Mapping the Evolution of Arabic Language Teaching and Acquisition: A Bibliometric and Systematic Review of Second Language Research (2013-2023)

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Abstract
This study provides a comprehensive analysis of current trends in language education, focusing on the most frequently used statistical methods, platforms, and sample populations. By examining 30 studies on language teaching and learning, the research identifies the dominant practices in both Arabic and other languages. The findings indicate that SPSS is the most commonly used tool for statistical analysis, alongside advanced techniques such as proportional odds logistic regression (POLR) and quasi-experimental designs. In terms of platforms, a shift towards technology-based methods is evident, with MOOCs, AI-powered Intelligent Personal Assistants (IPAs), and virtual reality (VR) platforms becoming prominent tools for enhancing language learning. The study also reveals that university and primary school students are the most frequently analyzed sample groups, while teachers and students with special learning needs are also gaining attention in recent research. This review underscores the evolving nature of language education and highlights the importance of integrating modern technology with traditional teaching methods to cater to diverse learner populations. The study's findings contribute to the growing body of research on language education, offering insights that can inform future educational practices and research in this field.
Keywords: Language Education, Arabic Teaching, Cooperative Learning, Student Samples, Language Acquisition, Educational Technology

Introduction
Language education is a crucial component of global education systems, impacting both individual learners and broader societal development. Around the world, learning new languages has become essential for personal, academic, and professional growth in

increasingly interconnected societies. From English as a Second Language (ESL) to heritage language acquisition, language education research has explored diverse methods, platforms, and theoretical frameworks to improve teaching practices and learner outcomes (Di Gregorio & Beaton, 2019; Yusuf, Jusoh, & Yusuf, N/A). Various educational systems worldwide have adopted innovative approaches to language teaching, incorporating traditional classroom methods alongside modern technological tools like Massive Open Online Courses (MOOCs) and virtual reality platforms (Duru et al., 2019; Darque Pinto et al., 2021). As educational technology continues to evolve, so too do the strategies for language teaching, making it an ever-changing field of study.

Arabic language education, in particular, holds a unique position in the global language learning landscape due to its importance both as a religious language and as a growing second language for many learners worldwide. With increasing demand for learning Arabic, educators have focused on various teaching methods and platforms to enhance learner engagement and performance (Alhajaji et al., 2020). In countries where Arabic is the dominant language, educators face the challenge of teaching Arabic to native speakers while also developing effective strategies for non-native speakers (Chen, 2020). Researchers have examined a range of approaches, from traditional techniques like whiteboards and flowcharts to more modern tools such as AI-powered personal assistants (Moulieswaran & Kumar, 2022). Despite these advancements, the field continues to evolve, especially with the growing use of cooperative learning platforms and technology-enhanced learning (Klimova et al., 2021; Yusuf, Jusoh, & Yusuf, N/A).

The aim of this paper is to explore the key trends and methods in language education, with a specific focus on the most widely used platforms, statistical methods, and sample populations in teaching Arabic and other languages. By analyzing 30 studies on teaching methods and language education, this paper seeks to identify the most common practices in statistical analysis, the platforms utilized in language teaching, and the demographic groups that are frequently studied. This review will provide insights into the evolving nature of language education, emphasizing the importance of integrating modern technology with traditional teaching methods to enhance learning outcomes for diverse student populations. The findings will contribute to the broader understanding of how teaching methods are adapting to meet the needs of learners in various educational contexts. To achive this study objectives, the following research questions were formulated.

1- What is the annual distribution, the best countries, the best educational institutions, and the most used keywords in the field of language education?
2- What are the most common theories in the field of teaching methods and language teaching??
3- What is the most widely used statistical analysis in language teaching?
4- What are the most used platforms in the field of language teaching?
5- What are the most frequently analyzed samples in the field of teaching methods and language teaching?

Methods

Search Strategy

This systematic review and bibliometric analysis followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2009). The Scopus database was used to conduct the search due to its broad coverage and inclusion of high-quality, indexed academic articles across various disciplines. Scopus was selected for this study because it provides the most comprehensive data set available for bibliometric analysis, ensuring the inclusion of relevant, peer-reviewed, and well-indexed sources. The search was conducted on 20th July 2024, with the goal of identifying research related to Teaching Arabic as a Second Language and Second Language Acquisition. The search was limited to articles published between 2012 and 2023, providing a comprehensive view of recent developments in the field. The search yielded a total of 2411 documents. To further refine the search, specific filters were applied, which are detailed below.

Inclusion and Exclusion Criteria

To ensure relevance and quality, we applied inclusion and exclusion criteria, summarized in Table 1

Table 1

Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Language	Articles published in English	Articles in languages other than English
Timeframe	Research published between 2012 and 2023	Research published before 2012 or after 2023
Document Type	Only research articles (ar)	Reviews, editorials, conference papers, and other document types
Subject Areas	Social Sciences, Arts and Humanities	Any other subject areas not related to Social Sciences or Arts
Keywords	Articles focusing on Second Language, EFL, Teaching Arabic, etc.	Articles without relevant keywords

These criteria were essential to narrowing down the scope of the research to focus on the teaching of Arabic as a second language and related pedagogical methods within Social Sciences and Arts and Humanities.

Screening Process

The screening process was carried out in two phases:

- Phase 1 (Initial Screening): After applying the inclusion and exclusion criteria, the total number of articles was reduced from 2411 to 259.
- Phase 2 (Eligibility Assessment): A deeper screening of the 259 documents was conducted, which included downloading 84 articles for further analysis. A quality assessment of these 84 articles was performed, and after a thorough review, 50 articles were considered of high quality and relevance.

The final step of the screening process involved a second phase of quality assessment, reducing the number of articles to **30**, which were included in the systematic literature review (SLR).

Data Extraction and Analysis

Data extraction was performed on the 30 selected articles. Key information was recorded, including the publication year, authors, keywords, methodologies, and key findings. The extracted data provided the basis for both qualitative synthesis and bibliometric analysis. For the bibliometric analysis, we utilized VOSviewer, a tool specifically designed for constructing and visualizing bibliometric networks. VOSviewer was used to generate co-occurrence maps based on the keywords and citation networks. This allowed for the identification of key themes and trends within the field, as well as the visualization of relationships between different studies and research areas.

PRISMA Flow Diagram

Following the PRISMA guidelines (Moher et al., 2009), a flow diagram was constructed to visually represent the identification, screening, eligibility, and inclusion process. See figure 1.

