Student Engagement, Academic Language, and Academic Writing: A Bibliometric Analysis

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ABSTRACT

This bibliometric analysis examines the intellectual structure, research trends, and thematic evolution of studies on student engagement, academic language, and academic writing. Student engagement with academic language is widely recognised as a crucial factor influencing writing quality, learning outcomes, and academic success, particularly in contexts where learners are required to operate in academically demanding and often second-language environments. However, despite the expanding body of literature, a systematic overview of how this research field has developed, its dominant themes, and its global research patterns remains limited. To address this gap, data were collected using Scopus advanced search techniques based on the keywords students' engagement, student engagement, engagement with academic phrases, academic phrases, academic language, academic writing, and academic skills. A total of 2,395 relevant publications were retrieved and analysed. The Scopus Analyzer was employed to examine publication trends, document types, source titles, and country distributions, while OpenRefine was used to clean, standardise, and harmonise bibliographic data to ensure analytical accuracy. VOSviewer software was then applied to visualise co-occurrence networks, collaboration patterns, and thematic clusters within the dataset. The numerical findings reveal a substantial growth in publications over time, with a notable increase after 2023, indicating rising scholarly interest in engagement-oriented academic writing research. Country-level analysis highlights strong contributions from both developed and emerging higher education systems, while keyword co-occurrence networks reveal central themes related to engagement, writing proficiency, academic vocabulary, educational technology, and learning outcomes. In conclusion, this bibliometric study provides a comprehensive mapping of the research landscape on student engagement, academic language, and academic writing, offering valuable insights into its conceptual foundations, research directions, and interdisciplinary nature.

Keywords: student engagement, academic language, academic writing, academic phrases, bibliometric analysis

INTRODUCTION

Students' engagement with academic phrases in writing is a critical aspect of their academic success. Academic writing, characterised by its formal tone and adherence to specific conventions, poses significant challenges for students, particularly those for whom English is a second language (ESL) or foreign language (EFL) (Alzahrani, 2025; "EFL Students' Challenges & Solutions," 2025; Sekonyela, 2023). The ability to effectively use academic phrases is essential for constructing coherent and persuasive arguments, which are fundamental to academic discourse (Jabulani, 2014; Min & Sukying, 2024). In ESL contexts, engagement with academic language has also been shown to be influenced by task design, instructional approach, and students' motivational orientations, particularly in task-based and blended learning environments (Johari et al., 2025). Despite its importance, many students struggle with the nuances of academic phraseology, including formulaic sequences and conventional academic expressions, which can impede their overall writing performance and academic achievement (Akrei, 2021; Bram & Angelina, 2022). This paper aims to

examine the broader research landscape surrounding student engagement, academic language, and academic writing, with particular attention to their development, dominant themes, and scholarly patterns.

LITERATURE REVIEW

The challenges students face in academic writing are multifaceted, encompassing difficulties with vocabulary, grammar, organisation, and the use of academic phrases (Akrei, 2021; Alzahrani, 2025; Bram & Angelina, 2022). For instance, EFL learners at Najran University in Saudi Arabia reported significant struggles with vocabulary, paraphrasing, and referencing, which are critical components of academic writing (Alzahrani, 2025). Similarly, Indonesian tertiary education students identified issues with parts of speech, tenses, and the construction of coherent academic essays (Bram & Angelina, 2022). These challenges are often exacerbated by inadequate foundational knowledge of the English language and limited opportunities for writing practice (Alzahrani, 2025; Bram & Angelina, 2022). Studies conducted in Malaysian ESL contexts further suggest that without structured, task-supported instruction, students face persistent difficulties in transferring linguistic knowledge into effective academic writing (Johari et al., 2024).

Academic phrases play a pivotal role in structuring arguments and presenting ideas clearly and persuasively. However, many students lack a comprehensive understanding of academic vocabulary and its appropriate use in writing (Akrei, 2021; Min & Sukying, 2024). A study on Chinese university EFL learners revealed that while students were aware of the importance of academic vocabulary, they struggled with word choice and academic collocations, often relying on their native language for meaning and spelling (Min & Sukying, 2024). This lack of familiarity with academic phrases can lead to errors and a lack of clarity in their writing, ultimately affecting their academic performance. From an instructional perspective, ESL instructors have highlighted both pedagogical and ethical considerations related to students' reuse of academic phrases, emphasising the need for explicit guidance on acceptable academic practice (Sabri et al., 2025). Empirical evidence also demonstrates that form-focused instruction targeting formulaic sequences can significantly improve learners' awareness and controlled use of academic phrases in writing (Johari et al., 2021).

To address these challenges, various strategies have been proposed and implemented. For example, the use of technology-aided instruction and targeted feedback has been suggested to help students improve their academic writing skills (Alzahrani, 2025). Additionally, incorporating writing-intensive curricula and providing explicit instruction on the use of academic phrases can enhance students' proficiency in academic writing (Alzahrani, 2025; Bram & Angelina, 2022). The integration of digital tools and engagement strategies has also been shown to positively impact students' writing performance by providing scaffolding and support throughout the writing process (Ndruru et al., 2025). Research on blended and task-supported language teaching further confirms that meaningful task design combined with explicit linguistic focus enhances ESL learners' engagement and writing outcomes (Johari et al., 2024, 2026). Moreover, motivational dimensions such as utility value and intrinsic value have been found to mediate students' willingness to engage actively with complex language tasks, including academic writing (Johari et al., 2025).

