

Language Teaching Research Quarterly

2023, Vol. 38, 34–64



The Scope of Second Language Teacher Education Research from 1980 to 2020: A Systematic Review

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Received 26 August 2023

Accepted 01 December 2023

Abstract

This paper presents a comprehensive and rigorous systematic review of the trajectories and challenges in Research Articles (RAs) of Second Language Teacher Education (SLTE) from 1980 to 2020. The RAs were carefully retrieved from two sources: (1) a pool of 100 top-tier journals based on SCImago Journal Ranking (SJR) in Linguistics and Language category and (2) seven well-known electronic databases. *This study used thematic analysis.* After conducting full-text screening and data extraction, each study was systematically coded for publication contents, themes, theories, and variable levels. Each study was further coded for methodological features, including research design, analyses, and sampling. The findings indicate a rapid and consistent growth in SLTE research with a notable emphasis on Teacher Professional Development Programs (TPDP), research in teacher education, psychology in teacher education, culture, knowledge-based teacher education, and CALL. In addition, analysis of the data revealed several trajectories, including fewer publications in teacher education journals compared to other journals, lack of adherence to a clear theoretical framework in 27% of the studies, limited use of software in qualitative studies, and underdeveloped themes that received little attention. This review sheds light on the most significant and emerging areas of research in the field, and the article concludes with implications for SLTE scholars, researchers, and practitioners.

Keywords: *Teacher Education, Second Language Teacher Education, Teacher Educator, Systematic Review*

Introduction

The field of Second Language Teacher Education (SLTE) has been recognized as a distinct discipline with its own objectives, methodological approaches, resources, and institutions. Since the introduction of Teacher Education (Cottrell & Cooper, 1956) and SLTE (Nunan & Richards, 1990), the field has seen exponential growth in scope and diversity in research. Scholars, researchers, and practitioners have made significant contributions to the development of SLTE, establishing it as an important area of research.

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<https://doi.org/10.32038/ltrq.2023.38.03>

The research in SLTE has been focused on many related areas. One of the key areas of research has been the construction of teacher identity, which has been explored by many researchers (e.g., Aliakbari & Valizadeh, 2023; Barkhuizen, 2019; Kanno & Stuart, 2011; Miller, 2009; Mockler, 2011; Nazari et al., 2023; Trent, 2011; Varghese et al., 2005; Yazan, 2023). Another important area of research in SLTE is Teacher Professional Development Programs (TPDP) (e.g., Golombek & Doran, 2014; Johnson & Golombek, 2011; Lee & Vongkulluksn, 2023). Researchers have also focused on sociocultural perspectives in teacher education (e.g., Johnson, 2009; Johnson & Golombek, 2011; Gaskaree et al., 2023; Nguyen, 2019), preservice teachers (e.g., Cross, 2020; Johnson, 2018; Nguyen & Loughland, 2018a; M. Nguyen, 2017; Nguyen et al., 2023), and mentoring (e.g., Maglente et al., 2023 ; H. Nguyen, 2017; M. Nguyen, 2017). These research areas and others have contributed significantly to the growth and development of SLTE as a field of study.

Overall, the field of SLTE is a dynamic and multidisciplinary area of inquiry that is critical to the success of second language education. Through ongoing research and development, SLTE scholars, researchers, and practitioners can continue to advance the field and address the evolving needs of second language learners and teachers.

Literature Review

The present literature review highlights the limited number of studies that have systematically reviewed the field of SLTE. While review studies have been conducted on various areas of teacher education, including CALL, teacher cognition, COVID-19 and teacher education, reflection in teacher education, teacher identity, and action research, only limited studies have conducted a comprehensive review of SLTE.

Nguyen (2016) critically reviewed the major conceptualizations of SLTE and their key differences from the conceptualizations of second language (L2) teaching. Mazandarani (2020) examined the changes in the trends of research on SLTE over a 15-year period through a bibliometric analysis of research articles indexed in the Science Direct database from 2003 to 2018. Demir and Koçyiğit (2018) reviewed the research studies on English Language Teacher Education (ELTE) published in three flagship teacher education journals in the last two decades (1997-2016), focusing on the general themes of teacher education and the research design of the studies. Moreover, Topping (2023) conducted systematic review to examine the effectiveness of digital peer assessment for pre-service and in-service teachers, encompassing various digital platforms. Among 43 papers, nearly all reported positive effects, highlighting the potential of digital peer assessment in teacher education.

However, these studies are limited in their scope and do not comprehensively cover the history and development of SLTE. This literature review aims to fill these gaps by conducting a systematic review of SLTE RAs from 1980 to 2020. The study will retrieve RAs from seven databases and 100 top journals based on SJR in Linguistics and Language category, and will consider studies on teacher education in not only English but also other languages.

The Study

Despite the abundance of research in SLTE, there is a pressing need for a comprehensive and systematic appraisal framework to guide the researchers' attention and prioritize future studies (Burns & Richards, 2009; Richards, 2008). While the literature of SLTE features some studies

highlighting the research trajectories and emerging trends in the field (Ellis et al., 2023; Feder & Cramer, 2023; Huang et al., 2023; Tedick, 2013; Topping, 2023; Vélez-Rendón, 2002; Wright, 2010), a more in-depth and overarching analysis is necessary to map out the scope and development of SLTE research over time. Such an analysis can provide valuable insights into the empirical trends and practical implications of SLTE research, which can ultimately inform teacher education programs and practices.

A systematic review of the research studies in SLTE is crucial in addressing this need for a comprehensive appraisal framework. The review can provide a comprehensive overview of the different themes, theories, and methodological approaches adopted in SLTE research, as well as the gaps and emerging trends in the field. This can help identify the areas that have received more attention, and those that need further exploration.

In conclusion, a systematic review of the research studies in SLTE can help establish a comprehensive appraisal framework and provide insights into the scope and development of the field. Such an analysis is essential in highlighting the empirical trends, research gaps, and emerging themes in the field of SLTE, which can ultimately inform teacher education programs and practices.

The study seeks to analyze and categorize SLTE RAs and sketch out the research trajectory of SLTE. To achieve this, eight key terms, including "Second Language Teacher Education," "English teacher education," "English language teacher education," "EFL teacher education," "ESL teacher education," "teacher education," "English teacher educator," and "teacher educator," is used to search the databases and journals. The review will aim to answer the following questions:

RQ1: What is the frequency and distribution of studies on SLTE in different journals and databases from 1980 to 2020?

RQ2: How is the distribution of the RA in SLTE over time during each year and each decade?

RQ3: What are the main trends and research themes in SLTE from 1980 to 2020?

RQ4: What are the most common research designs, methodologies, and sampling, and data analyzer software used in SLTE research?

RQ5: What are the dominant theoretical perspectives in SLTE research over the past four decades?

RQ6: What are the main variables investigated in SLTE research from 1980 to 2020, how are they related to each other, and what are the major research gaps and directions for future research in SLTE?

Method

This study endeavors to comprehensively investigate and examine various dimensions of SLTE RAs. The focus of this study includes frequency of journals, themes, trends, databases in different decades, research methodology, designs, data analyzing techniques, sampling types, sample sizes, software data analyzers, theoretical frameworks, and variable relationships. The primary objective of this study is to offer a conceptual map to describe the historical and evolutionary progression of SLTE research and chart its possible future trajectory. By exploring these dimensions, this study aims to provide a systematic and detailed analysis of the critical factors and relationships that have influenced the development of SLTE research from 1980 to 2020.

Inclusion/Exclusion Criteria

The present study employs a set of inclusion and exclusion criteria in order to ensure the reliability and validity of the review process. These criteria are depicted in Table 1. The time frame of this study is limited to the period between 1980 and 2020, which encompasses the emergence and evolution of SLTE research. Moreover, we only consider scholarly research articles published in the English language, as they are the most widely recognized and accessible sources in the field of SLTE. Conversely, we exclude dissertations, reports, responses, editorial reviews, book reviews, book chapters, and books from our review, as they do not meet the criteria for scholarly research articles. To ensure the rigor of the search process, all exclusion criteria are applied to the advanced search function of the selected databases.

