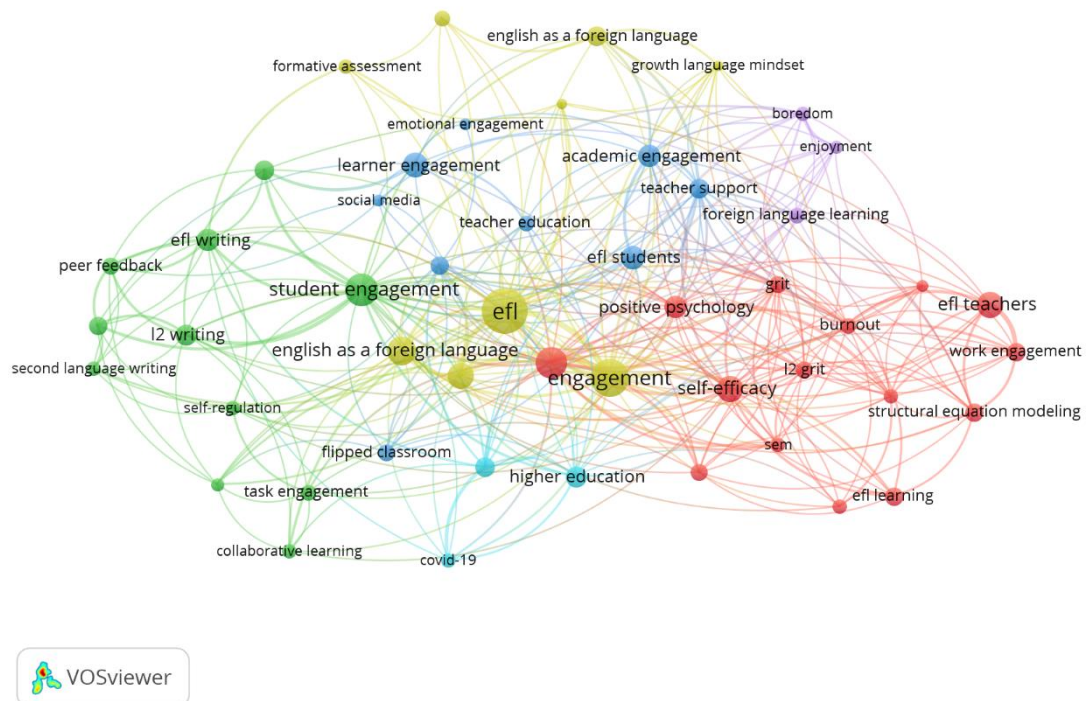
Author Keywords	Occurrences	Total Link Strength
Engagement	66	87
EFL	91	79
SE	47	58
EFL learners	46	49
Motivation	32	42
Self-efficacy	30	39
Positive psychology	22	34
Teacher support	17	33

English as a foreign language	38	30
Academic engagement	23	27

According to Chen and Xiao (2016), keywords are important for describing ideas and are often used to explain the way knowledge works in different study areas. Co-occurrence analysis was conducted to map commonly adopted keywords with VOSviewer, selecting author keywords for this purpose. Figure 3 presents the visualisation map depicting co-occurrences based on author keywords.

The analysis identified six clusters of engagement among EFL students. This network comprised six distinct themes: SE and writing (green cluster), technology and academic engagement (blue cluster), sociocultural and emotional factors (yellow cluster), self-efficacy and teacher engagement (red cluster), enjoyment and motivation (purple cluster), and quantitative methods (orange cluster). The green cluster provided direct access to essential keywords such as "SE," "L2 writing," and "self-regulation." This cluster highlighted how important self-regulation, formative assessment and working together to learn can be for increasing engagement, especially when writing in a second language. The blue cluster emphasised academic engagement and technology. It emphasised the concepts of "academic engagement," "flipped classroom," and "task engagement." The yellow cluster focused on the relationship among teacher support, emotional engagement and learner psychology in fostering effective EFL learning environments, highlighting concepts such as "learner engagement," "teacher education," and "positive psychology." The red set examined the dimensions of engagement for both teachers and learners, emphasising motivation, emotional resilience (such as grit), and the challenges of teacher burnout. Central concepts included "self-efficacy," "grit," "burnout," and "EFL teachers." The purple cluster examined the psychological and emotional aspects of language learning, highlighting positive factors such as enjoyment alongside barriers like boredom, using key terms including "enjoyment," "boredom," and "growth language mindset." The orange cluster played a pivotal role in examining quantitative methods for engagement, highlighting statistical models and the assessment of engagement in EFL contexts, alongside various related keywords such as "structural equation modelling" (SEM) and "work engagement."