1. **Identification**: The initial search using the Scopus database identified **2411 articles**.
2. **Screening**: After applying filters based on language, document type, subject area, and keywords, the number of articles was reduced to **259**.
3. **Eligibility**: After a detailed quality assessment, **84 articles** were selected for full review.
4. **Inclusion**: Ultimately, **30 articles** were included in the final systematic review and bibliometric analysis.
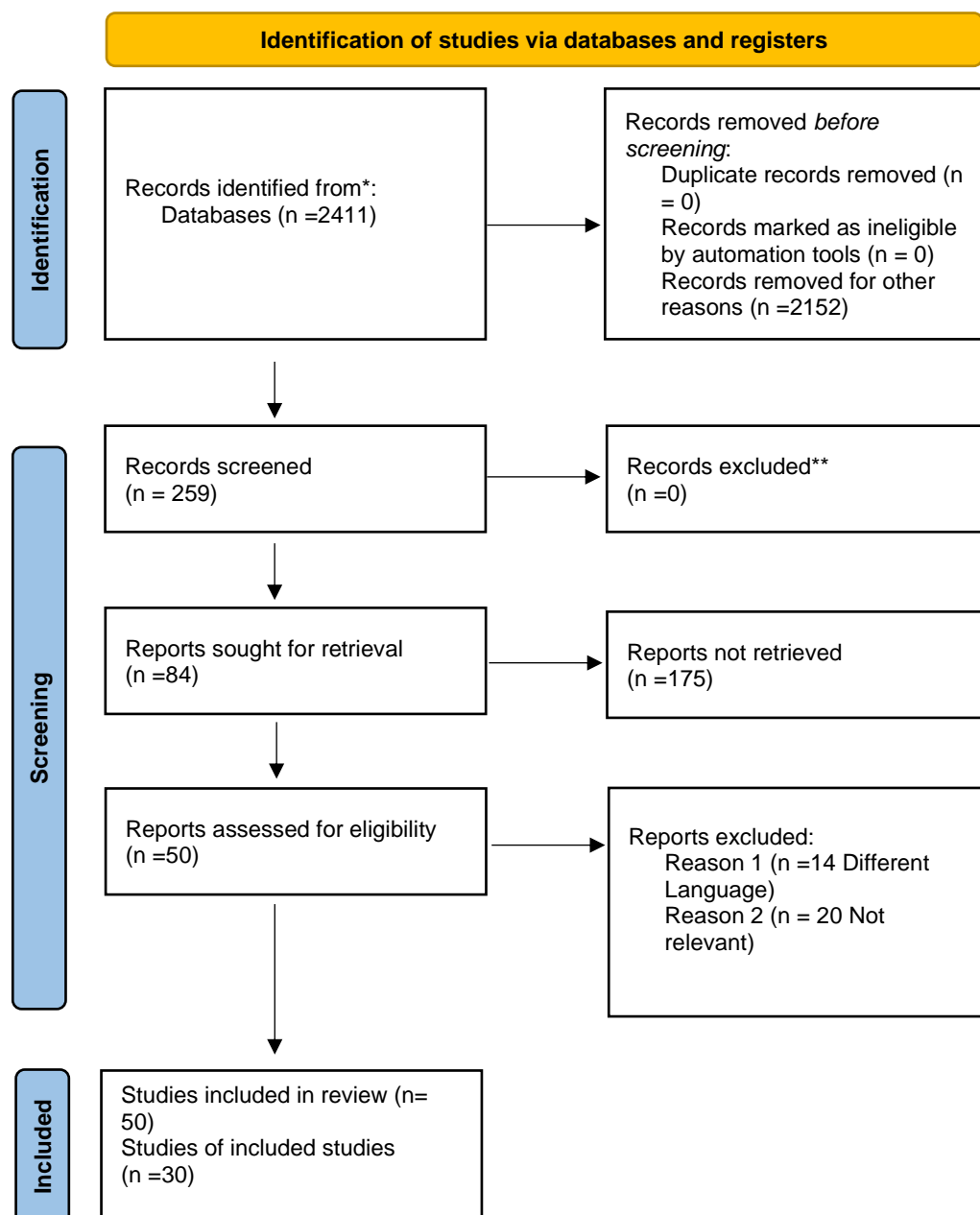
Figure 1: PRISMA framework

Rationale for Scopus and VOSviewer

Scopus was chosen for this review due to its wide scope, high-quality indexed data, and access to peer-reviewed journals across multiple disciplines. Its extensive citation indexing capabilities make it an ideal database for bibliometric studies.

VOSviewer was used to carry out the bibliometric analysis because it allows for the creation of visual representations of citation networks and keyword co-occurrence. This enables a deeper understanding of the relationships between key themes in Arabic language teaching and second language acquisition, facilitating the identification of research gaps and emerging trends in the field.

Results

What is the Annual Distribution, The Best Countries, The Best Educational Institutions, And The Most Used Keywords In The Field Of Language Education?

Yearly Distribution in the Field of Language Education

To answer the research question concerning the annual distribution of publications in the field of language education, a bibliometric analysis was conducted to track the number of relevant studies published each year from 2014 to 2024. Understanding the yearly distribution provides insight into the trends and shifts in research activity over time, highlighting periods of increased focus and interest in the topic.
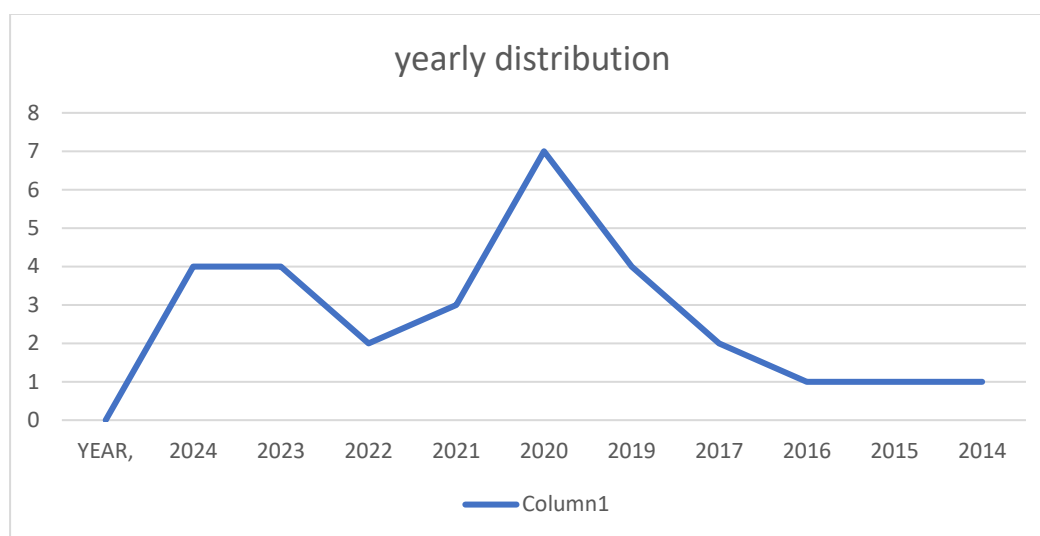

Figure 2: Yearly distribution in the field of language education

Figure 2 illustrates the yearly distribution of publications in the field of language education. As shown, there was a notable rise in the number of publications starting from 2016, peaking in 2020 with a total of 7 publications. The following years, from 2021 onwards, show a gradual decline, stabilizing at 2 publications per year by 2023 and 2024.

The spike in 2020 could indicate a growing interest in innovative approaches or a response to global events such as the COVID-19 pandemic, which impacted educational methods and pushed forward the exploration of language education, particularly in digital and online learning environments. However, the subsequent decline suggests either a saturation of the topic or a shift in focus towards other educational issues.

This distribution allows us to identify critical periods for language education research and provides a foundation for further exploration into why certain years witnessed more academic attention in this field.

