

Corpus-Based Comparative Analysis of Quantitative and Qualitative Research Articles in TEFL: A Lexico-Grammatical and Move Structure Approach

Alireza Kargar¹, Parisa Ghashami² & Mohamadreza Jafary³

¹ Department of Humanities, Lorestan University, Khoramabad, Iran

² Department of English language and literature, Islamic Azad University of Foreign Languages, Hamedan, Iran

³ Faculty of Education, McGill University, Montreal, Canada

Correspondence: Mohamadreza Jafary, DISE, Faculty of Education, McGill University, Montreal, H3 A1Y2, Canada. E-mail: Mohamadreza.Jafary@mail.mcgill.ca; Jafary.rezaa@gmail.com

Received: October 27, 2024

Accepted: February 15, 2025

Online Published: February 17, 2025

doi: 10.5539/elt.v18n3p10

URL: <https://doi.org/10.5539/elt.v18n3p10>

Abstract

This study examines the abstract, introduction, results/discussion, and conclusion sections of quantitative and qualitative academic papers in the field of TEFL, focusing on their lexico-grammatical and move-structure features. Utilizing both quantitative and qualitative methods, the research explores potential differences between these two genre-specific corpora in terms of their linguistic and rhetorical characteristics. The analysis of move-structure was based on Swales' CARS model (2004). A mixed approach of computer-assisted and manual analysis was used to ensure validity. Fifty research articles from ELT journals, representing both quantitative and qualitative approaches, were selected for analysis. Statistical interpretation of the results, including vocabulary profiles, readability statistics, and move-step structures, was conducted using the non-parametric Mann-Whitney U test. The results, with a significance level of $P < 0.05$, indicated that most lexico-grammatical features across abstracts, introductions, results/discussion, and conclusions in quantitative and qualitative papers were not significantly different. However, move-structure analysis revealed distinct variations between the two genres across these sections. These findings provide valuable insights for academic researchers in the EFL context, suggesting that while research methodology is important, the choice of topic and the researcher's unique perspective may be more critical in shaping the study.

Keywords: discourse analysis, academic writing, qualitative research, quantitative research, TEFL, move structure, CARS model, Mann-Whitney U test

1. Introduction

1.1 Background

1.1.1 Importance of Academic Writing in TEFL

Academic writing is essential for both students and professionals in the field of Teaching English as a Foreign Language (TEFL). It plays a crucial role in enabling scholars to synthesize complex ideas and engage with existing research. For non-native speakers, mastering academic writing is particularly challenging due to the need to balance language learning with the mastery of academic conventions (Jafary, 2023). The ability to publish in high-impact journals often hinges on proficiency in these areas, making academic writing a key factor in career advancement for TEFL researchers (Hyland, 2004). Furthermore, the pressure to publish in English-medium journals increases the need for mastering both linguistic and academic norms (Swales, 2004). In TEFL classrooms, educators must prepare students to write at a level that meets international research standards. This is particularly relevant for researchers from non-English-speaking backgrounds, who must not only navigate complex content but also meet the rhetorical and stylistic expectations of their academic audience (Bhatia, 1993; Swales, 2004). Academic writing, therefore, plays a crucial role in shaping the broader academic community and advancing global knowledge in TEFL (Biber et al., 2007).

1.1.2 Overview of Lexico-Grammatical and Move Structure Analysis in Research Articles

To understand academic writing in TEFL, an in-depth analysis of lexico-grammatical features and rhetorical moves is required. These analyses explore word choice, sentence structure, and the use of passive voice—essential for clarity and formality in research articles (Biber et al., 1998). For instance, the use of academic vocabulary is a critical skill in constructing meaningful arguments and conveying complex ideas in TEFL (Brezina, 2018). The use of passive voice, often associated with objectivity in academic discourse, also plays a vital role in how findings are communicated (Flowerdew, 2022). Move structure analysis, based on Swales' (2004) CARS model, investigates how arguments are organized across sections such as the abstract, introduction, results, and discussion. This approach allows researchers to craft papers that are aligned with the expectations of their academic audience, increasing their chances of publication success (Swales, 2004). This model has been particularly influential in TEFL, providing insights into how research gaps are identified, and contributions are framed (Anthony, 2022).

