Examining Cohesion in Academic Writing: A Comparative Study of Organizational Skills in Pakistani and International Research Abstracts

Research Article

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Abstract

Effective writing demands strategic language use for both communicative impact and structural accuracy. Cohesion is one of the keys to achieving these goals (Sutherland, 2015). This study investigates the use of cohesive devices in Pakistani and Native writers' research article abstracts, identifying the different used types and their functions, using the framework of Halliday and Hassan (1976). To achieve this, 50 abstracts were collected from two prominent international research journals (25 from each) of 'W' categories, compiled into a corpus, and analyzed manually. The findings revealed differences in grammatical and lexical cohesive device usage between the two

groups. Native writers frequently used reference, clausal ellipsis, reiteration, and collocation, while Pakistani writers' abstracts showed a higher frequency of conjunctions, nominal ellipsis, and verbal ellipsis. Consequently, the abstracts by native writers exhibited greater interconnectedness and flow of ideas. The results indicated that Pakistani writers primarily organized their texts at a syntactic level, suggesting the need for organizing texts at a semantic level.

Keywords: cohesive devices, coherence, grammatical cohesion, lexical cohesion, pragmatic competence

1. Introduction

Cohesive devices in grammar are tools used in sentences and clauses to ensure text coherence and logical organization. The study of these devices gained prominence with Halliday and Hasan's (1976) cohesion theory. Before their work, linguists concentrated on grammar, syntax, and vocabulary, often neglecting semantic and pragmatic links between sentences. Halliday and Hasan introduced two main types of cohesion: grammatical (including reference, substitution, ellipsis, and conjunction) and lexical (reiteration and collocation).

Cohesion involves linking ideas across sentences, while coherence refers to the underlying logic and sense across a text. According to Halliday and Hasan (1976), cohesive devices foster coherence, enabling writers to connect different ideas and enhancing their pragmatic competence in understanding and encoding contextual information. Their theory offered a framework for text analysis, emphasizing the role of cohesive ties in creating meaning. They argued that without proper syntactic structures, a text can lack cohesion.

Later linguists extended the study of cohesion using the framework of Systemic Functional Grammar, recognizing its importance for analyzing text structure and function. Anwar (2017) examined cohesive devices in undergraduate thesis abstracts but did not address their impact on text comprehension. Similarly, Crossley (2020) explored whether linguistic features indicate writing quality, concluding that successful writing follows various patterns without pinpointing the elements enhancing text comprehension. This research aims to identify cohesive devices that indicate a well-written text, producing cohesion and flow in academic writing, and to demonstrate how cohesion aids English Language Learners in better understanding texts.

This corpus-based study aims to examine cohesion in academic writing skills among Pakistani and non-Pakistani writers. Utilizing Halliday and Hassan's (1976) Model of cohesion, the researcher examines grammatical (reference, substitution, ellipsis, conjunction) and lexical cohesion (reiteration, collocation). Cohesive devices were identified and classified to assess frequency differences between academic texts by Pakistani and Native writers.

1.1 Objective of Study

The objective of this study is:

▪ To investigate the role of cohesive devices in developing cohesion in academic writing.

1.2 Research Question

The research questions are as follows:

▪ What is the frequency of grammatical and lexical cohesion in the abstracts of the Native and Pakistani writers?
▪ How does a comparative analysis of cohesive devices between Native and Pakistani writers affect cohesion?
▪ Which cohesive devices are abundantly used in the selected data by both writers?

Cohesive devices are vital for understanding how texts work beyond individual sentences. It enhances English language learners' comprehension and communication better. The researcher employed a diagnostic research design and mixed-method paradigm to explore the impact of cohesive devices on cohesion in 50 abstracts authored by native and Pakistani writers from international journals.