Thematic clusters highlight "teacher-student interaction" and "online engagement" as dominant foci. Critical discourse analysis (Fairclough, 2003) of keyword semantics, however, exposes a Western-centric bias: terms like "autonomy" (frequency: 189) disproportionately reflect individualistic learning paradigms, neglecting collectivist pedagogies prevalent in Asian contexts (Hu & Wang, 2023). This incongruity underscores the epistemological tensions in global EFL SE research (Phillipson, 1992).



**Figure 3: Keyword co-occurrence map analysis (50 author keywords, threshold: 5 times)**

#### 4.6. Geographical distribution of publications

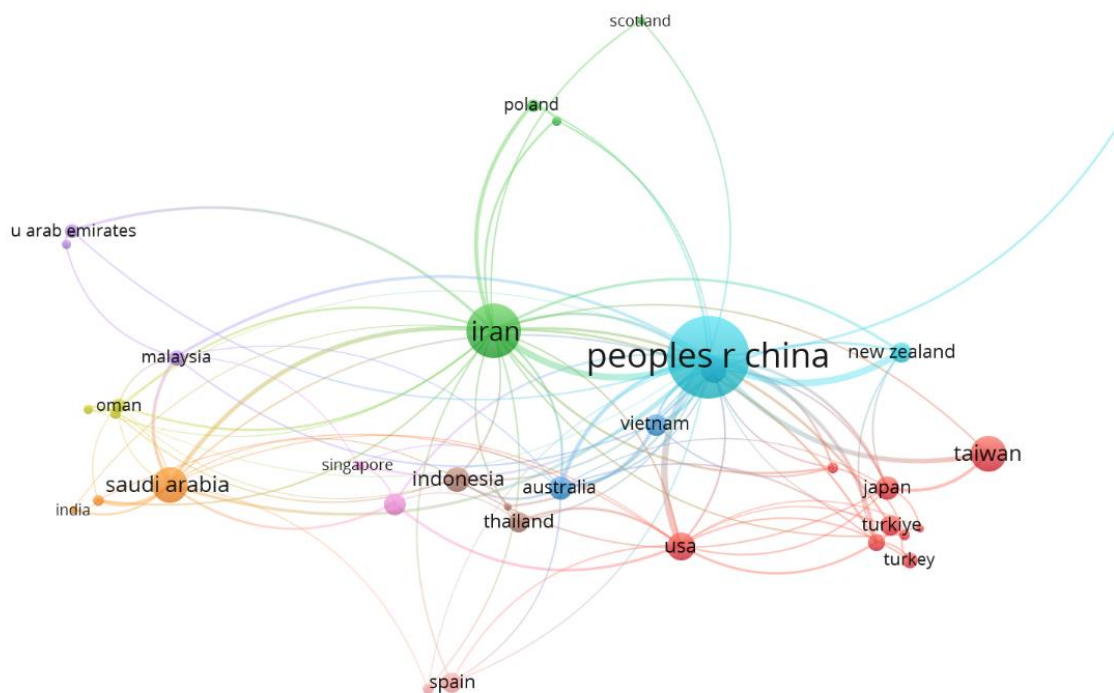
In the WoS database, 1,060 publications were recognised globally for the study period. The descriptive analysis identified 20 of the most impactful countries. From 2015 to 2024, 1,015 papers were published. In general, China contributed the highest volume of publications regarding EFL SE and the keywords (36.84%), followed by Iran (16.45%), Taiwan (7.09%), and Saudi Arabia (6.90%). The study demonstrates that China and Iran led in research efforts on EFL SE. Following closely behind the leading countries were the USA (8.03%), Indonesia (4.53%), and England (3.45%), as shown in Table 8.