Top Countries in the Field of Language Education

In order to identify the global research contributions in the field of language education, the distribution of publications by country was analyzed. This analysis helps to highlight which countries have been the most active in conducting and publishing research on language education, potentially pointing to regional focuses, policy impacts, or the presence of strong academic institutions and resources dedicated to this field.
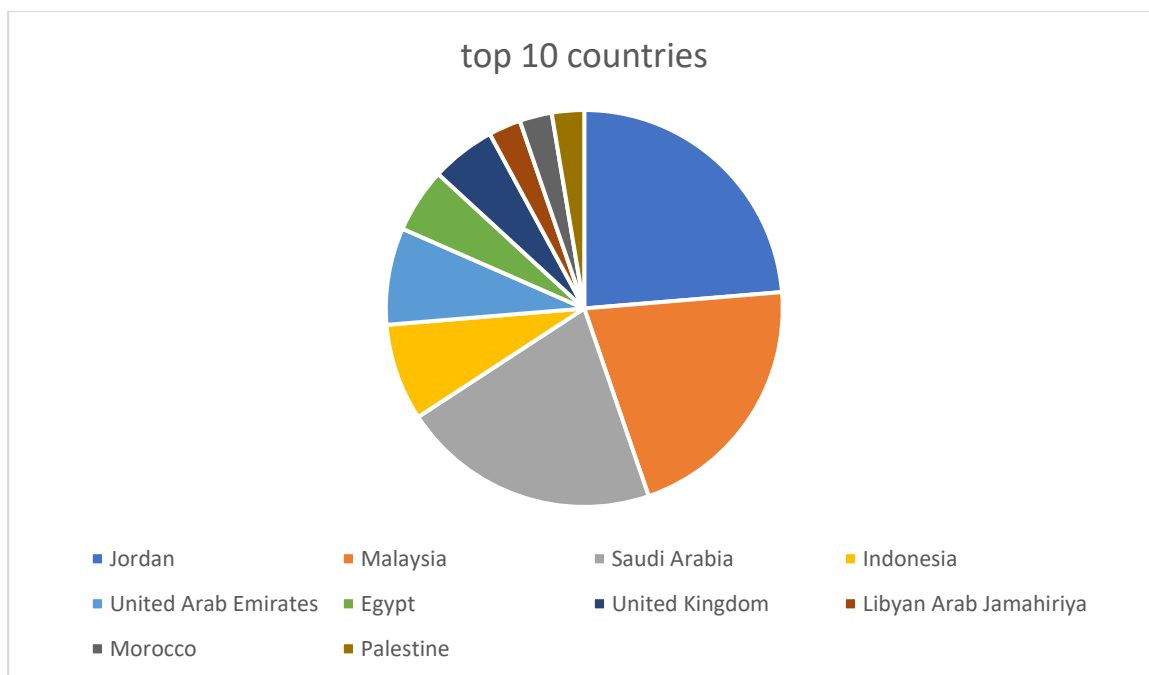
Figure 3: Top countries in the field of language education

Figure 3 presents the top 10 countries contributing to research in the field of language education. Jordan stands out as the most active country, followed closely by Malaysia and Saudi Arabia, which also show significant contributions. Other notable countries include Egypt, United Arab Emirates, and Indonesia, demonstrating the substantial participation of Middle Eastern and Southeast Asian nations in this research domain.

The presence of Palestine, Libya, and Morocco further emphasizes the regional interest and investment in language education within the Arab world. The United Kingdom is the only Western country in the top 10, indicating a relatively smaller, yet notable, contribution to the global discussion on language education.

This distribution underscores the pivotal role that Middle Eastern and Southeast Asian countries play in advancing language education research, potentially driven by linguistic diversity, educational reform policies, and a growing need for second-language acquisition in these regions.

Top 10 Educational Institutions in the Field of Language Education
The contributions of educational institutions are crucial in shaping research directions and developments within any academic field. Identifying the leading institutions in the field of language education allows us to highlight centers of excellence and prolific research hubs that drive innovations and studies in this domain.
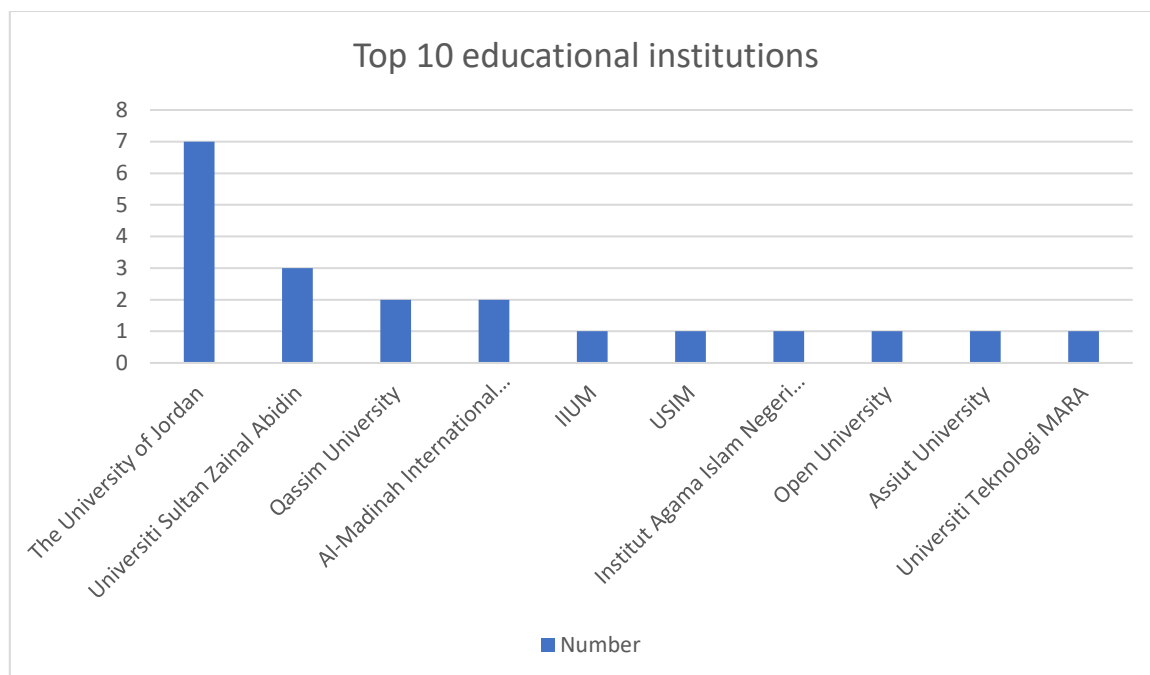
Figure 4: Top 10 educational institutions in the field of language education

Figure 4 shows the top 10 educational institutions contributing to research in language education. The University of Jordan leads with a significant margin, producing 7 publications in the field, far surpassing other institutions. Universiti Sains Islam Malaysia (USIM) and Qassim University follow, each contributing a substantial number of studies to the field, showcasing the active role of Middle Eastern and Southeast Asian universities in language education research.

Other institutions like Al-Madinah International University, International Islamic University Malaysia (IIUM), and Universiti Sains Malaysia (USM) also rank in the top 10, further emphasizing the region's investment in language education research. Additionally, institutions from Saudi Arabia, Egypt, and Libya such as Open University and Universiti Teknologi MARA contribute to the global knowledge base, though at a lower level compared to leading universities.

The dominance of institutions from the Middle East and Southeast Asia reflects the region's priority in improving and developing language education programs, particularly in Arabic and Islamic studies, which are deeply rooted in both academic and cultural priorities of these regions.

Terms and Keywords in the Field of Language Education
The analysis of frequently used terms and keywords provides insights into the central themes and areas of focus in language education research. This type of analysis highlights the most commonly explored topics, research trends, and emerging areas of interest.
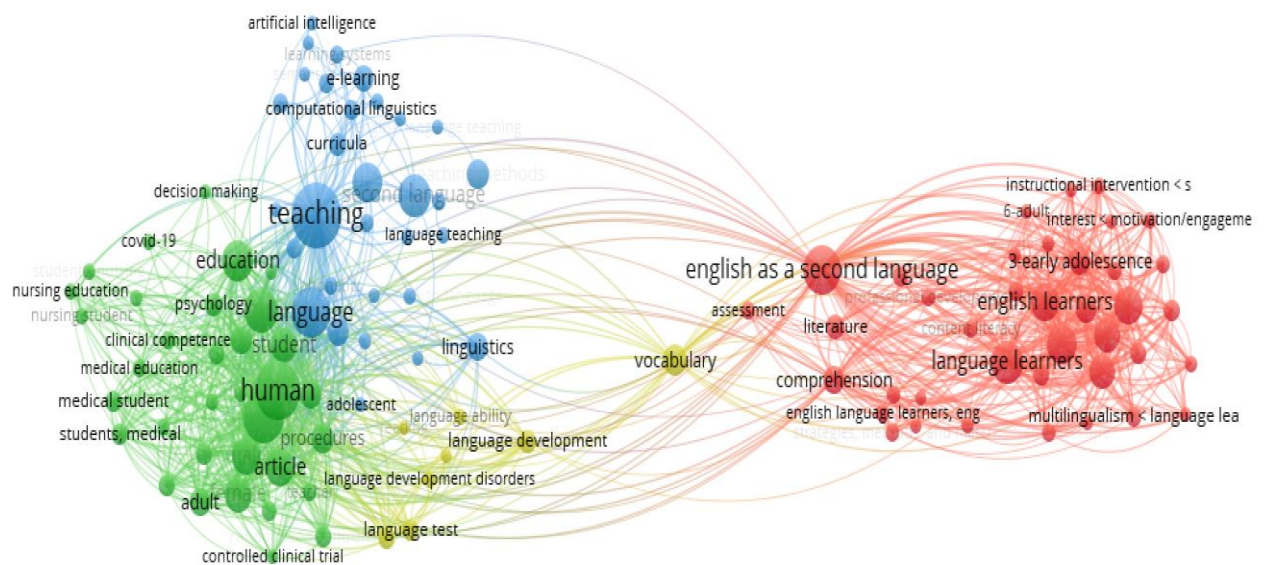
Figure 5: Terms and keywords in the field of language education