2. Literature Review

Effective communication relies heavily on written text, which must be coherent and organized to convey information. Cohesive devices are crucial in achieving this clarity by facilitating information integration between sentences. These devices encompass grammatical elements such as reference, substitution, conjunction, and ellipsis, and lexical devices like reiteration and collocation. Therefore, this study aims to investigate the variances in the utilization of cohesive devices and their influence on the academic writing abstracts of Native and Pakistani writers.

Halliday and Hasan (1976) outlined approaches to lexical cohesion, emphasizing its ties to conceptual structures for message interpretation. They categorized lexical cohesive devices into reiteration (repetition, synonym, superordinate, general word) and collocation, which relies on subtle word associations. Despite criticism, their exploration shed light on textual relations, though Hasan later discarded collocation due to subjectivity. Meanwhile, Halliday retained collocation as a "co-occurrence tendency" shaping text expectations. This lack of cohesive harmony poses challenges for ESL and EFL learners, prompting research into cohesive device usage and its impact on text quality.

Chanyoo (2018) explored the correlation between cohesive device usage and academic writing quality in Thai children. Conducting quantitative research, the study identified reiteration, reference, and conjunction as the top three cohesive elements used by Thai students. The findings suggested that foreign language learners gravitate towards cohesive devices they comprehend easily, with reiteration being the most frequently used. Kuswoyo, Sujatna, Maulia and Rida (2020), conducted a corpus-based study for Cohesive Conjunctions "and" and "so" as Discourse Strategies

in English Native and Non-Native Engineering Lecturers. A total of 6 engineering lectures, 3 NS and 3 NNS, were observed for this study. The findings showed no difference in the use of conjunctions. Both writers used, "and" as an additive conjunction whereas "so" was used to imply reasoning.

Nindya and Widiati (2020) observed the use of cohesive devices in argumentative essays by Indonesian EFL learners. The study was to check the ability of Indonesian EFL learners to use cohesive devices properly. They analyzed twenty essays and found 2386 grammatical cohesions. Out of which, 175 were wrong. The researchers concluded that teachers should help students improve their writing abilities through more practice and feedback.

Jassim (2023) explored the use of cohesive devices (CDs), their frequency, and their contribution to a text. For this, he analyzed the speech of the Singaporean Prime Minister. From the conclusion of his analysis, the researcher gathered that the PM of Singapore preferred conjunctions like "and" over other CDs. This is the reason ESL and EFL users could not use syntactic or lexical tools to produce a competent text. So, they tend to use simple cohesive devices that convey their thoughts without any difficulty. Abdulmalek Hammed argued the text needs to develop a unity of ideas, which is only achieved through cohesive devices.

Rahman, Zaigham and Umer (2023) focused on evaluating the use of cohesive devices in the academic writing of undergraduate students. They observed that the students used grammatical cohesion because their teachers focused too much on grammatical instructions and had forgotten to teach them the importance of cohesion. Because of this, students have often underused, misused, or overused cohesive devices. It disrupts the logical connections formed among the text.

The above studies explored relationships between cohesive devices, writing quality, usage descriptions, and learners' proficiency. Most concluded that students struggle with cohesive devices and require assistance from teachers. However, they did not investigate the reason for the lack of their usage despite their importance for the cohesive text. Thus, this study compared the academic writing text abstracts of Native and Pakistani writers to explore the reason for not using different cohesive devices appropriately.

3. Methodology

This research employed a diagnostic design to delve into the factors contributing to cohesion in academic writing among Pakistani and non-Pakistani writers. Analyzing 50 abstracts, with 25 each from native and Pakistani authors between times from 2013 to 2023, the study aimed to explore the frequency and variance in the usage of grammatical and lexical cohesive devices. Researchers utilized mixed methods, qualitative and quantitative data. It was analyzed to gain a comprehensive understanding. The study adopted Halliday and Hasan's (1976) Model of Cohesion as a theoretical framework, providing a taxonomy for categorizing cohesive devices systematically. To discern disparities between Pakistani and Native abstracts, 50 were selected for analysis, with 25 from each

group. Descriptive analyses of cohesive device frequencies were conducted, followed by comparative analysis to elucidate differences in usage patterns.

