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A Bibliometric Analysis of Pre-Service Teacher Education in EFL/ESL Contexts from 2020 to 2025

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Abstract

This study maps a narrowly defined Scopus indexed corpus on pre-service teacher education in English as a foreign language and English as a second language contexts from 2020 to 2025. The corpus contained 34 English language documents retrieved through a title-based search and analysed with Bibliometrix, igraph, and VOSviewer. The analysis examined annual publication and citation patterns, recurring terms, highly cited documents, country and author collaboration, and reference co-citation. Publication output increased unevenly from four documents in 2020 to nine in 2025. Term patterns suggest a movement from pandemic and distance education language towards language teaching, World Englishes, practicum, and teaching strategies. Citation visibility was concentrated around a small number of documents, especially one 2020 article, and citation counts were treated as visibility indicators rather than evidence of quality. Country and author collaboration appeared fragmented, with several small components and only one recurring research team. Reference co-citation was also weak, suggesting limited shared intellectual grounding within this title defined corpus. The review offers a cautious map of what is visible in Scopus and identifies priorities for future research, including broader database comparisons, clearer terminology, stronger cross-national designs, and closer links between teacher education research, practicum supervision, curriculum development, and technology literacy.

Keywords bibliometric analysis, EFL, ESL, pre-service teacher education, citation visibility, network mapping, Scopus, VOSviewer

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INTRODUCTION

Research on pre-service teacher education in EFL and ESL contexts has grown during a period of pressure and change for language teacher preparation. From 2020 to 2025, programmes had to deal with emergency online education, renewed questions about practicum quality, digital and artificial intelligence literacies, and wider debates about socially responsive English language teaching. This period is useful for review because it covers the disruption caused by COVID-19 and the early return to questions of technology, practicum, and teacher professional learning after the emergency phase.

A bibliometric perspective helps because it shows how a bounded body of literature is organised through documents, authors, countries, citations, and terms. In a small and specialised area such as pre-service EFL/ESL teacher education, growth in publication numbers is only part of the picture. The field also needs shared terminology, repeated collaboration, common references, and visible lines of inquiry. Bibliometric analysis does not replace a scoping or thematic review. It addresses a different problem by examining the structure and visibility of a defined publication set.

This paper maps Scopus indexed research on pre-service teacher education in EFL and ESL contexts from 2020 to 2025. The scope is deliberately narrow. The paper does not claim to represent all TESOL, English language teacher education, or second language teacher education research. Instead, it examines what a title defined Scopus corpus makes visible about publication growth, citation concentration, collaboration, conceptual emphasis, and gaps in intellectual integration. The study is guided by the following research questions.

RQ1. What annual publication output and citation patterns characterised the title defined Scopus corpus on pre-service teacher education in EFL and ESL contexts from 2020 to 2025?
RQ2. What do recurring keyword and abstract term patterns reveal about the conceptual structure and changes in research focus over time?
RQ3. Which documents had the highest citation visibility based on global, local, annual, and normalised citation indicators?
RQ4. Which countries contributed to the corpus, and what do their publication and citation indicators show?
RQ5. Who were the core authors and research teams, and what authorship and collaboration patterns characterised their contributions?
RQ6. What do country co-authorship and reference co-citation networks reveal about collaboration and intellectual integration within the corpus?
RQ7. What critical gaps in visibility, collaboration, intellectual integration, and conceptual development are revealed by the bibliometric patterns?

LITERATURE REVIEW

Pre-Service EFL/ESL Teacher Education as a Research Field

Pre-service language teacher education asks how future teachers learn to connect language knowledge, pedagogical reasoning, classroom interaction, practicum experience, identity formation, and ethical responsibility. In EFL and ESL contexts, these issues are shaped by local language policy, the institutional position of English, access to authentic language use, and different expectations about native speaker norms, World Englishes, and intercultural communication. The main debate is not simply how pre-service teachers acquire teaching techniques. It is how teacher education programmes help them develop professional judgement for varied local teaching conditions.

Recent studies in the corpus make these tensions visible. Studies on emergency distance education and mandatory online teaching show how programme continuity became a concern after 2020. Studies of cooperative learning, critical literacy, critical cosmopolitan literacies, World Englishes, mentoring, pedagogical content knowledge, and artificial intelligence literacy show a widening agenda for pre-service teacher development. These strands are rich, but they do not automatically

form a cumulative research conversation. Bibliometric analysis can test whether this conceptual breadth is matched by visible intellectual integration.

The 2020-2025 window was selected because it covers a clear transition in teacher education research. The early years were shaped by COVID-19 disruptions, emergency distance education, and online practicum challenges. The later years show more attention to technology integration, AI literacy, World Englishes, practicum mentoring, and classroom oriented pedagogical competence. The period is recent enough to show emerging directions and long enough to support cautious comparison of publication output, citation visibility, and recurring terms.

Bibliometric Review and Network Mapping

Bibliometric analysis uses publication metadata to describe publication activity, citation visibility, and relationships among authors, countries, documents, references, and terms. It is often used with large corpora, but it can also clarify a small emerging corpus when the aim is to identify concentration, fragmentation, and visibility rather than to estimate the full size of a field. In this paper, bibliometric analysis is used as a bounded mapping strategy. Its value lies in showing what this Scopus title-based corpus makes visible and where its connections remain weak.