Table 1*Inclusion and Exclusion Criteria during Search Strategy*

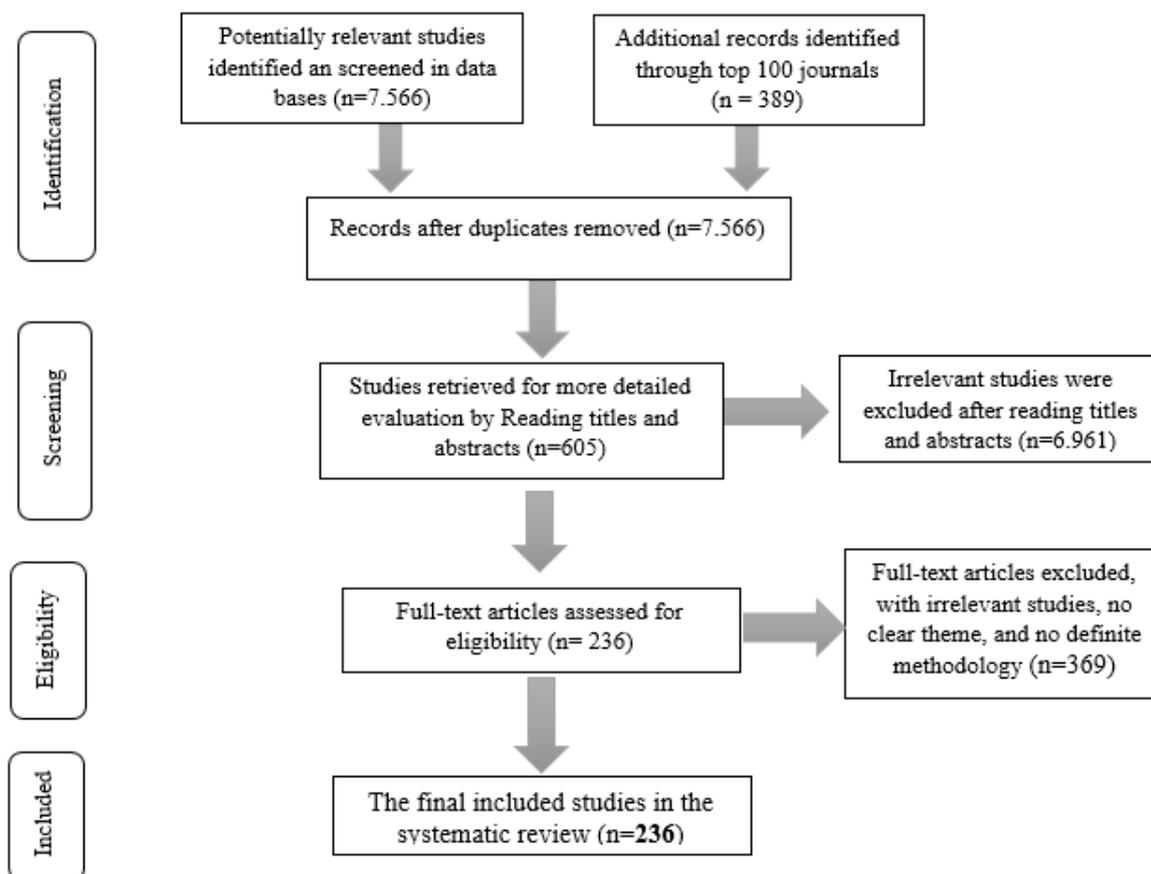
Criteria	Inclusion	Exclusion
Focus of the study	SLTE	Other disciplines such as science, art, etc.
Publication data	From 1980 to 2020 (as of July)	Prior to 1980 and after July 2020
Publication type	JCR RAs	dissertations, reports, responses, editorial reviews, book reviews, book chapters, and books
Language	Journal articles written in English	Languages other than English
Sources of searching	The seven main databases and 100 top journals of SJR in linguistic and language category	Other databases and indexes

Application of Inclusion/Exclusion Criteria

Following the advanced search using the inclusion/exclusion criteria as discussed earlier, a total of 7566 articles were retrieved from the databases, and 389 articles were retrieved from the top 100 journals. The identified studies were then uploaded into Endnote (Thomas Reuters), and duplicates were removed. The 389 RAs that appeared in the databases were then screened in a two-step process by two independent reviewers. The first stage involved screening based on title and abstract, with a total of 605 studies being included in the second stage. In the second stage, the screening process was conducted independently by both reviewers, with a consensus being reached in case of disagreements (N = 369). The final number of RAs included in the systematic review was 236, following the exclusion of irrelevant studies, those lacking a clear theme and a defined methodology. The flow diagram (Figure 1) was generated following the guidelines outlined on the PRISMA website (<http://www.prismastatement.org/>).

Figure 1

Summary of Protocol for Initial Identification and Screening for Inclusion and Exclusion



Literature Search Strategy and Terms

The present review aimed to provide a comprehensive overview of the SLTE literature by examining the frequency and significance of journals, databases, and number of studies from 1980 to 2020. To achieve this, two sources were selected: the top 100 journals in the language and linguistic category of the SJR list and seven databases relevant to SLTE. The advanced search of the databases was limited to English language RAs published between 1980 and 2020 and focused on eight key terms related to SLTE. The retrieved articles were screened through a two-step process, resulting in a final number of 236 RAs for the systematic review.

Table 2 provides the frequency and percentage of articles in the seven databases, with Taylor and Francis being the most frequent database (41.9%), followed by Wiley (17.8%) and Science Direct (16.9%). De Gruyter was the least frequent database, with only 2.5% of the total number of RAs. In Table 3, the number of each key term in different databases and the total number of studies in each database are presented. The term "teacher education" had the highest frequency (N=157), followed by "Second Language Teacher Education" (N=17), "English language teacher education" (N=14), and "teacher educator" (N=14). Other key terms included in this study followed the same criteria, with different key terms (N=35). Moreover, Table 3 illustrate the frequency of eight important and related key terms in the field SLTE.

Table 2*Frequency and Percentage of Articles 100 Top Journals and 7 Databases*

databases	100 top journals	databases	total	Percent
Taylor and Francis	26	73	99	41.9
Wiley	33	9	42	17.8
Science direct (Elsevier)	17	23	40	16.9
Sage	16	10	26	11.0
Oxford	13	0	13	5.5
Cambridge	10	0	10	4.2
de Gruyter	0	6	6	2.5
Total	115	121	236	100.0

Table 3*Eight Key Terms Extracted in the Databases and Top 100 Journals*

Databases	Key terms										Other	total
	Second Language Teacher Education	English teacher education	English language	EFL teacher education	ESL teacher education	teacher education	English teacher educator	teacher educator				
Taylor and Francis	3	5	6	3	5	64	4	7	2	99		
Wiley	7	0	0	0	3	28	0	2	1	42		
Science direct (Elsevier)	2	2	4	4	1	26	1	1	0	40		
Sage	3	0	0	0	1	20	0	2	0	26		
Oxford	0	1	3	0	0	8	0	1	0	13		
Cambridge	1	0	0	0	0	9	0	0	0	10		
De Gruyter	1	1	1	1	0	2	0	0	0	6		
Total	17	9	14	8	10	157	5	13	3	236		

Coding

In this systematic review, a thorough coding process ensured a systematic and comprehensive analysis of the included studies. The authors developed the coding scheme based on research questions and objectives to capture key information related to SLTE's research trajectory. After piloting and refining the scheme with a sample of 20 studies, the final coding scheme was applied to all included studies. The final scheme consisted of four main categories: publication information, theme, methodological considerations, and sampling and sample size. The fifth category, methods and software for data analysis, captured the tools and methods used for data analysis in the study. To ensure consistency and reliability, two independent reviewers coded all included studies, resolving any discrepancies through consensus. Data were entered into a Microsoft Excel spreadsheet for analysis. The coding process was essential for synthesizing and interpreting findings, contributing to the overall rigor and validity of the systematic review. The final coding scheme is available in Appendix 1.

Analysis

In a systematic review, data analysis is a critical step that involves examining and interpreting the data collected from the included studies. Typically, data analysis in a systematic review involves a structured and rigorous approach to identify patterns, themes, and relationships among the studies (Higgins, et. al., 2019). The analysis aims to provide answers to the research questions and hypotheses established at the outset of the review (Petticrew & Roberts, 2006)

This study used thematic analysis in systematic reviews. Thematic analysis is a qualitative method that involves identifying patterns and themes in the data collected from the included studies (Braun & Clarke, 2006). The process of thematic analysis involves coding the data and grouping the codes into themes. The themes are then interpreted and synthesized to provide answers to the research questions.

