

Corpus-based Analysis in Foreign Language Anxiety: A Systematic Review

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DOI: <https://doi.org/10.47772/IJRISS.2026.102100166>

Received: 18 September 2026; Accepted: 23 September 2026; Published: 05 October 2026

ABSTRACT

This study presents a systematic literature review of *Foreign Language Anxiety (FLA)* research spanning four decades (1986–2026), aiming to identify prevailing trends, methodological patterns and research gaps, especially in relation to corpus-based studies. Guided by the PRISMA framework, five databases, namely Scopus, Web of Science, ERIC, PsycINFO and Google Scholar, were systematically searched using keywords related to FLA and language learning anxiety. A total of 120 peer-reviewed studies met the inclusion criteria. Findings reveal a dominant reliance on psychometric instruments, particularly the Foreign Language Classroom Anxiety Scale (FLCAS), with limited integration of linguistic or corpus-based evidence. Emerging themes include contextual expansion into online and intercultural learning environments, technology-mediated anxiety and intervention strategies such as mindfulness and peer mentoring. Despite methodological diversity, the field remains survey-centric, with minimal discourse-level validation. The review highlights critical gaps in corpus-based approaches and cross-cultural comparisons, underscoring the need for multimodal and data-driven methodologies. This synthesis provides a foundation for future empirical research integrating psychometric and linguistic analyses to advance understanding of FLA in evolving digital contexts.

Keywords: Foreign Language Anxiety; Systematic Literature Review; Corpus-Based Analysis; Psychometric Methods; Digital Learning

INTRODUCTION

First conceptualised by Horwitz, Horwitz, and Cope (1986), Foreign Language Anxiety (FLA) describes the distinct anxiety learners experience in language-learning settings. It is consistently linked to lower performance, reduced confidence and a reluctance to speak. In modern classrooms, addressing FLA is more critical than ever as teaching moves toward learner-centred, communicative approaches. Although these active methods encourage participation and collaboration, they also expose students to real-time peer evaluation and heightened scrutiny. As a result, environments designed to promote active communication can unintentionally raise emotional barriers, impairing cognitive performance and student well-being if affective needs are overlooked.

Cultivating strong teacher-student rapport serves as a pivotal countermeasure in mitigating these heightened anxiety levels. A supportive, empathetic instructional atmosphere encourages psychological safety, empowering learners to risk making errors without fear of severe social or academic judgment. Establishing positive interpersonal dynamics not only buffers against foreign language anxiety but also optimises language processing, facilitating more resilient and self-efficacy-driven learning outcomes across diverse educational contexts.

Over the past four decades, research has expanded across diverse contexts (MacIntyre & Gardner, 1991), yet methodological imbalances remain (Sun et al., 2025). This review synthesises recent empirical studies, including meta-analyses of various intervention strategies, to identify trends, methods and gaps in FLA research (Xiong et al., 2024).

LITERATURE REVIEW

Psychometric Foundations of FLA

The FLCAS (Horwitz et al., 1986) has been the dominant instrument in FLA research, cited in over 13,000 studies. Meta-analyses confirm its reliability across contexts, though factor structures range from 2 to 7 components depending on the sample and language (Rossomondo & Vitevitch, 2026). This reliance on psychometric surveys has produced a rich body of correlational findings linking anxiety to performance, willingness to communicate and classroom dynamics. However, the methodological imbalance is clear. Most studies stop at perception-based data, leaving actual manifestations of discourse underexplored.

In response to these traditional psychometric limitations, recent scholarship has increasingly shifted toward technology-mediated and contextual investigations of FLA. As highlighted in the introduction, researchers have expanded their scope beyond conventional brick-and-mortar classrooms to examine how anxiety manifests in digital, online and hybrid learning environments. This evolution addresses the unique affective challenges posed by computer-mediated communication, telecollaborative exchanges and virtual reality platforms, where factors such as asynchronous communication, technological friction and digital audience awareness reconfigure the nature of language learner anxiety. This shift also necessitates broader methodological triangulation. Furthermore, findings from Xiong et al. (2024) suggest that pedagogical interventions such as peer collaboration and supportive feedback can effectively reduce anxiety, yet empirical evidence often lacks the granularity provided by linguistic analysis. Integrating corpus-based methodologies, which examine markers like hesitation, lexical simplification and avoidance strategies, offers a robust pathway to bridge the gap between perception-based self-reports and observable discourse patterns (Sun et al., 2025).