4. Analysis and Discussion

This study aims to find out the frequency of the use of cohesive devices, i.e. grammatical cohesive devices and lexical cohesive devices, in the abstracts of Native writers and Pakistani writers. Then it provides a comparative analysis of both types. Table 1 shows the use of cohesive devices by non-Pakistani and Pakistani writers.

Table 4.1 Cohesive devices by non-Pakistani and Pakistani writers

Sr. no.	Native writers			Pakistani writers		Differences in %
1	Reference	45	8.92	57	8.78	0.15
2	Substitution	0	0	0	0	0
3	Ellipsis	64	12.7	77	11.86	0.83
4	Conjunction	74	14.7	270	41.6	26.91
5	Reiteration	174	34.5	119	18.33	16.18
6	Collocation	147	29.2	126	19.41	9.75
	Total	**504**	**100**	**649**	**100**	

4.1 Descriptive Analysis

Out of 504 cohesive elements found in the abstracts of non-Pakistani writers, there were 45 references with a percentage of 8.92%, 0 substitutions with 0%, 64 ellipses of 12.7%, and 74 conjunctions contributing to 14.7% of the total percentage, 174 reiterations of 34.5% and 147 collocations with a percentage of 29.2%. The most frequently occurring reference in the abstracts was "this" which occurred 13 times among the 10 abstracts. It is followed by "their" occurred 10 times, "that" and "they" with a frequency of 4, "these" and "there" with a frequency of 3, "it" and "its" with an occurrence of 2 times and finally, "our", "which", "them" and "those" with frequency of 1. Among 64 ellipses, 33 were clausal which made the highest percentage of occurrence. Nominal ellipsis was detected 25 times followed by 6 verbal ellipses. Moving on to conjunction, the most frequently used conjunction was the additive conjunction *"and"* used *61 times*, followed by the conjunctions *"because"* and *"but"* which occurred *3 times*, *"as"* and *"although"* with an occurrence of *2 times* and lastly, *"while", "whereas", "thereby"* and *"so that"* which were used only *once*. This was the distribution of grammatical cohesive devices. Similarly, in lexical devices, *"reiteration"* occurred more frequently than *"collocation"*.

In abstracts of Pakistani writers, there were *57 references*, *0 substitution, 77 ellipses, 270 conjunctions, 119 reiterations,* and *126 collocations*. These devices make up *8.8%, 0%, 11.86%, 41.6%, 18.3%* and *19.4%* of the total *100%*, respectively. The most frequently used reference was *"this"* which was used *21 times*. It was followed by the use of *"their"* which took place *9 times*, then *"it"* and *"they"* which occurred *8 times*, *"them"* which was used *4 times*, *"there"* and *"these"* whose frequency is *2* and finally, *"those",*

"itself" and *"its"* which were used only *1 time*. Ellipsis was found *77 times* in these abstracts out of which *38* were *nominal*, being the most frequent type of ellipsis found in it. *25* were *clausal ellipsis* and *14* were *verbal*. Among the conjunctions, the most occurring was the additive conjunction *"and"* which was used *98 times*. It is followed by the use of *"however"* *9 times, "moreover"* and *"but"* *3 times*, *"thereby"* and *"semi-colon (;)"* *2 times* and *"or"* and *"because"* once. This was the frequency of grammatical cohesive devices. For the lexical cohesive devices, occurrences of *"collocations"* are more than *"reiteration"*.

4.2 Comparative Analysis

After analyzing the abstracts of research articles, we observed a difference in the usage of cohesive devices by Pakistani and Native writers in abstracts. The percentage of reference, ellipsis, reiteration, and collocation is higher in the abstracts written by Native writers than those of Pakistani writers by *0.145%, 0.834%, 16.187%,* and *9.752%*, respectively. Only the percentage of conjunctions is higher in the works of Pakistani writers by *26.91%*. Figure 5.1 illustrates the differences between the percentages of the two categories.