Figure 5 presents a visualization of the key terms and keywords in the field of language education, generated using a bibliometric mapping tool. The map shows a clustering of terms into distinct groups, with each cluster representing a thematic area within the field.

- The green cluster is centered around topics related to teaching, education, and language, with terms like "language learning," "education," and "human" showing strong associations. This indicates a focus on pedagogical approaches and educational frameworks within language education.
- The red cluster focuses on English as a second language (ESL), with terms such as "language learners," "comprehension," and "English language learners" being prominent. This reflects the emphasis on English as a second language within the broader language education research, particularly in regions where English is taught as a foreign or second language.
- The blue cluster highlights more specialized topics, including artificial intelligence, decision-making, and clinical settings, suggesting that some studies are exploring the intersections of language education with advanced technologies and applied fields such as healthcare and cognitive science.

This term map reveals the diversity of research topics in language education, from traditional teaching methods and second language acquisition to cutting-edge applications of technology in language learning. It also highlights the growing interest in integrating **AI** and other advanced tools into language education, signifying potential future trends in the field.

What are the most common theories in the field of teaching methods and language teaching?

In this section, we provide a summary of the most common theories used in research on teaching methods and language education. These theoretical frameworks form the foundation of various studies and help to shape the instructional strategies used by

educators. Below is a table that lists several articles, the year of publication, and the theories or methods they discussed.

Table 2

Most Common Theories in the Field of Teaching Methods and Language Teaching

Author(s)	Year	Theory
Luca Di Gregorio & Fran Beaton	2019	Social Learning Theory and Peer Cooperation
Banan Hassan Alhajaji, Jalila Saleh Algmadi & Amal Abdelsattar Metwally	2020	Entertaining Education
Antoni Fernandez Parera	2021	Theory of Heritage Language Acquisition (HLA) and Concept-Based Teaching
Tatiana Baranova, Dmitriy Mokhorov, Aleksandra Kobicheva & Elena Tokareva	2021	Blended Learning
Chen Chen	2020	Transport Theory
Russell Cross	2012	Vygotsky's Sociocultural Theory of Mind
Emily Lau Yen Yen, Harwati Hashim & Melor Md Yunus	2023	UTAUT - Permanent Certificate of Acceptance of New Technology
Tashi Dendup & Angkana Onthanee	2020	Constructivist Learning Theories
Nor Azwahanum Nor Shaid, Shahidi Hamid & Marlyna Maros	2022	Zone of Proximal Development (ZPD) Theory
Abdel Rahman Mitib Altakhaineh, Rozan Alhloul & Aseel Zibin	2022	Observation Theory (Five Hypotheses: Acquisition and Learning, Naturalism, Input, Emotional Filtering)
Yi-Chien Wang	2023	Cognitive Theory
Alaba Olaoluwakotansibe Agbatogun	2012	Vygotsky's Sociocultural Theory
Raphael Nhongo & Liqhwa Siziba	2022	Dynamic Bilingualism Theory
Rahmi Fhonna & Yunisrina Qismullah Yusuf	2020	Grammatical Translation Method
Heini Kallio, Antti Suni & Juraj Šimko	2021	Well-known Language Learning Theories (with a focus on Pronunciation)
Rafael Darque Pinto, Bruno Peixoto,	2021	Augmented Reality Theory

Miguel Melo, Luciana Cabral & Maximino Bessa		

Table 2 provides a diverse range of theories have been used in the field of teaching methods and language education, each bringing a unique perspective on how individuals acquire and improve their language skills. For example, Social Learning Theory, explored by Di Gregorio and Beaton (2019), emphasizes the importance of peer cooperation in the learning process, highlighting how collaborative environments can enhance language acquisition .

Similarly, Vygotsky's Sociocultural Theory, which was discussed in multiple studies (e.g., Cross, 2012; Agbatogun, 2012), posits that social interaction plays a fundamental role in the development of cognition, especially in language learning . This theory underscores the importance of cultural tools and collaborative learning, providing a framework for educators to design more interactive and engaging language programs.

Another interesting approach is Blended Learning, highlighted by Baranova et al. (2021), which combines traditional classroom methods with digital learning tools to create a hybrid learning environment . This method has gained considerable traction with the rise of technology-enhanced learning, especially during the COVID-19 pandemic when remote learning became essential.

Constructivist Learning Theories, such as those discussed by Dendup and Onthanee (2020), argue that learners build their understanding of language through active engagement with meaningful tasks. This learner-centered approach promotes deep understanding and critical thinking .

Moreover, the Unified Theory of Acceptance and Use of Technology (UTAUT), used by Emily Lau Yen Yen et al. (2023), explores how learners adapt to and accept new technology as part of the learning process . This theory is particularly relevant in today's digital age, where the integration of technology into language teaching has become a key trend.

Other theories, such as the Theory of Heritage Language Acquisition (HLA) and Observation Theory, delve into more specific aspects of language learning, like acquiring a heritage language and observing linguistic patterns .

This diverse theoretical landscape reflects the complexity of language education, where no single approach can account for all the variables involved in effective teaching and learning. Instead, educators and researchers draw from a broad range of theories to tailor their approaches to specific learner needs, contexts, and goals. This plurality of perspectives enriches the field and drives innovations in language education.

What is the most widely used statistical analysis in language teaching?
Statistical analysis plays a pivotal role in research on language teaching, allowing scholars to examine relationships between variables, measure learning outcomes, and assess the effectiveness of teaching interventions. Below is a table summarizing the various types of statistical and qualitative methods used in 30 studies related to language education.