Corpus-Based and Linguistic Approaches in FLA

Despite recognition that anxiety affects language use, corpus-based studies remain rare. Systematic reviews of FLA research (Yu, 2024) show that nearly all studies rely on questionnaires and interviews, with only a handful attempting to analyse learner discourse. These few works examine hesitation markers, lexical simplification and avoidance strategies, but they are not systematically paired with FLCAS scores. The gap is striking. While psychometric evidence is abundant, linguistic validation of anxiety remains underdeveloped.

Corpus-based approaches offer a more granular lens through which to examine FLA by shifting focus from subjective self-reports to objective linguistic output. By analysing large-scale learner corpora, researchers can identify distinct features of anxious production, such as increased self-correction, lower lexical diversity and distinct syntactic avoidance patterns (Sun et al., 2025). Unlike psychometric instruments, which capture students' perceptions of their anxiety, these linguistic markers provide direct evidence of how emotional arousal influences cognitive processing during production. Consequently, integrating these methodologies allows for a more comprehensive understanding of the anxiety-performance nexus, moving the field towards data-driven interventions that are grounded in actual learner discourse rather than solely on reported feelings (Yu, 2024).

To address this critical gap and complement existing psychometric foundations, this paper explores the intersection of corpus linguistics and affective variables in language learning. Specifically, two main research questions guide this review: (1) How many studies published between 1986 and 2026 have connected Foreign Language Anxiety (FLA) and corpus-based analysis? and (2) What thematic trends have emerged in Foreign Language Anxiety (FLA) research between 1986 and 2026, and how have these themes evolved across four decades?

METHODOLOGY

Research Design

This study adopts a systematic literature review (SLR) approach, guided by the PRISMA framework (Moher et al., 2009). Unlike empirical studies requiring ethics approval, the SLR synthesises published research to map

trends, methods and gaps in Foreign Language Anxiety (FLA). The design ensures transparency, replicability and comprehensiveness, aligning with best practices in applied linguistics and education research.

Search Strategy

This study uses five major databases of Scopus, Web of Science, ERIC, PsycINFO and Google Scholar, to systematically search the literature between January and March 2026. Keywords included *foreign language anxiety*, *FLCAS*, *language learning anxiety*, *corpus analysis* and *linguistic validation*. Boolean operators (AND/OR) were used to refine searches. Reference lists of key articles were also hand-searched to capture additional studies.

Inclusion and Exclusion Criteria

- Inclusion: Peer-reviewed journal articles (1986–2026), English-language, empirical or review studies focusing on FLA.
- Exclusion: Clinical anxiety studies unrelated to language learning, non-peer-reviewed sources, and conference abstracts without full papers.

To ensure methodological rigour, the inclusion and exclusion criteria were carefully defined in line with best practices for systematic reviews. Only peer-reviewed journal articles published between 1986 and 2026 were included, as this time frame captures four decades of Foreign Language Anxiety (FLA) research since the introduction of the FLCAS by Horwitz et al. (1986). Restricting the corpus to English-language publications ensured accessibility and consistency in coding, while focusing on empirical and review studies guaranteed that the synthesis was grounded in validated scholarly evidence. Conversely, clinical anxiety studies unrelated to language learning were excluded to maintain thematic relevance, and non-peer-reviewed sources, conference abstracts, and grey literature were omitted to safeguard the reliability and replicability of findings. This deliberate narrowing of scope allowed the review to concentrate on pedagogically and linguistically relevant contributions, while avoiding methodological noise from studies outside the educational and applied linguistics domains.

Screening and Selection

Initial searches yielded 520 records, with 30 additional records identified through reference lists. After removing duplicates, 480 records were screened by title and abstract. Of these, 180 full-text articles were assessed for eligibility and 120 met the inclusion criteria.

Data Extraction and Coding

Each study was coded for:

- Research design (quantitative, qualitative, mixed methods).
- Instruments used (FLCAS, interviews, discourse analysis).
- Context (classroom, online, intercultural).
- Themes (psychometric reliance, technology integration, interventions, corpus-based approaches).