Moreover, the role of academic writers and educators in supporting students' engagement with academic phrases cannot be overstated. Initiatives such as boot camps and refresher courses have proven effective in helping students apply the skills learned in academic literacy modules to their discipline-specific writing tasks (Sekonyela, 2023). These interventions not only improve students' writing performance but also boost their confidence and motivation to engage with academic writing ("EFL Students' Challenges & Solutions," 2025; Sekonyela, 2023). Complementary pedagogical innovations, including narrative-based learning and creative instructional approaches, have been shown to enhance engagement and cognitive involvement in language learning contexts (Basir et al., 2020). Furthermore, the development of personalised academic phrase libraries, such

as the MAPLE project, offers students a valuable resource for building their academic vocabulary and enhancing their writing skills (Hammond, 2014). In conclusion, students' engagement with academic phrases in writing is a complex but essential aspect of their academic success. The challenges they face are significant, but with targeted support, effective instructional strategies, and motivationally informed pedagogies, students can improve their proficiency in academic writing. By addressing the specific difficulties related to vocabulary, grammar, and the use of academic phrases, educators can help students develop the skills necessary for constructing coherent and persuasive academic texts, thereby enhancing overall academic performance and preparing students for future academic and professional endeavors.

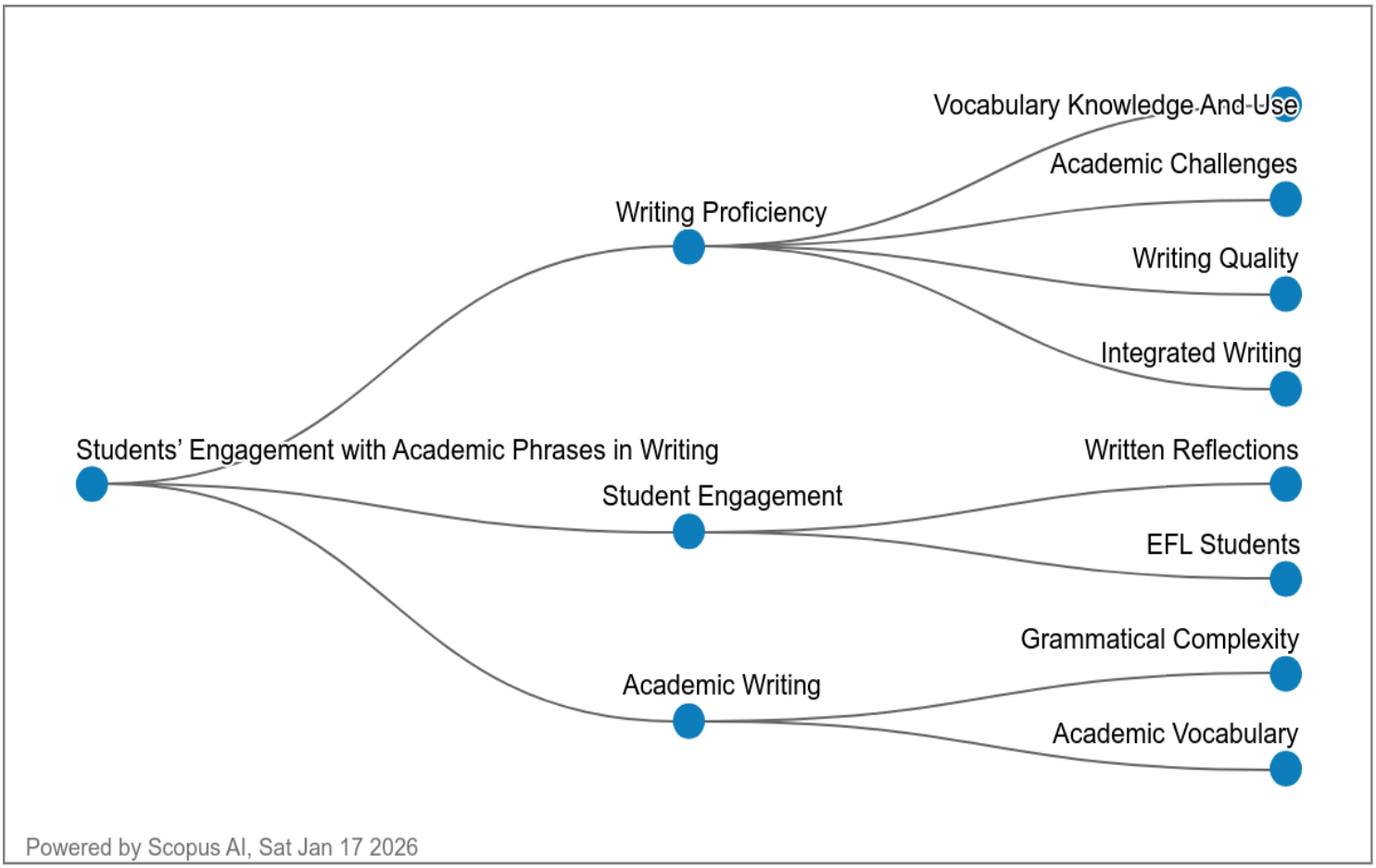


Figure 1. Concept map of student engagement, academic language, and academic writing.

Figure 1 illustrates a concept map that captures the multidimensional nature of students' engagement in academic writing by highlighting the interconnections between engagement, writing proficiency, and key academic outcomes. The map shows that students' engagement functions as a central driver influencing how learners interact with academic phrases, particularly among EFL students, where written reflections serve as an important medium for practice and self-expression. Engagement is closely linked to writing proficiency, which in turn shapes vocabulary knowledge and use, writing quality, integrated writing ability, and students' capacity to cope with academic challenges. At the same time, the concept map emphasises academic writing as a foundational component, connecting engagement with the development of grammatical complexity and academic vocabulary. Together, these elements suggest that students' meaningful engagement with academic phrases is not limited to surface-level vocabulary acquisition but contributes to deeper linguistic competence and overall writing development. In conclusion, the concept map underscores that fostering active student engagement with academic phrases can enhance writing proficiency, improve writing quality, and support learners in navigating academic demands more effectively, especially within EFL contexts.