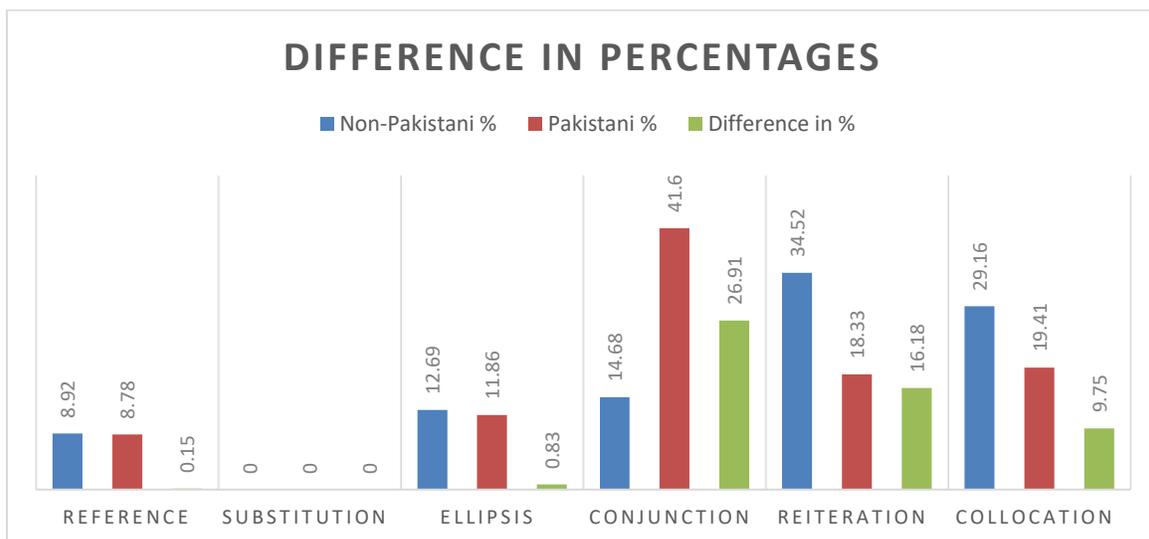Figure 4.1 Differences in Pakistani & Native Frequencies of Cohesive Devices

Figure 5.2 shows the additive conjunction *"and"* is used more dominantly by Pakistani writers than in non-Pakistani writers' abstracts. Secondly, clausal ellipsis is much more frequently used in non-Pakistani writers' abstracts as compared to the other one. Also, verbal and nominal ellipsis have high frequencies in the works of Pakistani writers. Fourthly, there are no cases of substitution, in both categories of the abstracts. And lastly, the use of lexical devices, i.e. reiteration and collocation, is more in non-Pakistani writers' abstracts.

Firstly, the additive conjunction "and" was found abundantly in the abstracts of Pakistani writers. This is attributed to their preference for writing compound and complex sentences over simple

ones, resulting in a higher frequency of conjunction use. In contrast, native writers favor simple and short sentences to convey their ideas more effectively. Pakistani writers generally use complex vocabulary and sentence structures because their textbooks and teachers frequently include such complexities to ensure learners understand the full range of grammatical possibilities in English (Ortega, 2009). In long sentences, different ideas are connected to create coherence, and using "and" effectively links these ideas without altering the sentence's meaning. Pakistani writers might believe that writing complex sentences demonstrates a higher level of language proficiency (Swales & Feak, 2012), which is why they use "and" more frequently in their abstracts.

Next, clausal ellipsis was found more frequently in the works of native writers compared to Pakistani writers. This can be attributed to their superior contextual understanding (Yule, 1996). Native writers, being more adept at grasping various nuances of context, produce concise, effective, and clear works by reducing redundancy (McCarthy, 1991). In contrast, Pakistani writers focus predominantly on grammar, syntax, and vocabulary, which results in less use of ellipsis. The language used in written works is influenced by conversational language, leading natives to omit clauses more often for a natural flow of information (Crystal, 2003). This practice facilitates smooth transitions, maintains reader focus, establishes coherence, and encourages active engagement, thereby reducing the likelihood of reader disinterest.