Analytical Approach

Frequency counts were calculated to identify dominant themes. For example, 85 studies relied exclusively on FLCAS, while fewer than 10 studies paired FLCAS with linguistic or corpus-based analysis. This imbalance highlights the methodological gap between perception-based and performance-based evidence.

FINDINGS AND DISCUSSION

PRISMA for the systematic review of Foreign Language Anxiety

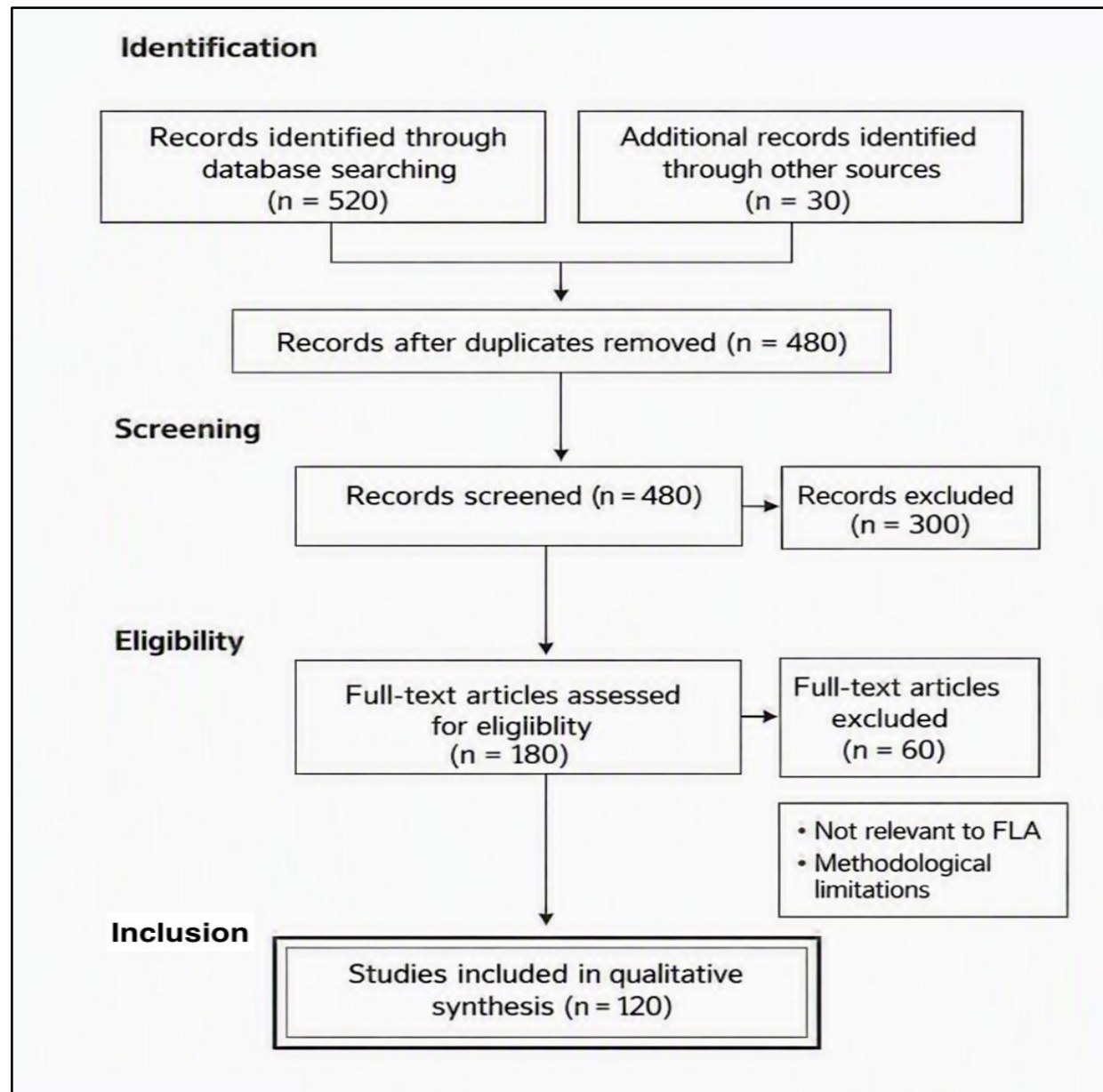


Figure 1: PRISMA flow diagram of study selection for the systematic review of Foreign Language Anxiety (1986–2026)