RESEARCH QUESTION

The research questions, together with the study's purpose, expected outcomes, and target audience, provide a structured framework that guides the processes of data identification, collection, analysis, and presentation. Accordingly, this paper seeks to address several key research questions that systematically examine the development, intellectual structure, and collaborative patterns of research on student engagement, academic language, and academic writing.

RQ1: What are the annual publication trends in research on student engagement, academic language, and academic writing?

RQ2: What are the top 10 most cited articles shaping research on student engagement, academic language, and academic writing?

RQ3: Which are the top 10 most productive countries contributing to research on student engagement, academic language, and academic writing?

RQ4: What are the most frequently used author keywords associated with student engagement, academic language, and academic writing?

RQ5: What are the patterns of international research collaboration (based on country-level co-authorship) in studies on student engagement, academic language, and academic writing?

METHODOLOGY

Bibliometric analysis entails the systematic collection, organisation, and examination of bibliographic data derived from scientific publications (Alves et al., 2021; Assyakur & Rosa, 2022; Verbeek et al., 2002). Beyond descriptive indicators such as publication outlets, annual output, and prolific authors (Wu & Wu, 2017), bibliometrics incorporates advanced analytical techniques, including document co-citation analysis, to uncover the intellectual structure and thematic evolution of a research field. A rigorous literature review within a bibliometric framework requires an iterative and carefully designed process involving the selection of appropriate keywords, comprehensive database searching, and in-depth data analysis. This methodological approach enables the construction of a robust and comprehensive bibliographic dataset, thereby enhancing the reliability and validity of the findings (Fahimnia et al., 2015). In light of these considerations, the present study prioritised high-impact publications, as such works offer substantive insights into the theoretical foundations and scholarly trajectories shaping the field. To ensure data accuracy and consistency, Elsevier's Scopus database was employed as the primary source for data retrieval (Al-Khoury et al., 2022; di Stefano et al., 2010; Khiste & Paithankar, 2017). Furthermore, to maintain academic quality and comparability, the analysis was restricted to peer-reviewed journal articles, with books and lecture notes intentionally excluded from the dataset (Gu et al., 2019). Given Scopus's extensive disciplinary coverage and citation indexing capabilities, publications from 2020 through January 2026 were systematically retrieved for subsequent bibliometric analysis.

Data Search Strategy

The data for this bibliometric study were collected using a structured Scopus advanced search strategy, as presented in Table 1, with the search string maintained exactly as follows: TITLE-ABS-KEY (students' engagement OR student engagement OR engagement with academic phrases OR academic phrases OR academic LANGUAGE OR academic writing OR academic skills) AND PUBYEAR > 2019 AND PUBYEAR < 2027 AND (LIMIT-TO (PUBSTAGE , "final")) AND (LIMIT-TO (LANGUAGE , "English")) AND (EXCLUDE (DOCTYPE , "dp") OR EXCLUDE (DOCTYPE , "sh") OR EXCLUDE (DOCTYPE , "tb") OR EXCLUDE (DOCTYPE , "er") OR EXCLUDE (DOCTYPE , "ed") OR EXCLUDE (DOCTYPE , "no") OR EXCLUDE (DOCTYPE

, "cr") OR EXCLUDE (DOCTYPE , "bk") OR EXCLUDE (DOCTYPE , "re") OR EXCLUDE (DOCTYPE , "ch")). The search strategy was intentionally designed to capture a broad research landscape at the intersection of student engagement, academic language, academic writing, academic phrases, and academic skills. The use of the OR operator increased the sensitivity of the search and enabled the identification of wider engagement-related research that may provide contextual insights into academic writing and language learning. However, this broad search design also resulted in the inclusion of studies addressing student engagement in wider educational contexts, including educational technology, blended learning, motivation, and learning outcomes, without directly examining academic phraseology. Therefore, the findings should be interpreted as a mapping of the broader scholarly landscape surrounding student engagement and academic language/writing rather than as an exclusively phraseology-focused corpus. This breadth also provides an important analytical insight by revealing the relatively limited visibility of academic phrase instruction within the wider engagement literature.

The publication year restriction ensured that only studies published between 2020 and 2026 were included, allowing the analysis to reflect recent and current research trends. Furthermore, limiting the results to final-stage publications and English-language documents enhanced the reliability, comparability, and academic quality of the retrieved records. Following the initial retrieval, a systematic screening process was conducted based on the inclusion and exclusion criteria outlined in

Table 2. Only journal articles and conference papers written in English and published within the specified timeframe were retained, while non-English publications and literature types such as book chapters, reviews, books, conference reviews, notes, editorials, errata, retracted papers, and data papers were excluded. This rigorous screening process ensured that the dataset focused on original scholarly contributions with empirical or theoretical relevance to the research domain. As a result of the advanced search and screening procedures, a total of 2,395 publications were identified as eligible for analysis. To enhance data accuracy and consistency, the final dataset was subsequently cleaned and harmonised using OpenRefine, which involved standardising author names, affiliations, keywords, and country information, as well as removing duplicates and correcting inconsistencies. Collectively, these procedures ensured a robust, high-quality dataset suitable for comprehensive bibliometric analysis and visualisation.

Table 1.

Scopus	TITLE-ABS-KEY (students' engagement OR student engagement OR engagement with academic phrases OR academic phrases OR academic LANGUAGE OR academic writing OR academic skills) AND PUBYEAR > 2019 AND PUBYEAR < 2027 AND (LIMIT-TO (PUBSTAGE , "final")) AND (LIMIT-TO (LANGUAGE , "English")) AND (EXCLUDE (DOCTYPE , "dp") OR EXCLUDE (DOCTYPE , "sh") OR EXCLUDE (DOCTYPE , "tb") OR EXCLUDE (DOCTYPE , "er") OR EXCLUDE (DOCTYPE , "ed") OR EXCLUDE (DOCTYPE , "no") OR EXCLUDE (DOCTYPE , "cr") OR EXCLUDE (DOCTYPE , "bk") OR EXCLUDE (DOCTYPE , "re") OR EXCLUDE (DOCTYPE , "ch"))

The search string

Table 2.

