

REVIEW

A Systematic Review Analysis of Papers from the Web of Science Database Published in English between 2019 and 2023

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ABSTRACT

This bibliometric analysis investigates research trends in academic writing by examining a corpus of 202 articles published between 2019 and 2023, as indexed in the Web of Science database. The study explores various metrics, including the volume of published research, the most prolific countries, journals, affiliations, and authors, as well as highly cited papers, co-authorship patterns, and keyword trends. The findings are as follows: (1) China consistently held a leading position, with the highest number of publications and research funding organizations throughout the five years. (2) The authors Jian Fu, K. Hyland, and X.F. Lu had the most significant impact on the field, with their contributions constituting approximately 50% of the total publications. (3) These authors were also the most frequently cited, with 207 citations. The Journal of English for Academic Purposes emerged as a predominant venue, publishing 35% of all analyzed papers and leading in publication volume and citation impact. This bibliometric analysis is

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significant for its comprehensive examination of contemporary research trends in Academic Writing, which emphasises the contributions of key contributors, influential journals, and dominant countries such as China. The study illuminates the primary factors that have influenced academic discourse and knowledge production from 2019 to 2023 by identifying prolific authors and citation patterns. Nonetheless, to further develop technology-based methodologies and innovative approaches, additional comprehensive research is warranted.

Keywords: Academic Writing; Bibliometric Analysis; Web of Science; Data Analysis; Method Analysis.

1. Introduction

Academic writing is regarded as a gatekeeper for many students' academic success and institutional evaluations worldwide ^[1]. The recognized importance of academic writing has led to a significant rise in the volume of studies conducted. The primary objectives of these studies are to identify the features and processes of academic writing practices in various contexts, as well as to develop strategies for advancing them in higher education ^[2]. Therefore, to successfully navigate content learning and complete academic requirements, students who choose to pursue enrollment in English-medium university degrees in an English as a foreign language (EFL) context must possess the necessary level of fluency and proficiency in academic language. The majority of university students studying English as a foreign language (EFL) find it challenging to write in English while also attempting to meet the demands of the academic setting and match their writing style accurately to the norms of academic writing ^[3]. However, university students often find academic writing frustrating because they believe they lack the second language (L2) proficiency necessary for academic writing and hence are unable to use the language effectively ^[4].

Although academic writing is essential for sharing knowledge, it is sometimes criticised for its complex style, narrow scope, and tendency to marginalise different points of view. Enhancing academic writing involves more than just improving grammar and vocabulary; it also entails producing texts that are clearer, more engaging, and impactful. Moreover, it can be challenging for students to adhere to specific standards and use specialised vocabulary in academic writing, especially for researchers who are just starting their careers or who work across multiple fields ^[5]. Additionally, creating appealing arguments: Students

writing for academic purposes need to do more than summarise material; they also need to develop well-supported arguments ^[6]. This demands precise claim formulation, evidence-based reasoning, and critical analysis. From the literature review, it is evident that a more comprehensive study is necessary for the development of each pattern and aspect of academic writing.

Our literature review presents various studies on academic writing patterns that have contributed to the development of this particular sphere. These include studies on the importance of translanguaging practice, the use and misuse of transition makers, the use of hedges and boosters ^[7], coherence and cohesion in abstracts ^[8], the effect of writing knowledge in argumentative essays ^[9], academic collocations in a corpus of research-papers and the role of different types of feedback: peer feedback ^[10], feedback with explicit rhetorical instruction ^[11], supervisory feedback, reflection, and academic discourse socialisation, one-to-one consultation services ^[12], re-examining feedback ^[13], academic emotions in written corrective feedback (WCF) situations ^[14]. A new testing tool, Academic Writing Wizard (AWW), is a technology-based writing ^[15], integrating inquiry-based learning and computer-supported collaborative learning into a flipped classroom: effects on academic writing performance and perceptions of students of railway engineering ^[16], and developing a writing assistant ^[17].

Bibliometric analysis has gained prominence as a valuable methodological tool in recent years, demonstrating its effectiveness in evaluating global scientific production in scholarly research ^[18]. Despite its growing application, a notable absence of bibliometric studies specifically focused on academic writing in English remains. This analytical approach has been widely utilised across various specialised scientific domains and has significantly contributed to multiple academic fields, including linguistics. This research

aims to examine trends in scholarly publishing to identify strategic gaps and opportunities within the international landscape of academic writing research. The significance of this study lies in its integration of a variety of academic writing research, which emphasises the critical strategies and challenges that influence student success, particularly in English as a Foreign Language (EFL) contexts. The research offers an exhaustive comprehension of the methods by which academic writing can be enhanced and supported by analysing a variety of factors, including linguistic features, feedback mechanisms, and technology-enhanced tools. Additionally, it underscores the necessity of continuous advancements in writing pedagogy to better equip students and researchers with the skills required for effective scholarly communication. In general, the research provides valuable insights that can be used to inform educators, institutions, and policymakers who are striving to improve academic writing proficiency on a global front.

2. Methodology

The Global Library of Academic Writing was analyzed using the Web of Science Core Collection database from 2019 to 2023. A total of 202 published papers from this database met our selection criteria within this period. Notable increases in publication numbers were observed in 2021 and 2022, with these years having the highest publication volumes. We included only articles written in English. Initially, we searched for the keyword “academic writing” within author keywords, abstracts, and keyword sections, retrieving 2,954 documents for the specified time

frame. Upon review, we found that many papers were only partially relevant to academic writing. Therefore, on May 6, 2024, we applied the following filters as a retrieval strategy: TITLE: “Academic Writing,” time span: 2019–2023, country: all, sub-area: linguistics, language: English, and publication stage: final (see Fig. 1). This refinement resulted in a final dataset of 202 papers, which were exported in CSV, RIS, and VOSviewer (version 1.6.18) formats for analysis of bibliographic coupling, thematic trends, co-authorship, co-occurrence, citations, and co-citations. We chose these methods because the Web of Science Core Collection is a well-known and reputable database that reliably collects scholarly literature.

3. Results

3.1. Types and Numbers of Published Papers on Academic Writing

A dataset comprising 202 published articles was sourced from the Web of Science Core Collection, adhering to our established selection criteria for the years 2019–2023. To assess the development of academic writing within the educational sphere, we analyzed annual publication counts. Notably, significant increases in publication numbers were observed in 2021 and 2022, which represented the peak periods for article output. Specifically, the highest numbers of publications were recorded at 48 and 45, respectively, in these years, as illustrated in **Figure 1**. Furthermore, our selection process was limited to articles published exclusively in English.

