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## RESEARCH TRENDS ON LISTENING ASSESSMENTS

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## Abstract:

The growing importance of listening skills in education and language acquisition has led to increasing scholarly attention on listening assessment. However, despite this interest, there is a limited amount of bibliometric research that maps the global research landscape, identifies key contributors, and analyzes thematic trends in this domain. This study addresses this gap by conducting a comprehensive bibliometric analysis of the literature on "listening assessment." Using Scopus as the primary database, an advanced search with the keywords "listening" and "assessment" retrieved 884 relevant documents. The data were first analyzed using Scopus Analyzer to extract statistical insights related to publication trends, prolific authors, top journals, and influential countries. OpenRefine was then employed to clean and harmonize metadata, ensuring consistency in author names, institutions, and keywords. VOSviewer software was utilized to generate network visualizations, including co-authorship networks, keyword co-occurrence maps, and country collaboration patterns. The analysis revealed a steady growth in publications over the last two decades, with the United States, United Kingdom, and China emerging as leading contributors. Thematic clustering of keywords indicated strong research interest in areas such as "language testing," "listening comprehension," "assessment tools," and "language proficiency." Co-authorship and country collaboration maps showed increasing international cooperation, particularly among English-speaking and Asian countries. These findings provide valuable insights into the development and focus of research on listening assessment, highlighting dominant themes and underexplored areas. This study not only contributes to the academic understanding of how listening assessment is evolving but also offers direction for future research and policy development in educational assessment and language learning.

**Keywords:**

Listening, Assessments, Tests

**Introduction**

Listening assessment is a critical component of language education, yet it has historically been underemphasized compared to other language skills such as reading, writing, and speaking. Listening involves complex cognitive processes that are challenging to observe directly, making its assessment particularly difficult (Schmidt & Holzknicht, 2024). Traditional methods of listening assessment have often been subjective and inconsistent, leading to a need for more reliable and objective approaches (Slamet & Mukminatien, 2024). Recent advancements in technology and research methodologies have provided new tools and frameworks for assessing listening skills more effectively, offering educators better means to evaluate and enhance students' listening abilities (Ockey, 2024; Schmidt & Holzknicht, 2024; Slamet & Mukminatien, 2024).