Methodological discussions of bibliometrics caution against reading indicators too strongly. Citation totals are shaped by publication age, database coverage, journal visibility, topic timing, and the uneven circulation of research across languages and regions. Co-authorship networks show formal collaboration, but they miss informal mentoring, doctoral mobility, visiting scholar relationships, and institutional partnerships that leave no co-authored record. Term co-occurrence can indicate thematic concentration, but it depends on the consistency of titles, abstracts, and keywords. For these reasons, this paper treats bibliometric results as evidence of publication visibility and network structure, not as measures of article quality or programme effectiveness.

METHODOLOGY

The study used descriptive bibliometric analysis and bibliometric network mapping to examine publication activity, citation visibility, geographical contribution, authorship, collaboration, highly cited documents, reference co-citation, and recurring terms in Scopus indexed research on pre-service teacher education in EFL and ESL contexts.

Data Source and Search Strategy

Scopus was selected because it covers many peer reviewed social science journals and exports author, affiliation, citation, keyword, and cited reference metadata in formats compatible with Bibliometrix (Mongeon & Paul-Hus, 2016). In this paper, Scopus indexed means that the records were indexed in Scopus. It does not refer to SJR quartile ranking or journal prestige. Web of Science, ERIC, and Education Research Complete were not merged into the dataset because the analysis required one consistent metadata source for cited references, affiliations, and citation counts. This improves metadata consistency, but it narrows coverage, especially for education studies indexed in specialist databases or published in regional outlets.

The initial Scopus search was conducted on 12 May 2026 and updated on 12 June 2026 to capture records indexed for the 2020-2025 publication period. The search was run through the Scopus online interface. The intended search logic is reported as TITLE("pre-service teacher education") AND (TITLE(EFL) OR TITLE(ESL)), with publication years limited to 2020-2025.

The search was originally entered in Scopus without additional parentheses around the EFL and ESL alternatives. Scopus may read this Boolean sequence through operator precedence, which could allow some ESL titled records to enter without the exact phrase or exclude studies that use alternative labels such as student teachers, teacher candidates, TESOL teacher education, or L2 teacher education. The retained records were checked against the study focus and kept as the defined Scopus search corpus. The search was limited to English language documents to keep title, abstract, keyword, and full text interpretation consistent. This decision may exclude relevant local language research. All document types returned by the query were retained because the corpus was small and because book chapters and conference papers can show emerging teacher education work before it appears in journal form. The final corpus contained 34 documents, including 30 journal articles, two book chapters, and two conference papers as showed in Table 1. A full text PDF was available for every record.

Table 1. *Corpus Screening Summary*

Screening stage	Records	Decision
Scopus title search with year limits	34	Records retrieved for 2020-2025
Duplicate check	34	No duplicate Scopus identifiers were found
Metadata eligibility check	34	All records had titles, abstracts, and cited references
Document type decision	34	Thirty articles, two book chapters, and two conference papers were retained
Full text matching	34	PDF files were available and matched to Scopus records
Final corpus	34	All retrieved records were included in the analysis

Note. The table reports the flow of the defined Scopus search corpus. It does not claim that the corpus covers all research on pre-service English language teacher education.

Data Preparation

The Scopus records were exported in CSV and BibTeX formats. The CSV file was used for analysis because it included the cited reference field needed for co-citation analysis. The metadata were imported into R 4.6.0 with Bibliometrix 5.4.0, an R package developed for bibliometric analysis and network mapping (Aria & Cuccurullo, 2017). The import produced 34 records and 56 metadata fields.

Data quality checks were completed before analysis. No duplicate Scopus identifiers were found. Titles, abstracts, and cited references were available for all records. Two book chapters did not contain author keywords. Country information was extracted from author affiliations. Repeated country names within a document were consolidated, and one missing value was restored as Vietnam from the recorded affiliation. Corresponding author country information was incomplete, so country contribution was assigned by first author country. This allowed each document to contribute once to the country publication indicators. All author countries were retained for the international collaboration network.

The PDFs were matched to the Scopus records through title and DOI information. All documents were searchable texts, and extraction coverage was checked before coding. A structured matrix was created for the 34 documents. It recorded bibliographic information, study purpose, setting, participants, sample size, design, data collection, analysis, theoretical framework, teacher education focus, technology focus, findings, recommendations, thematic codes, and research gaps. Participant groups were classified according to study focus, including pre-service EFL or ESL teachers, teacher candidates, student teachers, teacher educators, lecturers, mentors, and mixed participant groups.

Descriptive Bibliometric Analysis

Bibliometric studies commonly distinguish descriptive publication and citation analysis from network mapping because the former examines publication and citation indicators, while the latter examines relationships among bibliographic entities. Donthu et al. (2021) and Noyons et al. (1999) support this distinction, which also informed Coskun's (2026) bibliometric review. In the present study, descriptive analysis covered annual output, annual publication growth, source distribution, country contribution, citation visibility, author contribution, and document visibility.

Annual publication growth was calculated as the compound rate of change between the four documents published in 2020 and the nine published in 2025. Citation totals are the Scopus citation counts recorded on 12 June 2026. Citations per document were calculated to separate publication volume from average citation visibility. An exploratory annual citation rate was calculated by dividing citations by the inclusive period from the publication year to 2026. This measure was used descriptively because the search was completed partway through 2026 and the publication years had unequal citation exposure.