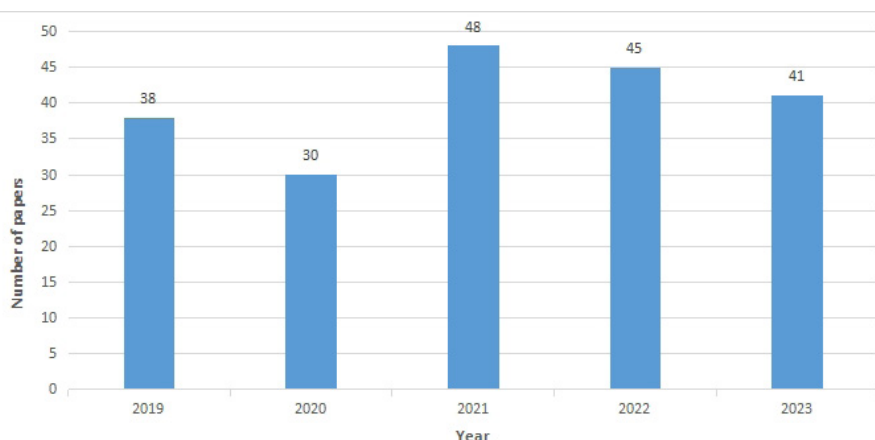


Figure 1. Annual production of articles on academic writing for 2019-2023.

Our analysis reveals that among the 202 papers examined, research articles accounted for the majority, with a total of 196 published over the five years. This was followed by 17 early

access papers and five review articles. Additionally, a smaller proportion of the documents included three book chapters and one conference proceeding, as depicted in **Figure 2**.

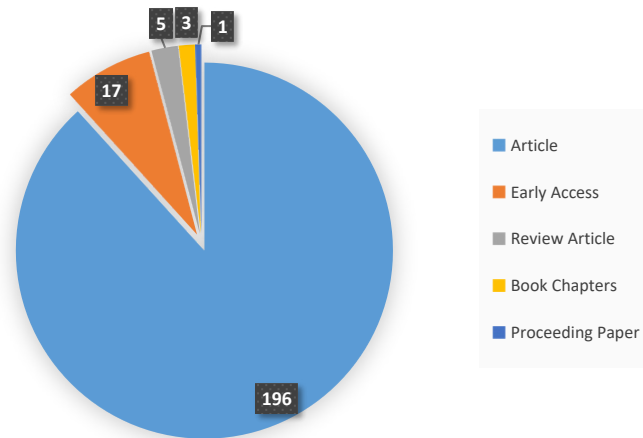


Figure 2. Types of publication.

3.2. Top Authors on WoS 's Core Collection

There is no doubt that authors play a crucial role in the advancement of research in any field worldwide. By analysing the most prolific contributors, this section provides information about individual research contributions. **Figure 3** displays the top 20 authors who have published papers on academic writing over the past five years. Ac-

cording to the data, Jiang F is the most productive author, with seven publications. In contrast, Hyland K. and Lu XF are the second most prolific authors, each with six articles on this topic. The illustration also shows that Casal JE and Liu YY are in third place, with three articles each, while the remaining authors have each published two articles in this area.

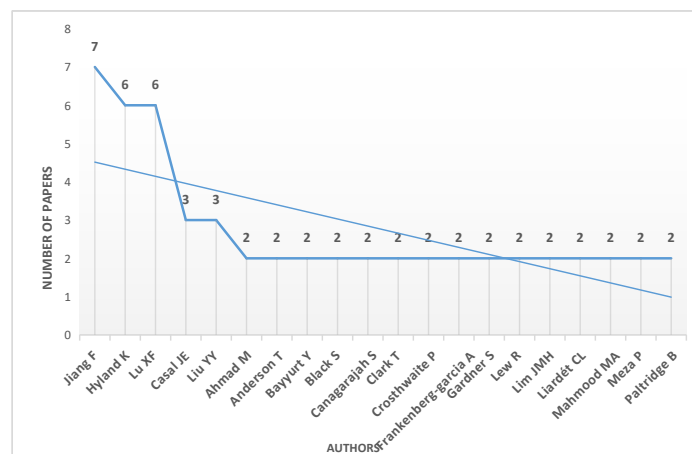


Figure 3. List of the top productive authors in research of academic writing on WoS .

3.3. List of Top Institutions

In **Figure 4**, institutions are ranked based on the quality and quantity of the papers published by their affiliated authors. Over the past five years, 234 distinct institutions

have collaborated to publish 202 papers on the Web of Science worldwide. We have listed the top ten affiliations to identify the most influential and productive ones. The leading five institutions are from the USA, with the highest

number of publications totaling 39 papers: Pennsylvania State University with 11 papers, the Pennsylvania Commonwealth System of Higher Education (PCSHE) with 11 papers, Pennsylvania State University Park with 10 papers, the University System of Ohio with four papers, and the City University of New York (CUNY) System with three

papers. In the subsequent positions, Jilin University (China) and the University of East Anglia (UK) each have 10 papers. In comparison, the University of Malaya (Malaysia) and Macquarie University (Australia) each have four papers, indicating that they are significant contributors to our results.

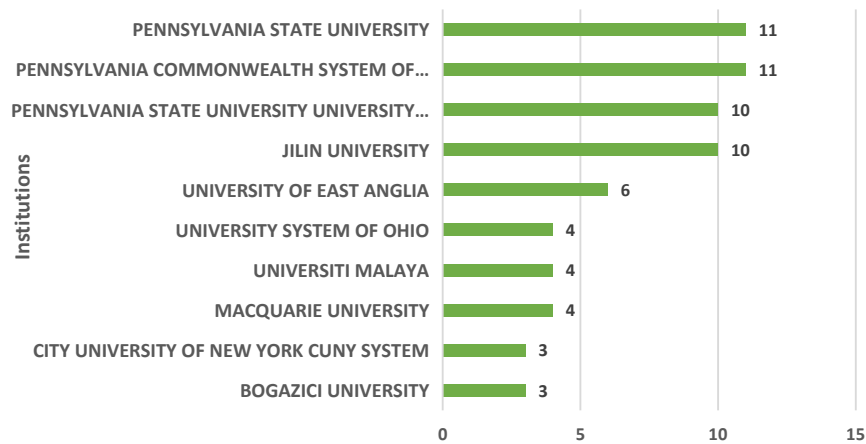


Figure 4. List of top institutions.