The selection criterion is searching

Criterion	Inclusion	Exclusion
Language	English	Non-English

Time line	2020 – 2026	< 2026
Literature type	Journal (Article)	Book chapter
	Conference Paper	Review
		Book
		Conference review
		Note
		Erratum
		Editorial
		Retracted
		Data paper
Publication Stage	Final	In Press

Data Analysis

VOSviewer is a widely recognised and user-friendly bibliometric visualisation software developed by Nees Jan van Eck and Ludo Waltman at Leiden University, the Netherlands (van Eck & Waltman, 2010, 2017). It is extensively employed in bibliometric and scientometric research to visualise, explore, and analyze large-scale scientific literature. The software is particularly known for its ability to generate intuitive network visualisations, perform clustering of related items, and construct density maps that reveal the intellectual structure of research fields. Its versatility enables the analysis of co-authorship, co-citation, and keyword co-occurrence networks, thereby offering researchers a comprehensive overview of collaboration patterns, thematic evolution, and knowledge domains. Supported by an interactive interface and continuous software updates, VOSviewer allows for efficient and dynamic exploration of complex bibliographic datasets. In addition, its capacity to compute bibliometric indicators, customise visual representations, and integrate data from multiple bibliographic sources positions VOSviewer as a powerful analytical tool for investigating sophisticated research landscapes. One of its key strengths lies in transforming complex bibliometric data into visually interpretable maps, facilitating clearer insight into relational structures within scholarly literature. Beyond its visual appeal, VOSviewer applies advanced mapping techniques that differ from conventional Multidimensional Scaling (MDS). While both approaches aim to represent similarities in low-dimensional spaces, VOSviewer employs the VOS mapping technique, which more accurately reflects item relatedness through distance-based representations (van Eck & Waltman, 2010), (Appio et al., 2014). Unlike MDS, which typically relies on similarity measures such as cosine similarity or the Jaccard index, VOSviewer adopts a normalisation method based on association strength to analyze co-occurrence frequencies (van Eck & Waltman, 2007). The association strength (ASij), calculated as

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

represents the ratio between the observed co-occurrence of two items and their expected co-occurrence under statistical independence assumptions (van Eck & Waltman, 2007). This methodological advantage enhances the robustness and interpretability of bibliometric networks generated by the software. In this study, datasets containing publication year, title, author information, journal sources, citation counts, and keywords were retrieved from the Scopus database in PlainText format, covering publications from 2020 to January 2026, and subsequently analysed using VOSviewer version 1.6.19. Through its clustering and mapping functions, the software facilitated systematic visualisation and analysis of research patterns, reaffirming its value as an indispensable tool for advanced bibliometric investigations.

FINDINGS

RQ1: What are the annual publication trends in research on student engagement, academic language, and academic writing?