The PRISMA synthesis directly addresses the two guiding research questions. Out of 120 eligible studies, only five explicitly combined FLCAS with corpus-based linguistic analysis, confirming the rarity of discourse-level validation in FLA research. Furthermore, fewer than three studies examined error correction as a factor influencing anxiety, indicating that corrective feedback remains an underexplored dimension of affective linguistics.

The PRISMA framework was instrumental in ensuring the systematic rigour and transparency of this review. By establishing a clear flow of information, the study systematically reduced a pool of 520 initial records identified across five major databases to a final set of 120 peer-reviewed articles. This structured filtering process not only validates the selection of relevant literature but also provides the methodological foundation necessary to address the research questions. Specifically, it allowed for the objective identification of the current methodological landscape, isolating the small subset of studies (n=5) that attempt to bridge psychometric measures with

linguistic evidence, thereby underscoring the critical gap between perception-based self-reports and observable discourse patterns in Foreign Language Anxiety research.

The thematic frequencies in Figure 2 below exceed the total number of included studies because several publications addressed multiple dimensions of FLA (e.g., psychometric and technological aspects). Thus, the chart reflects the distribution of research emphases rather than discrete study counts.

FLA Research Trends

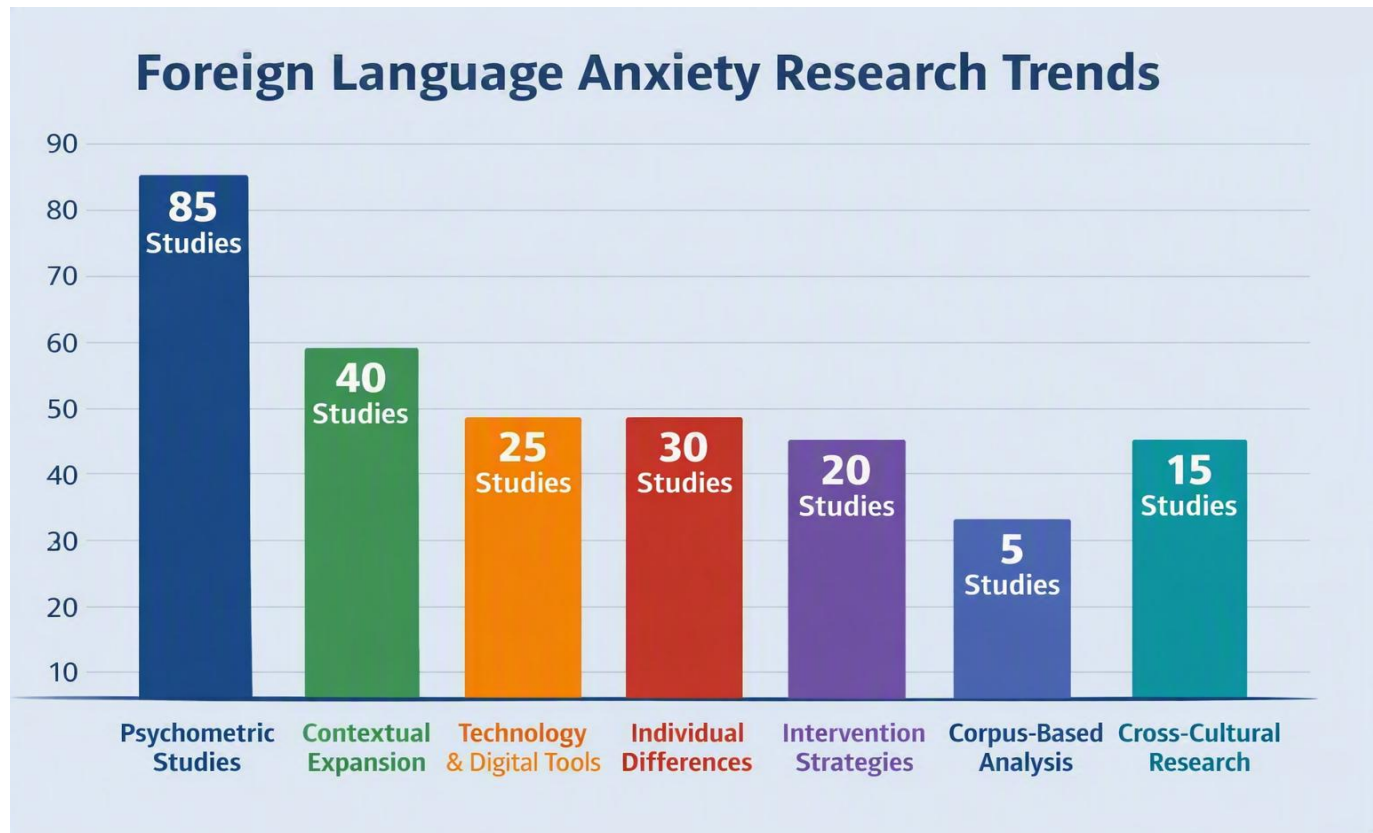


Figure 2: Frequency of major themes in Foreign Language Anxiety (FLA) studies across four decades

The bar chart above provides a visual summary of the distribution of research themes in Foreign Language Anxiety (FLA) studies between 1986 and 2026. It shows that 85 psychometric studies dominate the field, with these publications relying primarily on the Foreign Language Classroom Anxiety Scale (FLCAS) and similar survey instruments. This overwhelming reliance highlights the centrality of perception-based measures in FLA research. In contrast, contextual expansion into online, intercultural and multilingual settings accounts for 40 studies, while individual differences such as proficiency and exposure appear in 30 studies. The role of technology and digital tools is represented in 25 studies, reflecting the growing importance of platforms like Zoom, MOOCs and TikTok in shaping new forms of anxiety. Intervention strategies such as mindfulness and peer mentoring are less common, with 20 studies and cross-cultural research contributes 15 studies, offering comparative insights across diverse linguistic contexts. Finally, corpus-based analysis is the least represented theme, with only 5 studies attempting to pair FLCAS with linguistic evidence.