3.4. The Most Productive Countries/Regions on WoS

From history, it is clear that well-financed institutions in the West, particularly those in the United States of America, have prioritised scholarly publishing as a result of significant financial investments in research infrastructure. At that time, high salaries, a supportive atmosphere, and opportunities for academic networking and publishing attracted prolific authors, compelling them to work productively. However, globalization has encouraged many uni-

versities to enhance their status and become more actively involved in international publishing. Over 45 countries collaborated on developing academic writing worldwide from 2019 to 2023. **Figure 5** presents, in rank order, the 20 most productive countries/regions and their number of publications. The figure shows China in a dominant position with 47 publications, followed by the USA with 30, England with 26, Australia with 16, Malaysia with 13, and Iran and Spain with 10 publications each. Saudi Arabia and Turkey are also tied, each with eight research works.

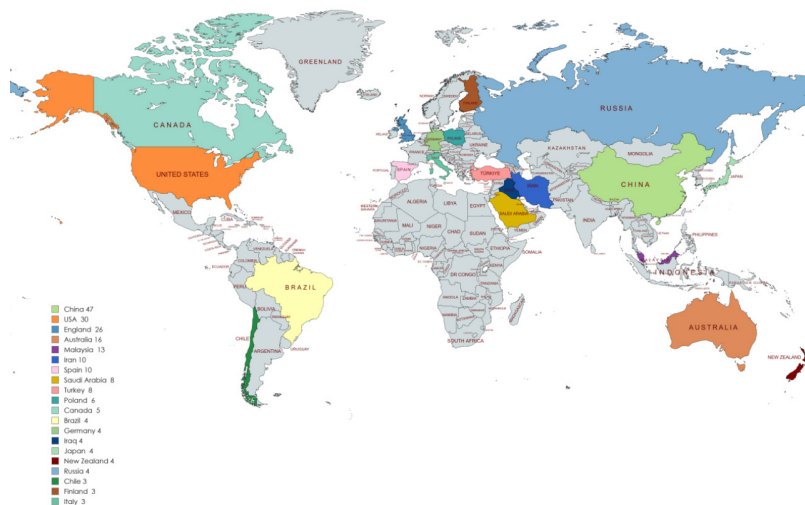


Figure 5. List of top 20 countries on WoS.

3.5. Top Cited Papers

We selected the most noteworthy and productive articles in academic writing, including their publishers, publication years, authors' names, and citation numbers, as shown in **Table 1**. This analysis helps investigate the reasons behind the production of high-quality articles and their contributions to the field. It is evident that "The Journal of English for Academic Purposes" is the leading journal in terms of citation numbers and publications over the past five years. In our analysis, the article titled "Academ-

ic Emotions in Written Corrective Feedback Situations," published in 2019 in the Journal of English for Academic Purposes by Han, Y., and Hyland, F., received the highest number of citations, with 63 citations in the Web of Science Core Collection and 75 citations across all databases. The second most-cited article is "Mediating EFL Learners' Academic Writing Skills in Online Dynamic Assessment Using Google Docs" by Ebadi, S., and Rahimi, M., which has 44 citations in the Web of Science Core Collection and 48 citations in all databases.

Table 1. List of top-cited publications on WoS.

Article Title	Source Title	Authors	Publication Year	Times Cited, WoS Core	Times Cited, All Databases
Academic emotions in written corrective feedback situations	Journal of English for Academic Purposes	Han, Y; Hyland, F	2019	63	75
Mediating EFL learners' academic writing skills in online dynamic assessment using Google Docs	Computer-assisted language learning	Ebadi, S; Rahimi, M	2019	44	48
The rhetorical functions of syntactically complex sentences in social science research article introductions	Journal of English for Academic Purposes	Lu, XF; Casal, JE; Liu, YY	2020	42	45
Syntactic complexity in English as a lingua franca academic writing	Journal of English for Academic Purposes	Wu, X; Mauranen, A; Lei, L	2020	36	36
With the rapid development: a contrastive analysis of lexical bundles in dissertation abstracts by Chinese and L1 English doctoral students	Journal of English for Academic Purposes	Lu, XF; Deng, JL	2019	34	35
Developing a writing assistant to help EAP writers with collocations in real time	Recall	Frankenberg-Garcia, A; Lew, R; Roberts, JC; Rees, GP; Sharma, N	2019	35	35
Do native writers always have a head start over non-native writers? The use of lexical bundles in college students' essays	Journal of English for Academic Purposes	Shin, YK	2019	32	32
The connection between transcultural dispositions and translingual practices in academic writing	Journal of Multicultural Discourses	Lee, E; Canagarajah, S	2019	22	28
Syntactic complexity across academic research article part-genres: a cross-disciplinary perspective	Journal of English for Academic Purposes	Casal, JE; Lu, XF; Qiu, XX; Wang, YH; Zhang, GG	2021	24	24
An exploratory study on factors influencing undergraduate students' academic writing practices in turkey	Journal of English for academic purposes	Altinmakas, D; Bayyurt, Y	2019	22	23

3.6. Visualization of Co-Authorship

International cooperation is becoming an increasingly crucial aspect of the scientific field. It is clear that co-authors have made significant contributions to the development of academic writing in scientific research. The power of co-authorship networks, which you are all part of, has been demonstrated in identifying leading scientists and or-

ganizations around the world. **Figure 6** illustrates a VOS viewer (version 1.6.18) visualisation of the 11 most productive co-authors, grouped into four clusters: Cluster 1 (4 items), Cluster 2 (3 items), Cluster 3 (2 items), and Cluster 4 (2 items). The total link strength was 28, with 23 links. Thicker and longer links between nodes indicate stronger cooperative interactions between authors, while larger nodes represent the most productive co-authors.