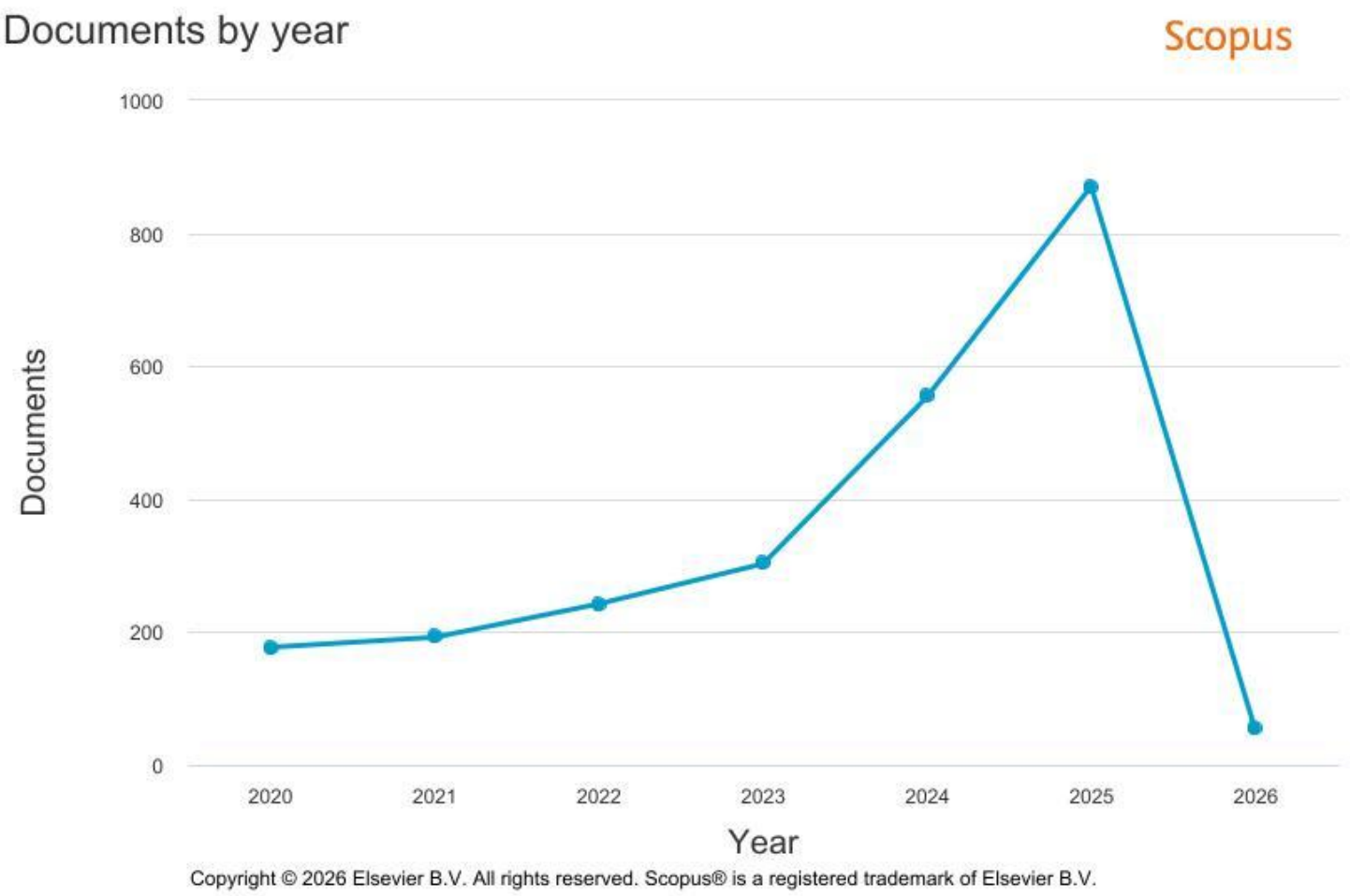


Figure 2. Annual publication trends in student engagement, academic language, and academic writing (2020–2026; 2026 data are partial). s

As illustrated in Figure 2, publication output increased steadily from 176 publications in 2020 to 193 in 2021, 242 in 2022, and 304 in 2023, followed by a substantial rise to 555 publications in 2024 and 870 in 2025. The 2026 data comprise only 55 publications because the dataset was retrieved in January 2026 and therefore represents a partial year. Accordingly, the apparent decline in 2026 should not be interpreted as a reduction in scholarly interest. Based on the complete publication years from 2020 to 2025, the overall trend demonstrates sustained and substantial growth in research on student engagement, academic language, and academic writing.

Several factors help explain this rapid growth pattern. First, the expansion of online and blended learning environments following the COVID-19 pandemic intensified concerns about students' writing engagement, academic language use, and autonomous learning skills, prompting more empirical investigations. Second, increasing emphasis on academic literacy, English for Academic Purposes (EAP), and discipline-specific writing in higher education has driven researchers to examine how students engage with academic phrases as tools for effective scholarly communication. Third, advancements in digital writing platforms, corpus-based tools, and learning analytics have enabled more sophisticated analyses of engagement and language use, further stimulating research output. Finally, policy-driven demands for measurable learning outcomes and publication productivity have encouraged scholars to explore engagement-related constructs that bridge pedagogy, linguistics, and educational psychology. Collectively, these factors justify the sharp increase in publications and underscore the relevance and timeliness of this research area.

RQ2: What are the top 10 most cited articles shaping research on student engagement, academic language, and academic writing?

Authors	Title	Year	Source title	Cited by
(Yu et al., 2021)	The Effect of Educational Games on Learning Outcomes, Student Motivation, Engagement and Satisfaction	2021	Journal of Educational Computing Research	229
(Borup et al., 2020)	Academic Communities of Engagement: an expansive lens for examining support structures in blended and online learning	2020	Educational Technology Research and Development	165
(Lampropoulos, 2024)	Virtual reality and gamification in education: a systematic review	2024	Educational Technology Research and Development	162
(Anthonysamy et al., 2020)	Self-regulated learning strategies and non-academic outcomes in higher education blended learning environments: A one decade review	2020	Education and Information Technologies	149
(Tong et al., 2022)	The effectiveness of blended learning on students' academic achievement, self-study skills and learning attitudes: A quasi-experiment study in teaching the conventions for coordinates in the plane	2022	Heliyon	113
(Kalender et al., 2020)	Damage caused by women's lower self-efficacy on physics learning	2020	Physical Review Physics Education Research	88
(Vieriu & Petrea, 2025)	The Impact of Artificial Intelligence (AI) on Students' Academic Development	2025	Education Sciences	86
(Suriano et al., 2025)	Student interaction with ChatGPT can promote complex critical thinking skills	2025	Learning and Instruction	86
(Estrada et al., 2021)	Does emotional intelligence influence academic performance? The role of compassion and engagement in education for sustainable development	2021	Sustainability (Switzerland)	85
(Guo et al., 2022)	Academic self-concept, perceptions of the learning environment, engagement, and learning outcomes of university students: relationships and causal ordering	2022	Higher Education	83

Table 3. Top 10 most cited articles on student engagement, academic language, and academic writing.

As presented in Table 3, the most highly cited articles in this field predominantly focus on student engagement, motivation, and technology-enhanced learning environments, reflecting the central role of engagement-related constructs in contemporary educational research. The most cited work by Yu, Gao, and Wang (2021) focuses on the effects of educational games on learning outcomes, motivation, engagement, and satisfaction, reflecting the strong scholarly interest in interactive and game-based learning environments that actively engage students. Similarly, Borup et al. (2020) and Lampropoulos (2024) emphasise engagement

within blended, online, and immersive learning contexts, highlighting how technological affordances such as virtual reality, gamification, and online communities reshape student participation and academic experiences. The prominence of journals such as Educational Technology Research and Development, Journal of Educational Computing Research, and Education and Information Technologies further indicates that engagement-related research is closely intertwined with educational technology and digital pedagogy. Collectively, these highly cited works suggest that engagement is increasingly conceptualised as a multidimensional construct influenced by learning environments, instructional design, and digital tools. Notably, none of the ten most cited records addresses academic phraseology, formulaic language, or phrase-level writing instruction directly, indicating that phrase-oriented research occupies a peripheral rather than central position within this literature.