1.1.3 The Role of Corpus-Based Studies in Revealing Discourse Patterns in Academic Writing

Corpus-based studies provide a powerful tool for examining patterns in academic writing. By analyzing large text collections, researchers can uncover trends in lexico-grammatical usage across different genres and disciplines (Hyland & Jiang, 2021). This approach has been widely applied in TEFL research, revealing important differences in how language is used in research articles, textbooks, and classroom discourse (Hyland, 2022). For example, studies comparing qualitative and quantitative articles in TEFL have identified notable differences in their rhetorical strategies, with quantitative papers favoring more formulaic structures and qualitative papers adopting a narrative style (Biber et al., 2007).

1.1.4 Pedagogical Implications

The insights gained from corpus-based research have significant pedagogical implications. By identifying common discourse patterns, educators can develop targeted strategies to improve students' academic writing skills (Brookes & McEnery, 2019). These strategies may include interventions that focus on common errors made by non-native speakers or the development of discipline-specific conventions to help students effectively organize their research papers (Caple et al., 2020). This data-driven approach supports more informed teaching practices in TEFL and helps non-native English writers to navigate the challenges of academic discourse (Flowerdew, 2022).

1.2 *Research Problem*

1.2.1 Challenges Faced by EFL Students in Writing and Publishing Academic Papers

For English as a Foreign Language (EFL) students, writing and publishing academic papers in high-impact journals pose significant challenges. These challenges often stem from a lack of mastery in academic writing conventions, such as appropriate lexico-grammatical features, rhetorical strategies, and the ability to construct coherent and persuasive arguments. Many non-native English-speaking researchers struggle to align their writing with the formal requirements of scholarly publications (Hyland & Jiang, 2021). The complexity of transitioning from conversational or general English to formal academic discourse—characterized by complex sentence structures and precise vocabulary—presents a significant hurdle for EFL students (Bhatia, 1993; Johns, 1997).

Moreover, understanding the nuanced differences between qualitative and quantitative research methodologies adds another layer of difficulty. EFL students often face challenges in choosing the correct linguistic and rhetorical strategies for each section of a research paper, such as the abstract, introduction, and conclusion (Hyland, 2019). The rigorous standards imposed by international academic journals demand not only proficiency in language but also a deep understanding of genre conventions and the expectations of academic discourse communities (Zhang & Zhan, 2020). This issue is compounded by the fact that many EFL students lack the necessary genre awareness, which is essential for presenting research findings in a structured, persuasive, and clear manner (Hyland, 2004; Johns, 1997).

For non-native English speakers, academic writing requires more than just language proficiency. Genre awareness, which encompasses the ability to structure research findings according to academic conventions, is just as important (Johns, 1997). As noted by Hyland & Jiang (2021), the challenge of producing academic papers is heightened by the unfamiliarity many EFL students have with academic prose conventions, particularly in specialized genres like research articles. Therefore, there is a clear need for targeted training that focuses on both language and genre-specific skills to improve the academic writing and publishing success of EFL researchers (Biber et al., 2007).

1.2.2 Lack of Comparative Studies Analyzing TEFL Articles from Both Quantitative and Qualitative Perspectives

In addition to writing challenges, there is a notable scarcity of comparative studies examining TEFL research articles from both quantitative and qualitative perspectives. While genre analysis has been widely used to study academic writing, most research tends to focus on either quantitative or qualitative papers in isolation. Few studies have systematically compared the lexico-grammatical and move structure features of both research types, which leaves a significant gap in the literature (Biber et al., 2007; Canagarajah, 1996). This lack of comparative analysis limits the ability of TEFL scholars to fully understand the distinctions between these two genres. Understanding these differences is essential for EFL writers, as it helps them make informed decisions about the appropriate writing conventions to follow, depending on their chosen research methodology. Quantitative papers typically adopt more formulaic structures with technical language, while qualitative studies tend to use a narrative-driven style with more descriptive language and flexibility in move structures (Flowerdew & Dudley-Evans, 2002). For EFL students who are already struggling with language proficiency, having a clear understanding of the differences between these two research types is crucial for ensuring academic success (Jafary, 2012). Moreover, understanding these distinctions can assist educators in developing more targeted teaching strategies that address the specific needs of students producing either quantitative or qualitative work. By focusing on the linguistic and rhetorical features specific to each genre, educators can provide more effective guidance in helping students navigate the challenges of academic writing and publication (Hyland, 2004; Seufert et al., 2021).

It is noteworthy that EFL students face dual challenges in mastering the conventions of academic writing and dealing with the scarcity of comparative research that addresses both quantitative and qualitative TEFL research articles. By investigating the linguistic and rhetorical differences between these two research types, this study aims to provide valuable insights for both EFL writers and educators, enhancing their understanding and ability to publish successfully in international academic forums. (Jafary, 2024).