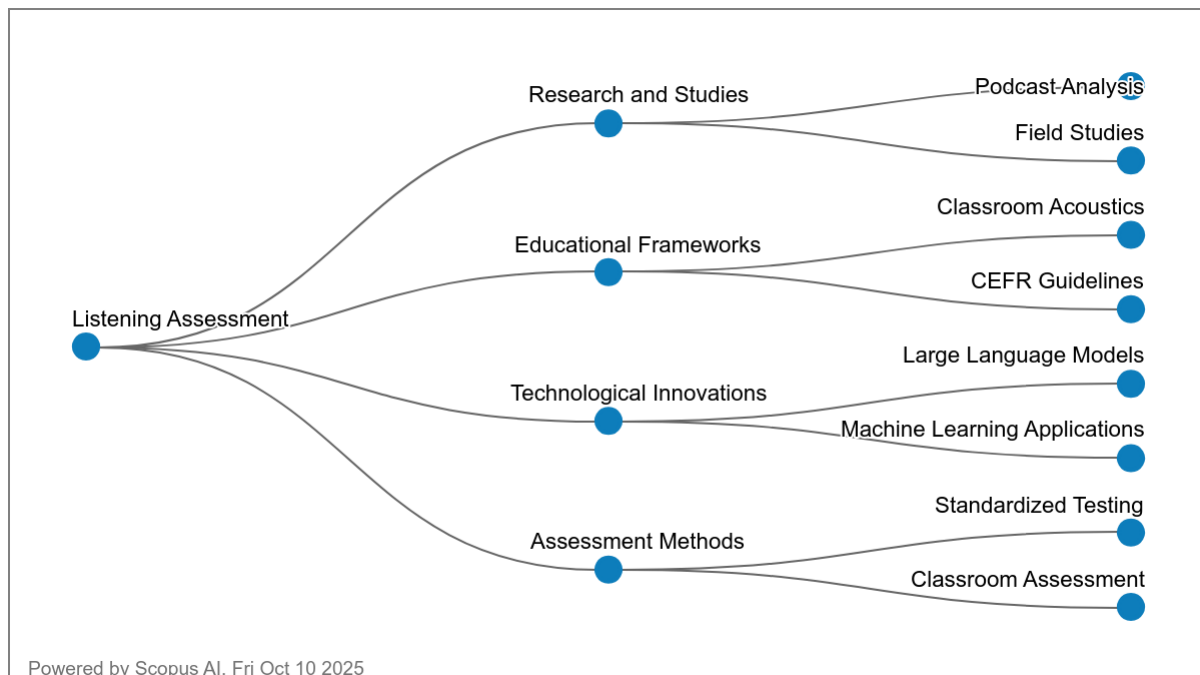
**Literature Review**

The importance of listening in language acquisition cannot be overstated. It is a foundational skill that supports effective communication and learning across various contexts (Folkerts & Matz, 2024; Korkmaz & Güneşli, 2024). Despite its significance, listening has often been neglected in educational curricula, with more focus traditionally placed on reading and writing skills (John et al., 2025). This oversight has led to a gap in students' language proficiency, particularly in their ability to comprehend spoken language. Addressing this gap requires a comprehensive approach to listening assessment that includes both subjective and objective measures, as well as the integration of new technologies and methodologies (Ockey, 2024; Schmidt & Holzknicht, 2024; Slamet & Mukminatien, 2024).

Recent studies have highlighted the benefits and challenges of different listening assessment methods. For instance, online listening assessments have been shown to offer flexibility and immediacy, enhancing learning outcomes by providing timely feedback (Deng et al., 2024). However, these assessments also present challenges such as technical difficulties and increased anxiety among students (Deng et al., 2024; Tran & Ma, 2021). Additionally, traditional listening tests, while considered the gold standard, can be costly and time-consuming, prompting the development of objective measures that correlate highly with subjective ratings (Loizou, 2011). These objective measures, such as pupillometry, offer promising alternatives by providing insights into the cognitive and physiological aspects of listening effort (Kuchinsky & Milvae, 2024).

The development of effective listening assessments requires careful consideration of various factors, including the specific needs of different learner populations and the context in which listening occurs. For example, classroom listening assessments must account for the unique challenges of noisy and dynamic environments, which can significantly impact students' listening comprehension (Mealings et al., 2025). Moreover, assessments should be designed to capture the multidimensional nature of listening, including the ability to understand main ideas, supporting details, and inferred implications within spoken communication (Seo et al., 2016; Slamet & Mukminatien, 2024). By adopting a holistic approach to listening assessment,

educators can better support students in developing this essential skill and ultimately improve their overall language proficiency (Bayona et al., 2024; Hidri, 2014).



**Figure 1: Concept Map of Listening Assessment**

Figure 1 illustrates the conceptual structure of research on listening assessment, highlighting its four major thematic clusters: **Research and Studies**, **Educational Frameworks**, **Technological Innovations**, and **Assessment Methods**. Each cluster represents a distinct yet interconnected area shaping the field. Research and Studies encompass topics such as podcast analysis and field investigations that explore how listening is evaluated in authentic contexts. Educational Frameworks include elements like classroom acoustics and CEFR guidelines, which influence instructional and policy-level practices. Technological Innovations reflect the growing integration of machine learning and large language models, marking the shift toward AI-assisted assessment. Finally, Assessment Methods cover traditional and modern approaches, including standardized testing and classroom-based evaluation. Together, these themes demonstrate the multidisciplinary and evolving nature of listening assessment, showing how research, pedagogy, and technology converge to enhance the validity, reliability, and authenticity of listening evaluations in diverse educational and professional contexts.

In conclusion, while listening remains a challenging skill to teach and assess, there are several promising strategies to enhance its focus and effectiveness. By addressing the current gaps in research and practice, educators and researchers can develop more comprehensive and effective approaches to listening assessment.

### Research Questions

1. What are the trends in this study according to the year of publication?
2. What are the top 10 most cited articles?

3. What are the top 10 countries based on the number of publications?
4. What are the popular keywords related to the study?
5. What is co-authorship by countries' collaboration?