In this systematic review, a comprehensive data extraction chart was designed to extract the necessary information about each included study separately. The chart allowed for a rigorous analysis of the higher-order and minor themes in the included studies. The themes were nominated as a numeric code for further analysis using SPSS. The minor themes of different studies were selected as major themes in order to investigate their trends in different decades. This process ensured that the data was systematically analyzed and patterns were identified. The final data extraction chart, which was used for the analysis of the included studies, is available in an Excel spreadsheet in the Institutional Research Information System (IRIS). The use of this comprehensive chart ensured that the data analysis was conducted with rigor and attention to detail. The results of the analysis are discussed in the subsequent sections.

Results

The present study presents a comprehensive analysis of the included research articles, exploring various aspects of the data to derive meaningful insights. The analysis is divided into several sections, each addressing a specific aspect of the research. First, the frequency of the journals is examined to identify the most prominent publications in the field. Second, the usage of electronic databases is presented, providing insight into the resources used by researchers in this field. Third, a chronological growth analysis of the included studies is performed, highlighting the number of publications per year across the decades. Fourth, the main themes and their evolution over time are explored, providing a broader understanding of the research trends in this area. Fifth, the research methodology, designs, and data analysis techniques are delineated, providing a comprehensive overview of the approaches used in the included studies. Sixth, the types of sampling and sample sizes are identified, providing insight into the representativeness of the study samples. Seventh, the popularity of qualitative and quantitative data analysis software is explored, providing an understanding of the analytical tools used in this field. Eighth, the theoretical frameworks of the included studies are depicted, providing insights into the underlying assumptions and perspectives. Finally, the main variables and their relationships are illustrated, providing a comprehensive understanding of the research findings.

Journals

In order to adopt a research-oriented approach towards the field of SLTE, it is essential to consider the most frequently used journals for publication. A total of 82 journals were identified in this study, and their frequency is presented in Table 4 (see appendix 2). TESOL Quarterly

published the highest number of articles (N = 20), with a percentage of 8.5%, making it the top-ranked journal. The second journal with the highest number of articles (N = 16, 6.8%) is Language Teaching Research, followed by ELT Journal and Procedia-Social and Behavioral Sciences with 13 articles each. Finally, Australian Journal of Teacher Education had a frequency of 12 articles, making it the fourth-ranked journal. These findings provide insight into the journals that may be more welcoming towards SLTE and help researchers decide where to submit their work.

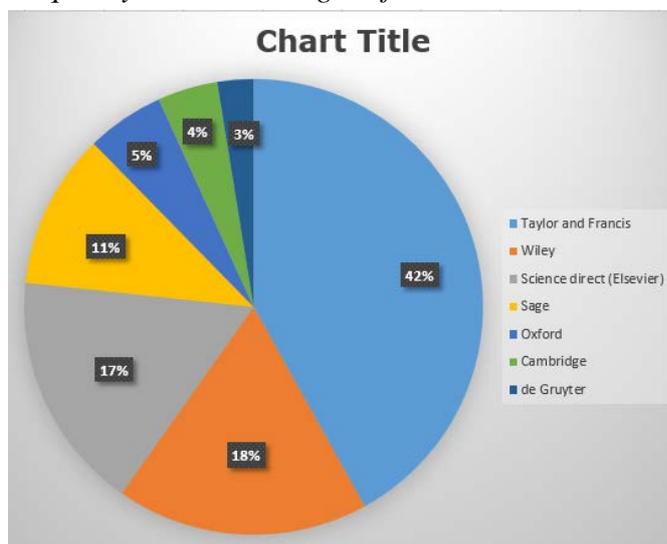
Databases

In addition to the frequency of journals, it is important to consider the databases that are commonly used to retrieve articles related to SLTE. A total of 236 RAs were retrieved from seven robust databases, and their frequency and percentage are presented in Table 5 and Figure 2. The results indicate that a large number of RAs were extracted from Taylor and Francis (N= 99, 35%), followed by Wiley (N=42, 17.8%) and ScienceDirect (Elsevier) with 16.9% (N=40). De Gruyter had the lowest frequency among the databases, with only 2.5% (N=6). Figure 2 shows the frequency and percentage of the databases, indicating that the majority of the articles were included in Taylor and Francis. This information helps researchers to identify the most frequently used databases and focus their search accordingly.

Table 5
Frequency and Percentages of the Databases

	Frequency	Percent
Taylor and Francis	99	41.9
Wiley	42	17.8
Science direct (Elsevier)	40	16.9
Sage	26	11.0
Oxford	13	5.5
Cambridge	10	4.2
de Gruyter	6	2.5
Total	236	100.0

Figure 2
Frequency and Percentages of the Databases



Frequency

In order to gain a comprehensive understanding of the field of SLTE, the researchers also analyzed the annual and decadal frequency distribution of the retrieved RAs. Figure 3 depicts the frequency distribution of RAs published between 1980 and 2020. Although the search was conducted from 1980, the first relevant articles were retrieved in 1987. The frequency of publications fluctuated over time. After a noticeable dip from 9 to 3 between 2006 and 2008, there was a sharp increase in the number of RAs to 14 between 2008 and 2010, which then decreased to 8 in 2012. The number of RAs increased dramatically to 17 in 2013 and reached a peak of 18 in 2018. Although there was a dip in 2019, the number of publications rose to 17 in the mid- 2020.

Figure 3

Frequency Distribution for RAs Published from the 1980s to 2020 (as of July)

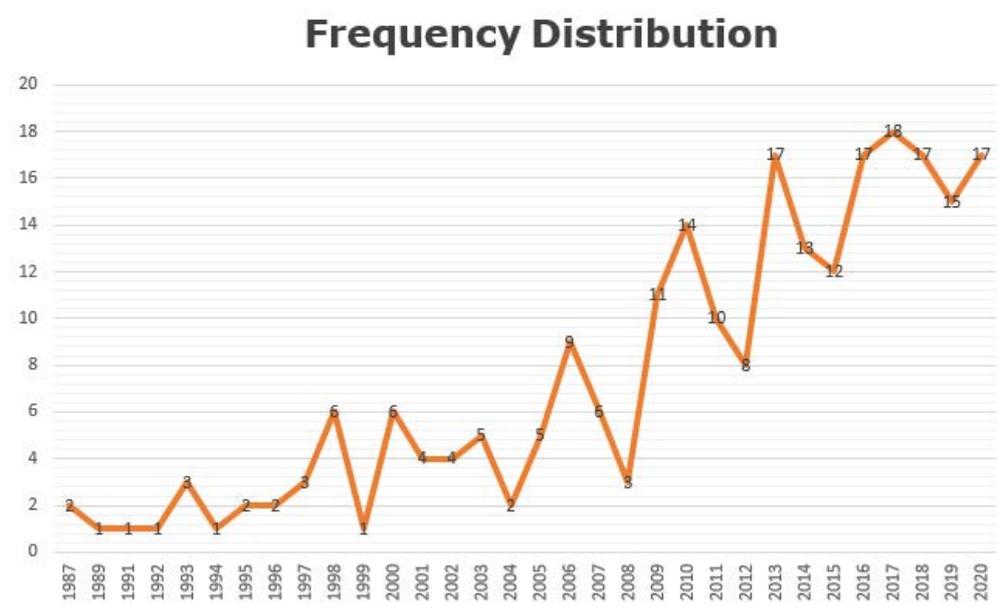
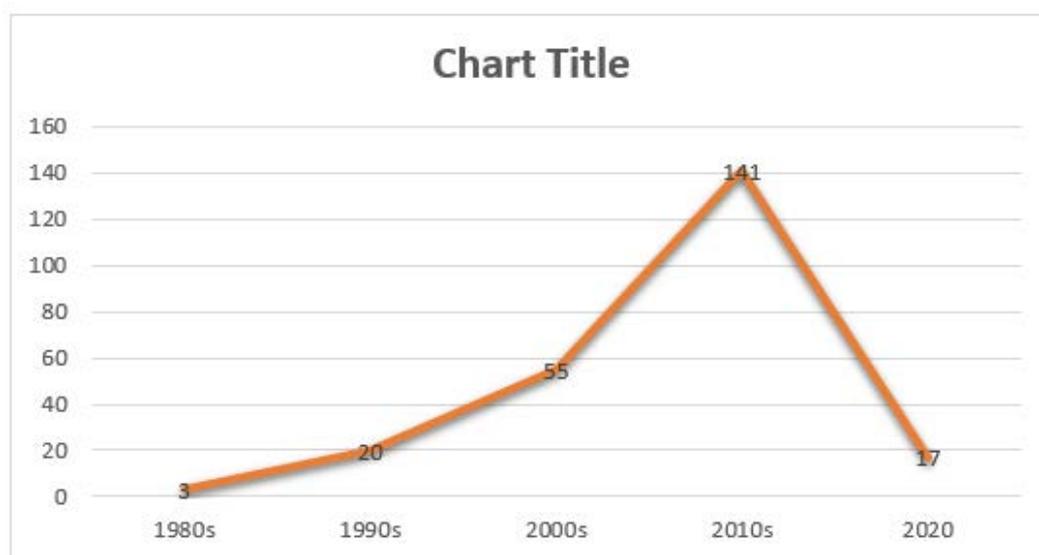


Figure 4 shows the frequency of publications by decade. The number of RAs gradually increased in each decade. In the 1980s, only three RAs were published, which is 1.3% of the total. In the 1990s, this number moderately increased to 20, then substantially grew to 55 in the 2000s, and in the 2010s, it reached a peak with 141 publications. More than half of the RAs were published in this decade. This number decreased to 17 in 2020. It is important to note that the last review of this study was conducted in July 2020, which means only seven months of the 2020s were included in the analysis.