Table 3
Most Widely Used Statistical Analysis in Language Teaching

Author(s)	Year	Statistical Analysis
Ismail Duru, Ayse Saliha Sunar, Su White, Banu Diri & Gulustan Dogan	2019	Behavioral analysis of ESL participants
Luca Di Gregorio & Fran Beaton	2019	Analysis of expressions, lexical subtleties, and vocabulary use in non-academic registers
Banan Hassan Alhajaji, Jalila Saleh Algmadi & Amal Abdelsattar Metwally	2020	SPSS analysis of student scores to measure vocabulary acquisition
Antoni Fernandez Parera	2021	Effects of Mindful Conceptual Engagement (MCE)
Moulieswaran & Dr. Prasantha Kumar	2022	Qualitative content analysis
Blanka Klimova, Marcel Pikhart, Anna Cierniak-Emerych & Szymon Dziuba	2021	Focus group interviews
Tatiana Baranova, Dmitriy Mokhorov, Aleksandra Kobicheva & Elena Tokareva	2021	Qualitative and quantitative analysis using surveys and interviews
Chen Chen	2020	Linguistic similarity analysis to enhance positive transfer
Aida R. Nurutdinova, Elena Dmitrieva, Zuhra Zakieva, Adelina Astafeva & Elvira Galiullina	2017	Russian approaches to ESL teaching and challenges analysis
Olena Panchenko, Vira Zirka, Tetiana Klymenko, Anastasiia Plakhtii & Iryna Suima	2022	Graphical analysis of written form, lexical, grammatical, and stylistic analysis
Qismullah Yusuf, Zalina Jusoh & Yunisrina Qismullah Yusuf	N/A	Quasi-experimental design with pretest-posttest; descriptive and inferential statistics
Russell Cross	2012	Vygotskian analysis of "thinking and speech"
Fenglin Jia, Daner Sun, Qing Ma & Chee-Kit Looi	2022	Real-time context analysis in mobile learning
Emily Lau Yen Yen, Harwati Hashim & Melor Md Yunus	2023	Empirical data collection on technology-enhanced learning; analysis using educational assessment

Dorota Werbińska	2020	Data interpretation through recorded material for discussion and further analysis
Tashi Dendup & Angkana Onthanee	2020	Quantitative design for data analysis
Nor Azwahanum Nor Shaid, Shahidi Hamid & Marlyna Maros	2022	Observation methods; continuous comparison method
Vimochana, Bindu Lamessa & Ramesh Manickam	2023	Questionnaire, interview, and classroom observation
Alaba Olaoluwakotansibe Agbatogun	2012	Descriptive and inferential statistics (t-tests, ANOVA, Pearson correlation, multiple regression)
Fengyi Ma	2021	Questionnaire analysis
Noor Hayati binti Romli, Mohd Sallehhudin bin Abd Aziz & Pramela Krish	2022	Qualitative data using semi-structured interviews and audio-recorded lessons
Heini Kallio, Antti Suni & Juraj Šimko	2021	R programming with proportional odds logistic regression (POLR) model
Rafael Darque Pinto, Bruno Peixoto, Miguel Melo, Luciana Cabral & Maximino Bessa	2021	Interactive communication, behaviors, and emotions analysis
Abdel Rahman Mitib Altakhaineh, Rozan Alhloul & Aseel Zibin	2022	Traditional Product Writing (TPW) and Innovative Writing Process (IWP) analysis
Yi-Chien Wang	2023	Cognitive Statistical Learning Strategy (CSLS) model
Chad Nilep	2015	Discourse data analysis
Rahmi Fhonna & Yunisrina Qismullah Yusuf	2020	Transcription conventions analysis
Yuhang Yuan	2021	Correlational analysis of student compositions
Diana Rustamovna Sabirova & Regina Rafael'yevna Khanipova	2019	Historical and theoretical analysis of multilingual education and statistical publications
Raphael Nhongo & Liqhwa Siziba	2022	Semi-structured interviews

Across the 30 studies reviewed, a diverse array of statistical and qualitative methods were employed to analyze data and assess outcomes in language teaching. SPSS was one of the most commonly used tools, as evidenced by Banan Hassan Alhajaji et al. (2020), who applied it to analyze student scores in vocabulary acquisition . SPSS allows researchers to perform various statistical tests, such as descriptive statistics, ANOVA, and regression analysis, making it a versatile tool for educational research.

Another notable method is the use of descriptive and inferential statistics (such as t-tests, ANOVA, Pearson product-moment correlation, and multiple regression), which were extensively employed by Alaba Olaoluwakotansibe Agbatogun (2012) . These methods allow researchers to compare groups, explore relationships between variables, and draw meaningful conclusions about the impact of specific interventions on language learning outcomes.

Quasi-experimental designs, such as those used by Qismullah Yusuf et al., combined pretest and posttest assessments with descriptive and inferential statistics. These designs are particularly useful for evaluating the effectiveness of language interventions and teaching methods over time, providing controlled comparisons between different learner groups.

Additionally, qualitative methods such as content analysis, focus group interviews, and semi-structured interviews were widely used in studies like Moulieswaran & Dr. Prasantha Kumar (2022) and Blanka Klimova et al. (2021) . These approaches offer deeper insights into learners' experiences, behaviors, and attitudes, complementing the quantitative data gathered through standardized tests and assessments.

Several studies also utilized more advanced statistical techniques. For example, Heini Kallio et al. (2021) employed R programming with the proportional odds logistic regression (POLR) model to analyze language learning variables, showcasing the increasing adoption of sophisticated statistical software in language education research.

Finally, innovative models like the Cognitive Statistical Learning Strategy (CSLS), explored by Yi-Chien Wang (2023), offer a specialized framework for analyzing cognitive processes in language learning, reflecting the growing intersection of cognitive science and language education research.

The diversity of statistical and qualitative methods used in these studies demonstrates the richness and complexity of language education research. From traditional inferential statistics to cutting-edge computational models, the methods employed reflect the varied goals of researchers in this field—from understanding learner behaviors to measuring the impact of teaching strategies on language proficiency.

What are the most used platforms in the field of language teaching?
In the context of language teaching, platforms play a key role in delivering content, facilitating interaction, and supporting various teaching and learning methodologies. The following table summarizes the platforms and tools mentioned across 30 studies related to language teaching, showcasing the diversity of approaches and technologies used to enhance the language learning process.

Table 4
Most Used Platforms in the Field of Language Teaching

Author(s)	Year	Platform
Ismail Duru, Ayse Saliha Sunar, Su White, Banu Diri & Gulustan Dogan	2019	MOOC platforms
Luca Di Gregorio & Fran Beaton	2019	Native speakers as a platform for learning through interaction
Banan Hassan Alhajaji, Jalila Saleh	2020	Whiteboard and GMT techniques

Algmadi & Amal Abdelsattar Metwally		
Antoni Fernandez Parera	2021	Flowcharts and pictures
Moulieswaran & Dr. Prasantha Kumar	2022	AI-powered Intelligent Personal Assistant (IPA) applications (Google Assistant, Alexa, Siri, Cortana, Bixby)
Blanka Klimova, Marcel Pikhart, Anna Cierniak-Emerych & Szymon Dziuba	2021	Online teaching platforms and digital media tools
Tatiana Baranova, Dmitriy Mokhorov, Aleksandra Kobicheva & Elena Tokareva	2021	Professional learning platforms
Qismullah Yusuf, Zalina Jusoh & Yunisrina Qismullah Yusuf	N/A	Cooperative Learning (CL)
Fenglin Jia, Daner Sun, Qing Ma & Chee-Kit Looi	2022	AIELL system (web-based English learning platform)
Emily Lau Yen Yen, Harwati Hashim & Melor Md Yunus	2023	Teaching platforms for imparting spelling knowledge
Tashi Dendup & Angkana Onthanee	2020	Cooperative Learning (CL)
Nor Azwahanum Nor Shaid, Shahidi Hamid & Marlyna Maros	2022	Ethnographic case study platform
Alaba Olaoluwakotansibe Agbatogun	2012	Student Response System (SRS) technology
Fengyi Ma	2021	Learning platforms shaped by student learning styles and teacher methods
Heini Kallio, Antti Suni & Juraj Šimko	2021	European Framework of Reference
Rafael Darque Pinto, Bruno Peixoto, Miguel Melo, Luciana Cabral & Maximino Bessa	2021	Virtual reality, mobile phones, personal computers

Abdel Rahman Mitib Altakhaineh, Rozan Alhloul & Aseel Zibin	2022	Representative images and deductive learning sessions
Yi-Chien Wang	2023	Card games, slides, and sample learning papers
Chad Nilep	2015	Hippo Family Club
Rahmi Fhonna & Yunisrina Qismullah Yusuf	2020	Observational field notes and video recordings
Yuhang Yuan	2021	Interview-based teaching strategies
Diana Rustamovna Sabirova & Regina Rafael'yevna Khanipova	2019	Innovative platforms for teaching EFL/ESL
Raphael Nhongo & Liqhwa Siziba	2022	Trilingual language transfer platforms

Table 4 proviese the articles reviewed indicate that a wide range of platforms are employed in the teaching of languages, each tailored to specific learning objectives and technological advancements. MOOCs (Massive Open Online Courses) were notably highlighted by Ismail Duru et al. (2019) as an emerging platform for language learning, offering free and accessible language education to learners worldwide . MOOC platforms allow learners to engage in self-paced language courses with flexible schedules and access to a wide array of resources.