1.3 Objective

The primary objective of this study is to compare the lexico-grammatical features and move structures found in quantitative and qualitative research articles within the field of Teaching English as a Foreign Language (TEFL). Specifically, this research aims to analyze the abstract, introduction, results/discussion, and conclusion sections of these articles to uncover distinct linguistic and rhetorical patterns used in both genres. This includes identifying differences in vocabulary usage, sentence structure, and rhetorical moves, focusing on how research gaps are introduced, findings are presented, and engagement with existing literature is conducted (Swales, 2004; Biber et al., 2007). This comparison provides critical insights into how authors in both genres navigate academic discourse.

This investigation will offer practical insights for EFL scholars and educators by equipping non-native English-speaking authors with the tools to effectively structure research articles for scholarly publications. By analyzing vocabulary profiles, the use of passive structures, and sentence complexity, alongside Swales' (2004) CARS model for move structure, this study provides authors with strategies for improving their academic writing and publication success (Flowerdew, 2022; Hyland, 2022)

1.4 Significance

This study is significant for both genre-based pedagogy and academic writing instruction, particularly for non-native English speakers. Understanding the lexico-grammatical and rhetorical structures of different academic genres is crucial for effective instruction in TEFL. The findings will inform curriculum design and enhance teaching strategies aimed at improving students' academic writing skills (Hyland & Jiang, 2021). This is particularly relevant in non-native English contexts, where students face additional challenges mastering academic discourse (Jafary, 2023). The practical implications of this research extend to both TEFL educators and students. EFL learners, especially those in higher education, are frequently required to produce research articles that meet the high linguistic and structural standards of international journals. By providing an in-depth analysis of the rhetorical and linguistic conventions specific to qualitative and quantitative writing, this study offers concrete guidance to help non-native writers navigate the challenges of academic publishing (Biber et al., 2019; Galaidin, 2021). The study highlights the need for tailored academic writing instruction that addresses the unique demands of different genres, empowering EFL students to succeed in international academic communities.

1.5 Research Questions and Hypotheses

1.5.1 Research Questions

- (1) What are the lexico-grammatical features of qualitative and quantitative research articles in the field of TEFL?
- (2) How do the move structures in the abstract, introduction, results/discussion, and conclusion sections differ between qualitative and quantitative research articles?

(3) Do qualitative and quantitative research articles in TEFL differ significantly in terms of their lexico-grammatical features?

(4) Do qualitative and quantitative research articles in TEFL exhibit different move structures?

1.5.2 Hypotheses

(1) H1: There is no significant difference in the lexico-grammatical features between qualitative and quantitative research articles across the abstract, introduction, results/discussion, and conclusion sections.

(2) H2: There is no significant difference in the move structures between qualitative and quantitative research articles in the abstract, introduction, results/discussion, and conclusion sections.

These research questions and hypotheses set the foundation for a detailed comparative analysis. By focusing on both linguistic features and rhetorical structures, the study will provide insights into how academic writing in TEFL varies across genres, contributing to the broader understanding of academic discourse in non-native English contexts.

2. Literature Review

2.1 Theoretical Framework

2.1.1 Overview of Discourse Analysis, Genre Analysis, and Corpus Linguistics

Discourse analysis, genre analysis, and corpus linguistics form the core of this study's analytical framework. Discourse analysis focuses on language beyond individual sentences, examining how language is used in real-world contexts to achieve communicative goals (Biber et al., 2021). It considers the ways language patterns, structures, and rhetorical moves convey meaning. For example, discourse analysis can investigate how EFL writers structure arguments and how they use specific linguistic tools to engage with the reader (Hyland, 2022; Jafary, 2014).

Genre analysis, pioneered by Swales (1990), provides a framework for examining how different types of texts adhere to specific structures and serve common communicative purposes. In the field of TEFL, genre analysis helps understand how research papers are organized, how arguments are framed, and how research is presented. Swales' CARS model (2004) remains highly relevant for analyzing the structure of academic introductions. The model breaks down the introduction into three moves: establishing a research territory, identifying a gap, and outlining the present research. This framework is essential for analyzing the rhetorical strategies employed by TEFL authors.

Corpus linguistics, in contrast, relies on large collections of texts (corpora) to investigate language use patterns across different genres and disciplines. This approach employs computational tools to systematically analyze linguistic patterns, such as the frequency of specific words, phrases, or syntactic structures (Brezina, 2018). The combination of discourse analysis, genre analysis, and corpus linguistics enables this study to explore both the rhetorical and lexico-grammatical features of TEFL research articles, providing a comprehensive understanding of how language is used in different academic contexts (Caple et al., 2020).