Figure 4

Frequency Distribution for RAs Published from the 1980s to 2020 (as of July)



These findings provide insights into the trends and changes in the field of SLTE over the past four decades. The data indicates an increasing interest and attention in the field, with a significant rise in the number of RAs in the 2010s. However, it is also evident that the number of RAs has fluctuated over time, with occasional dips and peaks. These trends may reflect changes in research interests and priorities or variations in funding and resources available for conducting research in this field.

Themes

The present study aimed to explore the trends in SLTE by examining the most commonly used databases, journals, and frequency distribution of RAs published between 1980 and 2020. To identify the main themes in SLTE, the study extracted 32 themes, out of which the themes with 5% or more percentages were considered as the main themes in SLTE in Table 6 (*see appendix 3*). The study found that the most frequent theme was TPDP followed by Research in Teacher Education and Knowledge-Based Teacher Education. The study further examined SLTE trends by analyzing the main themes in each decade.

Table 6 illustrates that six themes are more frequent over the past four decades. For this reason, Table 7 that showed the frequency number and percentage of the six main themes in different decades, including Research in Teacher Education, TPDP, Psychology in Teacher Education, Culture in Teacher Education, Knowledge-Based Teacher Education, and CALL. The table showed that Research in Teacher Education was a trendy theme in all decades, and TPDP had the highest frequency from the 1990s to the 2010s. Other themes were less frequent but still considered as trendy themes in at least one decade.

Table 7*Frequency and Percentage of Trends*

Themes	Research in Teacher Education	TPDP	Knowledge-Based Teacher Education	CALL	Psychology of Teacher Education	Culture in Teacher Education
the 1980s	1 (33.3%)	0	0	0	0	0
the 1990s	3 (15%)	4 (20%)	1 (5%)	2 (10%)	0	0
the 2000s	7 (12.7%)	11 (20%)	3 (5.5%)	4 (7.3%)	1 (1.8%)	5 (9.1%)
the 2010s	14 (9.9%)	19 (13.5%)	9 (6.4%)	7 (5%)	13 (9.2%)	7 (5%)
2020	3 (17.6%)	1 (5.9%)	3 (17.3%)	1 (5.9%)	0	0

Note: Each theme which is more than 9% is considered as a trend in that decade

Trends

A key step in conducting a systematic review is to identify trends among the themes that appear most frequently in the included studies per decade. To achieve this, researchers employed standard criteria for selecting themes with a frequency of 9% or more as "trendy themes." These themes are considered to be significant and to guide future research in the field. The selection of trendy themes involves multiple criteria, such as the relevance of the themes to the research question, the quality of the studies reporting on them, and their potential to impact practice or policy.

Table 7 provides an overview of the frequency of six main themes in SLTE from the 1980s to 2020 (as of July), with Figure 5 depicting the trend of these themes over time. The six main themes include Research in Teacher Education, TPDP, Psychology in Teacher Education, Culture in Teacher Education, Knowledge-Based Teacher Education, and CALL. This systematic review highlights that Research in Teacher Education was the most frequently studied theme throughout all decades, with a significant increase in the number of studies from the 1980s to the 2010s. TPDP, on the other hand, experienced a steady increase in the number of studies from the 1990s to the 2010s, but a decline in 2020. Psychology in Teacher Education and Culture in Teacher Education were trendy themes in the 2010s and 2000s, respectively, but both experienced a decrease in the number of studies in 2020. Knowledge-Based Teacher Education was a trend over four decades, with a moderate increase in the number of studies until the 2010s, followed by a slight decrease in 2020. Finally, CALL had an increasing trend until the 2010s but experienced a decrease in 2020. The criteria used for identifying the trends in this review were based on a frequency of 9% or more. These findings can inform future research and provide insights into the areas of focus in SLTE.

Figure 5

The Trend Distribution of TPDP, Research in Teacher Education, Psychology in Teacher Education, Culture in Teacher Education, Knowledge-Based Teacher Education, and CALL

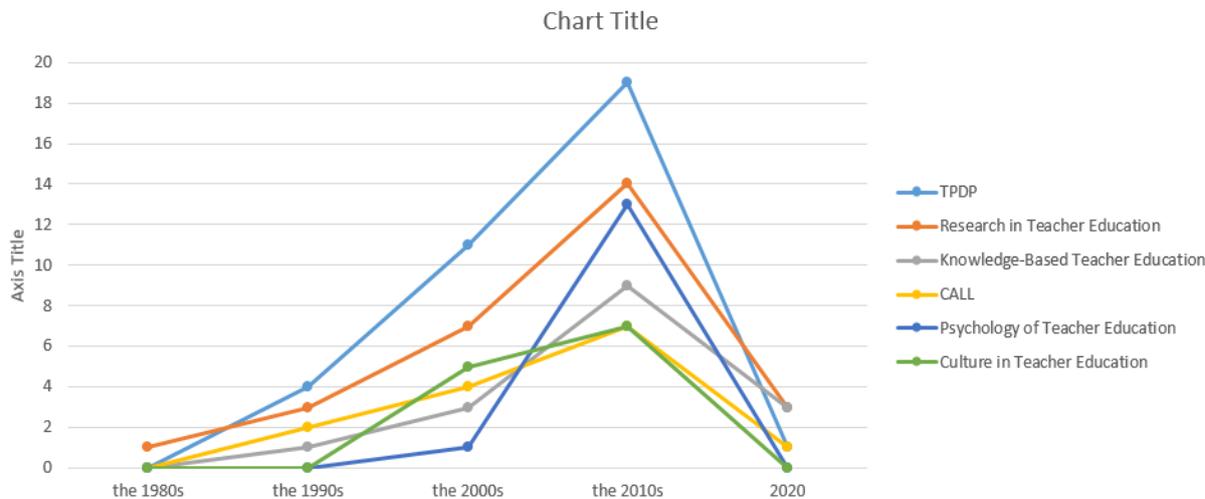


Table 4 presents data on the publication frequency of TESOL Quarterly, Language Teaching Research, Procedia - Social and Behavioral Sciences, ELT Journal, the Language Learning Journal, and the Modern Language Journal in the field of SLTE. These journals are predominantly included in the Taylor and Francis database. It is notable that the number of research articles (RAs) fluctuated over time, with a peak of 18 in 2017. In terms of the themes explored in these studies, six major themes were identified as being "trendy" for at least one decade, namely TPDP, Research in Teacher Education, Psychology in Teacher Education, Culture in Teacher Education, knowledge-Based Teacher Education, and CALL. A summary of this information is presented in Table 8.

Table 8

The Most Frequent Journals, Databases, Years, and Trendy Themes

Journals	Databases	Year	Trendy themes
TESOL Quarterly	Taylor and Francis	2017 (18)	TPDP
Language Teaching Research			Research in Teacher Education
Procedia - Social and Behavioral Sciences			Psychology in Teacher Education
ELT Journal			Culture in Teacher Education
The Language Learning Journal			knowledge-Based Teacher Education
The Modern Language Journal			CALL

Research Methodologies, Designs, and Data Analysis Techniques

Research methodologies, designs, and data analysis techniques are vital components in systematic reviews, as they facilitate the collection, evaluation, and analysis of data to ensure a comprehensive and accurate review. The methodology delineates the approach for identifying, selecting, and analyzing studies, while the design specifies the study type, such as qualitative or quantitative. The data analysis technique refers to the method employed for data analysis. These components are crucial for determining evidence quality and ensuring the systematic review is conducted rigorously and transparently. Adhering to established

methodology, design, and data analysis techniques enables systematic reviews to provide the highest level of evidence for decision-making across various fields.