The citation impact of these articles can be justified by their broad theoretical relevance, methodological rigor, and alignment with contemporary educational challenges. Many of the highly cited studies adopt systematic reviews, large-scale empirical designs, or integrative frameworks that offer transferable insights across disciplines and educational levels. Topics such as self-regulated learning, emotional intelligence, academic self-concept, and AI-supported learning resonate strongly with ongoing debates on student-centered learning and sustainable education, thereby attracting wide scholarly attention. In addition, the rapid expansion of blended and online learning since 2020 has amplified the relevance of these studies, leading to higher citation rates. Articles published in high-impact, interdisciplinary journals also benefit from greater visibility and accessibility, further contributing to their citation performance. Overall, the citation patterns indicate that research integrating engagement with technology, psychological factors, and learning outcomes holds strong explanatory power and enduring relevance, explaining why these studies dominate the citation landscape.

RQ3: Which are the top 10 most productive countries contributing to research on student engagement, academic language, and academic writing?

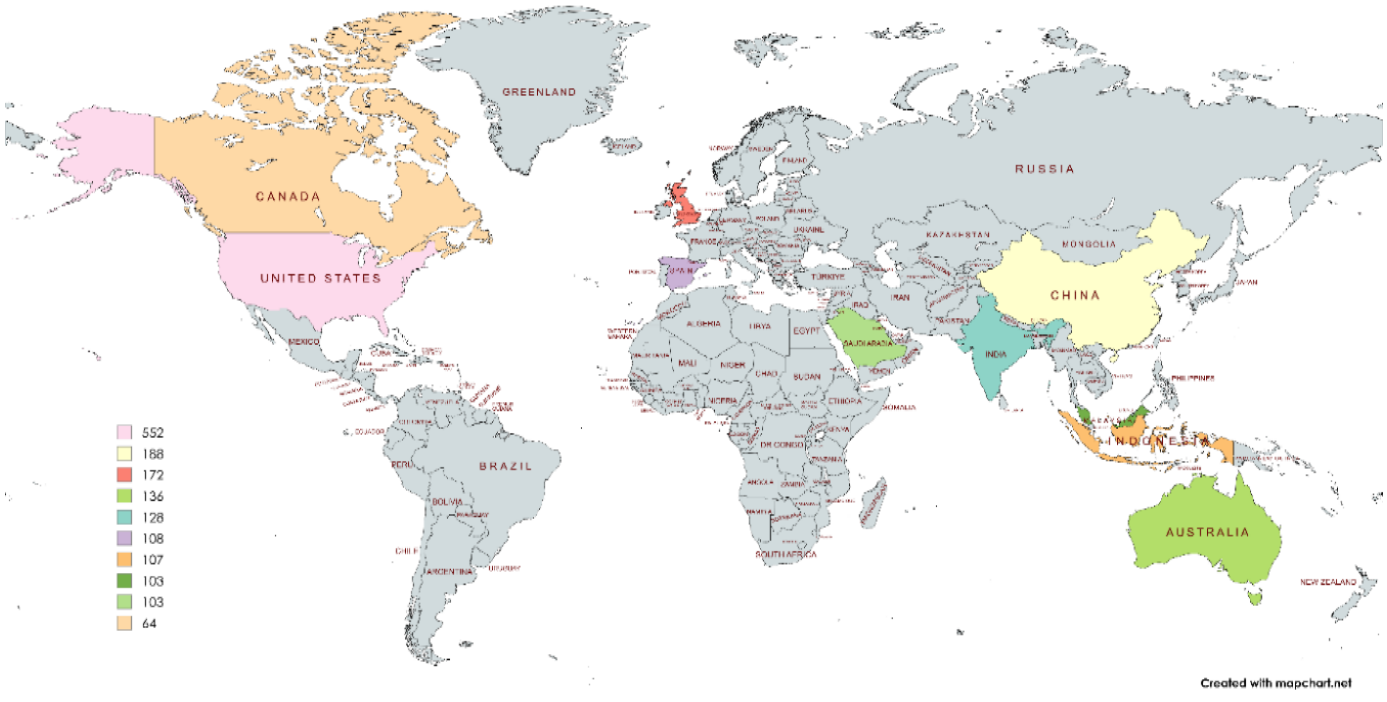


Figure 3. Distribution of publications by country on students' engagement, academic language, and academic writing.

As illustrated in Figure 3, the distribution of publications by country shows a clear dominance of the United States, which leads with 552 documents, followed by China (188) and the United Kingdom (172). This pattern indicates that research on student engagement, academic language, and academic writing is largely driven by countries with well-established research ecosystems and strong traditions in educational and applied linguistics research. Other English-dominant or English-medium higher education systems such as Australia (136), Canada (64), and the United Kingdom further reinforce the central role of Anglophone contexts, where

academic writing, EAP, and literacy development are core research priorities. At the same time, the strong presence of Asian countries such as China, India, Indonesia, Malaysia, and Saudi Arabia highlights the growing scholarly interest in academic writing and student engagement within EFL and multilingual settings, where challenges related to academic language use are particularly salient.

The observed pattern can be explained by several structural and contextual factors. Countries like the United States, the United Kingdom, and Australia benefit from robust research funding, high publication expectations, and long-standing journals indexed in international databases, which naturally result in higher output. In contrast, the increasing contributions from China, India, and Southeast Asian countries reflect rapid expansion in higher education, stronger emphasis on international publication, and growing concerns about students' academic writing proficiency in English-medium instruction. For countries such as Indonesia, Malaysia, and Saudi Arabia, the relatively high publication counts are closely linked to policy-driven academic performance indicators, postgraduate research growth, and the need to address EFL learners' engagement with academic language. Overall, the country-level distribution suggests that this research area is shaped by both global research capacity and localised educational needs, explaining the concentration of publications in both developed and emerging higher education systems.