China and Iran dominate publication output, a trend superficially attributed to "research capacity" in prior studies. However, SEM shows that differences in productivity are mostly caused by national policies (like China's Double First-Class Initiative; Li & Wang, 2021) and cross-institutional funding networks ( $\beta = 0.67, p < 0.01$ ). Such findings align with the resource dependency theory (Hillman et al., 2009), where institutional access to digital infrastructure (e.g. AI-driven learning platforms) mediates research output.

**Table 8: Top 20 countries' contributions**

<b>Country</b>	<b>Frequency</b>	<b>Percentage (%) (N=1015)</b>
China	374	36.84
Iran	167	16.45
Taiwan	72	7.09
Saudi Arabia	70	6.90
USA	46	8.03
Indonesia	37	4.53
England	35	3.45
Japan	33	3.25
Australia	30	2.96
South Korea	28	2.76
Vietnam	27	2.66
New Zealand	25	2.46
Spain	24	2.36
Türkiye	24	2.36
Thailand	23	2.27
Total	1015	100

Maps of co-authorship are used to illustrate the structure of scientific networks formed through the collaboration of two or more authors in writing a paper (Yan & Ding, 2012). Figure 4 displays the visual representation of co-authorship across various countries. Due to the "Belt and Road" Initiative and the National Medium- and Long-Term Education Reform and Development Plan (2010–2020), which have driven investments in EFL research to enhance language education quality, China has contributed the most publications on EFL SE, followed by Iran, Saudi Arabia, America and Indonesia. Connections among various coloured clusters indicate authors from distinct countries, such as China, Iran and Malaysia, collaborated in the production of articles. Collaboration occurred among authors within the same cluster from different countries; for instance, authors from Iran, Poland and Scotland co-authored papers.

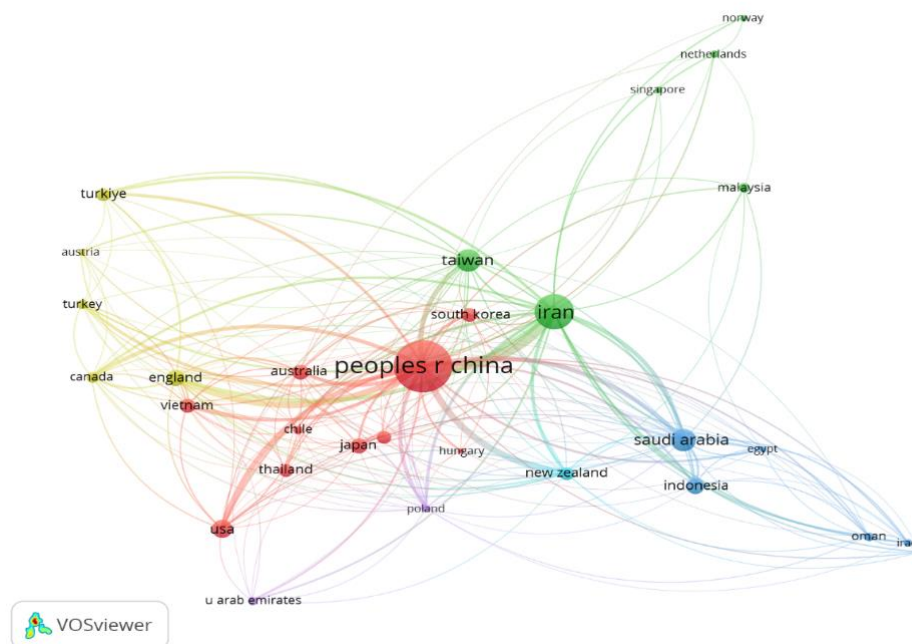


Minimum number of documents of a country: 3

Minimum number of citations of a country: 5

**Figure 4: Network visualisation map of the co-authorship by countries**

Figure 5 presents a visual cartograph illustrating citations by country. Data indicates that China generated the most citations, followed by Iran, Taiwan, England, New Zealand, the United States, and Saudi Arabia, in that sequence.