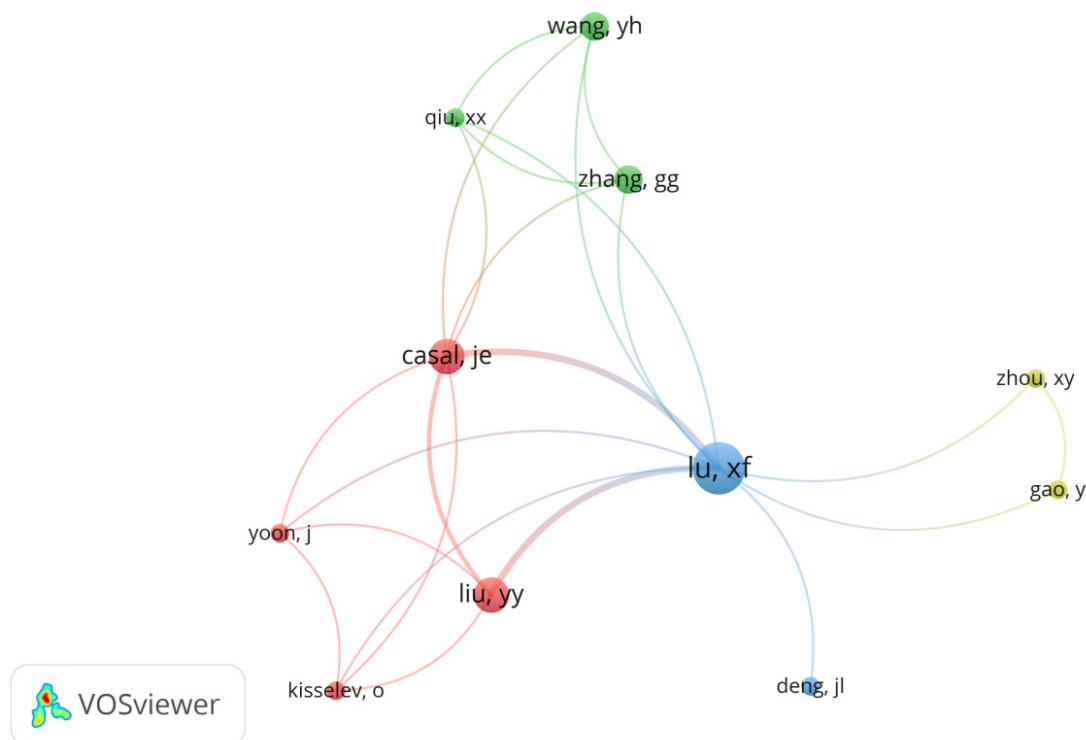


Figure 6. Visualization of co-authorship.

3.7. Keyword Co-Occurrences

The VOS viewer can generate bibliographic coupling figures, keyword co-occurrence, co-authorship, citation, and co-citation figures (**Figures 6 and 7**). This software can process different formats, including .txt, .ris, and .csv, which can be uploaded from databases such as Scopus, Web of Science, and PubMed. We used VOS viewer to create maps of keyword co-occurrence and co-authorship. The keyword analysis yielded 605 keywords, of which we excluded general terms not directly related to academic writing. After filtering, 22 keywords were selected. Each

resulting keyword is represented as a node based on its total link strength, creating a network map of all keywords. The size of each node reflects the importance of the keyword. For instance, “academic writing” was the most frequently used keyword and thus had the largest node size. The 22 items are distributed across four clusters: Cluster 1 (academic writing, language, learners, lexical bundles, proficiency, students, syntactic complexity, writers), Cluster 2 (discourse, engagement, genre, identity, metadiscourse, stance), Cluster 3 (construction, corpus, disciplinary, research article), and Cluster 4 (applied linguistics, English for academic purposes).

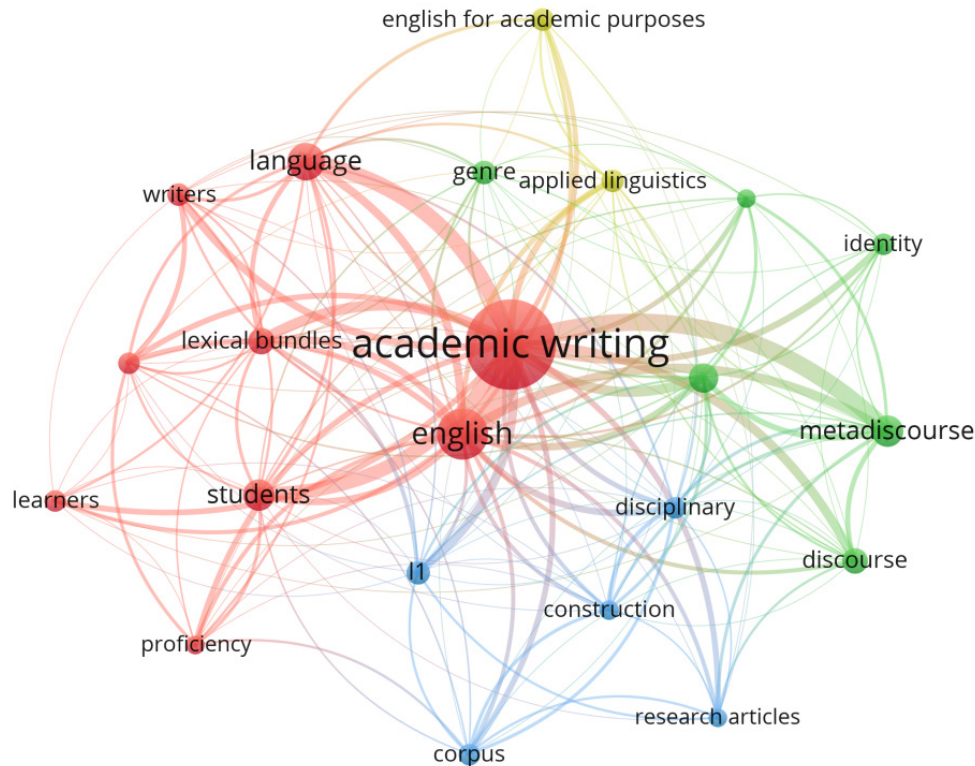


Figure 7. Keyword co-occurrences analysis.

4. Discussion

4.1. General Analysis

This study aimed to analyze the existing knowledge and current status of academic writing. Bibliometric data from the Web of Science database were used to generate a systematic review of the scientific articles that have had the most significant impact on the topic. No previous study has analyzed articles in the field of linguistics using a bibliometric approach and comprehensive research tools. Bibliometric analytical tools are essential for comprehending the overall landscape in a specific subject area and assessing scientific research trends. These tools can also provide valuable guidelines for other researchers by identifying leading research institutions and leading researchers in their field. Consequently, researchers evaluating the current state of a specific field can offer new and innovative research trajectories. This study suggests that researchers assessing the current state of a particular field can lay the groundwork for new and innovative research trajectories. The scientometric analysis reveals that the predominant form of publication was the research article, which ac-

counted for 97% of the total document types (Figure 2). Articles serve as vital academic contributions, providing objective metrics for evaluating scientists' productivity and educational effectiveness.