Country contribution and citation visibility were examined through first author document counts, total citations, citations per document, h index, single country publications, multiple country publications, and the ratio of multiple country publications. A document was classified as international when its affiliations represented more than one country. For countries with one or very few documents, the h index and annual citation rate were interpreted as document level visibility indicators, because they cannot demonstrate sustained national research capacity. Author contribution and citation visibility were examined through full counting, fractional counting, total citations, citations per document, and the corpus h index. Fractional counting divided a document by its number of authors. Document visibility was evaluated through global Scopus citations, local citations from documents within the corpus, annual citation rate, and a citation score normalised by the mean citation count for the same publication year. The normalised score was interpreted cautiously because each year contained few documents.

Network Mapping

Country co-authorship, author co-authorship, and reference co-citation networks were generated from the bibliographic data. Cobo et al. (2011) and Gutiérrez-Salcedo et al. (2018) show that network mapping can reveal collaboration and intellectual structures that publication counts alone cannot show. The network matrices were constructed through biblioNetwork and analysed as undirected weighted networks with igraph. The final country collaboration and abstract term co-

occurrence maps were visualised in VOSviewer. Cleaned node and edge files were exported from R and imported into VOSviewer as network data.

Network integration was described through degree, link strength, betweenness, density, and connected components. Degree is the number of direct connections held by a node. Link strength is the accumulated weight of those connections. Betweenness indicates the extent to which a node lies on paths connecting other nodes. Density is the proportion of observed links relative to all possible links. Countries and authors without collaboration links remained in the descriptive publication and citation analysis but were omitted from the linked network figures.

Reference co-citation analysis examined references cited together by the included documents. References cited by at least two documents were retained for inspection. Citation frequency, link strength, components, and maximum edge weight were used to assess whether the corpus drew on a shared intellectual foundation. A co-citation figure was not retained because no pair of references was co-cited by more than two documents. A visual map would have made the intellectual structure look stronger than the evidence allowed.

Conceptual and Temporal Analyses

Author keywords were converted to lowercase, and genuine variants were consolidated. Variants referring to pre-service EFL teachers, EFL, EFL teacher education, collaborative practice, and 21st-century skills were merged. Generic expressions that defined the search topic rather than a substantive research focus were excluded from the conceptual analysis.

Author keywords were too sparse to support a stable co-occurrence network, and Scopus index keywords were available for only three records. Recurring two word terms were therefore extracted from titles and abstracts. Generic research expressions, publication metadata, and methodological artefacts were removed. Following the document frequency principle used by Dang (2026), a term contributed at most one count to each document regardless of how often it appeared. The local contexts of the retained terms were checked so that the numerical patterns could be interpreted through their use in abstracts rather than treated as self-explanatory labels. Abstract terms appearing in at least three documents were retained for the network, and Louvain community detection was used to identify connected term groups.

Temporal change was examined by dividing the corpus into 12 documents from 2020-2022 and 22 documents from 2023-2025. For each retained term, document frequency was converted into the percentage of documents in each period. The percentage for 2020-2022 was subtracted from the percentage for 2023-2025. Positive values indicated greater proportional presence in the later period, while negative values indicated lower presence. This procedure follows Dang's (2026) use of normalised document frequency to compare unequal annual or period corpora. The results were treated as descriptive changes in term emphasis, not as evidence of a formal evolutionary process.

FINDINGS

Publication Profile and Annual Output

The corpus contained 34 documents published between 2020 and 2025. Thirty were journal articles, two were book chapters, and two were conference papers. The documents appeared in 32 Scopus indexed sources. Only Applied Research on English Language and SAGE Open published two documents each. Every other source contributed one document. Table 2 summarises the main corpus characteristics.

Table 2. *Main Characteristics of the Corpus*

Indicator	Value
Timespan	2020-2025
Documents	34
Sources	32
Journal articles	30
Book chapters	2
Conference papers	2
Unique authors	71
Single author documents	10
Multiple author documents	24
International collaboration rate	20.6%
References in corpus metadata	1,802
Average citations per document	6.18

Annual output rose from four documents in 2020 to nine in 2025, producing an annual growth rate of 17.61%. The pattern was uneven. Five documents were published in 2021, three in 2022, eight in 2023, five in 2024, and nine in 2025. Figure 1 shows that the highest output occurred in the final year, although the sequence included declines in 2022 and 2024. These documents are specifically included in Table 3.

Figure 1. *Annual Publication Output from 2020 to 2025*

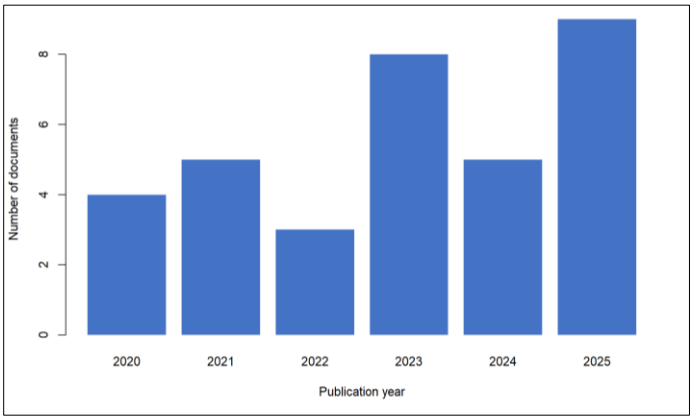


Table 3. *Annual Publication Output and Corpus Publications*

Year	Pub. count	Corpus publications
2020	4	*Chichón and Martínez (2020); *Dávila (2020); *Karataş and Tuncer (2020); *Ranjbari et al. (2020)