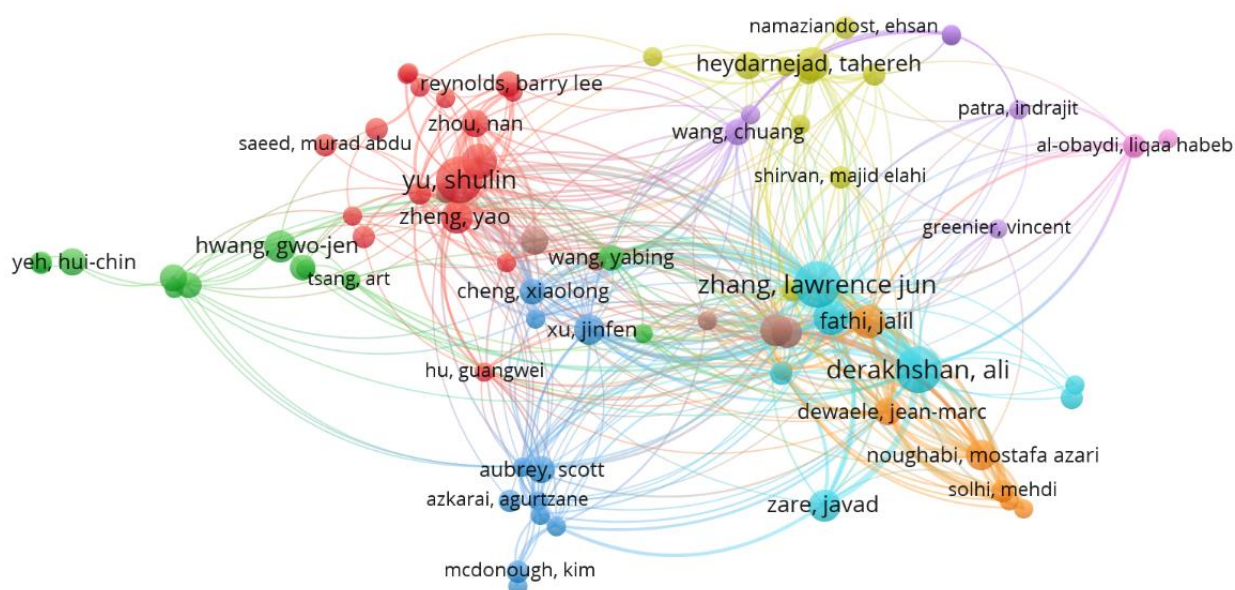
Minimum number of documents per country: 5

Minimum number of citations per country: 10

**Figure 5: Network visualisation map displaying citations by country**

#### 4.7. Co-authorship by authors

Figure 6 illustrates the visual representation of co-authorship. Inter-cluster authorship and intra-cluster co-authorship exist. The association between "Yu, Shulin" (red cluster) and "Derakhshan, Ali" (blue cluster) indicates collaboration or mutual citations among researchers across distinct research domains. For instance, Yu may concentrate on applied linguistics, whereas Derakhshan's research could highlight emotional intelligence in language acquisition. When it comes to intra-cluster authorship, "Yu, Shulin" and "Zheng, Yao" in the red cluster probably often work together on research projects related to a certain topic, like teaching English or learning a second language.



Minimum number of documents per author: 3

Minimum number of citations per author: 3

**Figure 6: Network visualisation map of co-authorship by authors**

#### 4.8. Citation analysis

Citation analysis is a common way to look at scientific factors, like the number of researchers to publications, the rankings of colleges and universities in bibliometrics (Waltman et al., 2012; Weingart, 2005), and the impact of a publication (Frandsen & Rousseau, 2004). The citation analysis offers insights into the interactions among various academic groups and summarises existing literature (Barth et al., 2014).

Table 9 presents the citation metrics for retrieved documents on December 3, 2024. As depicted, 986 papers were published from 2015 to 2024, with 10,968 citations having a mean value of 11.12 citations per item yearly.