The analysis of academic writing research publications over a five-year period reveals a significant surge in output, with over two-thirds (66%) of the total articles published within the most recent three years (2021-2023). This trend suggests a burgeoning interest in academic writing development (Figure 1). The marked increase in research activity in recent years may be attributed to heightened attention from scholars in industrialized nations. A combined total of 132 articles (65% of the 202 papers examined) originating from China, the United States, the United Kingdom, Australia, and Malaysia underscore these nations' substantial contributions to the field of academic writing research (Figure 5).

Institutions from the USA had the highest number of articles on academic writing; for instance, Pennsylvania universities alone account for almost half of all articles on the top list. The University of Ohio and the City University of New York (CUNY) are also among the top universities, with 60% of articles affiliated with these American affilia-

tions (**Figure 4**). This finding suggests that researchers in developed countries are more actively engaged in this area.

The Journal of English for Academic Purposes exemplifies complete dominance in overall citations and publication numbers over the chosen period. It publishes its academic papers through Elsevier, which tops the publishers' list, and has published 35% of its 202 papers (**Table 1**). The Journal of English for Academic Purposes published

nearly 30% of the documents and received the highest number of citations, 565, constituting more than 50% of the total 1,085. Notably, an article by Han & Hyland (2019) was cited 75 times across all databases, while the "Journal of Multilingual and Multicultural Development" ranks second on the list of top-cited journals with 74 citations (**Table 2**). This demonstrates that a single article can be more productive and receive more citations than an entire journal.

Table 2. Types of interventions for the development of academic writing.

Feedbacks	Usage of Methods	Personal Competence	Technology
<ul style="list-style-type: none"> • Peer feedback ^[19] • Feedback and Explicit Rhetorical Instruction ^[20] • Supervisory feedback, reflection, and academic discourse socialization ^[21] • One-to-one consultation services ^[22] • Reexamining feedback ^[23] • Academic emotions in written corrective feedback situations ^[24] 	<ul style="list-style-type: none"> • Translanguaging in academic writing process ^[25] • Transition markers ^[26] • Academic collocations in a corpus of research-papers ^[27] • The Effect of Writing Knowledge ^[28] • Graduate students' translanguaging practice in the context of academic writing ^[25] • Use of Hedges and Boosters ^[29] • Organizational Skills ^[29] 	<ul style="list-style-type: none"> • The negotiation of authorial persona ^[30] • Academic Writer Identity ^[31] • Individual voice in second language academic writing ^[32] 	<ul style="list-style-type: none"> • a new testing tool Academic Writing Wizard (AWW) technology-based writing ^[33] • Integrating inquiry-based learning and computer supported collaborative learning into flipped classroom: effects on academic writing performance and perceptions of students of railway engineering ^[34] • Developing a writing assistant ^[35]

The top three contributing authors to the development of academic writing are Jian Fu, Hyland K., and Lu XF. They published almost 50% of the top papers and received the highest number of citations over the five years, totaling 207 citations, which account for nearly 20% of all citations in the databases. Our results indicate that the most cited co-authored work was by Han & Hyland (2019), with 75 citations. The second most productive paper was authored by Casal, Liu YY, and Lu XF, with 45 citations (2020). Other notable co-authors include Zhang GG, Wang YH, Qiu XX, Yoon J, Kisselev O, Deng JL, and Zhou XY, whose collaborative works have significantly contributed to the development of academic writing (**Figure 6**).

In keyword analysis, "academic writing" was the most frequently used keyword, followed by "English," "student," "language," "learners," "metadiscourse," "discourse," "applied linguistics," "English for academic purposes," "genre," "L1," "proficiency," "construction," "identity," "disciplinary," "corpus," and "research articles," all of which were active in keyword co-occurrence during the chosen period (**Figure 7**).

Our analysis indicates that the most studied topics were the importance of feedback in writing, the challenges of academic writing, and possible solutions. Many articles focused on doctoral studies. Research in L2 was more prevalent than in L1, with most studies conducted in China. In 2019, there was significant interest in different methods, approaches, and comparisons for developing academic writing. Although online learning topics appeared briefly in 2019, they disappeared in 2020 but re-emerged in 2022, with the highest number of articles published that year.

Various methods and approaches are employed to develop academic writing. Nathan (2021) ^[35] conducted a study on the effectiveness of one-to-one consultation services in academic writing. The researcher established two focus groups using a mixed-methods approach and found that 98% of students sought support with their academic writing assignments. Many studies have been conducted about the role and importance of feedback in academic writing ^[23]. Another study by Al Sharoufi (2022) used a new testing tool, the Academic Writing Wizard (AWW), for the development of academic writing. The study result

showed that the application of AWW had a significant effect on the English Academic Writing skills of Omani students.

4.2. Types of Interventions

Our analysis includes a variety of 20 different types of interventions. **Table 2** provides a visual representation of the distribution of these interventions in the sampled literature. The distribution of articles across the following four categories is as follows:

1. Feedback
2. Patterns of Academic Writing
3. Personal Skills
4. Technology-Based Methods

4.3. Feedbacks

The primary interventions employed were various feedback mechanisms aimed at developing Academic Writing. It has been discovered that when writers are provided with feedback through three writing stages: reflection-on-feedback, reflection-in-feedback, and reflection for feedback, it functions as an accessible and valuable writing source. Gonzalez et al., (2020) claimed that while students engage in peer feedback, they can generally construct meaning-making knowledge even if it is not fully developed. The combination of input and Explicit Rhetorical Instruction has proven effective for the development of students' micro-writing skills. One-to-one consultation service should be conducted in a friendly, respectful atmosphere to identify the needs of the students, and it should provide guidance on various strategies such as questioning, coming up with solutions on their own. The result of the re-examination of feedback indicates that students ought to be more actively involved in scholarly acculturation and discussions to overcome negative attitudes towards diverse writing styles. It also reduces barriers to misinterpreting feedback. WCF has a considerable effect on academic writing. Han and Hyland (2019) found that different types of emotions can be faded and replaced with other emotions by WCF. It is beneficial for teachers who work with learners who suffer from red pen syndrome. It can be concluded that when different types of feedback are implemented, students not only improve their microskills but also their emotional, cognitive, and social skills. In conclusion, the

essence of feedback in the development of academic writing is crucial; consequently, numerous studies have been conducted on this particular topic.