2.1.2 Explanation of Swales' CARS Model and Its Application to Academic Writing

Swales' CARS model (Create a Research Space), developed in 1990 and revised in 2004, is a widely accepted framework for analyzing academic writing, especially in research article introductions. The model outlines three essential moves: establishing a research territory, indicating a gap, and presenting the current study. Each of these moves includes smaller rhetorical steps that guide the writer in positioning their work within the broader academic landscape (Jafary, 2022; Swales, 2004). For EFL writers, mastering the CARS model is critical because it offers a clear structure for organizing ideas. Move 1—"Establishing a Territory"—provides context and background information, while referencing existing research to demonstrate familiarity with the field. Move 2—"Establishing a Niche"—identifies a gap in the literature that the current study seeks to address. Finally, Move 3—"Presenting the Present Work"—states the research questions or hypotheses, briefly explains the methodology, and summarizes the findings. Applying this model helps non-native English writers improve the clarity and coherence of their introductions, which is vital for successful publication in international journals (Alharbi, 2021; Hyland & Jiang, 2021).

2.2 Previous Studies

2.2.1 Review of Prior Corpus-Based Studies on TEFL, Genre Analysis, and Move Structures

Numerous corpus-based studies have investigated TEFL writing, particularly in the areas of genre analysis and move structures. For instance, Biber et al. (1998) provided foundational research on lexico-grammatical features in

academic writing, showing how different genres use language patterns to achieve specific communicative goals. More recently, Alharbi (2021) analyzed large corpora to investigate linguistic markers across genres, highlighting how quantitative and qualitative research articles employ distinct strategies in language usage. These studies demonstrate that genre-specific linguistic features in TEFL research articles are shaped by the nature of the research methodology.

Studies such as those by Hyland (2005) and Paltridge (2011) have examined the rhetorical structures of academic writing, focusing on the move structure patterns in research articles. For example, Hyland (2005) found that discussion sections in qualitative studies often employ a more interpretive style, whereas quantitative papers tend to focus on the presentation of statistical results. Similarly, Peacock (2002) and Pho (2008) applied Swales' CARS model to analyze the introduction sections of TEFL research articles, identifying common rhetorical moves and steps. These findings underscore the importance of move structure analysis for understanding how researchers position their work in the academic community.

2.3 Gaps in the Literature

While previous studies have significantly contributed to understanding the genre-specific features of academic writing in TEFL, there is a notable gap in comparative research that directly examines both qualitative and quantitative research articles. Most studies have focused on either genre in isolation, leaving a gap in understanding how these two genres compare in terms of lexico-grammatical features and move structures. This study seeks to address this gap by offering a detailed comparative analysis of these two research genres in TEFL, thus contributing to the growing body of literature on academic discourse and genre analysis (Alharbi, 2021).

Similarly, Matsuda (2001) explored the use of rhetorical moves in qualitative versus quantitative research articles in second language writing, noting that qualitative papers often include more elaborate discussions of methodology and theoretical frameworks, while quantitative papers focus more on data presentation and analysis. These differences reflect the underlying goals of each research methodology: qualitative research aims to interpret and understand complex phenomena, while quantitative research seeks to test hypotheses and present empirical findings.

The current study builds on these findings by exploring how these genre-specific conventions manifest in TEFL research articles. While much has been done to analyze the linguistic features of qualitative and quantitative research in other fields, there is a gap in the literature when it comes to TEFL, particularly regarding the interplay between lexico-grammatical features and move structures. Additionally, while Swales' CARS model has been widely applied to research article introductions, there is a lack of research on how this model can be adapted to analyze the entire structure of research papers, including abstracts, results, and conclusions. This study aims to fill these gaps by providing a comprehensive analysis of both the lexico-grammatical and rhetorical features of TEFL research articles, with a focus on comparing qualitative and quantitative genres. The absence of such comparative studies is particularly problematic for non-native English speakers, who may struggle to navigate the complex conventions of academic writing. By addressing these gaps, this study will not only contribute to the field of TEFL but also provide practical insights for educators and researchers seeking to improve the academic writing skills of EFL students.

3. Literature Review

3.1 Theoretical Framework

3.1.1 Overview of Discourse Analysis, Genre Analysis, and Corpus Linguistics

Discourse analysis, genre analysis, and corpus linguistics form the foundation of this study's analytical framework. Discourse analysis refers to the study of language beyond individual sentences, examining how language is used in context to accomplish specific communicative goals (Biber et al., 2021). It involves examining patterns and structures within language that contribute to meaning, such as sentence structures, word choices, and rhetorical moves. For example, discourse analysis can be applied to analyze academic texts in TEFL to explore how language is used to achieve specific academic and research-related goals.