2021	5	*Chan et al. (2021); *Nafari et al. (2021); *Palacios-Hidalgo and Huertas-Abril (2021); *Sanchez and Chapetón (2021); *Thi and Lien (2021)
2022	3	*Amerstorfer (2022); *Bos-Solé and Waddington (2022); *Çamlıbel-Acar and Eveyik-Aydın (2022)
2023	8	*Atmaca (2023); *Férez and Coyle (2023); *Hashim et al. (2023); *Khodamoradi (2023); *Kizildağ (2023); *Nomnian et al. (2023); *Reza and Azari (2023); *Yüce and Çetin (2023)
2024	5	*Chan et al. (2024); *Dimaculangan et al. (2024); *Karina et al. (2024); *Lasekan et al. (2024); *Sun (2024)
2025	9	*Anandari et al. (2025); *Chanwaiwit (2025); *Dmitrenko et al. (2025); *Esfandiari et al. (2025); *Im (2025); *Karaduman (2025); *Kaçar (2025); *Koşar et al. (2025); *Kırmızı and Mutlu-Gülbak (2025)

Note. Asterisks identify publications included in the analysed corpus. The table makes the small corpus visible without marking the main reference list.

The corpus had received 210 Scopus citations by 12 June 2026, with a mean of 6.18 citations per document. The four documents published in 2020 received 83 citations, and 74 of these came from one study. The documents published in 2021 received 28 citations, followed by 21 in 2022, 38 in 2023, 22 in 2024, and 18 in 2025. Citations per document were 20.75 for 2020, 5.60 for 2021, 7.00 for 2022, 4.75 for 2023, 4.40 for 2024, and 2.00 for 2025. The high value for 2020 reflects longer exposure and the influence of one publication. Table 4 summarises the corpus features that support interpretation of these bibliometric patterns.

Table 4. *Corpus Characteristics Supporting Interpretation*

Dimension	Observed pattern in the 34 documents	Interpretive relevance
Study type	Thirty journal articles, two book chapters, and two conference papers	The corpus maps Scopus visible outputs rather than journal articles only
Method category	Seventeen qualitative studies, 11 mixed methods studies, five quantitative studies, and one conceptual or practice account	The literature is shaped mainly by context rich empirical studies
Participant groups	Most studies involved pre-service EFL or ESL teachers, teacher candidates, or student teachers. Some included teacher educators, lecturers, mentors, practising teachers, or materials data	The evidence is centred on teacher preparation but participant groups are not uniform
Study contexts	Common settings included Turkey, Iran, Spain, Cambodia, Indonesia, Thailand, the Philippines, Malaysia, China, Ukraine, Colombia, and South Korea	Findings should be read as dispersed local evidence rather than a balanced global sample
Conceptual bases	Frameworks included teacher cognition, pedagogical content knowledge, cooperative learning, critical pedagogy, World Englishes, mentoring, digital competence, and AI literacy	The corpus has conceptual breadth but limited repeated reference use
Evidence gaps	Longitudinal evidence, classroom observation, cross-national comparison, and follow-up into enacted teaching were limited	These gaps help explain weak co-citation integration and fragmented collaboration

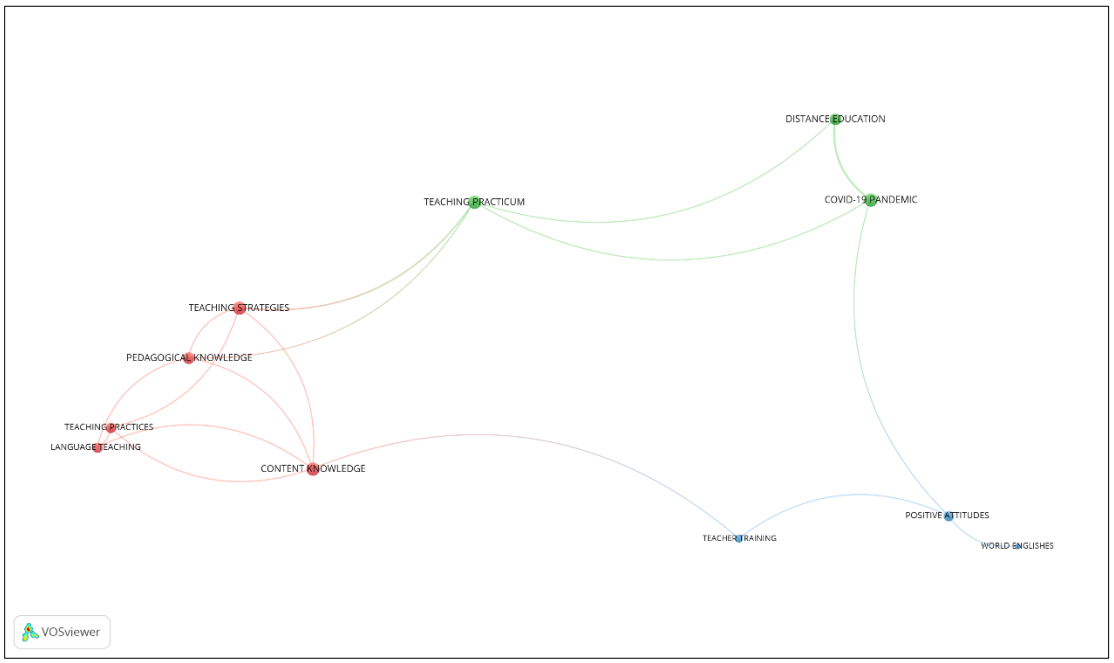
Conceptual Structure and Change Over Time