Intelligent Personal Assistants (IPAs), such as Google Assistant, Alexa, and Siri, were examined by Moulieswaran & Dr. Prasantha Kumar (2022) for their role in language learning, particularly in promoting conversational practice through voice-enabled interactions . These AI-powered tools provide learners with opportunities for real-time spoken language practice and can simulate human conversation, which is beneficial for improving language fluency and listening skills.

Online teaching platforms and the integration of digital media were explored by Blanka Klimova et al. (2021), demonstrating how these platforms enable remote language learning and foster interactive learning environments . Digital media, including videos, podcasts, and online assessments, have become essential components of modern language education, especially in the context of the COVID-19 pandemic, which accelerated the adoption of online learning.

Cooperative Learning (CL) platforms were discussed in multiple studies, such as those by Qismullah Yusuf et al. and Tashi Dendup & Angkana Onthanee (2020), emphasizing the value of collaboration among learners in achieving language proficiency. These platforms encourage peer-to-peer interaction, group tasks, and shared learning experiences, which are key to developing communication skills in language learners.

Virtual reality (VR) platforms and mobile technology, highlighted by Rafael Darque Pinto et al. (2021), offer immersive and interactive environments for language learners to engage in real-world language use scenarios . VR platforms allow learners to simulate real-life situations, providing a more engaging and effective learning experience, while mobile phones ensure learning can take place anytime and anywhere.

Additionally, platforms like Student Response Systems (SRS), explored by Alaba Olaoluwakotansibe Agbatogun (2012), promote active learning and classroom engagement

by enabling instant feedback and interaction during language lessons . SRS technology is used to pose questions, gather responses, and assess comprehension in real-time, helping educators adjust their teaching strategies to meet learners' needs more effectively.

The review also reveals the use of innovative approaches, such as Hippo Family Club (as mentioned by Chad Nilep, 2015), which encourages family-based learning environments for language acquisition . This approach highlights the importance of creating supportive environments where learners, especially young children, can practice languages in a more natural and familiar context.

Overall, these studies underscore the growing diversity of platforms available for language teaching, ranging from traditional classroom tools to cutting-edge technologies like AI and virtual reality. Each platform offers unique advantages, catering to different aspects of language learning, such as interaction, immersion, and collaboration.

What are the most frequently analyzed samples in the field of teaching methods and language teaching?

Sampling is a crucial element of educational research, as it helps in understanding which populations are being studied and what conclusions can be drawn about teaching methods and language acquisition. Below is a table summarizing the various types of samples used in 30 studies related to teaching methods and language education.

Table 5
Most Frequently Analyzed Samples in the Field of Teaching Methods and Language Teaching

Author(s)	Year	Sample
Ismail Duru, Ayse Saliha Sunar, Su White, Banu Diri & Gulustan Dogan	2019	International students
Luca Di Gregorio & Fran Beaton	2019	University students learning a second language
Banan Hassan Alhajaji, Jalila Saleh Algmadi & Amal Abdelsattar Metwally	2020	Students
Antoni Fernandez Parera	2021	University students
Blanka Klimova, Marcel Pikhart, Anna Cierniak-Emerych & Szymon Dziuba	2021	European university students
Tatiana Baranova, Dmitriy Mokhorov, Aleksandra Kobicheva & Elena Tokareva	2021	Students
Chen Chen	2020	English teachers
Aida R. Nurutdinova, Elena Dmitrieva, Zuhra Zakieva, Adelina	2017	English teachers (non-native speakers) and teaching assistants (native speakers); student evaluations

Astafeva & Elvira Galiullina		
Olena Panchenko, Vira Zirka, Tetiana Klymenko, Anastasiia Plakhtii & Iryna Suima	2022	Charles Dickens's writings, including novels, journalism, and letters
Qismullah Yusuf, Zalina Jusoh & Yunisrina Qismullah Yusuf	N/A	Ninth-grade students at a middle school in Kuala Lumpur
Fenglin Jia, Daner Sun, Qing Ma & Chee-Kit Looi	2022	20 participants with 3 interviewees
Emily Lau Yen Yen, Harwati Hashim & Melor Md Yunus	2023	Curriculum for teaching spelling
Dorota Werbińska	2020	Applied linguists
Tashi Dendup & Angkana Onthanee	2020	Fourth-grade students at a Bhutanese school
Nor Azwahanum Nor Shaid, Shahidi Hamid & Marlyna Maros	2022	13 participants (8 students from the Orang Asli tribe, 2 teachers, 3 parents)
Vimochana, Bindu Lamessa & Ramesh Manickam	2023	26 students with dyslexia and 2 teachers
Alaba Olaoluwakotansibe Agbatogun	2012	67 students from two Nigerian primary schools
Fengyi Ma	2021	Students
Noor Hayati binti Romli, Mohd Sallehhudin bin Abd Aziz & Pramela Krish	2022	Second language teachers
Heini Kallio, Antti Suni & Juraj Šimko	2021	Non-native speakers of English
Rafael Darque Pinto, Bruno Peixoto, Miguel Melo, Luciana Cabral & Maximino Bessa	2021	Teachers and students
Abdel Rahman Mitib Altakhaineh, Rozan Alhloul & Aseel Zibin	2022	70 children
Yi-Chien Wang	2023	Students
Chad Nilep	2015	Club members
Rahmi Fhonna & Yunisrina Qismullah Yusuf	2020	Teachers

Yuhang Yuan	2021	Students
Diana Rustamovna Sabirova & Regina Rafael'yevna Khanipova	2019	Teachers of English as a second language
Raphael Nhongo & Liqhwa Siziba	2022	Teachers and students

Table 5 shows the studies reviewed reveal that students, particularly those in universities and secondary schools, are the most frequently analyzed sample group in language education research. For instance, Luca Di Gregorio & Fran Beaton (2019) and Antoni Fernandez Parera (2021) focus on university students who are learning a second language. University students represent a significant population in language education studies as they are often engaged in formal language instruction and benefit from a structured learning environment.

Primary school students also feature prominently in language learning research. Alaba Olaoluwakotansibe Agbatogun (2012) examined 67 primary school students in Nigeria, providing insights into how young learners respond to different language teaching methods. Similarly, Tashi Dendup & Angkana Onthanee (2020) focused on fourth-grade students at a Bhutanese school, demonstrating the role of language education in remote or underserved communities.

Teachers, particularly English as a Second Language (ESL) teachers, are another key sample group. Studies by Chen Chen (2020) and Diana Rustamovna Sabirova & Regina Rafael'yevna Khanipova (2019) investigated the experiences and teaching practices of English teachers. Teachers' roles in shaping the language learning process are critical, as their instructional methods, experiences, and cultural contexts influence learner outcomes.

In addition, several studies focused on students with special learning needs, such as dyslexic students, highlighted in the work by Vimochana et al. (2023). These studies aim to explore how language teaching methods can be adapted to accommodate learners with specific challenges, providing more inclusive language education strategies.