## Methodology

Bibliometrics serves as a systematic approach to collecting, organizing, and analyzing bibliographic information from scientific publications (Alves et al., 2021; Assyakur & Rosa, 2022; Verbeek et al., 2002). Moving beyond simple descriptive statistics—such as identifying leading journals, publication years, and prolific authors (Wu & Wu, 2017)—bibliometric analysis employs advanced methods like document co-citation analysis to map intellectual structures within a field. Conducting an effective literature review, therefore, demands an iterative and rigorous process of keyword selection, literature retrieval, and in-depth analytical synthesis. This ensures the development of a comprehensive bibliography and enhances the reliability of findings (Fahimnia et al., 2015).

Guided by this rationale, the present study concentrated on high-impact publications, which offer critical insights into the theoretical foundations shaping the research domain. To ensure accuracy and consistency, SCOPUS was employed as the principal database for data retrieval (Al-Khoury et al., 2022; di Stefano et al., 2010; Khiste & Paithankar, 2017). Furthermore, to maintain scholarly rigor, only peer-reviewed journal articles were included, while books, conference proceedings, and lecture notes were intentionally excluded (Gu et al., 2019). Data encompassing publications from 2000 to October 2025 were extracted from Elsevier's Scopus, recognized for its extensive disciplinary coverage and robust indexing standards.

## Data Search Strategy

The strategic data for this study were obtained through a systematic search using the Scopus Advanced Search feature, selected for its extensive coverage of peer-reviewed and high-impact scholarly publications. To accurately capture research related to listening assessment and strategies, the following Boolean search string was employed: TITLE ((listening OR "listening skill" OR "listening skills" OR "listening strategy" OR "listening strategies") AND (assessment OR assessments OR test OR tests OR evaluation)) AND PUBYEAR > 1999 AND PUBYEAR < 2026 AND (LIMIT-TO (LANGUAGE, "English")). This targeted search strategy focused on titles containing specific keywords, ensuring that only studies directly addressing listening assessment, testing, and strategies were retrieved. The search was conducted in October 2025, encompassing publications from 2000 to 2025 to reflect contemporary trends and advancements within the field. To maintain data consistency and accessibility, the language criterion limited the dataset to English-language articles, while non-English publications were excluded to prevent translation bias and enhance analytical reliability. The inclusion and exclusion criteria were applied systematically to refine the search results, ensuring relevance and academic rigor. After screening and filtering according to these parameters, a total of 884 publications were identified as the final dataset. This comprehensive collection represents a robust body of literature that captures developments in listening assessment and strategies across diverse educational and research contexts. The systematic search and screening process established a solid foundation for subsequent bibliometric analysis, facilitating an in-depth exploration of research patterns, thematic evolution, and influential contributions within the field.

**Table 1: The Search String**

<b>Scopus</b>	<b>TITLE ( ( listening OR "listening skill" OR "listening skills" OR "listening strategy" OR "listening strategies") AND ( assessment OR assessments OR test OR tests OR evaluation ) ) AND PUBYEAR &gt; 1999 AND PUBYEAR &lt; 2026 AND ( LIMIT-TO ( LANGUAGE , "English" ) )</b>
	<b>Access date: October 2025</b>

**Table 1: The Search String**

**Table 2: The Selection Criterion in Searching**

<b>Criterion</b>	<b>Inclusion</b>	<b>Exclusion</b>
<b>Language</b>	English	Non-English
<b>Time Line</b>	– 2025	>1999 and <2026

**Table 2: The Selection Criterion**

### **Data Analysis**

VOSviewer, a sophisticated bibliometric analysis software developed by Nees Jan van Eck and Ludo Waltman at Leiden University, the Netherlands (van Eck & Waltman, 2010a, 2017), has become one of the most widely adopted tools for visualizing and interpreting scientific literature. Renowned for its intuitive network visualizations and powerful analytical capabilities, VOSviewer enables researchers to map, cluster, and explore complex bibliometric relationships. The software's versatility extends across various analytical dimensions—including co-authorship, co-citation, and keyword co-occurrence networks—providing comprehensive insights into the intellectual and thematic structure of research domains. Its interactive interface, continual development, and adaptability to large datasets make it indispensable for both novice and experienced researchers.

A key strength of VOSviewer lies in its ability to transform intricate bibliometric data into clear, visually interpretable maps and charts. By focusing on network visualization, the tool effectively identifies clusters of related items, reveals patterns of keyword co-occurrence, and produces high-resolution density maps. The ongoing enhancement of its computational and visualization features ensures VOSviewer's position at the forefront of bibliometric analysis. Its flexibility to integrate data from multiple bibliometric databases, coupled with advanced metric computation and customization options, solidifies its value as a critical resource for uncovering emerging trends and knowledge structures across disciplines.