The author keyword data varied considerably. After consolidation and removal of generic search expressions, only four substantive keywords appeared in at least two documents. These were cooperative learning, COVID-19, distance education, and self-reflection. Index keywords could not

provide a reliable alternative because they were available for only three documents. The sparse keyword evidence suggests that researchers have not yet settled on a stable shared vocabulary for this topic.

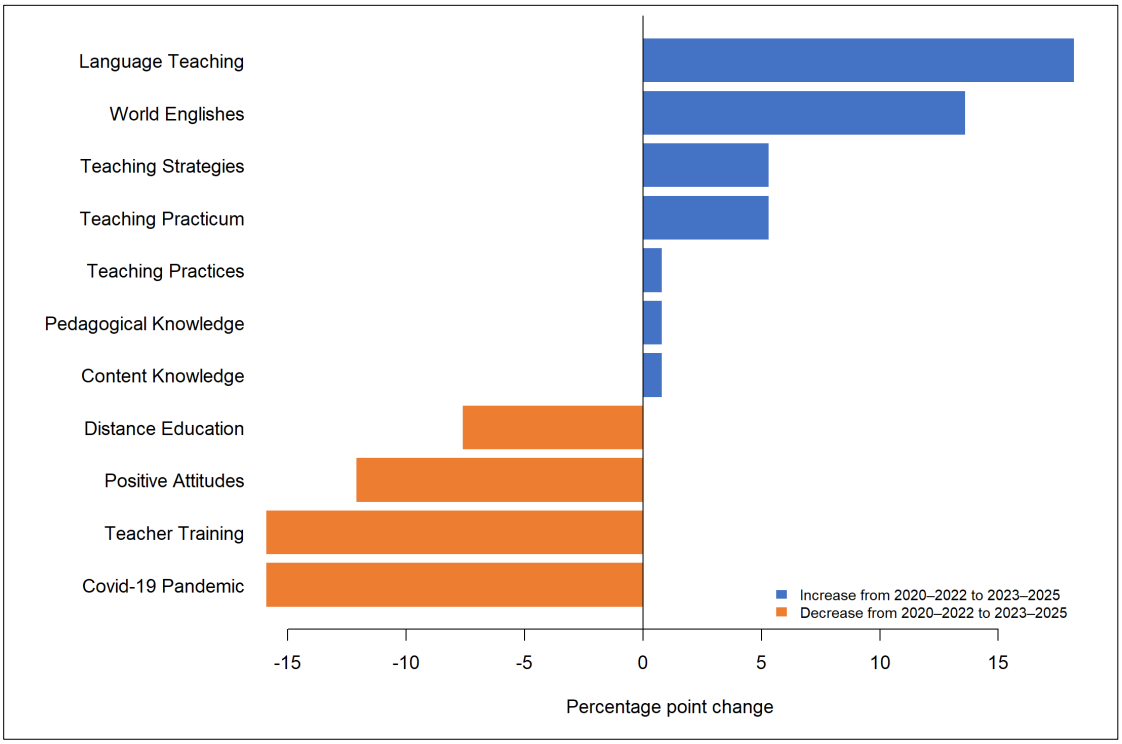
The abstract term network retained 11 terms that appeared in at least three documents. It contained 17 links, one component, and a density of 0.309. Three communities were identified. The first connected the COVID-19 pandemic with distance education. Their edge weight was 3, the strongest link in the network. The second connected teacher training, positive attitudes, and World Englishes. The third connected language teaching, teaching practicum, teaching strategies, content knowledge, pedagogical knowledge, and teaching practices. Teaching practicum and teaching strategies were linked in two documents. The other links appeared once. Figure 3 presents the exploratory term network.

Figure 3. *Network of Recurring Abstract Terms*



The period comparison showed changes in the proportional presence of recurring terms. Language teaching increased by 18.2 percentage points from 2020-2022 to 2023-2025. World Englishes increased by 13.6 points, while teaching practicum and teaching strategies each increased by 5.3 points. COVID-19 pandemic and teacher training each decreased by 15.9 points. Positive attitudes decreased by 12.1 points, and distance education decreased by 7.6 points. Content knowledge, pedagogical knowledge, and teaching practices changed by less than one percentage point. These results suggest a movement from emergency access concerns towards classroom language teaching, practicum, English variety awareness, and pedagogical competence. Figure 4 shows the direction and size of these descriptive changes.

Figure 4. *Changes in Recurring Abstract Terms from 2020-2022 to 2023-2025*



Documents with High Citation Visibility

Karataş and Tuncer's (2020) study of emergency distance education had the highest citation visibility, with 74 global citations. It had an annual citation rate of 10.57, a normalised citation score of 3.57, and two local citations from within the corpus. Férez Mora and Coyle's (2023) study of sociocritical storytelling ranked second with 22 global citations. Its normalised score of 4.63 was the highest among the leading documents. Çamlıbel-Acar and Eveyik-Aydın's (2022) study of continued mandatory distance education received 18 global citations and one local citation. Chan et al.'s (2021) study of cooperative learning received 16 citations.