Pakistani writers, on the other hand, may avoid clausal ellipsis to prevent misunderstandings, fearing that omitted information might not be easily interpreted by readers (Kasper & Rose, 2002). This suggests a lack of pragmatic competence. Conversely, native writers believe that omitting unnecessary clauses enhances the overall effectiveness and clarity of written communication. In summary, non-Pakistani writers use clausal ellipses more frequently than Pakistani writers to keep their content concise and easily interpretable. Kasper and Rose (2002) highlighted that ellipsis is employed by English language learners only after they gain proficiency and confidence in their pragmatic skills.

Even though Pakistani writers exhibit less frequent use of clausal ellipses, their works feature more nominal and verbal ellipses. This emphasis on content richness leads to the omission of less critical information, resulting in a higher frequency of nominal and verbal ellipses and a lower frequency of clausal ellipses (Nisar, Ahmed, & Asif, 2023). These types of ellipses contribute to cohesion and coherence in discourse by omitting redundant elements, allowing writers to focus on conveying new or relevant information. This tendency might stem from Pakistani writers' use of English as a second language, potentially transferring syntactic structures from their first language where ellipsis is more common (Bukhari & Xiaoyang, 2013). Consequently, this practice enhances clarity and efficiency in communication and helps establish connections between sentences or clauses, reinforcing the overall coherence of the text.

There were no instances of lexical device 'substitution' in the abstracts from either category. The absence of substitution results in the overuse and repetition of the same words or phrases, rather

than using terms like "do so" or "one" (Ahmad, Mahmood, & Siddique, 2014). While this can make the text more explicit and clearer, it reduces cohesion and can make the writing feel fragmented. This is why ellipsis is more prevalent in the writers' abstracts compared to substitution. Additionally, repetition may emphasize key terms and make them more memorable, but it comes at the expense of a smoother flow of ideas.

Lastly, the use of lexical devices, such as reiteration and collocation, is more prevalent in the abstracts of non-Pakistani writers. Native English writers utilize these lexical cohesive devices to enhance clarity, emphasize key concepts, and create a cohesive text (Yarmohammadi & Torabi, 2012). These devices help establish consistency, prevent confusion, and aid in comprehension, making their texts easier to follow and understand, thus more effective and engaging (McCarthy, 2008). In contrast, Pakistani writers use fewer reiterations and collocations because they are less exposed to the English language from a young age. This limited exposure results in a reduced use of idiomatic expressions and common phrases, and a weaker intuitive understanding of word and phrase placement. Consequently, non-native writers tend to employ fewer reiterations and collocations in their writing (Demir, 2016).

5. Conclusion

This study analyzed the role of cohesive devices in developing cohesion in the academic writings of native and Pakistani writers, specifically abstracts. It also showed the frequency and difference of cohesive devices, i.e. grammatical and lexical cohesive devices, used by Pakistani and native writers. Furthermore, it provided a comparative analysis between the two. The analyses revealed notable differences in the employment of reference, ellipsis, substitution, conjunction, reiteration, and collocation among the abstracts of the two categories. Non-Pakistani writers exhibited a higher frequency of reference, ellipsis, reiteration, and collocation in their works in comparison to Pakistani writers. However, Pakistani writers are inclined to employ more conjunctions.

The additive conjunction "and" is found excessively in the abstracts of Pakistani writers, indicating a preference for compound and complex sentence structures. It is the result of their educational practices that emphasize the use of compound/complex sentences to show language proficiency (Swales & Feak, 2012). Pakistani writers perceive complex sentences as an indicator of advanced language skills (Ortega, 2009). Thus, they utilized conjunctions like "and" to connect ideas without changing the meaning.

Conflict of Interest: The authors declare that they have no conflict of interest.

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