In this study, datasets containing publication year, title, author name, journal, citation, and keywords—extracted in PlainText format from the Scopus database—were analyzed using VOSviewer version 1.6.20. The data spanned the period from 2000 to October 2025. Through the application of VOS clustering and mapping techniques, the software facilitated the

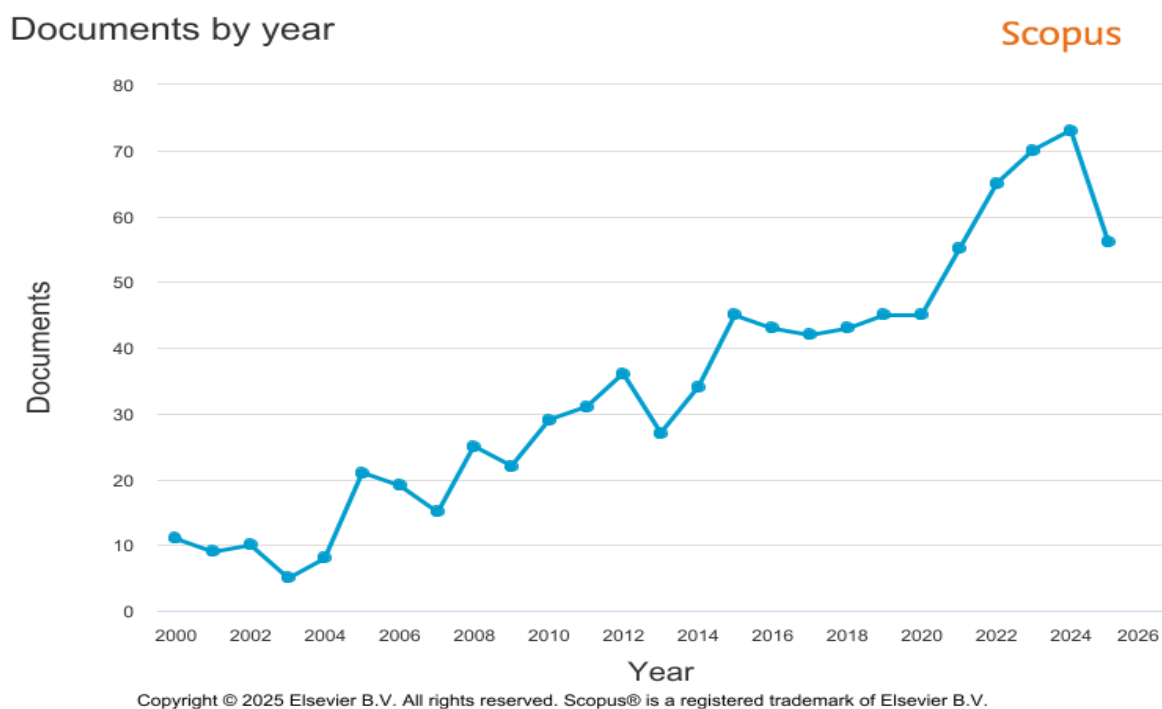
generation of bibliometric maps that represent the relational structures among research entities. Unlike the Multidimensional Scaling (MDS) approach, which focuses on computing similarity measures such as cosine or Jaccard indices, VOSviewer situates items within a low-dimensional space where the distance between any two items accurately reflects their degree of relatedness (Appio et al., 2014; van Eck & Waltman, 2010). To achieve this, VOSviewer employs a normalization method based on association strength ( $AS_{ij}$ ), calculated as:

$$AS_{ij} = \frac{C_{ij}}{w_i w_j}$$

where ( $C_{ij}$ ) denotes the observed number of co-occurrences of items  $i$  and  $j$ , and ( $w_i$ ) and ( $w_j$ ) represent their respective total co-occurrence frequencies. This measure is "proportional to the ratio between, on the one hand, the observed number of co-occurrences of  $i$  and  $j$ , and on the other hand, the expected number of co-occurrences of  $i$  and  $j$  under the assumption that co-occurrences are statistically independent" (Van Eck & Waltman, 2007).