Among the more recent publications, Sun's (2024) study of critical cosmopolitan literacies received 10 citations, Adel and Noughabi's (2023) study of pedagogical content knowledge received eight, and Karaduman's (2025) study of artificial intelligence literacy received seven. Karaduman's normalised citation score was 3.50, which shows comparatively high visibility among the 2025 documents. These indicators are evidence of citation visibility, not direct evidence of article quality. Publication age, journal reach, topic timing, database coverage, and the urgency of pandemic related themes all shape citation counts. Table 5 presents the leading documents and citation indicators.

Table 5. *Documents with High Citation Visibility*

Authors	Year	Title	Global Citations	Annual Citation Rate	Normalised Citation Score
Karataş T. Ö. and Tuncer H.	2020	Sustaining language skills development of pre-service EFL teachers despite the	74	10.57	3.57

Authors	Year	Title	Global Citations	Annual Citation Rate	Normalised Citation Score
		COVID-19 interruption: A case of emergency distance education			
Férez Mora P. A. and Coyle Y.	2023	Storytelling in EFL primary education: Defining a sociocritical and participatory model with pre-service teachers	22	5.5	4.63
Çamlıbel-Acar Z. and Eveyik-Aydın E.	2022	Perspectives of EFL teacher trainers and pre-service teachers on continued mandatory distance education during the pandemic	18	3.6	2.57
Chan S., Maneewan S., and Koul R.	2021	Cooperative learning in teacher education: Its effects on EFL pre-service teachers' content knowledge and teaching self-efficacy	16	2.67	2.86
Sun L.	2024	Transforming pre-service EFL teacher education through critical cosmopolitan literacies: Voices from Mainland China	10	3.33	2.27
Adel S. M. R. and Noughabi M. A.	2023	Developing pedagogical content knowledge (PCK) through an enriched teacher education program: Cases of four Iranian pre-service EFL teachers	8	2	1.68
Karaduman C.	2025	Pre-service EFL teachers' perceived AI literacy and competency: The integration of ChatGPT into English language teacher education	7	3.5	3.5
Palacios-Hidalgo F. J and Huertas-Abril C. A.	2021	Effects of hybrid education in pre-service EFL and bilingual primary teachers' digital literacy	7	1.17	1.25
Ranjbari M. N., Tabrizi H. H., and Afghari A.	2020	Evaluation of the latest pre-service teacher education curriculum in EFL context: A testimony of teachers, teachers educators and student teachers' perspectives	7	1	0.34
Esfandiari R., Arefian M. H., and Lam R.	2025	Understanding collective and reflective learning-oriented assessment among Iranian EFL pre-service teachers in learner-centered language teacher education	6	3	3

Local citation exchange was limited. Only Karataş and Tuncer (2020) and Çamlıbel-Acar and Eveyik-Aydın (2022) received local citations. The corpus contained three local citations in total. Most document visibility was therefore generated by the wider Scopus literature rather than by citation exchange within the 34 document corpus.

Country Contribution and Collaboration

First author affiliations represented 17 countries. Turkey led with nine documents, followed by Spain and Iran with four each, Thailand with three, and Indonesia with two. The remaining 12 countries contributed one document each. Because the corpus is small and country assignment was

based on first author affiliation, these figures show the distribution of visible records in this dataset rather than comprehensive national research capacity. Table 6 presents country publication and citation indicators.

Table 6. *Country Publication and Citation Indicators*

Country	Docs	Citations	Cit./Doc	Annual Rate	h	MCP* Ratio
Turkey	9	106	11.78	2.19	3	0
Spain	4	31	7.75	1.77	2	0
Iran	4	16	4	0.79	2	0
Thailand	3	23	7.67	1.72	2	0.67
Indonesia	2	1	0.5	0.12	1	0.5
China	1	10	10	3.33	1	0
Chile	1	6	6	2	1	1
Hong Kong	1	6	6	3	1	1
Colombia	1	3	3	0.5	1	0
Ecuador	1	2	2	0.29	1	0
Ukraine	1	2	2	1	1	0
Austria	1	1	1	0.2	1	0
Korea	1	1	1	0.5	1	0
Malaysia	1	1	1	0.25	1	1
Vietnam	1	1	1	0.17	1	0
Australia	1	0	0	0	0	1
Philippines	1	0	0	0	0	0