Other studies, such as those by Fenglin Jia et al. (2022) and Nor Azwahanum Nor Shaid et al. (2022), employed smaller and more diverse samples, such as participants from indigenous communities or international student populations. These groups offer valuable perspectives on how language education is experienced in different cultural and social contexts.

The diverse range of samples across these studies reflects the complexity of language education research. By examining various student populations, teachers, and individuals with unique educational needs, researchers can gain a more comprehensive understanding of how teaching methods impact different learners and how these methods can be refined to support a wide range of learning environments.

Discussion

This study aimed to provide an overview of the current trends in the field of language teaching, focusing on key elements such as statistical analysis methods, platforms used in language education, and the sample populations frequently analyzed in research. The findings reflect a diverse approach to teaching methods and platforms, as well as a wide range of populations being studied, which contributes to the complexity and richness of the language teaching field.

Statistical Methods in Language Teaching Research

A wide variety of statistical methods are employed in language teaching research, demonstrating the field's reliance on both qualitative and quantitative approaches. SPSS software is commonly used for quantitative data analysis, as seen in the study by Banan Hassan Alhajaji et al. (2020), where student scores were analyzed to assess vocabulary acquisition. This is indicative of the broader trend in educational research to use SPSS as a tool for performing a range of statistical tests such as descriptive analysis, ANOVA, and regression. The widespread use of descriptive and inferential statistics, as applied by Alaba Olaoluwakotansibe Agbatogun (2012), further shows that statistical analysis is critical in evaluating the effectiveness of teaching methods, assessing student performance, and exploring the relationships between different learning variables.

More advanced techniques, such as proportional odds logistic regression (POLR), employed by Heini Kallio et al. (2021), highlight the growing trend of using sophisticated statistical models in language education research. These methods allow researchers to handle complex datasets and explore nuanced relationships in language learning outcomes, further illustrating the increasing complexity of statistical analysis in this field. Additionally, studies such as those conducted by Qismullah Yusuf et al. demonstrate the use of quasi-experimental designs, which are effective in assessing the impact of interventions on student learning.

Platforms in Language Education

The diversity of platforms used in language teaching underscores the importance of technology in modern education. Traditional tools like whiteboards and GMT techniques, as used by Banan Hassan Alhajaji et al. (2020), remain relevant in language teaching, but there is a notable shift towards the integration of advanced technological platforms. Massive Open Online Courses (MOOCs), as discussed by Ismail Duru et al. (2019), offer learners the flexibility to engage in language learning outside the traditional classroom, making education more accessible globally. This aligns with broader educational trends that emphasize the democratization of learning through online platforms.

AI-powered platforms, such as Intelligent Personal Assistants (IPAs) like Google Assistant, Alexa, and Siri, as explored by Moulieswaran & Dr. Prasantha Kumar (2022), represent a novel approach to language teaching. These platforms allow learners to practice conversational language skills in real-time, simulating interactions that are crucial for developing fluency. Similarly, virtual reality (VR) platforms, as noted by Rafael Darque Pinto et al. (2021), provide immersive language learning experiences that closely mimic real-world environments. These technologies have the potential to revolutionize language education by offering more interactive and engaging learning opportunities.

Cooperative Learning (CL) platforms, highlighted by Qismullah Yusuf et al. and Tashi Dendup & Angkana Onthanee (2020), emphasize the importance of peer-to-peer interaction in language learning. CL platforms foster collaboration among learners, which can enhance communication skills and promote a deeper understanding of language through group work and shared experiences. This type of learning is particularly effective in language education, where interaction plays a critical role in developing both oral and written language skills.

Sample Populations in Language Education Research

The studies reviewed reveal that students, especially university and primary school students, are the most commonly analyzed sample group in language education research. This is particularly evident in studies such as those by Luca Di Gregorio & Fran Beaton (2019) and

Antoni Fernandez Parera (2021), which focus on university students learning a second language. The focus on university students may reflect the importance of formal education settings in shaping language learning outcomes, as well as the availability of structured language programs at higher education institutions.

Primary school students, as studied by Alaba Olaoluwakotansibe Agbatogun (2012) and Tashi Dendup & Angkana Onthanee (2020), also play a significant role in language education research, as this population represents early language learners who are often just beginning to develop foundational language skills. Research on this group is critical for understanding how teaching methods can be tailored to support young learners, particularly in multilingual or low-resource settings.

Teachers, particularly English as a Second Language (ESL) teachers, are another important sample group, as seen in the work of Chen Chen (2020) and Diana Rustamovna Sabirova & Regina Rafael'yevna Khanipova (2019). These studies focus on understanding teachers' roles in language education and how their instructional methods and experiences impact learner outcomes. By studying both teachers and students, these researchers highlight the interconnected nature of teaching and learning in language education.

Furthermore, research involving students with special learning needs, such as those with dyslexia, as explored by Vimochana et al. (2023), provides valuable insights into how language teaching methods can be adapted to meet the needs of diverse learners. Such studies emphasize the importance of inclusive education and the need for differentiated instructional strategies to support all learners in achieving language proficiency.

Implications for Language Education

The findings of this study have several implications for language education. First, the reliance on a wide variety of statistical methods highlights the need for language educators to be proficient in both qualitative and quantitative research methods. Understanding how to analyze data effectively allows educators to make evidence-based decisions about their teaching practices and adapt their methods to improve learner outcomes.

Second, the increasing use of technological platforms in language education suggests that educators should consider incorporating these tools into their teaching strategies. The flexibility, accessibility, and interactivity provided by platforms like MOOCs, IPAs, and VR can enhance the learning experience, particularly for students who require more dynamic and engaging methods to acquire language skills.

Finally, the diverse sample populations analyzed in language education research point to the need for more inclusive teaching methods that cater to learners of all ages, backgrounds, and abilities. As the field of language education continues to evolve, it is essential that teaching methods be adaptable and inclusive, ensuring that all learners have the opportunity to succeed in acquiring new languages.

Conclusion

This study aimed to provide a comprehensive overview of the most common practices, platforms, statistical methods, and sample populations used in the field of language teaching and education. The findings from the analysis of 30 studies reveal that language education is a diverse and evolving field that draws upon a wide range of tools and methodologies to support both teachers and learners.

The review of statistical methods shows that quantitative analysis, particularly through tools like SPSS, is widely used to measure learner performance, assess teaching methods, and

evaluate language acquisition outcomes. More sophisticated statistical models, such as proportional odds logistic regression (POLR), are also being employed, reflecting the increasing complexity of research in this field. At the same time, qualitative approaches like content analysis continue to provide valuable insights into learner behavior and teacher experiences.

Technology plays a significant role in language education, with platforms such as MOOCs, AI-powered Intelligent Personal Assistants (IPAs), and virtual reality (VR) becoming essential tools for delivering language instruction. These platforms offer learners greater flexibility, immersion, and interactivity, making language learning more accessible and engaging. The use of Cooperative Learning (CL) platforms also highlights the importance of collaborative, peer-to-peer learning environments in language acquisition.

The analysis of sample populations shows that university and primary school students are the most frequently studied groups, with significant research focused on both early learners and adult language learners in formal education settings. Teachers, particularly those teaching English as a second language (ESL), are also central to the research, as their instructional methods and classroom experiences directly impact learner outcomes. Furthermore, research on learners with special needs, such as dyslexic students, underscores the importance of developing inclusive teaching strategies that accommodate diverse learners.

Overall, the findings from this study demonstrate the dynamic nature of language education research. As new technologies and methodologies continue to emerge, language educators and researchers must adapt their practices to meet the changing needs of learners. The integration of advanced statistical methods, cutting-edge platforms, and inclusive teaching strategies will be crucial in shaping the future of language education, ensuring that all learners have the opportunity to succeed in acquiring new languages.