## Findings and Discussion

### *What Are The Trends In This Study According To The Year Of Publication?*



**Figure 2: Number Of Documents Cited By Year**

Between 2014 and 2023, there has been a steady and significant increase in the number of publications, indicating a growing scholarly interest and academic engagement in the subject area. Starting from 34 publications in 2014, the output grew consistently, reaching a peak of 70 publications by 2023. This ten-year period reflects a more than two-fold increase, with particularly sharp rises observed from 2020 onwards. For example, publications rose from 55 in 2021 to 65 in 2022 and further to 70 in 2023. This pattern suggests accelerating momentum and possibly the establishment of new research groups, enhanced funding, or international collaborations that fuelled publication growth.



The sharp rise in recent years may also be attributed to external socio-political or global events, such as the COVID-19 pandemic, which significantly influenced academic research trends starting in 2020. The global crisis spurred interdisciplinary studies, increased digital access to academic resources, and prompted researchers to publish more to address emerging societal challenges. Additionally, the rise of open-access publishing platforms and increased emphasis on knowledge dissemination may have contributed to the surge. The consistent upward trajectory highlights both the maturation of the field and the increasing relevance of the topic within the broader academic and policy discourse.

### ***What Are The Top 10 Most Cited Articles?***

(Cameron & Dillon, 2007)	2007	Ear and Hearing	221
(Schoeffler et al., 2018)	2018	Journal of Open Research Software	213
(Major et al., 2002)	2002	TESOL Quarterly	209
(Cristancho et al., 2008)	2008	Qualitative Health Research	206
(Mallinson, 2002a)	2002	Social Science and Medicine	166
(Gagné et al., 2017)	2017	Trends in Hearing	158
(Beerends et al., 2013)	2013	AES: Journal of the Audio Engineering Society	151
(Zieliński et al., 2008)	2008	AES: Journal of the Audio Engineering Society	150
(Mooney et al., 2020)	2020	Royal Society Open Science	140
(Paliwal & Alsteris, 2005)	2005	Speech Communication	125