Table 9 presents an overview of the methodological orientation of studies in the SLTE field across four main categories: qualitative, quantitative, mixed methods, and non-empirical. Qualitative methodology dominates the published research, accounting for 38.1% of the studies. Among the various qualitative designs used, narrative inquiry, grounded theory, case study, action research, ethnography, and phenomenological approaches were the most prevalent. Qualitative-oriented methods offer a deep understanding of phenomena and participants' lived experiences, making them particularly well-suited for exploring the complex nature of teachers' knowledge and their working contexts.

In this review, 98 studies were categorized as non-empirical, as they did not employ any research methods. These studies primarily consisted of literature reviews and theoretical studies. Mixed methods research, which involves collecting both qualitative and quantitative data to investigate research questions, was more popular than quantitative studies. 13.1% of studies in this field employed mixed methods, with 7.2% using sequential designs and 5.9% using convergent designs. Conversely, only 7.3% of studies used quantitative research methods, with experimental, survey, and correlational research designs accounting for 0.8%, 2.7%, and 2.8% of studies, respectively. Descriptive statistical methods and inferential statistical methods were employed to analyze data in 10.1% and 7.6% of studies, respectively. This distribution highlights the diverse research approaches within the SLTE field, each contributing to a richer understanding of the subject.

Table 9

The Frequency of Research Methodologies, Designs, and Data Analysis Techniques

Research Method	Type of the Research Design	Data Analysis Technique
Qualitative (38.1 %)	Narrative inquiry (13.13%)	Coding (39.4 %)
	Grounded theory (10.6 %)	Content Analysis (7.6%)
	Case study (7.2 %)	Discourse Analysis (6.3%)
	Action Research (4.6 %)	Descriptive statistical methods (10.1%)
	Ethnography (1.7 %)	Inferential statistical methods (7.6%)
	Phenomenological (0.8 %)	
Quantitative (7.3 %)	Experimental (0.8 %)	
	Survey (2.7%)	
	Correlational research (2.8%)	
Mixed methods (13.1 %)	Sequential (7.2%)	
	Convergent (5.9%)	
Non-empirical (41.5 %)	---	---

Sampling Frequency

Sampling is a critical element in systematic reviews as it influences the generalizability and reliability of the findings. As such, it is essential to identify the most appropriate sampling method to avoid biased or incomplete results. According to Bramer et al. (2017), "the choice of sampling method has a significant impact on the comprehensiveness and completeness of systematic reviews." In the case of sampling, two well-known methods are used: the probability sampling method which is for quantitative studies, and the non-probability sampling method

which is for qualitative studies. As Table 10 shows, most of the studies are qualitative, with 43.6% of the samplings being non-probability. These non-probability samplings are categorized in different forms, with 34.7% using Purposive Sampling, 0.4% using Snowball sampling, and 8.4% using Convenience sampling. In quantitative and mixed method studies, the probability sampling method (14.8%) is used, with 5.5% using cluster sampling, 6.3% using random sampling, and 2.9% using stratified sampling.

Table 10
The Types of Sampling Claustration

Sampling	Type of sampling
Probability sampling method (14.8%)	Cluster (5.5%) Random Sampling (6.3%) stratified sampling (2.9%)
Non-probability sampling method (43.6%)	Purposive Sampling (34.7%) Snowball sampling (0.4%) Convenience sampling (8.4%)

In relation to sample sizes, a considerable proportion of studies, namely 41.5%, did not involve any participants since they were non-experimental in nature. Among the studies that did incorporate a sample, a majority employed qualitative methods, and it was found that 41.84% of these studies featured a participant size ranging from one to 50 individuals. Conversely, a smaller fraction, amounting to 16.5%, of studies featured larger sample sizes beyond 50 individuals, with only a few studies incorporating such extensive participant pools.

Software

The use of software for data analysis in both qualitative and quantitative studies is of great importance. In the present review, it was found that SPSS was the only software used in 41 studies to analyze quantitative data. Conversely, only four studies used qualitative software analyzers such as MAXQDA and Nvivo for analyzing qualitative data. This disparity in the usage of software for qualitative and quantitative studies suggests that the implementation of software in qualitative studies is still relatively low. Several reasons could account for this finding, including a lack of software literacy among researchers, technical challenges with software, or the unsuitability of the software for the research being conducted. Further research is needed to explore these reasons in greater depth and to encourage the adoption of appropriate software tools for effective data analysis in both qualitative and quantitative studies.

Theoretical Frameworks of the Studies

In the field of second language teaching and education, the application of theories has become increasingly important in order to explore and analyze various aspects of language learning. Nguyen (2016) argues that using theoretical frameworks can provide a deeper understanding of the complexities of second language learning and teaching. In this systematic review, one of the key components examined is the theoretical foundations of the studies. Table 11 reveals that 27.1% of the studies lacked a clear theoretical framework, with most of these studies being reviews or exploratory studies. Among the studies that did employ theoretical frameworks, social constructivist theories (27.9%) were the most commonly used, with a particular focus on sociocultural theories. This emphasis on sociocultural theories can be traced back to the

work of Lantolf (2000), who is recognized as a significant contributor to the use of sociocultural theories in SLTE. Additionally, constructivist theories (22.5%) were frequently employed, particularly in psychological studies, identity construction, and reflective practices. Other theories, such as CALL theory (5.5%), critical theory (5.5%), cultural competence theory (5.1%), and linguistic theory (3.8%) were also utilized in various studies. Despite the significance of Systemic Functional Linguistics Theory and Krashen's Hypothesis, only 1.7% and 0.8% of studies, respectively, employed these theories.

Table 11*The Frequency of Theoretical Frameworks of the RAs*

Theories	Frequency	Percent
Social Constructivist Theories	66	27.9
No Theories	64	27.1
Constructivist Theories	53	22.5
CALL Theory	13	5.5
Critical Theory	13	5.5
Cultural Competence Theory	12	5.1
Linguistic Theory	9	3.8
Systemic Functional Linguistics (SFL) Theory	4	1.7
Krashen's Hypothesis	2	0.8
Total	236	100.0

Variables Relationship in SLTE

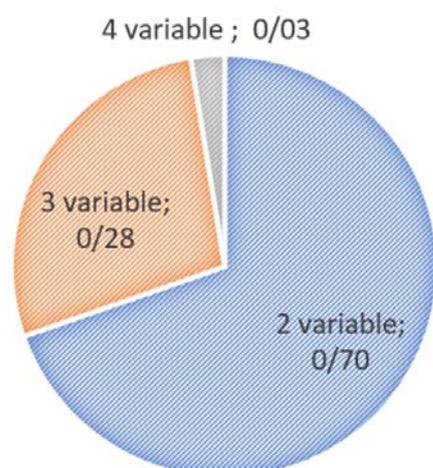
In systematic review studies, considering the relationship between variables is important in order to identify the gaps in the research and to contribute to the field with a more comprehensive view. As Grant and Booth (2009) noted, systematic reviews aim to provide a thorough, exhaustive summary of current literature relevant to an area. In the current review of SLTE studies, the relationship between variables was explored in order to gain a deeper understanding of the research in the field. These main variables were investigated alongside different variables, which were considered in three different layers. At most, a study had four variables, for this reason, the main variables are categorized in three layers. As figure 6 shows, 69% of the studies are two-variable, 27.54% three-variable, and only 2.54% four-variable.

Table 12 in Appendix 4 presents the primary variables analyzed in SLTE studies, classified into three layers and the frequency of various variables within each layer. The dominant variable was found to be TEACHER EDUCATION, constituting 77.11% of the analyzed articles. Nevertheless, the frequency of consideration for the different variables linked to teacher education varied considerably.

The most frequent area of research within this variable was CALL, with a 5.65% frequency, followed by linguistics knowledge, knowledge-based variables, and challenges in teacher education. While research methodology, pre-service teachers, and reflective practice received moderate attention, other areas like cultural issues and curriculum development were less explored. The second primary variable, TEACHER EDUCATION PROGRAM, had a 17.37% frequency, with most studies concentrating on its relationship with pre-service teachers. The third primary variable, TEACHER EDUCATOR, had the lowest frequency of 5.5%, with teacher education programs and teacher cognition being the most investigated variables.