Genre analysis, as first popularized by Swales (1990), focuses on understanding how specific types of texts share common communicative purposes and structural features. In TEFL, genre analysis is applied to research articles to explore how they adhere to conventions for organizing ideas, framing arguments, and presenting research findings. Swales' CARS (Create a Research Space) model, revised in 2004, remains a widely accepted framework for analyzing academic writing, especially introductions, by identifying moves such as establishing a research territory, indicating gaps in the literature, and presenting the current study (Swales, 2004).

Corpus linguistics is another central analytical approach in this study. It involves the use of large, digitally stored text collections, or corpora, to analyze linguistic patterns across different genres and contexts. Corpus analysis allows researchers to empirically investigate language use, making it possible to identify patterns that may not be immediately evident through qualitative analysis alone (Biber, Conrad & Reppen, 2021). For instance, corpus-based studies have revealed distinct differences in the use of lexico-grammatical features in quantitative and qualitative research articles (Brezina, 2018). Combining discourse analysis, genre analysis, and corpus linguistics offers a comprehensive approach to exploring the rhetorical and linguistic features in TEFL academic writing.

3.1.2 Explanation of Swales' CARS Model and Its Application to Academic Writing

Swales' CARS (Create a Research Space) model is a well-established framework for analyzing academic introductions. It consists of three moves: establishing a research territory, identifying a gap, and introducing the current research. Each move involves specific steps that allow authors to structure their introductions coherently. The CARS model is especially relevant for non-native English speakers as it provides a clear template for organizing complex ideas, helping them write more accessible and structured academic papers (Swales, 2004). This model is crucial for teaching academic writing, particularly for EFL students learning to write for international academic communities (Flowerdew, 2022).

3.2 Previous Studies

3.2.1 Review of Prior Corpus-Based Studies on TEFL, Genre Analysis, and Move Structures

Corpus-based studies have significantly contributed to understanding academic writing in TEFL, particularly regarding genre analysis and move structures. Biber et al. (1998) conducted seminal work on the lexico-grammatical features of academic texts, highlighting the distinct linguistic patterns used across different academic genres. Their work provided foundational insights into how quantitative and qualitative research articles employ different linguistic strategies to achieve communicative goals (Brezina, 2018).

In terms of move structure analysis, scholars like Hyland (2005) and Paltridge (2011) have explored how rhetorical moves are organized within sections of research articles. Their studies emphasized that academic writing is highly formulaic, with recurring patterns across genres. For example, Hyland (2005) noted that the discussion sections of qualitative research tend to be more interpretive, while quantitative research articles focus on statistical results and objective analysis (Hyland, 2019).

Other studies, such as those by Peacock (2002) and Pho (2008), applied Swales' CARS model to examine the structure of introductions in TEFL research articles. Their findings demonstrated how researchers use rhetorical moves to position their work within the academic community. By comparing these studies to the current research, it becomes evident that while much has been done to explore academic writing in TEFL, more comparative studies are needed to analyze both qualitative and quantitative genres simultaneously (Flowerdew, 2022).

3.2.2 Existing Research on Differences Between Qualitative and Quantitative Papers in Other Fields

Research outside of TEFL, in fields such as medicine, engineering, and applied linguistics, has also explored differences between qualitative and quantitative papers. For instance, Marco (2000) conducted a corpus-based study of medical research articles, revealing that qualitative studies typically feature narrative-driven language, whereas quantitative studies use more technical vocabulary and focus heavily on statistical analysis (Gil, 2020). These findings suggest that the distinctions between qualitative and quantitative research writing are not unique to TEFL but are prevalent across academic disciplines.

Recent studies continue to explore these distinctions. Galaidin (2021), for example, conducted a cross-disciplinary study on the linguistic and rhetorical differences between qualitative and quantitative abstracts in linguistics and engineering, revealing similar patterns of variation between the two genres. Similarly, Flowerdew (2022) highlighted the need for more research into the rhetorical strategies employed in quantitative versus qualitative writing, particularly in relation to move structures and lexico-grammatical features. These studies reinforce the importance of genre analysis and corpus linguistics as tools for understanding the complexities of academic writing across disciplines.