Even though corpus-based studies in Foreign Language Anxiety (FLA) are limited, they remain significant because they attempt to move beyond self-reported perceptions into the actual linguistic manifestations of anxiety. For example, some exploratory works have examined how anxious learners produce simplified syntax, reduced lexical variety and hesitation markers in oral or written tasks, linking these features to FLCAS scores. These studies suggest that anxiety is not only a psychological construct but also a linguistic reality, observable in pauses, fillers, avoidance of complex structures and reduced fluency. Yu (2024) highlights that while corpus linguistics offers tools to validate anxiety effects at the discourse level, fewer than ten published studies have

systematically attempted this pairing. Similarly, Huang and Liu (2025) note that technology-mediated contexts provide rich linguistic data, yet most studies still stop at survey analysis without examining learner output.

Thus, studies were included if they addressed Foreign Language Anxiety (FLA) and incorporated analysis of learner language, discourse, corpus data, fluency, or linguistic performance. This ensured that the synthesis foregrounded corpus-based evidence rather than reiterating the psychometric dominance of FLCAS.

The evidence therefore points to a critical methodological gap. While FLCAS provides robust psychometric data, it lacks integration with corpus-based approaches that could reveal how anxiety shapes language use in real time. Addressing this gap would allow researchers to triangulate perception (survey scores) with performance (linguistic evidence), offering a fuller picture of FLA. The few studies integrating linguistic data demonstrate the potential for richer, multimodal insights into anxiety's cognitive and communicative effects. Future research should therefore triangulate FLCAS scores with corpus evidence to capture the interplay between affective states and linguistic performance.

ACKNOWLEDGEMENTS

The authors would like to express their sincere gratitude to the Research Ethics Committee of Tunku Abdul Rahman University of Management and Technology (TAR UMT) for granting ethical clearance and guidance throughout the review process. Appreciation is also extended to colleagues from the Academy of Language Studies, Universiti Teknologi MARA, for their cooperation during manuscript development.

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