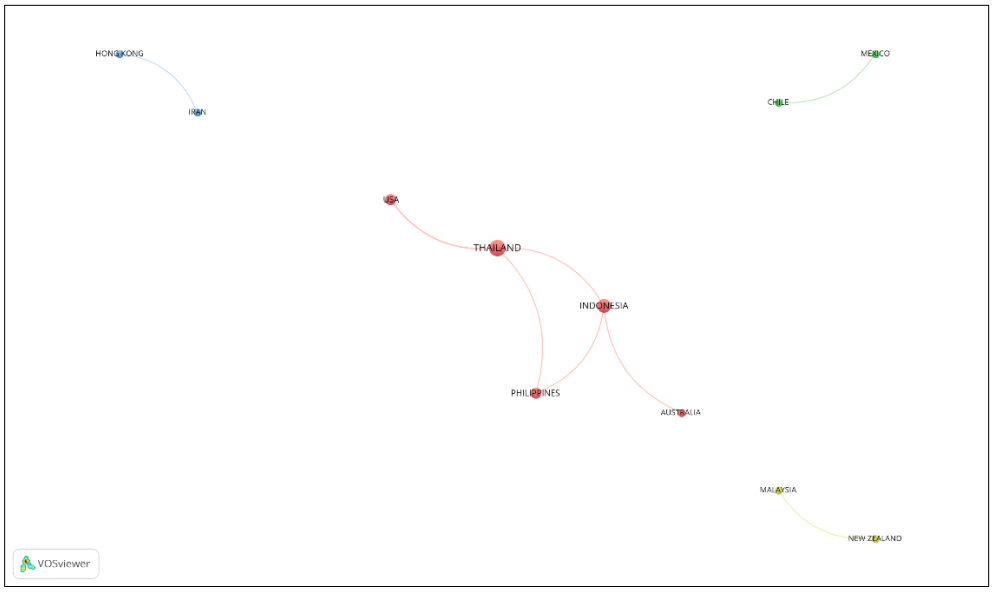
Turkey also recorded the highest citation total with 106 citations, 11.78 citations per document, and an h index of 3. Spain received 31 citations and had an h index of 2. Thailand received 23 citations and had an h index of 2, while Iran received 16 citations and also had an h index of 2. The 74 citations received by Karataş and Tuncer (2020) made a substantial contribution to Turkey's citation indicators. China had one first author document with 10 citations. Chile and Hong Kong each had one first author document with six citations. Indicators based on one document were treated as evidence of document visibility rather than sustained country contribution.

Seven documents involved more than one country, producing an international collaboration rate of 20.6%. The country network contained 20 participating countries, but only 11 had international links. The linked network contained eight edges, four components, and a density of 0.145. Thailand and Indonesia had the highest degree at 3. Thailand had the highest link strength at 4 because the Thailand and United States link appeared in two documents. These links are useful because they show where future comparative studies, shared doctoral supervision, practicum research partnerships, and regional research capacity building could develop.

The largest component connected Thailand, Indonesia, the Philippines, the United States, and Australia. Three smaller components connected Iran with Hong Kong, Chile with Mexico, and Malaysia with New Zealand. Figure 2 shows several small international groups rather than one

integrated collaboration network. The map should not be read as a full account of scholarly mobility or institutional cooperation because many collaborations do not result in co-authored Scopus records.

Figure 2. *Country Collaboration Network*



Authors and Research Teams

The corpus included 71 unique authors. Ten documents were written by one author, and 24 involved two or more authors. The mean number of authors was 2.18, the median was 2, and the largest team contained five authors. Eleven documents had two authors and another 11 had three authors. Only Chan, Koul, and Maneewan contributed more than one document. Each had two publications, 22 citations, a fractional publication count of 0.67, and a corpus h index of 2. Their three pairwise collaboration links each appeared in two documents, making them the only recurring author links in the corpus. The complete author network contained 71 authors, of whom 61 had at least one collaborator. The linked network contained 57 edges, 23 components, and a density of 0.031. Betweenness was zero for all authors because no author connected otherwise separate teams. Table 7 summarises the leading author and network indicators.

Table 7. *Leading Author Publication and Citation Indicators*

Author	Docs	Fractional Docs	Total Citations	Citations per Doc	h Index
Chan S.	2	0.67	22	11	2
Koul R.	2	0.67	22	11	2
Maneewan S.	2	0.67	22	11	2
Karataş T. Ö.	1	0.5	74	74	1
Tuncer H.	1	0.5	74	74	1
Coyle Y.	1	0.5	22	22	1
Mora P. A. F.	1	0.5	22	22	1
Çamlıbel-Acar Z.	1	0.5	18	18	1
Eveyik-Aydın E.	1	0.5	18	18	1

Author	Docs	Fractional Docs	Total Citations	Citations per Doc	h Index
Sun L.	1	1	10	10	1

Reference Co-Citation Structure

The co-citation matrix contained 1,799 reference entries. Twenty-six references appeared in at least two documents, and two appeared in at least three. The most frequent Braun and Clarke entry appeared in four documents, while a Strauss entry appeared in three. The linked network retained 23 references and 117 edges in two components. The maximum edge weight was 2, which means that no pair of references was co-cited by more than two documents. One component contained methodological sources associated with qualitative analysis, including Braun and Clarke, Strauss, Lincoln and Guba, Miles and Huberman, Borg, and Creswell. The second contained references related to cooperative learning and was generated mainly by two studies from the same research team. The co-citation findings indicate that this corpus shares some methodological references but has not yet consolidated a common theoretical base for pre-service EFL/ESL teacher education. This matters because concepts such as teacher identity, pedagogical content knowledge, practicum learning, World Englishes, critical literacy, and digital competence appear in separate lines of work rather than in a tightly connected intellectual conversation.

Critical Synthesis of Bibliometric Patterns

The first critical point is that growth in this corpus is not yet matched by strong cumulative structure. Publication output rose across the period, but the knowledge base remained fragmented across local studies, small teams, and weakly shared references. This matters because additional studies will not automatically create a coherent research field unless future work builds more directly on prior studies and uses more consistent conceptual terms.