RQ4: What are the most frequently used author keywords associated with student engagement, academic language, and academic writing?

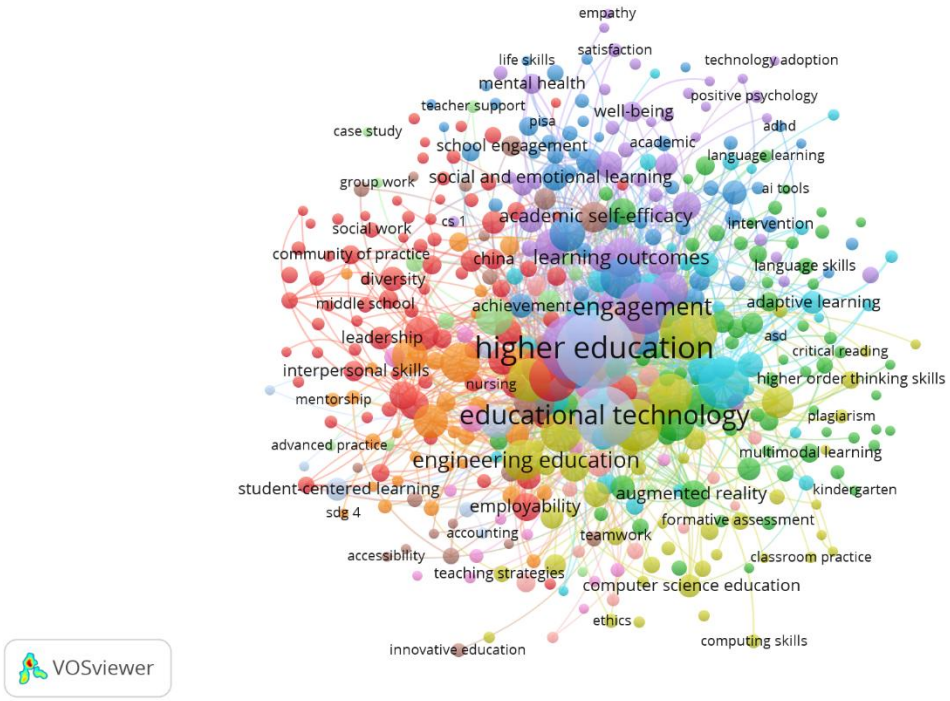


Figure 4. Network visualisation of author keyword co-occurrence

As illustrated in Figure 4, the co-occurrence analysis of author keywords in VOSviewer is a bibliometric technique used to identify conceptual relationships and thematic structures within a research field by examining how frequently keywords appear together across publications. In this analysis, keywords that co-occur more often are assumed to share stronger conceptual or topical connections, allowing the visualisation of dominant themes and their interrelationships within the literature. Using the full counting method, each occ-

urrence of a keyword in a document is given equal weight, which emphasises the overall prominence of frequently used concepts across studies. For this map, a minimum occurrence threshold of five was applied, meaning that only keywords appearing at least five times were included in the network. Out of a total of 3,379 extracted author keywords, 447 met this threshold and were subsequently visualised. To ensure meaningful thematic grouping, a minimum cluster size of five keywords was set, resulting in the formation of 12 distinct

clusters that represent coherent research subthemes within the broader domain.

The resulting network visualisation reveals a dense and interconnected knowledge structure centered around key themes such as engagement, higher education, educational technology, learning outcomes, and academic self-efficacy. The prominence and central positioning of these keywords indicate their foundational role in shaping current research directions. Surrounding clusters highlight specialised yet interrelated areas, including language learning, social and emotional learning, adaptive and multimodal learning, employability, mental health, and emerging technologies such as augmented reality and AI tools. The presence of multiple clusters demonstrates that the field is both multidisciplinary and integrative, bridging pedagogy, psychology, technology, and skill development. Collectively, these findings contribute to the body of knowledge by mapping the intellectual landscape of the field, identifying dominant and emerging themes, and illustrating how diverse research strands converge around student engagement and learning processes. This structured overview not only deepens theoretical understanding but also provides a valuable reference for future research directions and interdisciplinary collaboration.

RQ5: What are the patterns of international research collaboration (based on country-level co-authorship) in studies on student engagement, academic language, and academic writing?