Figure 6*The Percentage of Number of Variables*

■ 2 variable ■ 3 variable ■ 4 variable



These results imply that more focus should be directed to examining teacher educators with various variables for a more holistic understanding of the field. In terms of the number of variables considered in each study, 69% of the studies examined two variables, 27.54% examined three variables, and a mere 2.54% examined four variables. These findings indicate that while many SLTE studies do investigate the relationship between variables, there remains a need for more intricate and multivariate research in the field.

In conclusion, the current review of SLTE studies underlines the significance of exploring variable relationships and the necessity for additional research to provide a more comprehensive understanding of the SLTE field.

Discussion

This article presents a systematic review of 236 research articles published between 1980 and 2020 on the topic of SLTE. The aim of this study was to identify the under-researched areas in SLTE, and address the challenges encountered in this field. The review used thematic analysis. Thematic analysis was used to explore the frequency of research articles in different decades, themes and trends, research methodology, designs, analysis techniques, sampling methods, and number of samplings. The theoretical frameworks of the articles were also examined to identify future research directions in SLTE. Finally, the relationship between the variables was explored in different layers in Table 12 to provide researchers with a comprehensive understanding of the gaps in the field.

In the case of the first question, the analysis of 158 journals revealed that certain journals in the field of teacher education seem to pay less attention to SLTE, as reflected by the relatively low number of studies retrieved from these journals. For instance, in Table 4, *Teaching and Teacher Education*, *Asia-Pacific Journal of Teacher Education*, *European Journal of Teacher Education*, and *Teacher Development* are among the journals that retrieved fewer studies related to SLTE. This observation is concerning, especially given the importance of SLTE in language teaching and learning. Therefore, it is recommended that journals in teacher

education should consider SLTE more seriously in their publishing agenda, to ensure that language teachers receive a comprehensive and updated education that prepares them for the complex reality of language classrooms (Cook, 2016; Johnson, 2009).

In response to the second question, the distribution of the RAs is different. Although the growth of the RAs is significant, it is notable that the 1980s was not the main start of SLTE studies, and only three studies were retrieved in that the first studies were published in 1987. Bernhardt and Hammadou (1987) reported the lack of contributive studies in SLTE in the 1980s. According to that study, few studies were conducted in that decade showed generally an unconscionable lack of awareness in the teacher education literature, lack of theoretical framework, and professional development programs, which is corroborated by the findings in the current review. Accordingly, the 1990s was the main start of this field of study. In the 2000s, this number rose considerably to 55 studies, but in the 2010s it dramatically boomed to 141, more than a half of the total. During seven months, 21 articles were retrieved up until the end of July. On a more positive note, we will observe the high growth in the number of the studies in the current decade.

Regarding the third question, this systematic review identified six main themes in SLTE: Research in Teacher Education, TPDP, Knowledge-Based Teacher Education, Psychology of Teacher Education, Culture in Teacher Education, and CALL. While Research in Teacher Education and TPDP were present throughout the decades, Knowledge-Based Teacher Education was the most prominent theme in 2020, indicating a trend in this area. CALL was also identified as a significant theme, particularly during the 1990s when technology was emerging in education. The COVID-19 pandemic has intensified the focus on the relationship between technology and education, making CALL a popular theme for future research (Carrillo & Flores, 2020). The study also suggests the need for greater attention to ignored themes, such as critical analysis, discourse analysis, and assessment in teacher education, to create a more balanced distribution of research attention.

Recent studies in SLTE have also highlighted the importance of topics such as language assessment (Papadima-Sophocleous, 2022; Topping, 2023), teacher identity (Sadeghi & Bahari, 2022), and reflective practice (Sarab & Mardian, 2022). Research has also explored the impact of global trends, such as English as a lingua franca (Jenkins et al., 2011) and migration (Hawkins & Norton, 2009), on SLTE. Finally, studies have also focused on the role of collaboration and communities of practice in SLTE (Borg, 2006; Tsui & Tollefson, 2017), emphasizing the importance of social and cultural factors in shaping language teacher education.

In conclusion, while Research in Teacher Education and TPDP have been consistent themes in SLTE research, there is a need for greater attention to underrepresented themes. CALL (Tafazoli & Meihami, 2023) and Knowledge-Based Teacher Education have emerged as popular themes in recent years, particularly due to the impact of technology and changing teaching methodologies. Future research should explore new trends in SLTE, such as technology in SLTE and language assessment, and the role of collaboration and communities of practice in shaping teacher education.

To address the fifth question, the present study found that a significant portion of research methodologies used in SLTE have been qualitative studies. This trend is also supported by previous research, such as the study conducted by Mazandarani (2020), which emphasizes the

need for mixed methods approaches to improve the reliability and validity of data. However, it is noteworthy that the utilization of analyzing software in the field of SLTE is limited, with the preferred software being SPSS, which is only applicable to quantitative data. Given the availability of various qualitative software options, it is necessary to encourage researchers to use such tools for data analysis, which can be a time-consuming process when done manually. Previous studies suggest that incorporating qualitative software into research can significantly enhance data analysis by providing more accurate, comprehensive and reliable results (e.g., Guest et al., 2012; Teddlie & Yu, 2007). Therefore, it is recommended that future SLTE studies incorporate mixed methods and utilize qualitative software to improve the rigor and validity of their research findings.

In the field of SLTE, the use of theoretical frameworks is essential for guiding and informing research studies. Theoretical frameworks provide a lens through which researchers can view their data, and they help to ensure the rigor and validity of research studies. However, in response to the eighth research question, this review shows that a significant number of studies did not clarify their theoretical frameworks, which is a significant limitation for these studies. Researchers in SLTE should be aware of the importance of selecting and using appropriate theoretical frameworks to guide their research studies. In addition, they should consider the benefits of using multiple theoretical frameworks, as this can provide a more comprehensive and nuanced understanding of their research topic. Some examples of commonly used theoretical frameworks in SLTE research include social constructivism, critical theory, and sociocultural theory (Nunan, 1992; Vygotsky, 1978).

There is a growing body of literature that emphasizes the importance of theoretical frameworks in SLTE research. For instance, Walsh and Mann (2019) argue that theoretical frameworks are essential for building coherent and focused research studies, and they help to ensure that research studies are grounded in well-established theories and concepts. Theoretical frameworks help researchers to identify gaps in existing knowledge, and they can provide a foundation for developing new theories and models in SLTE. Moreover, theoretical frameworks are helpful in providing a more nuanced understanding of the complex and dynamic nature of SLTE, and they can provide guidance for developing effective teacher education programs.

Systematic reviews are essential for summarizing and synthesizing the results of previous studies, and identifying gaps in the field of research. As shown in Table 12, it is critical to investigate the relationships between variables in SLTE studies. Understanding the relationships between variables is essential for comprehending the complex processes and factors affecting teacher education. It is important to identify and investigate the relationships between variables, such as teacher education practices, beliefs, and attitudes, and their impact on student learning and achievement. Two studies have emphasized the importance of examining variable relationships in systematic reviews. For example, a study by Borenstein et al. (2021) emphasized the need to examine the relationship between variables in meta-analyses, and a study by Özdemir et al. (2022) highlighted the importance of exploring variable relationships in systematic reviews to gain a better understanding of the research domain. Therefore, it is crucial for SLTE scholars to consider variable relationships when conducting systematic reviews to advance the field and bridge the gaps that exist in our understanding of teacher education.

Strengths and Limitations

One of the notable strengths of this review is its comprehensive coverage of the SLTE RAs over a considerable period of time, spanning almost 41 years, from 1980 to 2020. The review process was grounded in a rigorous approach to data collection, utilizing seven scientific databases and 100 top journals in the language and linguistics categories of SJR, in order to ensure a high level of validity. In order to maximize the generalizability of the findings, the review examined research studies conducted not only in English language teacher education, but also in other languages and diverse fields. The study employed thematic analysis to identify gaps and challenges encountered in the field during the review period. The reliability of the results was further bolstered by seeking the expert opinion of an external reviewer, who examined and considered the retrieved themes. However, it should be noted that the review did not account for contextual factors, such as the setting and participants of the included RAs. Future studies could address these limitations in order to provide a more nuanced understanding of the field.