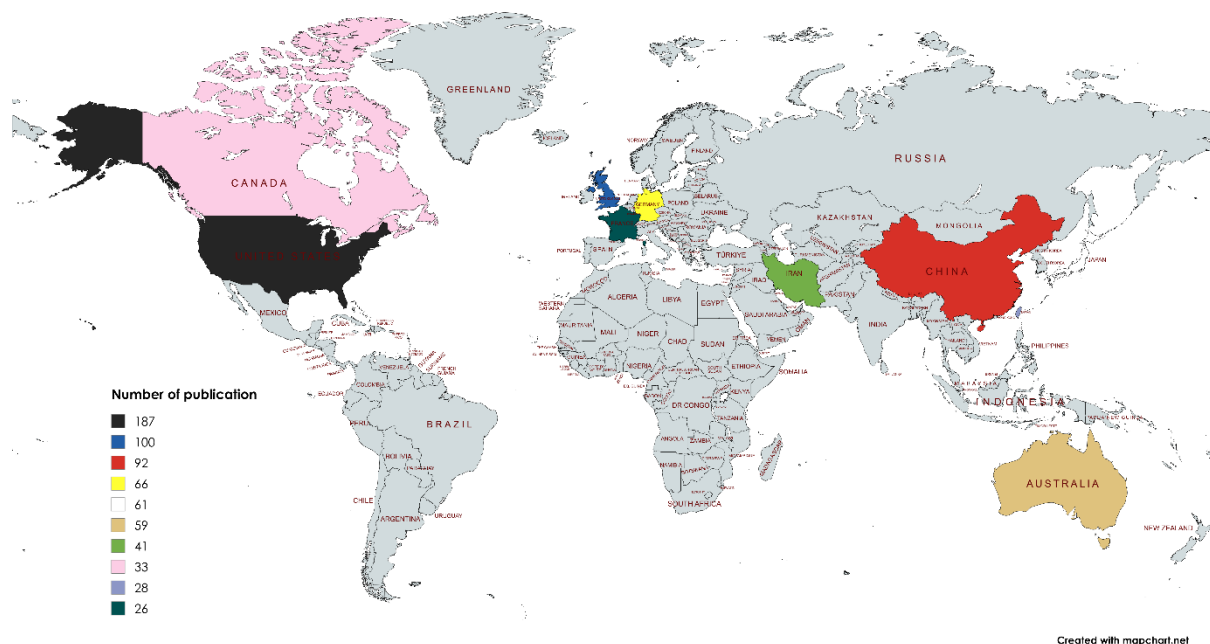
**Table 3: Most Cited Author**

The top 10 most cited articles reflect a diverse but thematically cohesive interest in listening-related research across disciplines such as audiology, language assessment, health communication, and acoustic testing. The most cited article by (Cameron & Dillon, 2007), with 221 citations, introduced the LISN-S test—a widely adopted tool in auditory research and clinical audiology. Its prominence can be attributed to its practical applicability and its role in improving diagnostic accuracy in spatial hearing deficits. Similarly, high citation counts for articles like *webMUSHRA* (2018, 213 citations) and *POLQA* (2013, 151 citations) show the growing importance of standardized, tech-enabled listening test frameworks, especially in the context of increasing remote testing and audio technology development.

Several articles also gain prominence due to their cross-disciplinary relevance. For example, (Major et al.'s, 2002) work on nonnative accents in ESL contexts (209 citations) and (Cristancho et al.'s, 2008) community-based assessment of health access barriers (206 citations) resonate strongly in education and public health, respectively—fields with high publication volume and citation rates. The presence of qualitative health and social science

articles, like those by (Mallinson, 2002b) and (Mooney et al., 2020), further highlight the relevance of "listening" beyond a purely technical or auditory scope. These works are widely cited likely because they address real-world challenges, adopt accessible methodologies, and are published in respected journals, making them valuable to both academic and applied audiences.

### *What Are The Top 10 Countries Based On The Number Of Publications?*



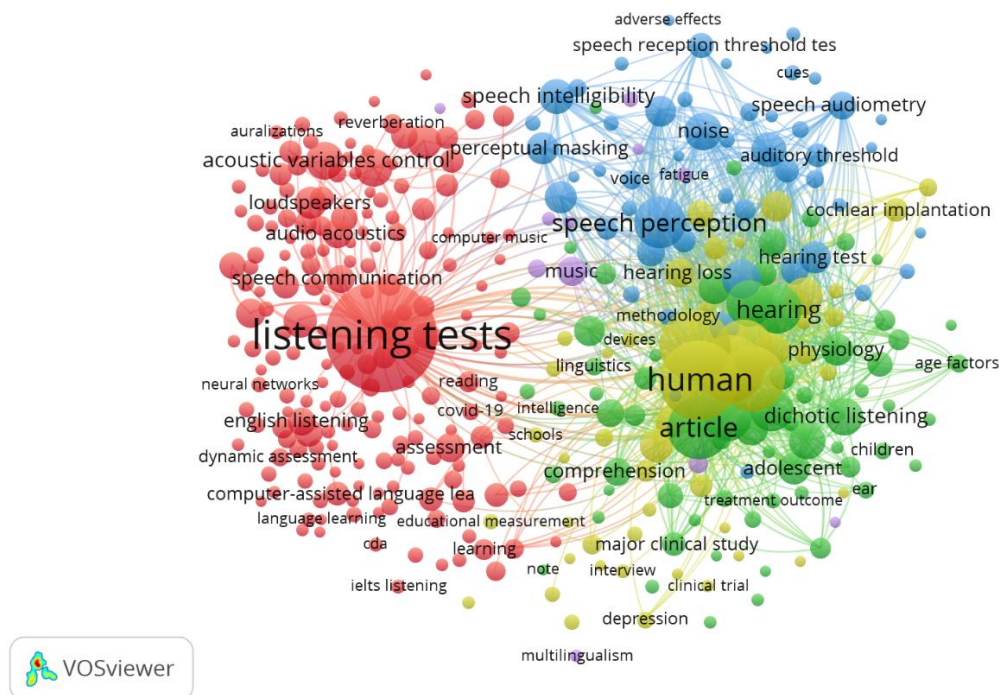
**Figure 3: Country Mapping Based on Number of Publications**

The distribution of publications by country reveals a clear dominance by the United States, which leads with 187 publications—nearly double that of the second-ranking United Kingdom (100). This significant lead underscores the United States' well-established research infrastructure, abundant funding opportunities, and a strong network of academic institutions and think tanks. The UK, China (92), and Germany (66) also feature prominently, reflecting their long-standing investment in research and development and active participation in global academic discourse. Notably, China's rapid rise in publication output aligns with its strategic push to become a global leader in science and technology, supported by government policies and increased research funding.