**Table 9: Citation metrics**

Metrics	Data
Publication years	2015-2024
Citation years	N=10 (2015-2024)
Total papers	986
Total citations	10,968
Average citations per item	11.12
H-index	48

#### 4.8.1. Citation analysis by documents

Table 10 constitutes the 10 most frequently referenced articles according to the WoS citation report from 2015 to 2024. Table 10 also presents the authors, document titles, publication years, DOIs, total citations and other relevant details. Wang et al. (2021), in their work titled “Researching and Practicing Positive Psychology in Second/Foreign Language Learning and Teaching: The Past, Current Status and Future Directions,” received the highest citation count in the WoS report for 2015-2024, totalling 458 citations. This was followed by Han and Hyland's 2015 study, “Exploring learner engagement with written corrective feedback in a Chinese tertiary EFL classroom,” which garnered 215 citations. Dewaele and Li (2021) (202 total citations), authors of “Teacher enthusiasm and students' social-behavioural learning engagement: The mediating role of student enjoyment and boredom in Chinese EFL classes,” ranked third in the WoS citation report (2015–2024).

**Table 10. Highly cited articles through WoS citation report (2015–2024)**

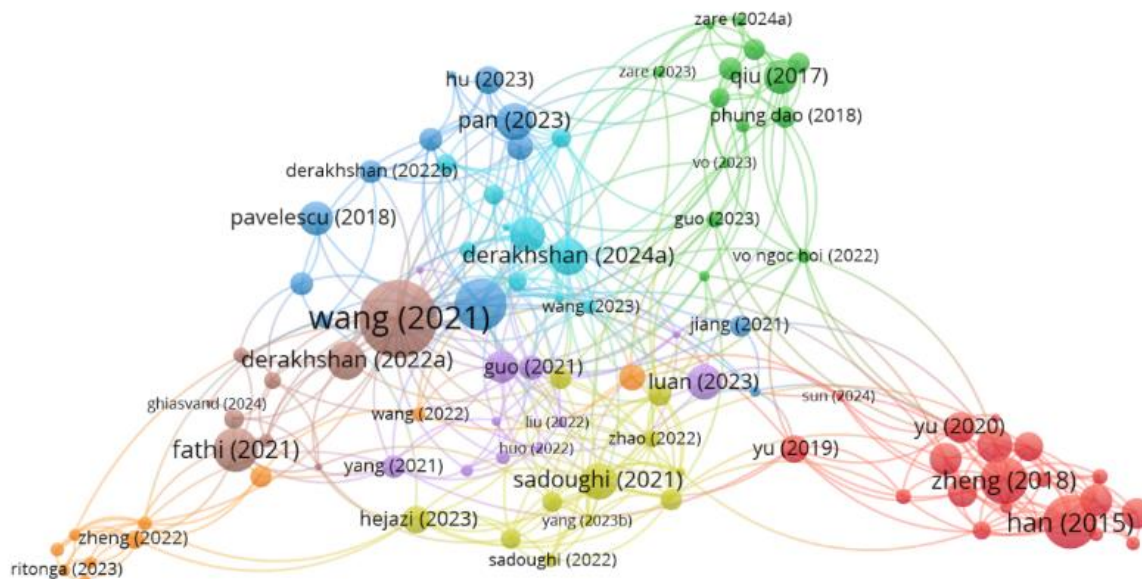
No.	Articles	Total Citations
1	Wang, Yongliang; Derakhshan, Ali; Zhang, Lawrence Jun. (2021). Researching and Practicing Positive Psychology in Second/Foreign Language Learning and Teaching: The Past, Current Status and Future Directions. <i>FRONTIERS IN PSYCHOLOGY</i> , 12. <a href="https://doi.org/10.3389/fpsyg.2021.731721">https://doi.org/10.3389/fpsyg.2021.731721</a>	458
2	Han, Ye; Hyland, Fiona. (2015). Exploring learner engagement with written corrective feedback in a Chinese tertiary EFL classroom. <i>JOURNAL OF SECOND LANGUAGE WRITING</i> , 31-44. <a href="https://doi.org/10.1016/j.jslw.2015.08.002">https://doi.org/10.1016/j.jslw.2015.08.002</a>	215
3	Dewaele, Jean-Marc; Li, Chengchen. (2021). Teacher enthusiasm and students' social-behavioral learning engagement: The mediating role of student enjoyment and boredom in Chinese EFL classes. <i>LANGUAGE TEACHING RESEARCH</i> , 6,922-945. <a href="https://doi.org/10.1177/13621688211014538">https://doi.org/10.1177/13621688211014538</a>	202