3.3 Move Structure Analysis

The move structure analysis in this study was based on Swales' Create a Research Space (CARS) model (2004), which remains a cornerstone framework for understanding the rhetorical structure of research articles. The CARS model divides the introduction into three moves: establishing a research territory, identifying a gap, and presenting the current research (Swales, 2004). This study applied the model not only to the introduction but also to other

sections, including the abstract, results/discussion, and conclusion, to provide a comprehensive overview of how both qualitative and quantitative research articles structure their academic writing.

In the abstract, this study focused on how authors succinctly summarize their work by outlining the background, methodology, results, and implications. Applying the CARS model, we aimed to determine how well abstracts serve their purpose of providing a compact, yet comprehensive overview of the research. Abstracts play a crucial role in academic papers, and the application of move structure analysis ensures the clarity and functionality of these sections (Ellis, 2020). The introduction was examined using Swales' moves to see how effectively authors grounded their research in existing literature, identified gaps, and outlined their objectives. This is a critical element in positioning the research within the academic conversation and establishing its relevance (Arsyad et al., 2023). This study also analyzed how qualitative and quantitative papers differ in their approach to identifying research gaps and how these gaps are introduced in different disciplines (Cortes, 2020).

The results/discussion sections were analyzed to see how the findings were presented and interpreted. Previous research suggests that quantitative articles tend to focus more on presenting statistical results, while qualitative papers emphasize interpretation and connections to broader theoretical frameworks (Flowerdew, 2022). By applying the CARS model to these sections, this study sought to understand how authors in each genre structure their discussions and conclusions differently (Galaidin, 2021). Finally, the conclusion sections were examined to see how authors summarize their findings, highlight the significance of their work, and suggest future research directions. Conclusions are essential for demonstrating the broader implications of the research, and the CARS model provided a lens for understanding how these sections differ in qualitative and quantitative papers (Lam & Nnamoko, 2024).

This move structure analysis provided a comprehensive perspective on how academic papers in the field of TEFL are organized across different genres. The findings offer valuable insights for both educators and researchers who aim to write more coherent and persuasive academic articles.

3.4 Data Collection and Analysis

The data collection for this study integrated both automated tools and manual tagging to ensure comprehensive analysis. For move structure analysis, AntMover software (version 1.0) was employed, a tool specifically designed to identify and categorize rhetorical moves within research articles. AntMover allowed the input of selected texts and automatically tagged sections based on pre-defined move structures from Swales' CARS model (Swales, 2004). This helped maintain consistency in the analysis and enabled the efficient processing of a large corpus of research articles (Shibani, 2021). The software's ability to track rhetorical structures across multiple papers has been previously utilized in genre studies, particularly in English for Academic Purposes (EAP) research (Hyland, 2022).

Additionally, a Vocabulary Profiler was used to assess vocabulary richness and diversity across the research articles. The tool provided quantitative data on academic and general vocabulary distribution, which enabled the comparison between the two genres—qualitative and quantitative. The vocabulary profiles were essential for determining if qualitative and quantitative research papers used different levels of specialized academic vocabulary, supporting previous findings in the field (McEnery & Hardie, 2012).

For statistical analysis, this study utilized the Mann-Whitney U test, a non-parametric statistical test suitable for comparing two independent samples. This test was chosen because it does not assume a normal distribution of data, making it ideal for linguistic analysis where distribution can be highly variable (Cortes, 2020). The Mann-Whitney U test was applied to assess differences in vocabulary profiles, readability scores, and the use of passive structures between qualitative and quantitative articles (Vaughn, 2019). This statistical test was also used to analyze the frequency and sequence of rhetorical moves across various sections of the articles, such as abstracts, introductions, and results/discussion sections, providing insights into how different genres structure their arguments (Zhang & Zhan, 2020). Combining manual tagging with AntMover and statistical analysis through the Mann-Whitney U test offered a robust and comprehensive methodology for investigating the lexico-grammatical and rhetorical features of TEFL research articles. This mixed-methods approach, integrating both qualitative and quantitative insights, provided a thorough comparison of the two genres, ensuring that the findings were grounded in linguistic and rhetorical evidence.

4. Results

4.1 Lexico-Grammatical Findings

The lexico-grammatical analysis revealed distinct patterns between quantitative and qualitative research articles in terms of vocabulary usage, readability, and passive structures. These findings align with earlier studies that highlight the unique linguistic requirements of academic genres (Biber et al., 2019; Cortes, 2020).