Middle-ranking countries such as Japan (61), Australia (59), and Iran (41) demonstrate strong regional contributions, often tied to national research priorities and growing international collaboration. Iran's presence is particularly notable, reflecting an emerging research base despite geopolitical and economic challenges. Countries like Canada (33), Taiwan (28), and France (26) round out the top ten, highlighting the global spread of research activity. The results suggest that while Western nations continue to lead due to historical academic advantages, there is a clear shift toward more geographically diverse research contributions, influenced by globalization, increased access to digital research tools, and collaborative international projects.



### *What Are The Popular Keywords Related To The Study?*

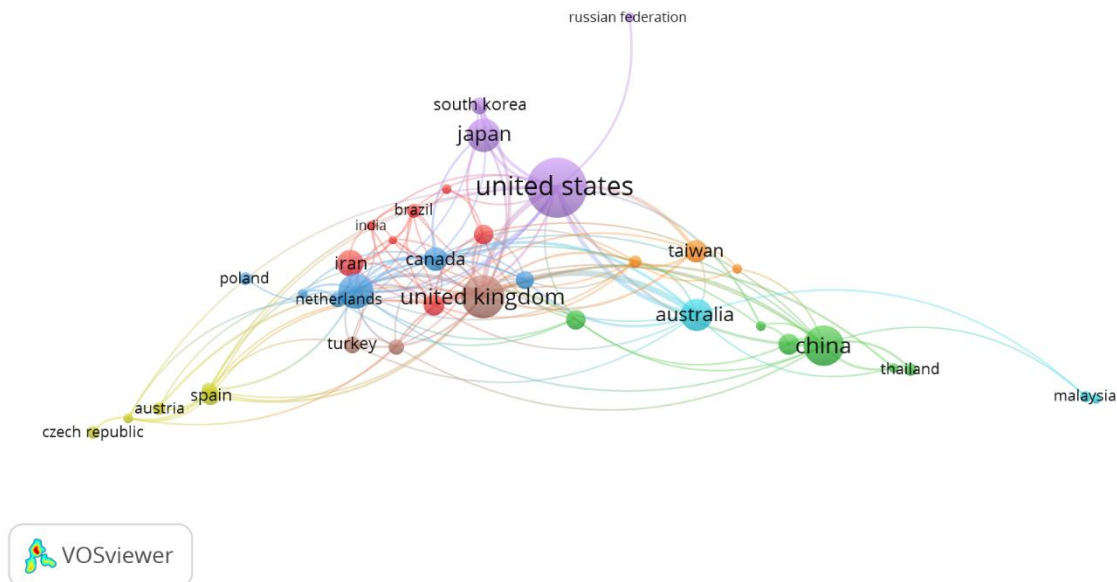


### Figure 4: Network Visualization Map of Keywords' Co-occurrence

Co-occurrence analysis of author keywords using VOSviewer is a bibliometric technique that maps the relationships and frequency of terms used together within a set of academic publications. Visualizing how often keywords appear together in the same documents helps identify conceptual structures and thematic clusters within a research domain. In this case, the analysis applied the *full counting method*, meaning each occurrence of a keyword is counted equally across all documents. A *minimum threshold* of 5 occurrences was set, filtering the initial 3,041 keywords down to 362 relevant ones. To refine the visualization, a *minimum cluster size* of 5 was chosen, resulting in 8 clusters, each grouping keywords based on their relatedness, as determined by total link strength (e.g., "human" with 3356, "listening tests" with 2245). These settings collectively shape the network, revealing the density and connectivity of the research landscape.

The results contribute meaningfully to the body of knowledge by identifying core themes and interrelated topics within the field. For instance, keywords like "listening tests," "speech perception," and "auditory perception" are frequently linked, suggesting a strong research emphasis on auditory processing and assessment. The presence of demographic terms such as "female," "male," "child," "young adult," and "middle-aged" points to population-specific studies, while terms like "cognition," "attention," "memory," and "psychology" highlight cognitive dimensions of auditory research. Clinical relevance is underscored through keywords like "hearing impairment," "hearing aids," "controlled study," and "clinical article." By revealing these patterns and groupings, the map not only uncovers prevailing research focuses but also provides a framework for identifying gaps, guiding future research directions, and supporting interdisciplinary connections across auditory science, cognitive psychology, and clinical practice.