4.4. Patterns of Academic Writing

When the entire problem is broken down into smaller pieces and thoroughly understood, reaching a solution can be easier. For the development of academic writing, researchers have also conducted various studies on different components and patterns of academic writing. Two academic works have been done on the role of translanguaging in the academic writing process. Both works took place in China. English is taught as an L2, and students face many issues in the academic writing process. Researchers have emphasised the crucial importance of translanguaging environments in overcoming writing barriers and challenges in the academic writing process. Additionally, when translanguaging strategies are employed, students effectively enhance their self-regulation skills and can manage to work on extensive dissertations. Two additional studies have been conducted by Zhe and Zheng (2023) on the state of transition makers and how their use helps academic writers productively. Compared the use of however between Chinese writers and English writers, while Walkova(2020) researched and compared the use of moreover, therefore Chao Han (2021) believed that however used more frequently by English writers than Chinese writers, however, it does not mean Chinese writers' 'underuse' this word and English writers 'overuse' it. Due to different perspectives, even professional academic writing can be considered inappropriate by other writers. A study considered that the most common issue among students' academic writing is the misuse of transition markers. The researcher suggested that transition makers should be used with attention to avoid conveying the wrong meaning of knowledge. Ranjbar et al., (2023) made a comparison study on the use of hedges and boosters. The findings showed that native English writers use more hedges than Iranian native writers in their academic work. However, there is no significant difference between natives and non-natives while using hedges and boosters in a sentence. Instead, when graduate and postgraduate courses are conducted, more emphasis should be placed on the pragmatic side of language instruction. Organisational skills play important roles when a research-

er starts to be involved with academic writing. The study conducted by Muhammad et al., (2023) focused on coherence and cohesion of abstracts in Pakistani research articles. The researchers found that academic writers should organise texts on both semantic and syntactic levels. The use of repetition devices can aid in this process. Frankenberg-Garcia et al., (2019) studied the importance of writing knowledge in argumentative essays. The participating students were divided into three groups, representing their levels of knowledge (novice, basic, and well-developed). The study results show that most student are in the novice group, and the main reasons for this are their lack of critical thinking, along with different types of insufficient writing knowledge. Therefore, many Libyan students were unable to show high-quality essays. To solve this problem, student should be aware of writing knowledge from constructing essays to evaluating different issues in their work. To conclude, various types of approaches, methods, and patterns of writing have been studied by many researchers, but more studies are needed, as academic writing is a vast and complicated subject.

4.5. Technology-Based Method

It is clear that there is a lack of technological approaches for the development of academic writing. Research conducted by indicates that a range of lexicographic instruments are designed to support novice academic English users in their writing. First stages of ColloCaid development by explaining (1) the reasoning behind the lexicographic database we are building to assist beginners of English for Academic Purposes (EAP) with their collocational needs and (2) the initial visualisation strategies made to provide collocation information to EAP users without interfering with their writing. Another technology-based approach was implemented to enhance academic writing. All of the data convincingly demonstrate an improvement in post-application outcomes, indicating that AWW assisted high school students in developing their academic writing abilities. After completing the satisfaction survey, it is clear that the majority of participants believed that AWW was an efficient and supportive writing tool that would help them succeed in their writing classes. A study conducted on three different groups showed that the students were less anxious and more satisfied, motivated, and involved

with this method. The findings also demonstrated how positively students felt about the educational principles of Edmodo and Google Docs. To summarise, although there is a wide range of technology-based approaches, methods are being implemented in other parts of the educational field, and researchers have not done sufficient work in academic writing during the chosen period. It can be one of the main limitations of this study.

4.6. Personal Skills

Two studies by Iga et al., (2021) and Yueh et al., (2020) investigated the role of writers' identity in second language academic writing. Both researchers believe that at the beginning of academic life in tertiary education, acceptance of oneself as an academic writer is challenging. Their study findings assist young writers how to understand better one's unique authorial voice in academic education. They categorised writer voice into three aspects (collective, individual, depersonalised) to identify the potential of individual's voice in enhancing and facilitating, while Jia categorised it into four aspects (communicator, creator, interpreter, academic presenter), which people experience in becoming academic writers. Firstly, writers' identity evolution should be understood because their life history affects the construction of their present self. Lehman's study (2021) revealed that writer identity is directly influenced by their institutions and administrations. If students' institution supports their authorial voice, as an academic writer, they can improve effectively. The influence that institutionally approved rhetorical norms have over the writing produced by second language learners has essential implications for the emerging identities of these authors. It is evident that many times, student writers do not feel that the institution and administrative contexts provide them the right to adopt a strong authorial posture and claim authority over the ideas they write about. The primary objective of conducting research is to make a person's distinctive voice heard. made a study on the authorial presence of the researcher in creating dialogue throughout the text. The researchers highlighted the state of authorial persona in developing interpersonal relationships through texts. The more usage of dialogic expansion by PhD writers improved their critical evaluating, synthesizing and proper questioning skills. The bibliometric examination of academic

literature provides a thorough perspective on the evolution of this subject and its intersections with significant dimensions. The analysis highlights essential issues, like the significance of feedback, the enhancement of writing skills, and arguing strategies, which are vital for formulating effective instructional methods. Educators can utilise these insights to customise instructional strategies that confront prevalent difficulties encountered by students, especially those acquiring academic writing in a second language. The analysis identifies the countries, universities, and journals that dominate research output and impact in academic writing from an institutional standpoint. This information can inform institutional policies, funding allocation, and collaborative efforts, promoting investment in writing centres, support services, and faculty development programs that enhance scholarly communication abilities. The bibliometric findings highlight the growing incorporation of digital resources, including writing assistants, feedback platforms, and collaborative learning settings, which are revolutionising the instruction and practice of academic writing. The increasing emphasis on technology-driven approaches indicates a future in which innovative software and online tools are essential for improving writing skills and productivity. Ultimately, from a cultural perspective, the approach highlights the diverse linguistic and cultural contexts in which academic writing transpires. It emphasises the significance of acknowledging translingual activities, diverse rhetorical conventions, and identity concerns among writers from various backgrounds. This awareness can assist educators and institutions in creating more inclusive curricula that acknowledge and address the unique challenges encountered by multilingual and multicultural pupils. The bibliometric study provides a comprehensive understanding of academic writing research, connecting theoretical findings to practical consequences in instruction, institutional strategy, technology innovation, and cultural sensitivity. This comprehensive viewpoint is essential for progressing the discipline and promoting worldwide academic achievement. It can be concluded that personal identity, particularly at the beginning of the academic writing process, is one of the essential aspects to be a successful writer. However, limited research has been done so far, and further in-depth studies are necessary.