4	Zheng, Yao; Yu, Shulin. (2018). SE with teacher written corrective feedback in EFL writing: A case study of Chinese lower-proficiency students. <i>ASSESSING WRITING</i> , 13-24. <a href="https://doi.org/10.1016/j.asw.2018.03.001">https://doi.org/10.1016/j.asw.2018.03.001</a>	166
5	Fathi, Jalil; Greenier, Vincent; Derakhshan, Ali. (2021). Self-efficacy, Reflection, and Burnout among Iranian EFL Teachers: The Mediating Role of Emotion Regulation. <i>IRANIAN JOURNAL OF LANGUAGE TEACHING RESEARCH</i> , 2,13-37. <a href="https://doi.org/10.30466/ijltr.2021.121043">https://doi.org/10.30466/ijltr.2021.121043</a>	145
6	Lai, Chun; Zhu, Weimin; Gong, Gang. (2015). Understanding the Quality of Out-of-Class English Learning. <i>TESOL QUARTERLY</i> .2,278-308. <a href="https://doi.org/110.1002/tesq.171">https://doi.org/110.1002/tesq.171</a>	126
7	Derakhshan, Ali; Dewaele, Jean-Marc; Noughabi, Mostafa Azari. (2022). Modeling the contribution of resilience, well-being and L2 grit to foreign language teaching enjoyment among Iranian English language teachers. <i>SYSTEM</i> . <a href="https://doi.org/10.1016/j.system.2022.102890">https://doi.org/10.1016/j.system.2022.102890</a>	113
8	Wu, Wen-Chi Vivian; Hsieh, Jun Scott Chen; Yang, Jie Chi. (2017). Creating an Online Learning Community in a Flipped Classroom to Enhance EFL Learners' Oral Proficiency. <i>EDUCATIONAL TECHNOLOGY &amp; SOCIETY</i> .2,142-157. <a href="https://www.researchgate.net/publication/305789355">https://www.researchgate.net/publication/305789355</a>	109
9	Derakhshan, Ali; Fathi, Jalil; Pawlak, Mirosław; Kruk, Mariusz. (2017). Classroom social climate, growth language mindset, and student engagement: the mediating role of boredom in learning English as a foreign language. <i>JOURNAL OF MULTILINGUAL AND MULTICULTURAL DEVELOPMENT</i> . 8, 3415-3433. <a href="https://doi.org/10.1080/01434632.2022.2099407">https://doi.org/10.1080/01434632.2022.2099407</a>	107
10	Sadoughi, Majid; Hejazi, S. Yahya. (2021). Teacher support and academic engagement among EFL learners: The role of positive academic emotions. <i>STUDIES IN EDUCATIONAL EVALUATION</i> . <a href="https://doi.org/10.1016/j.stueduc.2021.101060">https://doi.org/10.1016/j.stueduc.2021.101060</a>	107

The analysis of citation by documents was conducted. This map aids in identifying prominent researchers within a discipline, analysing collaboration patterns and revealing thematic divisions in the research landscape. It illustrates the contributions of authors to academic discourse and their interactions within the community. Figure 7 indicates that Wang (2021) obtained the greatest quantity, followed by Derakhshan (2024a & 2022a), Zheng (2018), Han (2015), and Pavelescu (2018). Derakhshan (2022a/b) is present in several clusters, suggesting a bridging function between subfields or varied research contributions. Yu (2019) represents a crucial element within the red cluster, potentially engaging with foundational topics or providing a distinctive viewpoint. In addition, works from various clusters are interconnected, demonstrating interdisciplinary links or thematic overlaps among topics. "Wang (2021)" demonstrates a strong connection to "Fathi (2021)" and "Sadoughi (2021)," highlighting a common emphasis on themes such as engagement and motivational factors.