4.1.1 Vocabulary Usage

Quantitative papers exhibited a higher usage of specialized academic vocabulary, particularly from the Academic Word List (AWL). This aligns with the findings of Hyland (2019), who notes that quantitative research papers often rely heavily on technical terminology to ensure precise data presentation. On the other hand, qualitative papers employed a wider range of general vocabulary, relying on more descriptive language. The use of K1 and K2 words (the most common words in English) was significantly higher in qualitative articles, emphasizing their narrative style. This pattern is supported by Ellis et al. (2020), who explored the role of lexical bundles in academic writing, noting that qualitative studies often prioritize descriptive explanations over the density of content words (Ellis et al., 2010).

4.1.2 Readability

The Flesch Reading Ease and Flesch-Kincaid Grade Level scores indicated that quantitative research articles were more difficult to read, with an average score of 25-30. The complexity of quantitative articles is attributed to longer sentences and the frequent use of subordinate clauses, reflecting their dense empirical nature. Gopen and Swan's (1990) analysis of scientific prose also supports this, as technical writing tends to be less accessible to non-experts. In contrast, qualitative papers, scoring 35-40 on the readability scale, were easier to read due to their narrative-driven, conversational style (Hyland, 2022). This difference can be linked to the varying objectives of the two genres: one prioritizes factual precision, while the other aims for rich contextual interpretation.

4.1.3 Passive Structures

Quantitative articles employed significantly more passive voice constructions, which aligns with the need for objectivity and depersonalization in empirical studies (Cortes, 2020). Passive constructions in such articles help focus on the process and findings rather than the researcher. This is in line with Hyland's (2022) work, which suggests that quantitative research often uses passive voice to emphasize neutrality. Conversely, qualitative articles demonstrated a preference for active voice, placing the researcher and participants at the forefront of the narrative, which is consistent with the interpretive nature of qualitative research (Ellis et al., 2020).

4.2 Move Structure Findings

The move structure analysis revealed clear differences in the rhetorical strategies employed by quantitative and qualitative research articles across key sections, including abstracts, introductions, results/discussion sections, and conclusions. These differences highlight how different genres approach the structuring of academic discourse (Hyland, 2022; Swales, 2004).

4.2.1 Abstracts

Quantitative abstracts generally adhered to a structured IMRD (Introduction, Methods, Results, Discussion) format. This structure aligns with Swales' (2004) CARS model, which outlines three essential moves: establishing a research territory, identifying a gap, and presenting the current study. This standardized format ensures that readers quickly grasp the study's main points, crucial in data-driven fields (Antony, L., 2022). In contrast, qualitative abstracts varied in structure, with some following the IMRD format and others adopting a more narrative approach, often including theoretical background and additional context. This flexibility in structure reflects the broader scope and complexity often associated with qualitative research.

4.2.2 Introductions

The introduction sections of quantitative articles followed the CARS model closely, placing emphasis on Move 1 (Establishing a Territory) and Move 2 (Identifying a Niche). These introductions frequently included detailed literature reviews to justify the research's need and relevance (Cortes, 2020). In contrast, qualitative introductions often incorporated theoretical frameworks earlier, devoting more space to Move 1 and emphasizing a broader context before narrowing to specific research gaps. This approach aligns with the goal of qualitative research, which seeks a deeper understanding of phenomena rather than filling a narrowly defined gap in the literature (Peacock, 2002).

4.2.3 Results/Discussion Sections

Quantitative papers were highly structured in their presentation of results, often relying on tables, figures, and statistical analyses. This clear delineation of results, followed by brief interpretations, aligns with Hyland's (2022) observation that quantitative research prioritizes objective data presentation over subjective interpretation. Qualitative papers, on the other hand, presented findings narratively, often integrating participant quotes and providing in-depth discussions that connected results to broader theoretical frameworks (Flowerdew, 2022).

4.2.4 Conclusions

The conclusions of quantitative articles were brief, summarizing the main findings and emphasizing their contributions to the existing literature. Quantitative conclusions frequently pointed to opportunities for further research, particularly in addressing empirical gaps (Swales, 2004). By contrast, qualitative conclusions were longer and more reflective, revisiting research questions and offering practical applications of the findings (Ellis, 2010). This reflective approach underscores the broader goals of qualitative research, which often seeks to understand complex social phenomena in-depth rather than provide conclusive empirical answers.

4.3 Implications for TEFL Writers

The findings of this study offer several practical recommendations for EFL learners and researchers looking to improve their academic writing skills. The differences in lexico-grammatical features and move structures between quantitative and qualitative papers highlight the need for tailored writing strategies that address the unique challenges posed by each genre.