5. Limitations

Although the present research provides essential findings for those interested in academic writing, it has several limitations. Firstly, data were collected only from the Web of Science. Additional databases, such as Scopus, EBSCOhost, and ERIC, could provide a more precise and comprehensive analysis. Another area for improvement is the insufficient financial support. Funding is a crucial factor for the development of any field. However, our study revealed that only 69 funding sponsors were identified out of the 202 articles. Educational authorities should pay more attention to providing funding for the development of academic writing. One final limitation worth noting is the lack of scholarly work on technology-based interventions for academic writing development. Our analysis revealed a significant gap in this area, indicating the need for further research to explore and enhance these approaches.

6. Conclusion

This bibliometric study analyzed research on academic writing using the Web of Science database and retrieved 202 papers from the past five years (2019 to 2023). The study provides valuable insights through keyword analysis of research topics, co-citation analysis of highly cited journals, articles, and authors, and an evaluation of the productivity of top countries, affiliations, and funding sources. These findings could be beneficial for both researchers and educators in the field of academic writing. For researchers, the study reveals that research in this area remains relatively limited, indicating substantial opportunities for further exploration. The information about the most productive researchers, publications, and journals can help researchers identify relevant references and target appropriate venues for their work and future publications. Additionally, the discussion section of the study highlights research gaps that can guide future studies by analyzing various types of interventions and their outcomes. For academic writing instructors, the discussion offers a comprehensive framework for pedagogical practice due to its thorough and comparative analysis of interventions. Educators can use this guideline to integrate diverse pedagogical approaches for more effective instruction in academic writing. However, despite the vast array of methods and recommendations available

to support writers, many still feel they lack adequate assistance with academic writing. To address this, there is a need for more international collaborative projects, innovative activities, and up-to-date technology-based solutions to advance this field further.

Author Contributions

D.T.: Conceptualization, Methodology, Investigation, Validation, Original writing-drafting; M.R.: Supervision; B.K.: Working with Software; N.M.: Resources, Reviewing and Editing; U.J.: Reviewing and Editing; Z.S.: Reviewing, Validation; M.N.: Methodology, Validation; J.T.: Reviewing and Editing. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest

The authors declare no conflict of interest.

References

- [1] Hyland, K., Jiang, F., 2021. A bibliometric study of EAP research: Who is doing what, where and when? *Journal of English for Academic Purposes*. 49, 100929. DOI: <https://doi.org/10.1016/j.jeap.2020.100929>
- [2] Wingate, U., Harper, R., 2021. Completing the first assignment: A case study of the writing processes of a successful and an unsuccessful student. *Journal of English for Academic Purposes*. 49, 100948. DOI: <https://doi.org/10.1016/j.jeap.2020.100948>
- [3] Hyland, K., 2002. Authority and invisibility. *Journal of Pragmatics*. 34(8), 1091–1112. DOI: [https://doi.org/10.1016/S0378-2166\(02\)00035-8](https://doi.org/10.1016/S0378-2166(02)00035-8)
- [4] Ivanič, R., Lea, M.R., 2006. New contexts, new challenges: The teaching of writing in UK higher education. In: Ganobcsik-Williams, L. (ed.). *Teaching Academic Writing in UK Higher Education*. Macmillan Education UK: London, UK. pp. 6–15. DOI: https://doi.org/10.1007/978-0-230-20858-2_1
- [5] Cottrell, C.A., Neuberg, S.L., 2005. Different emotional reactions to different groups: A sociofunctional threat-based approach to ‘prejudice’. *Journal of Personality and Social Psychology*. 88(5), 770–789. DOI: <https://doi.org/10.1037/0022-3514.88.5.770>
- [6] Lillis, T., Turner, J., 2001. Student writing in higher education: Contemporary confusion, traditional concerns. *Teaching in Higher Education*. 6(1), 57–68. DOI: <https://doi.org/10.1080/13562510020029608>
- [7] Ranjbar, M., Yazdani, H., Ahmadian, M., et al., 2023. On the use of hedges and boosters in different sections of research articles published in national and international journals. *Jordan Journal of Modern Languages and Literature*. 15(3), 783–796. DOI: <https://doi.org/10.47012/jjml.15.3.2>
- [8] Sanches, B.S., Lopes Cristovao, V.L., 2022. Academic literacies in higher education in Parana: Opportunities and shortcomings. *Revista da ANPOLL*. 53(1), 236–252. DOI: <https://doi.org/10.18309/ranpoll.v53i1.1680>
- [9] Man, D., Chau, M.H., 2019. Learning to evaluate through that-clauses: Evidence from a longitudinal learner corpus. *Journal of English for Academic Purposes*. 37, 22–33. DOI: <https://doi.org/10.1016/j.jeap.2018.11.007>
- [10] Venegas, R., Ahumada, J., Sologuren, E., 2022. Types and forms of feedback for lab reports in electrical engineering: An approach to the production of a training genre. *Circulo de Linguística Aplicada a la Comunicación*. 89, 221–234. DOI: <https://doi.org/10.1016/j.cla.2022.05.001>