The second point concerns the link between educational disruption and research visibility. Pandemic related work gained strong citation attention, but later term patterns point towards practicum, language teaching, World Englishes, and teaching strategies. The corpus suggests a shift from maintaining teacher education during crisis towards improving the substance of teacher preparation. For TESOL teacher education programmes, bibliometric trends need to be read alongside curriculum questions about supervised practicum, digital and AI literacy, critical and intercultural pedagogy, and teacher professional judgement.

The third point is that collaboration data have practical value when read cautiously. Country and author networks do not prove research quality, but they show where research capacity is concentrated and where connections are thin. This evidence can inform decisions about comparative projects, mentor networks, doctoral supervision, regional research consortia, and resource sharing across teacher education institutions.

DISCUSSION

The bibliometric findings describe a small, title defined Scopus corpus with uneven growth and limited social and intellectual connection. The evidence does not support a broad claim about the

whole field of pre-service EFL/ESL teacher education. It supports a narrower claim. The visible Scopus record produced by this search is expanding, but its internal connections remain weak.

Geographical participation was broad in the number of countries represented, but sustained output and citation visibility were concentrated. Turkey produced the most documents and citations, followed by Spain, Iran, and Thailand. This pattern is partly a result of document concentration, especially the visibility of Karataş and Tuncer's (2020) study of emergency distance education. The finding should be read as evidence about visible records in this corpus, not as a direct ranking of national research strength.

The collaboration networks show limited integration. Only seven documents involved international collaboration, and the linked country network consisted of small separate components. Author collaboration was also fragmented. Although most documents had more than one author, repeated collaboration was limited, and no author bridged otherwise separate teams. This pattern gives the collaboration analysis practical relevance because it shows where future partnerships could connect isolated local studies into more comparative and cumulative work.

The co-citation structure shows a similar pattern at the intellectual level. Few references appeared repeatedly, and no pair of references was co-cited in more than two documents. The most visible shared sources were methodological rather than conceptual. This suggests that the corpus has not yet developed a stable theoretical centre around pre-service EFL/ESL teacher education. Future studies need to connect recurring concerns such as practicum, teacher identity, pedagogical content knowledge, World Englishes, critical literacy, and technology literacy more explicitly.

The citation and term findings show a transition in topical visibility. Pandemic related studies received the strongest citation attention, partly because older documents have had more time to accumulate citations and partly because emergency distance education was highly visible. At the same time, the period comparison showed declining attention to COVID-19 pandemic, distance education, and teacher training terms. Language teaching, World Englishes, practicum, and teaching strategies became more visible in the later period. In short, the corpus appears to be moving from emergency access concerns towards more specific questions of pedagogy, practicum, English variety awareness, and professional competence.

This shift gives the paper a clearer message for teacher education readers. Bibliometric patterns are more than counts. They can show whether programme priorities are becoming visible in the research record. The present corpus suggests that future work should move beyond documenting pre-service teachers' perceptions in single courses. It should design studies that connect programme structure, practicum supervision, teacher educator support, technology and AI literacy, and evidence of enacted teaching practice.

CONCLUSION

This bibliometric review examined 34 Scopus indexed documents on pre-service teacher education in EFL and ESL contexts published from 2020 to 2025. The analysis found growing but uneven publication output, concentrated citation visibility, limited international collaboration, fragmented author networks, weak co-citation integration, and changing term patterns. The conclusion is

cautious. Within this title defined Scopus corpus, the research area is becoming more visible, but its collaboration structure, shared terminology, and theoretical integration remain limited.

IMPLICATIONS

The findings suggest that researchers in this area need stronger international and cross-institutional collaboration. Shared terminology, comparable indicators, and more visible citation foundations would make it easier to connect local studies to cumulative knowledge. Collaboration patterns can also help research leaders identify potential partners, underconnected regions, and opportunities for shared doctoral supervision, practicum research, and comparative teacher education projects. For TESOL teacher education programmes, the findings point to curricula that connect practicum supervision, pedagogical content knowledge, World Englishes, critical and intercultural pedagogy, and digital and AI literacy. For policy makers and programme leaders, research capacity building should support publication quantity, sustained partnerships, and shared conceptual frameworks.

LIMITATIONS

The study is limited by its Scopus only dataset and by the search expression used to retrieve the corpus. The title-based query may have excluded studies that used labels such as pre-service teachers, student teachers, teacher candidates, TESOL teacher education, English language teacher education, or L2 teacher education. The original Scopus Boolean sequence may also have affected retrieval because of operator precedence. The English language restriction may have excluded relevant regional research. The small number of documents limits the stability of network indicators, especially country h index values, annual citation rates, and co-citation links. Citation counts were recorded from Scopus on 12 June 2026 and reflect unequal citation exposure across publication years. These limitations mean that the findings should be read as a map of one defined Scopus corpus rather than as a comprehensive account of the whole field.

RECOMMENDATIONS

Future bibliometric studies should test broader search strings, compare Scopus with Web of Science, ERIC, Education Research Complete, and regional databases, and analyse longer publication windows as the field grows. Researchers should also combine bibliometric mapping with closer qualitative synthesis so that structural patterns can be interpreted in relation to the content of teacher education research. Future empirical studies should use longitudinal designs, classroom observation, practicum based evidence, and cross-national comparisons to examine how pre-service teachers' learning is translated into teaching practice.

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