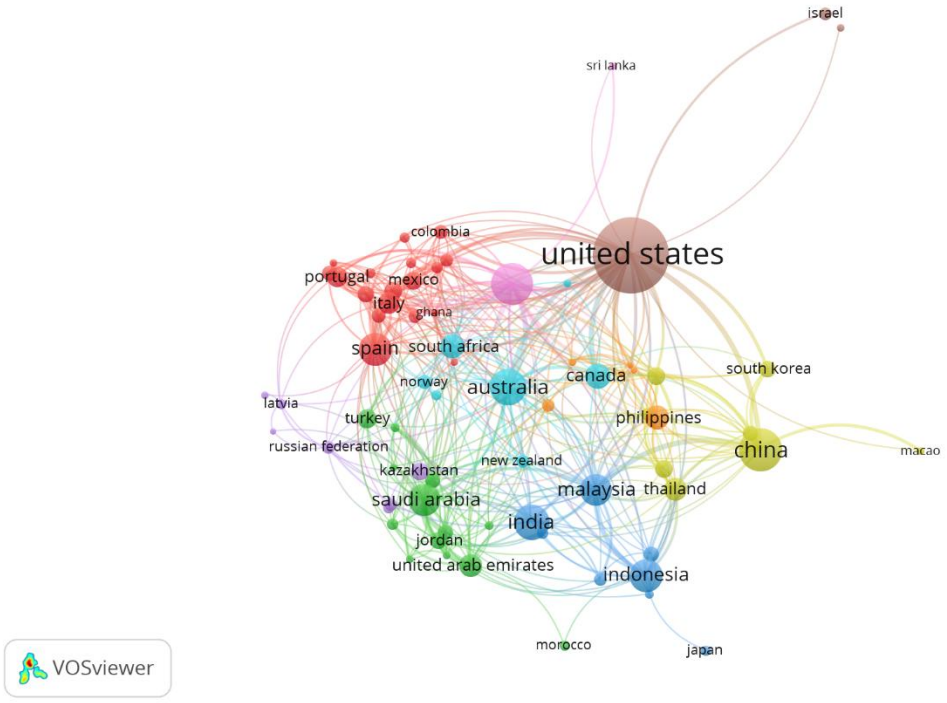


Figure 5. Country-level co-authorship collaboration network

The co-authorship co-occurrence analysis by countries generated using VOSviewer is a bibliometric technique designed to examine patterns of international research collaboration by analysing how frequently authors from different countries publish together in the same documents. In this analysis, each country is represented as a node, while the connecting lines indicate collaborative relationships based on shared authorship across publications. Countries that collaborate more frequently are positioned closer to each other, and larger node sizes reflect higher publication output or stronger collaborative presence. As shown in Figure 5, the network was generated using the full counting method, in which every co-authored publication is fully attributed to each contributing country, thereby emphasising overall collaboration visibility. A minimum threshold of five

publications was applied, resulting in 72 countries being included out of a total of 129 identified. To ensure meaningful and interpretable groupings, a minimum cluster size of five countries was set, which produced nine distinct collaboration clusters representing groups of countries with relatively strong and frequent research partnerships.

The collaboration network illustrated in Figure 5 reveals a highly interconnected global research structure, with the United States emerging as the most central and influential collaboration hub. The strong collaborative links between the United States, China, Australia, Canada, and several Asian, European, and Middle Eastern countries indicate that research in this field is driven by extensive cross-national partnerships. Regional clustering patterns are also evident, such as collaboration networks among Southeast Asian countries, Middle Eastern countries, and European nations, suggesting that geographical proximity, shared educational challenges, and similar research agendas play important roles in shaping collaboration patterns. These findings contribute to the body of knowledge by demonstrating that research on student engagement and related educational themes is increasingly international in nature, relying on collaborative knowledge production rather than isolated national efforts. The analysis provides valuable insights into global research dynamics, highlights key collaboration hubs, and supports strategic decision-making for future international research cooperation and policy development.

CONCLUSION

This study was conducted to systematically examine the development, intellectual structure, and collaborative patterns of research on student engagement, academic language, and academic writing through a bibliometric approach. The analysis was guided by research questions focusing on publication growth, influential studies, productive countries, dominant author keywords, and international research collaboration. The findings indicate a clear and sustained increase in scholarly output from 2020 to 2026, with a sharp acceleration after 2023, reflecting heightened academic interest in engagement-related issues within academic writing and language learning contexts. Citation analysis shows that highly influential publications are largely associated with student engagement, motivation, learning environments, and technology-enhanced instruction, suggesting that engagement with academic language is increasingly examined through interdisciplinary and pedagogical lenses. Country-level results reveal that research productivity is led by countries with strong research infrastructures, while substantial contributions from emerging and multilingual contexts highlight the global relevance of academic writing engagement. Keyword co-occurrence analysis further demonstrates a well-structured and interconnected research landscape, with central themes related to engagement, writing proficiency, academic language, educational technology, and learning outcomes, supported by multiple specialised yet interrelated clusters.

The study contributes to the field by offering a comprehensive mapping of research trends and thematic concentrations, thereby clarifying how scholarly attention to student engagement, academic language, and academic writing has evolved and diversified. By synthesising large-scale bibliographic data, the analysis extends existing knowledge beyond individual empirical studies and provides a structured overview of dominant and emerging research directions. The findings have practical implications for researchers, educators, and policymakers, as they highlight the importance of integrating engagement-focused approaches, academic language instruction, and technology-supported strategies in writing pedagogy.

Despite these contributions, several limitations should be acknowledged. First, the broad search strategy employed OR operators across terms related to student engagement, academic phrases, academic language, academic writing, and academic skills. Although this approach enabled comprehensive mapping of the wider research landscape, it also increased the inclusion of studies addressing general engagement and educational technology that were not specifically focused on academic phraseology. Consequently, the findings should be interpreted as representing the broader intellectual context surrounding student engagement and academic writing rather than an exclusively phrase-focused research corpus. Future bibliometric studies may employ more targeted search combinations and proximity operators, such as “academic phrase” AND “student engagement,” to construct a more tightly bounded phraseology-focused dataset. Second, the analysis relied solely on English-language publications indexed in Scopus, which may have excluded relevant studies available through other databases or published in other languages. Future studies could extend the analysis to Web of Science and ERIC to enhance disciplinary and database coverage. Finally, bibliometric analysis primarily captures publication patterns and intellectual relationships rather than providing an in-depth examination of individual study content. Future research could therefore integrate bibliometric mapping with systematic or qualitative content analysis and incorporate document co-citation or author co-citation analysis to

provide deeper insights into the theoretical and intellectual foundations underlying research on academic language and writing.

ETHICAL CONSIDERATIONS

Ethical approval

This study analysed publicly available bibliographic metadata retrieved from the Scopus database. It did not involve human participants, personal data, or animal subjects, and ethical approval was therefore not required.

Conflict of interest

The authors declare that they have no conflict of interest.

DATA AVAILABILITY STATEMENT

The data supporting this study's findings were retrieved from the Scopus database (Elsevier), which requires an institutional subscription and cannot be redistributed by the authors. The complete search string is reported in Table 1 and the screening criteria in Table 2, so any user with Scopus access can reproduce the dataset in full. The cleaned dataset and the VOSviewer map files are available from the corresponding author on reasonable request.

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