By examining the trends in statistical analysis, platforms, and sample populations, this study provides a foundation for future research aimed at improving language teaching methods and outcomes. As the field continues to evolve, there will be a growing need for innovative and evidence-based approaches to language education that are informed by both qualitative and quantitative research.

References

Agbatogun, A. O. (2012). Exploring the efficacy of student response system in a Sub-Saharan African country: A sociocultural perspective. *Journal of Information Technology Education: Research, 11*, 179-194. https://doi.org/10.28945/1638

Alhajaji, B. H., Algmadi, J. S., & Metwally, A. A. (2020). Exploring the success of GMT technique: Games, mind-mapping, and Twitter hashtags in teaching vocabulary in EFL higher education environment. *International Journal of Higher Education, 9*(3), 180-192. https://doi.org/10.5430/ijhe.v9n3p180

Altakhaineh, A. R., Alhloul, R., & Zibin, A. (2022). Foreign language processing of English regular and irregular past tense verbs by Arabic-speaking EFL children. *Psycholinguistics, 32*(2), 6-28. https://doi.org/10.31470/2309-1797-2022-32-2-6-28

Baranova, T., Mokhorov, D., Kobicheva, A., & Tokareva, E. (2021). Assessment of the application of content and language integrated learning in a multilingual classroom. *Education Sciences, 11*(808). https://doi.org/10.3390/educsci11120808

Chen, C. (2020). A study on positive transfer of native language and second language teaching methods. *Theory and Practice in Language Studies, 10*(3), 306-312. https://doi.org/10.17507/tpls.1003.06

Cross, R. (2012). Creative in finding creativity in the curriculum: The CLIL second language classroom. *The Australian Educational Researcher, 39*, 431–445. https://doi.org/10.1007/s13384-012-0074-8

Dendup, T., & Onthanee, A. (2020). Effectiveness of cooperative learning on English communicative ability of 4th-grade students in Bhutan. *International Journal of Instruction, 13*(1), 255-266. https://doi.org/10.29333/iji.2020.13117a

Di Gregorio, L., & Beaton, F. (2019). Blogs in the modern foreign languages curriculum: A case study on the use of blogging as a pedagogic tool and a mode of assessment for modern foreign languages students. *Higher Education Pedagogies, 4*(1), 406-421. https://doi.org/10.1080/23752696.2019.1644660

Duru, I., Sunar, A. S., White, S., Diri, B., & Dogan, G. (2019). A case study on English as a second language speakers for sustainable MOOC study. *Sustainability, 11*(10), 2808. https://doi.org/10.3390/su11102808

Fernandez Parera, A. (2021). A comparison of the effects of mindful conceptual engagement for the teaching of the subjunctive to heritage- and second-language learners of Spanish. *Languages, 6*(23). https://doi.org/10.3390/languages6010023

Fhonna, R., & Yusuf, Y. Q. (2020). Indonesian language learning methods in Australian elementary schools. *Journal of Language and Education, 6*(2), 106-119. https://doi.org/10.17323/jle.2020.10080

Jia, F., Sun, D., Ma, Q., & Looi, C.-K. (2022). Developing an AI-based learning system for L2 learners' authentic and ubiquitous learning in English language. *Sustainability, 14*(15527). https://doi.org/10.3390/su142315527

Kallio, H., Suni, A., & Šimko, J. (2022). Fluency-related temporal features and syllable prominence as prosodic proficiency predictors for learners of English with different language backgrounds. *Language and Speech, 65*(3), 571-597. https://doi.org/10.1177/00238309211040175

Klimova, B., Pikhart, M., Cierniak-Emerych, A., & Dziuba, S. (2021). A qualitative analysis of students' reflections on the current use of digital media in foreign language classes. *Sustainability, 13*(9082). https://doi.org/10.3390/su13169082

Lau, Y. Y. E., Hashim, H., & Md Yunus, M. (2023). Development and validation of an instrument to evaluate technology-enhanced learning and teaching sustainability in teaching spelling. *Sustainability, 15*(4256). https://doi.org/10.3390/su15054256

M., V., B., M. R., Lamessa, O., & Manickam, R. (2023). Exploring challenges of dyslexic students learning English as a second language: Reading drama script. *World Journal of English Language, 13*(8), 590. https://doi.org/10.5430/wjel.v13n8p590

Ma, F. (2021). Factors affecting the English language preparedness of college freshman students. *Journal of Language Teaching and Research, 12*(2), 227-234. https://doi.org/10.17507/jltr.1202.05

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & The PRISMA Group. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med*, 6(7), e1000097. https://doi.org/10.1371/journal.pmed.1000097

N, M., & Kumar, N. S., P. (2022). Amelioration of Google Assistant: A review of artificial intelligence-stimulated second language learning and teaching. *World Journal of English Language, 13*(1), 86. https://doi.org/10.5430/wjel.v13n1p86

Nhongo, R., & Siziba, L. P. (2022). Instruction through translanguaging in triglossic classroom contexts of Midlands Province in Zimbabwe. *3L: Language, Linguistics, Literature® The Southeast Asian Journal of English Language Studies, 28*(4), 113-126. https://doi.org/10.17576/3L-2022-2804-07

Nilep, C. (2015). Ideologies of language at Hippo Family Club. *Pragmatics, 25*(2), 205-227. https://doi.org/10.1075/prag.25.2.04nil

Nor Shaid, N. A., Hamid, S. A., & Maros, M. (2022). Exploration of Malay language acquisition and learning experience among Orang Asli students. *International Journal of Learning, Teaching and Educational Research, 21*(5), 126-142. https://doi.org/10.26803/ijlter.21.5.7

Nurutdinova, A. R., Dmitrieva, E. V., Zakieva, Z. R., Astafeva, A. E., & Galiullina, E. I. (2017). Awareness in acquisitive understanding of second language oral aspect: Intercultural, socio-cultural and cross-cultural reflections. *XLinguae, 10*(4), 65-77. https://doi.org/10.18355/XL.2017.10.04.07

Panchenko, O., Zirka, V., Klymenko, T., Plakhtii, A., & Suima, I. (2022). Character speech individualization in Charles Dickens's novels. *Studies in Media and Communication, 10*(3), 168-176. https://doi.org/10.11114/smc.v10i3.5848

Pinto, R. D., Peixoto, B., Melo, M., Cabral, L., & Bessa, M. (2021). Foreign language learning gamification using virtual reality: A systematic review of empirical research. *Education Sciences, 11*(222). https://doi.org/10.3390/educsci11050222

Romli, N. H., Aziz, M. S., & Krish, P. K. N. (2022). First language use among second language teachers: Views vs. practice. *Cakrawala Pendidikan: Jurnal Ilmiah Pendidikan, 41*(3), 688-702. https://doi.org/10.21831/cp.v41i2.42988

Sabirova, D. R., & Khanipova, R. R. (2019). Innovative approaches to teaching and learning English as second and English as foreign language in multilingual education. *Humanities & Social Sciences Reviews, 7*(6), 45-48. https://doi.org/10.18510/hssr.2019.7610

Wang, Y.-C. (2023). Gamification in a News English course. *Education Sciences, 13*(90). https://doi.org/10.3390/educsci13010090

Werbińska, D. (2020). Duoethnography in applied linguistics qualitative research. *Neofilolog, 54*(2), 269-283. https://doi.org/10.14746/n.2020.54.2.5

Yuan, Y. (2021). Influence of native language transfer on senior high school English writing. *Theory and Practice in Language Studies, 11*(2), 170-175. https://doi.org/10.17507/tpls.1102.08

Yusuf, Q., Jusoh, Z., & Yusuf, Y. Q. (2019). Cooperative learning strategies to enhance writing skills among second language learners. *International Journal of Instruction, 12*(1), 1399-1412. https://doi.org/10.29333/iji.2019.12189a