Conclusion

In summary, this systematic review of SLTE provides valuable insights into the field by using thematic analysis to identify gaps and challenges encountered. The study found that Research in Teacher Education and TPDP are the trendiest themes in the 2020s, indicating their significance for future research. The study also suggests the need to explore new trends in SLTE, such as technology in SLTE and language assessment, and the role of collaboration and communities of practice in shaping teacher education. While the review had some limitations, including the exclusion of geography context, it is a significant contribution to SLTE research, providing a comprehensive overview of the field from 1980 to 2020. Future research could focus on the current decade and explore the significance of technology, teacher learning and development, and different research designs in SLTE. Overall, this review highlights the need for continued research to address the challenges and gaps in SLTE and promote effective teacher education.

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Acknowledgements

Not applicable.

Funding

Not applicable.

Ethics Declarations

Competing Interests

No, there are no conflicting interests.

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Appendix 1

The Study Coding Scheme

Items: 5

Publication information items:

- Title:
- Author:
- Year of Publication:
- Journal:
- Database:

Theme, Theory and Related Content items:

- Theme:
- Subtheme:

Type of the SLTE studies:

- Teacher Professional Development Programs (TPDP)
- Research-Based in Teacher Education
- Knowledge-Based Teacher Education
- CALL
- Psychology of Teacher Education
- Challenges in Teacher Education
- Culture in Teacher Education
- Sociocultural Perspective in Teacher Education
- Teacher Identity Construction
- TPACK
- L2 Teacher Educators
- Reflective Practices
- Initial Teacher Education (ITE)
- Theory and Practice

- Cooperative Teaching
- Curriculum Development in Teacher Education
- Critical Language Teacher Education
- In-service and pre-service Teacher Education
- Globalization
- Models of Teacher Education
- Reconceptualization of Teacher Education
- Assessment in Teacher Education
- Discourse Analysis in Teacher Education
- English Medium Instruction
- Ethnic Studies
- Need analysis in Teacher education
- Others

Theoretical Framework of the study:

Reported Not reported

- Theoretical framework drawn upon:
 - Constructivist Theories
 - CALL Theory
 - Critical Theory
 - Cultural Competence Theory
 - Linguistic Theory
 - Systemic Functional Linguistics (SFL) Theory
 - Krashen's Hypothesis
- The main variable investigated in interaction with the SLTE of the study:
- Number of Levels variables: 2 3 4 5 more
- The most frequent level variables:
 - Level 1 variable with level 2 variable
 - Level 1 variable + level 2 variable + level 3 variable
 - Level 1 variable + level 2 variable + level 3 variable + level 4 variable

Methodological Considerations Items:

- Design:
- Research Design:
 - Qualitative
 - Quantitative
 - Mixed Method
 - Not Mentioned
- Quantitative Research Design:
 - Preexperimental Designs
 - True Experimental Designs
 - Factorial Designs
 - Quasi-Experimental Designs
 - Time-Series Designs
 - Others
- Qualitative Research Design:
 - Case study
 - Content analysis
 - Ethnography
 - Grounded theory
 - Historical research
 - Narrative inquiry
 - Phenomenological
 - Action Research
 - Others
- Mixed-Method Design
 - Sequential Design
 - Concurrent Design

Sampling & Sample Size Items

- Probability Sampling
 - Simple Random Sampling
 - Stratified Sampling
 - Cluster Sampling

- Systematic Sampling
- Nonprobability Sampling
 - Convenience Sampling
 - Purposive Sampling
 - Quota Sampling
- Sample size:

Methods and software Used for Data Analysis

- Qualitative studies
 - Content Analysis
 - Narrative Analysis
 - Discourse Analysis
 - Thematic Analysis
 - Grounded Theory
 - Other types of analysis
- Quantities studies
 - t-test t
 - Analysis of variance (ANOVA)
 - Analysis of covariance (ANCOVA)
 - Multiple analysis of variance (MANOVA)
 - Chi square
 - Mann Whitney
 - Other types of analysis
- Were data analyzed by any software: Yes No
- Data Analysis Software Name:

Appendix 2

Table 4

Frequency and Percentage of Journals in Different Databases

Journals	Databases	Frequency	Percent
TESOL Quarterly	Wiley	20	8.5
Language Teaching Research	Sage	16	6.8
Procedia - Social and Behavioral Sciences	Science direct (Elsevier)	13	5.5
ELT Journal	Oxford	13	5.5
The Language Learning Journal	Taylor and Francis	12	5.1
The Modern Language Journal	Wiley	10	4.2
System	Science direct (Elsevier)	8	3.4
Teaching And Teacher Education*	Science direct (Elsevier)	7	3
Critical Inquiry in Language Studies	Taylor and Francis	7	3
RELC Journal	Sage	6	2.5
Recall	Cambridge	6	2.5
Asia-Pacific Journal of Teacher Education*	Taylor and Francis	5	2.1
European Journal of Teacher Education*	Taylor and Francis	5	2.1
Foreign Language Annals	Wiley	5	2.1
Language Awareness	Taylor and Francis	5	1.7
Innovation In Language Learning and Teaching	Taylor and Francis	4	1.7
Linguistics And Education	Science direct (Elsevier)	4	1.7
Journal of Education for Teaching	Taylor and Francis	3	1.3
Teacher Development*	Taylor and Francis	3	1.3
Teaching In Higher Education	Taylor and Francis	3	1.3
The Anthropologist	Taylor and Francis	3	1.3
The New Educator	Taylor and Francis	3	1.3
Language Teaching	Cambridge	3	1.3

World Englishes	Wiley	3	1.3
Cogent Education	Taylor and Francis	2	0.8
Computers & Education	Taylor and Francis	2	0.8
Educational Studies	Science direct (Elsevier)	2	0.8
English In Education	Taylor and Francis	2	0.8
Journal of Education for Teaching: International Research And Pedagogy	Taylor and Francis	2	0.8
Journal of Teacher Education*	Taylor and Francis	2	0.8
Language, Culture and Curriculum	Sage	2	0.8
Professional Development in Education	Taylor and Francis	2	0.8
Teaching Education	Taylor and Francis	2	0.8
The Teacher Educator	Taylor and Francis	2	0.8
International Journal of Bilingual Education and Bilingualism	Science direct (Elsevier)	2	0.8
Journal of English for Academic Purposes	Science direct (Elsevier)	2	0.8
A/B: Auto/Biography Studies	Taylor and Francis	1	0.4
Action In Teacher Education*	Taylor and Francis	1	0.4
Africa Education Review	Taylor and Francis	1	0.4
American Educational Research Journal	Taylor and Francis	1	0.4
Asia Pacific Journal of Education	Sage	1	0.4
Assessment & Evaluation in Higher Education	Taylor and Francis	1	0.4
Changing English	Taylor and Francis	1	0.4
Chinese Journal of Applied Linguistics	Taylor and Francis	1	0.4
Classroom Discourse	de Gruyter	1	0.4
Compare: A Journal of Comparative and International Education	Taylor and Francis	1	0.4
Current Issues in Language Planning	Taylor and Francis	1	0.4
Educational Action Research	Taylor and Francis	1	0.4
Educational Foundations	Taylor and Francis	1	0.4
E-TEALS	Wiley	1	0.4
European Journal of Higher Education	de Gruyter	1	0.4
Frontiers Of Education in China Volume	Taylor and Francis	1	0.4
Intercultural Education	Science direct (Elsevier)	1	0.4
International Journal of Educational Development	Taylor and Francis	1	0.4
International Journal of Pedagogies and Learning	Taylor and Francis	1	0.4
International Journal of Qualitative Studies in Education	Taylor and Francis	1	0.4
International Journal of Research & Method in Education	Taylor and Francis	1	0.4
International Multilingual Research Journal	Taylor and Francis	1	0.4
Journal of Information Technology for Teacher Education*	Taylor and Francis	1	0.4
Journal of Language and Cultural Education	Taylor and Francis	1	0.4
Journal of Multilingual and Multicultural Development	de Gruyter	1	0.4
Journal of Pedagogy	Taylor and Francis	1	0.4
Journal of Research on Computing In Education	de Gruyter	1	0.4
Journal of Teacher Education for Sustainability*	Science direct (Elsevier)	1	0.4
Linguaculture	de Gruyter	1	0.4
Literacy Research and Instruction	de Gruyter	1	0.4
Pedagogy, Culture & Society	Taylor and Francis	1	0.4
Psychology In the schools	Taylor and Francis	1	0.4
Reflective Practice	Wiley	1	0.4
Sage Open	Taylor and Francis	1	0.4
Scandinavian Journal of Educational Research	Sage	1	0.4

Southern African Journal of Applied Language Studies	Taylor and Francis	1	0.4
Studying Teacher Education*	Taylor and Francis	1	0.4
TESOL Journal	Taylor and Francis	1	0.4
The Clearing House: A Journal of Educational Strategies, Issues and Ideas	Wiley	1	0.4
The TESOL Encyclopedia of English Language Teaching	Taylor and Francis	1	0.4
Theory Into Practice	Wiley	1	0.4
Thinking Skills and Creativity Language And Education	Taylor and Francis	1	0.4
Annual Review of Applied Linguistics	Cambridge	1	0.4
Journal Of Second Language Writing	Science direct (Elsevier)	1	0.4
Computer Assisted Language Learning	Taylor and Francis	1	0.4
Total		236	100

Note: *Journal with a particular focus on teacher education.