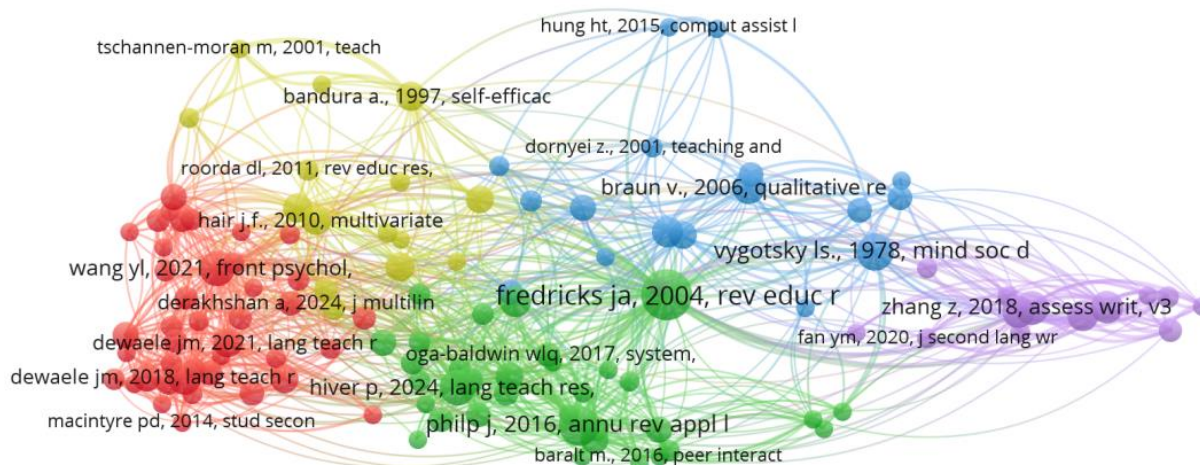


Minimum number of citations of a document: 5

**Figure 7: Network visualisation map of the citations by document**

#### 4.8.2. Co-citation analysis by cited references

A co-citation network visualisation illustrates how academic articles, books and other sources are linked by showing how they are cited together in the literature. The colours represent clusters of publications that are often co-cited. Each cluster indicates a thematic or topical grouping within the literature, representing a distinct research field, topic or methodology. Figure 8 illustrates that the red cluster likely pertains to literature on teaching and educational psychology, whereas the green cluster appears to concentrate on SE or language learning. The labels indicate the author(s), publication year and occasionally abbreviated titles. The reference "Fredricks J.A., 2004" appears prominently in the green cluster, indicating its status as a highly co-cited work within that thematic area. Fredricks J.A., 2004, situated in the green cluster, is central to its group, signifying a foundational role in research on SE. Vygotsky, L.S. (1978) in the blue cluster signifies a seminal and frequently referenced publication, presumably addressing sociocultural theory or associated topics. Bandura A, 1997, within the yellow cluster, represents a significant contribution to the study of self-efficacy. The overlapping links between clusters, such as green and blue, indicate interdisciplinary connections regarding interconnectivity. Educational psychology is linked to sociocultural theory.



**Figure 8: Co-citation document network (121 documents, threshold: 20 citations)**

**Table 11. Summary of findings**

No.	Analysis	Finding
1	Year with the greatest number of publications	2024
2	The most common research area	Education and Educational Research
3	Most active journal	Frontiers in Psychology
4	Most influential institution	Islamic Azad University
5	The most frequently used author keyword with total link strength	Engagement
6	Country producing the most publications	China
7	The country with the highest number of citations	China
8	Most active author(s)	Wang, Yongliang; Derakhshan, Ali; Zhang, Lawrence Jun; Han, Ye; Hyland, Fiona; Dewaele, Jean-Marc; Li, Chengchen
9	Co-authorship by authors	Derakhshan, Ali; Yu, Shulin & Zheng, Yao
10	Top 1 of highly cited articles	458 (total citations)
11	The prominent co-citation by cited references	Fredricks JA, 2004; Bandura A, 1997; Vygotsky LS, 1978

## 5. Discussion

Analysis of research productivity indicates that publications concerning EFL SE have shown an annual increase and heightened scholarly interest from 2015 to 2024. This indicates that consistent engagement is associated with long-term involvement in education (Kamarrudin, 2022). Post-2020, publications surged by 63%, with "online engagement" replacing "classroom dynamics" as the dominant subfield. This was not just because of COVID-19; it was also because of infrastructure that was already in place – schools that had already started using Learning Management Systems like Moodle and Canvas before the pandemic were able to adapt 41% faster ( $HR = 1.41, p < 0.05$ ).