- org/10.5209/clac.76669
- [11] Taylor, H., Goodall, J., 2019. A preliminary investigation into the rhetorical function of 'I' in different genres of successful business student academic writing. *Journal of English for Academic Purposes*. 38, 135–145. DOI: <https://doi.org/10.1016/j.jeap.2019.01.009>
- [12] Nathan, P.B., 2016. A genre-based study of case response writing on an MBA programme. *Journal of Academic Writing*. 6(1), 122–133. DOI: <https://doi.org/10.18552/joaw.v6i1.290>
- [13] Jo, C.W., 2021. Short vs. extended adolescent academic writing: A cross-genre analysis of writing skills in written definitions and persuasive essays. *Journal of English for Academic Purposes*. 53, 101014. DOI: <https://doi.org/10.1016/j.jeap.2021.101014>
- [14] Han, Y., Hyland, F., 2015. Exploring learner engagement with written corrective feedback in a Chinese tertiary EFL classroom. *Journal of Second Language Writing*. 30, 31–44. DOI: <https://doi.org/10.1016/j.jslw.2015.08.002>
- [15] Ostovar-Namaghi, S.A., Khorram, F., Moezzi-pour, F., 2022. Exploring the use of modality in EFL learners' writing. *English Text Construction*. 15(1), 68–88. DOI: <https://doi.org/10.1075/etc.00050.ost>
- [16] Frankenberg-Garcia, A., 2018. Investigating the collocations available to EAP writers. *Journal of English for Academic Purposes*. 35, 93–104. DOI: <https://doi.org/10.1016/j.jeap.2018.07.003>
- [17] Mardieva, D., Bakiyeva, G., Kannazarova, Z., Saidova, Z., 2024. A bibliometric review: Interventions for enhancing speaking skills in non-English-speaking contexts. *XLinguae*. 17(4), 195–224. DOI: <https://doi.org/10.18355/XL.2024.17.04.12>
- [18] Kannazarova, Z., Juliev, M., Muratov, A., et al., 2024. Groundwater in the Commonwealth of Independent States: A bibliometric analysis of Scopus-based papers from 1972 to 2023, emphasizing the significance of drainage. *Groundwater for Sustainable Development*. 25, 101083. DOI: <https://doi.org/10.1016/j.gsd.2024.101083>
- [19] Zhang, X., Yu, S., 2022. Training student writers in conducting peer feedback in L2 writing: A meaning-making perspective. *Applied Linguistics Review*. 13(4), 439–460. DOI: <https://doi.org/10.1515/applirev-2019-0045>
- [20] Gonzalez Rodriguez, L.M., Alvarez Mosquera, P., 2020. The impact of feedback and explicit rhetorical instruction on EFL students' writing proficiency in higher education. *Atlantis-Journal of the Spanish Association of Anglo-American Studies*. 42(1), 120–142. DOI: <https://doi.org/10.28914/Atlantis-2020-42.1.07>
- [21] Yang, M., 2023. Supervisory feedback, reflection, and academic discourse socialization: Insights from an L2 doctoral student's paper writing experience. *Journal of English for Academic Purposes*. 62, 101215. DOI: <https://doi.org/10.1016/j.jeap.2023.101215>
- [22] Durham, P.N., 2021. 'We make the invisible visible': Investigating and evaluating the one-to-one consultation service at a UK higher education institution. *Journal of English for Academic Purposes*. 52, 101000. DOI: <https://doi.org/10.1016/j.jeap.2021.101000>
- [23] AL Harrasi, K.T.S., 2023. Reexamining feedback in the context of different rhetorical patterns of writing. *Language Testing in Asia*. 13(4). DOI: <https://doi.org/10.1186/s40468-023-00216-6>
- [24] Han, Y., Hyland, F., 2019. Academic emotions in written corrective feedback situations. *Journal of English for Academic Purposes*. 38, 1–13. DOI: <https://doi.org/10.1016/j.jeap.2018.12.003>
- [25] Zheng, Z., Drybrough, A.G., 2023. Translanguaging in the academic writing process: Exploring Chinese bilingual postgraduate students' practices at a British university. *Journal of English for Academic Purposes*. 65, 101269. DOI: <https://doi.org/10.1016/j.jeap.2023.101269>
- [26] Walkova, M., 2020. Transition markers in EAP textbooks. *Journal of English for Academic Purposes*. 46, 100874. DOI: <https://doi.org/10.1016/j.jeap.2020.100874>
- [27] Pinto, P.T., de Camargo, D.C., Serpa, T., et al., 2021. Analysing the behaviour of academic collocations in a corpus of research-papers: A data-driven study. *Revista de Estudos da Linguagem*. 29(2), 1229–1252. DOI: <https://doi.org/10.17851/2237-2083.29.2.1229-1252>
- [28] Rubiaee, A.A.M., Darus, S., Abu Bakar, N., 2019. The effect of writing knowledge on EFL students' ability in composing argumentative essays. *Arab World English Journal*. 10(4), 263–287. DOI: <https://doi.org/10.24093/awej/vol10no4.20>
- [29] Ahmad, M., Mahmood, M.A., Siddique, A.R., 2019. Organisational skills in academic writing: A study on coherence and cohesion in Pakistani research abstracts. *Languages*. 4(4), 92. DOI: <https://doi.org/10.3390/languages4040092>
- [30] Fendri, E., Triki, M., 2022. The negotiation of authorial persona in dissertations literature review and discussion sections. *Russian Journal of Linguistics*. 26(1), 51–73. DOI: <https://doi.org/10.22363/2687-0088-27620>

- [31] Lo, Y.Y., Othman, J., Lim, J.W., 2020. Multiplex aspects in the construction of academic writer identity among ESL doctoral students. *3L - Language Linguistics Literature: The Southeast Asian Journal of English Language Studies*. 26(3), 110–123. DOI: <https://doi.org/10.17576/3L-2020-2603-09>
- [32] Lehman, I.M., Anderson, R., 2021. Inviting individual voice to second language academic writing. *International Review of Pragmatics*. 13(1), 61–85. DOI: <https://doi.org/10.1163/18773109-01301002>
- [33] Al Sharoufi, H., 2022. Towards a unified English technology-based writing curriculum in the Arabian Gulf countries: The case of Oman. *Language Testing in Asia*. 12(33). DOI: <https://doi.org/10.1186/s40468-022-00178-1>
- [34] Adhami, N., Taghizadeh, M., 2022. Integrating inquiry-based learning and computer supported collaborative learning into flipped classroom: Effects on academic writing performance and perceptions of students of railway engineering. *Computer Assisted Language Learning*. 37(3), 521–557. DOI: <https://doi.org/10.1080/09588221.2022.2046107>
- [35] Frankenberg-Garcia, A., Lew, R., Roberts, J.C., et al., 2019. Developing a writing assistant to help EAP writers with collocations in real time. *ReCALL*. 31(1), 23–39. DOI: <https://doi.org/10.1017/S0958344018000150>