4.3.1 Practical Recommendations for EFL Learners and Researchers

For EFL learners writing quantitative research papers, it is essential to focus on developing a clear and concise writing style that emphasizes precision and objectivity. This includes paying attention to vocabulary usage, particularly the use of academic terms from the Academic Word List (AWL), as well as mastering the use of passive constructions to maintain a formal tone. Additionally, quantitative writers should aim to follow the IMRD structure closely, ensuring that each section of the paper fulfills its specific rhetorical purpose. In contrast, EFL learners writing qualitative research papers should focus on developing a more narrative-driven writing style that allows for flexibility in structure and greater engagement with theoretical frameworks. This includes using a wider range of general vocabulary to describe and interpret the research context, as well as employing active voice constructions to convey a more personal and involved tone. Qualitative writers should also be mindful of the importance of framing their research within a broader theoretical context, particularly in the introduction and conclusion sections.

4.3.2 Implications for Teaching Academic Writing in Non-Native Contexts

The findings of this study have significant implications for the teaching of academic writing in non-native English contexts. One of the key challenges faced by EFL learners is the need to adapt their writing style to meet the expectations of different academic genres. This study suggests that genre-based instruction, which focuses on the specific rhetorical and linguistic conventions of different genres, can be highly effective in helping students develop the skills needed to write and publish in English. Educators should consider incorporating genre-awareness into their academic writing curricula, providing students with opportunities to analyze and practice writing in both quantitative and qualitative genres. This could include activities such as comparing the move structures of different research articles, analyzing the use of academic vocabulary and passive voice in quantitative papers, and practicing the development of narrative and theoretical frameworks in qualitative papers.

In addition to genre-based instruction, educators should also provide students with practical guidance on how to navigate the publication process in international journals. This includes teaching students how to structure their papers according to the expectations of their target audience, how to engage with existing literature in a meaningful way, and how to present their research in a clear and concise manner. By equipping students with these skills, educators can help them overcome the challenges of academic writing and improve their chances of success in the global academic community.

5. Recommendations for Future Research

The findings of this study suggest several avenues for further research. First, future studies should consider expanding the sample size to include a larger corpus of articles from a broader range of TEFL journals, as well as from other related fields such as applied linguistics or second language acquisition. This would allow for a more comprehensive analysis of genre-specific writing strategies across different disciplines and subfields.

Second, there is a need for more in-depth analysis of the lexico-grammatical features and move structures used in research articles across different sections. While this study focused on four key sections (abstract, introduction, results/discussion, and conclusion), future research could examine the use of rhetorical strategies in other sections, such as the literature review or methodology. These sections are often crucial in framing the research and justifying the methodology, and their analysis could provide further insights into how authors structure their papers. Additionally, future studies could explore the interaction between lexico-grammatical features and move structures in greater detail. For example, investigating how certain linguistic features, such as passive voice or specialized vocabulary, are employed to support specific rhetorical moves could offer a more nuanced understanding of how language and structure work together in academic writing. Moreover, expanding the scope of analysis to include other genres, such as conference papers or book chapters, could provide a broader perspective on the writing practices of TEFL researchers.

Finally, there is room for research into how non-native English speakers navigate these genre-specific conventions in academic writing. Understanding the challenges they face in adapting their writing to the expectations of different genres could lead to more targeted pedagogical interventions, helping EFL learners improve their academic writing skills and succeed in publishing their research.

6. Final Remarks

The importance of genre-specific knowledge for academic writers in TEFL cannot be overstated. As this study has demonstrated, the differences between quantitative and qualitative research articles are not merely stylistic; they reflect fundamental differences in how knowledge is constructed, presented, and interpreted within the academic community. For non-native English speakers, mastering these genre-specific conventions is crucial for gaining acceptance in international academic journals and contributing to global academic discourse.

This study has provided valuable insights into the linguistic and rhetorical strategies used in quantitative and qualitative TEFL research articles, offering practical recommendations for EFL learners and researchers. By understanding the distinct writing conventions of each genre, TEFL researchers can tailor their writing to meet the expectations of their audience, thereby increasing their chances of success in publishing their work. Furthermore, educators can use these findings to inform the teaching of academic writing, helping students develop the skills needed to navigate the complex world of academic publishing. As the field of TEFL continues to grow and evolve, the need for genre-specific writing instruction will become even more important. This study represents a step toward addressing that need, but there is much more to be done. By continuing to explore the linguistic and rhetorical features of academic writing in TEFL, researchers and educators can help shape the future of the field, ensuring that non-native English speakers have the tools and knowledge they need to succeed in the global academic community.

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