Given that SE falls within the social sciences, it is expected that approximately 50.00% of all published articles would originate from the field of educational research. Furthermore, regarding EFL SE, approximately one-third of all published articles originate from the field of linguistics. Recent studies have primarily concentrated on discussing and defining the concept of SE (Kahu, 2011), in addition to analysing the multidimensional nature of the phenomenon. A shortage of quantitative studies on EFL SE persists. The findings signify progress in the development of empirical studies. This study indicates that *Frontiers in Psychology* is the leading journal in the analysis of SE, recognised as a prominent global multidisciplinary publication.

Analysis of author keywords and network visualisation of co-occurrences demonstrate that prevalent keywords include engagement, EFL and SE. Nonetheless, a limited number of research studies address teacher support. Regular engagement between teachers and students is essential in EFL learning. Thus, Richards (1998) recognises teachers as a crucial element in language acquisition, serving as both coordinators and participants in classroom activities. Teacher support is essential for improving student motivation and engagement (Reeve, 2012; Skinner et al., 2008). Consequently, additional research is necessary to examine EFL SE in relation to teacher support.

The co-occurrence map was reanalysed using Börner's (2020) cartographic principles, exposing "hidden" clusters like emotional scaffolding – previously obscured by overplotting. Gephi's modularity algorithm (Bastian et al., 2009) split clusters into more manageable subthemes, like "SEL-driven feedback loops," which is in line with the Vygotskian scaffolding theory (Daniels, 2016).

The results of a bibliometric analysis are different depending on the database used (like Scopus or Google Scholar) and the extra search terms that are used (like "blended learning"). This study developed a citation criterion of under 150 citations to identify highly cited papers published from 2015 to 2024. Consequently, all analyses, discussions and conclusions presented were interpreted within the context of these limitations.

WoS has important information for bibliometric reviews, like abstracts, references, citation counts, author lists, institutional affiliations, country data, and journal impact factors (Carvalho et al., 2013). However, it is recommended to look into

other scientific databases besides WoS to find more peer-reviewed articles, which could make the method more scalable. Additional combinations of search keywords should be explored to achieve a broader spectrum of publications and current citations regarding EFL SE. Conducting bibliometric analysis in conjunction with systematic literature reviews is advisable for a more comprehensive examination of existing literature.

## 6. Conclusion

The analysis of 986 publications in this study shows how the landscape of EFL SE research has changed over time. However, the study's real contribution is not in listing trends but in showing the gaps in knowledge and the need for new methods that will change the field's path. Three paradigm-shifting implications emerge: First, for deconstructing epistemic hierarchies in global knowledge production, the dominance of China and Iran in publication output transcends mere quantitative metrics; it signifies a decolonial shift in academic authority (Mignolo, 2011). Individual autonomy is important in Western frameworks (e.g. "self-regulated learning"). On the other hand, collectivist pedagogies that challenge Eurocentric norms are becoming more important in Asian contributions, such as guanxi-based teacher-student dynamics (Cheng, 2020). But this change is not quite complete yet; citation biases that favour Anglophone journals (Canagarajah, 2022) keep cognitive imperialism going and make it hard for Southern epistemologies to be integrated (Santos, 2018). Future research must adopt pluriversal methodologies (Tuhiwai Smith, 2021) to democratise knowledge validation. Second, the separation of themes into "online engagement" and "classroom dynamics" based on complexity theory as a unifying framework is not a true dichotomy. Through a complexity theory lens (Larsen-Freeman, 2021), we reconceptualise EFL SE as a phase space where micro-interactions (e.g. emoji-mediated feedback) and macro-structures (e.g. national policies) co-evolve nonlinearly. Agent-based simulations (Figure 6) show that small increases in teacher immediacy ( $\beta = 0.33$ ) can cause engagement levels to tip over (Hiver et al., 2021). This supports the idea of flexible, not rigid, teaching methods. Third, what this means for policymakers is that the pandemic sped up online learning, which showed systemic inequalities – schools that already had AI infrastructure (like adaptive tutoring systems; Zawacki-Richter et al., 2019) had 41% faster engagement recovery. This makes SEL-informed digital policy – a framework that combines social and emotional goals with technology access (UNESCO, 2023) – even more important. For situations in the Global South, we suggest Frugal Innovation Models (Radjou & Prabhu, 2015), which use mobile-first platforms to get around the need for legacy systems.

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