### *What Is Co-Authorship By Countries' Collaboration?*



**Figure 5: Network Visualization Map of the Author's Collaboration by Country**

The co-authorship analysis by countries using VOSviewer visualizes international research collaboration by examining how often authors from different countries co-author publications together. In this network, each node represents a country, and the links indicate collaborative relationships based on co-authored documents. VOSviewer's *full counting method* was applied, meaning each country receives full credit for a co-authored paper regardless of the number of co-authors involved. With a *minimum threshold* of 5 documents, 37 out of 66 countries met the criteria for inclusion. Additionally, by setting a *minimum cluster size* of 5, the analysis grouped the countries into 8 clusters, each reflecting a community of closely collaborating nations. The "total link strength" indicates the intensity of collaboration between a country and others, such as the United Kingdom (65), the United States (57), and Germany (37), highlighting their central role in the global research network.

The findings offer valuable insights into patterns of international scientific collaboration in the field. The United States leads in both publication volume (192 documents) and citation impact (3,302 citations), followed by the United Kingdom and Germany, signifying their strong influence and active international engagement. Meanwhile, countries like China and Australia demonstrate substantial contributions, with Australia showing a high citation impact relative to its publication count. Smaller countries such as Denmark, Belgium, and New Zealand, despite lower document counts, exhibit meaningful collaborative ties, suggesting strategic partnerships with larger research hubs. This mapping enhances the body of knowledge by identifying key players in the global research ecosystem, uncovering regional networks, and providing a foundation for strengthening future international collaborations, especially for countries seeking to increase visibility and impact in the academic community.

## Conclusion

The purpose of this study was to examine global research trends, thematic developments, and collaborative networks within the field of listening assessment. By applying bibliometric techniques to publications indexed in Scopus from 2000 to 2025, the analysis aimed to identify key contributors, influential publications, and emerging research themes that have shaped the field over the past two decades. The study also sought to highlight the dominant countries and institutions leading scholarly production in this area, as well as to uncover existing gaps that may guide future research.

The analysis revealed a consistent increase in publication output, particularly after 2014, indicating a growing academic and institutional interest in listening assessment. The United States, the United Kingdom, and China emerged as the most active contributors, supported by strong research infrastructures and international collaborations. The most cited publications demonstrated that listening assessment is not limited to linguistic and pedagogical contexts but extends across diverse disciplines, including audiology, cognitive science, and technological innovation. Keyword mapping further showed that topics such as "listening comprehension," "language testing," "assessment tools," and "listening strategies" represent central themes, while newer areas like digital testing and multimodal assessment have gained momentum in recent years.

This research contributes to the field by providing a structured overview of the intellectual and thematic development of listening assessment. It identifies the main research clusters, highlights collaboration patterns, and clarifies the dominant conceptual directions that define current scholarly discourse. The findings offer valuable reference points for educators, policymakers, and language assessment practitioners seeking to understand the evolution and research priorities of this domain. Furthermore, the study underscores the importance of bibliometric analysis as an evidence-based approach for evaluating progress and identifying underexplored areas within language assessment research.

In terms of practical implications, the results suggest that future advancements in listening assessment may benefit from greater integration of technology, standardized assessment frameworks, and cross-disciplinary collaboration. These directions could strengthen the design and implementation of assessment tools that are more authentic, equitable, and adaptable to global learning contexts.

Despite its comprehensive scope, this study is limited by its reliance on a single database and its focus on English-language publications, which may omit relevant studies in other languages or less-indexed sources. Future research could expand the dataset to include multiple bibliographic platforms, conduct longitudinal citation analyses, or explore the qualitative dimensions of listening assessment research.

Overall, this bibliometric analysis demonstrates the dynamic and evolving nature of research on listening assessment. The mapping of publication trends, influential works, and collaboration networks provides a valuable foundation for continued exploration and innovation in the field. As interest in listening-based learning and assessment continues to expand, bibliometric studies of this kind will remain essential for monitoring intellectual growth, guiding future inquiry, and advancing evidence-based practices in language education.

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