Appendix 3

Table 6

Frequency and Percentage of Themes from 1980 to 2020 (as of July)

Themes	Frequency	Percentage
TPDP	35	14.8
Research in Teacher Education	28	11.9
Knowledge-Based Teacher Education	16	6.8
CALL	14	5.9
Psychology of Teacher Education	14	5.9
Culture in Teacher Education	12	5.1
Challenges in Teacher Education	12	5.1
Sociocultural Perspective in Teacher Education	10	4.2
Teacher Identity Construction	10	4.2
TPACK	10	4.2
L2 Teacher Educators	9	3.8
Reflective Practices	9	3.8
Initial Teacher Education (ITE)	8	3.4
Theory and Practice	7	3
Cooperative Teaching	6	2.5
Curriculum Development in Teacher Education	6	2.5
Critical Language Teacher Education	5	2.1
In-service and pre-service Teacher Education	5	2.1
Globalization	4	1.7
Model of Teacher Education	4	1.7
Reconceptualization of Teacher Education	4	1.7
Assessment in Teacher Education	3	1.3
Discourse Analysis in Teacher Education	2	0.8
English Medium Instruction	1	0.4
Ethnic Studies	1	0.4
Need analysis in Teacher education	1	0.4
Total	236	100

Appendix 4

Table 12
The Frequency and the Relationship of Variables in SLTE

Main Variable	Layer 1	Layer 2	Layer 3	Frequency	Percentage	Number of Variables	
teacher education	CALL	Pre-service teachers		11	5/65%	2	
		Reading		1		3	
		Initial Teacher Education		1		3	
		Motivating factors		1		3	
		Situated Activity		1		3	
		Theory and Practice		1		3	
		Teaching Skills		1		3	
		Reading		1		2	
		reflective thinking		1		3	
	Linguistic Knowledge			11	3/57%	3	
			Teacher legitimization		1	2	
	Knowledge-Based			10	3/27%	2	
			Sociocultural approach		1	3	
	Challenge in teacher education			8	3%	2	
			CALL		1	3	
			discourse analysis		1	3	
	Cultural Issues research methodology			7	2/10%	2	
	Initial Teacher Education			6	1/80%	2	
			teacher autonomy		5	1/50%	2
			Assessment	Modern languages	2	1/20%	3
			Sociocultural approach	mentor to co-tutor	1		4
	Teacher Cognition				6	2/08%	2
			Inservice teachers	readiness and self-competency	1		4
			Linguistics knowledge		1		3
	Pre-Service Teachers				4	2/38%	2
			Critical Analysis		2		3
			Inservice teachers		1		3
		Reflective practice		1		3	

reflective practice		4	1/80%	2
	Pre-service teachers	2		3
Socio-Cultural Approach		4	1/80%	2
	Teaching Skills	1		3
	challenges in teacher education	1		3
Critical analysis		4	1/50%	2
	Turkey, Turkmenistan, Kyrgyzstan and Azerbaijan Cases	1		3
Curriculum Development		3	1/20%	3
	Discourse analysis	1		3
Language Policy		3	0/90%	2
Teacher Identity		3	1/80%	2
	Preservice Teacher	2		3
	Situated Activity	1		3
Communicative Approach		2	0/90%	2
	Code-switching	1		3
Coteaching		2	1/20%	2
	self-efficacy	1		4
	Sociocultural approach	1		3
nationalization		2	1/20%	2
Ontological Perspective	L2 Classroom Praxis	2		3
Outcomes-based Approach		2	0/60%	2
Reading		2	0/90%	2
	Customer Service Model	1		3
School-University Collaboration		2	0/60%	2
TPACK		2	1/50%	2
	Students' English Proficiency Level	1		3
	Inservice teachers	1		3
	Dialogical interaction	1		3
Writing		1	0/90%	2
	Linguistics knowledge	1		3
	Curriculum Development	1		3
Abroad And At Home Approaches in teacher education		1	0/30%	2
		1	0/30%	2

Classroom Discourse	Discourse analysis	1	0/30%	3
Classroom Practice	nationalization	1	0/30%	3
Core Practices		1	0/30%	2
Cultivating Multivocality	Critical Pedagogy	1	0/30%	3
Dialogic Gatherings		1	0/30%	2
Discourse analysis	Dialogical interaction	1	0/30%	3
English-medium instruction	higher education	1	0/30%	3
Ethnocentrism		1	0/30%	2
European citizenship		1	0/30%	2
Globalization		1	0/30%	2
ICT integration		1	0/30%	2
Informing and transforming	Critical Pedagogy	1	0/30%	3
Inservice teachers	Language ideology	1	0/30%	3
Knowledge-Base	Sociocultural approach	1	0/30%	3
Language awareness		1	0/30%	2
Lapsed Languages	modern lanaguages	1	0/30%	3
Local Needs	Preservice Teachers	1	0/30%	3
Pattern		1	0/30%	2
Language policy vs academic standards		1	0/30%	2
Socio-Cultural Approach	Teaching Skills	1	0/60%	3
	challenges in teacher education	1		3
Socioliterate Approach		1	0/30%	2
Speaking		1	0/30%	2
Standards, engagement, and Minecraft		1	0/30%	2
strategic mediation		1	0/30%	2
task-based language teaching		1	0/30%	2
teacher education programme		1	0/30%	2
Teacher Emotions		1	0/30%	2
the age of ambiguity		1	0/30%	2
Theory and Practice	Writing	1	0/30%	3

teacher education program	Transdisciplinary Framework		1	0/30%	2	
	Transformative Power of Narrative		1	0/30%	2	
	World Englishes		1	0/30%	2	
	Preservice Teachers		6	2/10%	2	
		reflective teaching		1		3
	Assessment		3	0/90%	2	
	Cultural Issues		2	0/60%	2	
	Initial Teacher Education		2	0/90%	2	
		modern languages	task-based language teaching	1		4
	Linguistic Knowledge		1	0/90%	2	
		low-level English language users		2		3
	Teacher Identity		2	0/60%	2	
	academic literacy socialization		1	0/30%	2	
	Alternative and Traditional		1	0/30%	2	
	CALL	Linguistics knowledge		1	0/30%	3
	challenges of teacher education		1	0/30%	2	
	Communicative Approaches		1	0/30%	2	
	Co-teaching	young learners' language classrooms		1	0/30%	3
	Critical analysis	Turkey and Other European Countries		1	0/30%	3
	Critical Pedagogy		1	0/30%	2	
	Dialogic interaction		1	0/30%	2	
	Flexible Approaches		1	0/30%	2	
	Globalization	nationalization		1	0/30%	3
	NESTs and NNESTs		1	0/30%	2	
	postgraduate students		1	0/30%	2	
	Preservation and Advancement		1	0/30%	2	
	Reflective practice	Pre-service teachers	School	1	0/60%	4
	task-based language teaching		1		3	
research methodology			1	0/30%	2	

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	self-efficacy		1	0/30%	2
	Teacher Cognition	teacher certification	1	0/60%	3
		Inservice teachers	1		3
	Teacher Educators		1	0/30%	2
Teacher Educator	Teacher Education Program		3	0/90%	2
	teacher cognition		3	0/90%	2
	Teacher Identity		2	0/60%	2
	Critical Pedagogy		1	0/30%	2
	EMI Teacher Development	Reflective practice	1	0/30%	3
	Feedback		1	0/30%	2
	literacy education		1	0/30%	2
	Publish or Perish		1	0/30%	2
Total			236		