MEGA INSTITUTE FOR ADVANCE RESEARCH AND DEVELOPMENT

Journal of Arts and Linguistics Studies
ISSN Print 2959-0957 ISSN Online 2959-0965
Volume 3 Issue 3 2025
Pages 4187-4216
Open Access

Disrupting Cohesive Patterns in Academic Theses: A Corpus-Assisted Study of FSS theses at NUML

Publication Details
Paper Received:
April 11, 2025
Paper Accepted:
June 28, 2025
Paper Published:
August 02, 2025

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Article DOI: https://doi.org/10.71281/jals.v3i3.416

Abstract
This study investigates the grammatical cohesion patterns in MPhil theses submitted by students in the Faculty of Social Sciences at the National University of Modern Languages (NUML), Islamabad. Drawing upon Halliday and Hasan's (1976) cohesion model, this research aims to explore the frequency and usage patterns of grammatical cohesive devices in academic discourse and highlight their appropriate and inappropriate applications. Using a mixed-methods approach, a corpus of thirty theses from the departments of Education, International Relations, and Pakistan Studies is compiled and analyzed with AntConc software (3.5.8) and manual annotation. The findings reveal that the most frequently used cohesive devices were references (12.53%) and conjunctions (5.71%), while ellipses (0.28%) and substitution (0.09%) appeared less frequently. Moreover, the study identified instances of inappropriate use of these devices, indicating challenges in cohesive writing among ESL postgraduate students. The comparative analysis across the three departments reveals differences in cohesion usage, with Education showing the most consistent application. The study contributes to improving academic writing pedagogy by recommending targeted instructional strategies for teaching cohesion to ESL learners.
Keywords: Grammatical cohesion, Academic writing, Corpus linguistics, Cohesive devices.

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1. Introduction:

Writing is a productive and complex skill that is critical to academic success, particularly for ESL learners. In the Pakistani context, students face numerous challenges in writing, including poor organization, incoherence, limited vocabulary, and especially a lack of understanding of cohesion. According to Halliday and Hasan (1976), cohesion is a linguistic mechanism that binds different parts of a text together, making the discourse understandable and structured. Studies such as Ahmad et al. (2019), Farooq et al. (2020), and Sheikh (2020) have shown that students in Pakistan often produce writing that lacks appropriate cohesive devices, leading to fragmented and unclear academic discourse.

Cohesion plays a pivotal role in academic writing because it ensures that the reader can easily follow the writer's argument. Grammatical cohesion, which includes reference, conjunction, ellipsis, and substitution, helps maintain this connectedness within texts. ESL learners in Pakistan, especially those not majoring in English, often struggle with these devices due to inadequate training and instruction. Research by Bahaziq (2016) and Almutairi (2017) supports the notion that weak cohesion adversely affects the readability and comprehensibility of academic texts. As a result, their writing becomes less impactful and academically inappropriate.

This study focuses on grammatical cohesion—specifically reference, conjunction, ellipsis, and substitution—in academic discourse produced by MPhil students in the Faculty of Social Sciences (FSS) at NUML. It seeks to identify the most frequently used cohesive devices and evaluate their appropriate or inappropriate usage across three departments: Education, International Relations, and Pakistan Studies. Through a corpus-assisted approach, this research offers

insights into the writing practices of ESL postgraduate students and provides implications for improving writing instruction.

1.1. Statement of the Problem

Despite the importance of cohesive academic writing, ESL students in Pakistani universities often struggle to employ grammatical cohesive devices effectively. This inadequacy affects the clarity and coherence of their academic work, particularly in research theses. There is a lack of empirical studies that systematically analyze the patterns and appropriateness of cohesive device usage in academic discourse within Pakistan, especially using corpus-based methods.

1.2. Significance of the Study

This study holds pedagogical significance for both students and educators. By identifying the strengths and weaknesses in the use of grammatical cohesion, it aims to inform curriculum designers and language instructors about the critical areas where ESL students require support. The findings will contribute to the development of more effective writing instruction strategies and serve as a valuable resource for enhancing the academic writing skills of postgraduate students.

1.3. Research Questions

1. What types of cohesive devices are frequently employed in the academic discourse of students in the faculty of social sciences (FSS) at NUML?
2. How do cohesion patterns deviate in the academic discourse of students in FSS at NUML?

2. Literature Review

Halliday and Hasan's (1976) seminal work on cohesion in English laid the foundation for understanding how different parts of a text are linked through grammatical and lexical devices. Their model identifies five types of cohesive

ties: reference, substitution, ellipsis, conjunction, and lexical cohesion. Grammatical cohesion, which includes all but the last, is central to creating coherence in academic discourse.

Numerous studies have explored the role of cohesion in ESL writing. Bahaziq (2016) investigated the use of cohesive devices by Saudi EFL students and found that although students used various devices, their usage often lacked accuracy, thereby hindering coherence. Similarly, Alarcon and Morales (2011) analyzed the cohesion in argumentative essays by ESL learners and reported frequent misuse of references and conjunctions. These findings suggest that while learners are aware of cohesive devices, their functional application remains a challenge.

In the South Asian context, research by Ahmed and Mahboob (2019) and Sheikh (2020) indicates that Pakistani students face similar struggles. Their work revealed that cohesive devices, particularly reference and conjunction, were used repetitively and sometimes inappropriately, impacting the flow of ideas. Farooq et al. (2020) emphasized the need for writing instruction that explicitly teaches cohesion strategies, pointing to a gap in current academic writing pedagogies.

Corpus-based approaches have also contributed significantly to cohesion research. Studies like those of Wei and Lei (2011) demonstrate how software tools can assist in identifying cohesive patterns in large datasets, offering objective insights into learners' writing. However, such research remains limited in Pakistan, particularly in analyzing postgraduate academic writing across disciplines.

3. Methodology

This study employs a mixed-methods research design to ensure both depth and breadth in analyzing the use of grammatically cohesive devices in academic writing. A total of thirty MPhil theses—ten each from the departments of

Education, International Relations, and Pakistan Studies at NUML—are selected for corpus construction. Only the fifth chapter (Findings and Discussion) from each thesis is used, as it is typically the most analytical and language-rich section. The theses are collected in PDF format from NUML's online thesis repository. These documents are then converted into txt files to facilitate computational analysis. For the quantitative part of the study, AntConc (version 3.5.8), a widely-used corpus analysis software, is employed. This tool enables the identification and frequency calculation of grammatical cohesive devices, specifically reference, conjunction, ellipsis, and substitution. The quantitative findings provide a statistical foundation for understanding the distribution of these devices across the selected disciplines.

To complement the numerical data, a qualitative analysis is also conducted. Selected extracts from the corpus are manually examined to identify patterns of appropriate and inappropriate usage. This phase is grounded in Halliday and Hasan's (1976) cohesion framework, which serves as the analytical lens for categorizing and interpreting the cohesive ties.

The comparative aspect of the study involves evaluating the frequency and quality of cohesive device usage across the three departments. This helps to uncover potential disciplinary trends and pedagogical gaps, contributing to a more nuanced understanding of cohesion in ESL academic writing at the postgraduate level.

4. Data Analysis and Findings

The following data has been analyzed for this study.

Table 1

Name of Discipline	No. of Selected Theses	Word Tokens	Word Types
Education	10	33,435	3,086
International Relations	10	53,270	6,051
Pakistan Studies	10	36,098	4,475
Total	30	122,803	13,612

The above table presents the basic corpus profile constructed for this study. The total corpus comprises 122,803-word tokens and 13,612-word types across thirty theses. The highest number of word tokens and types comes from the International Relations department, suggesting comparatively more extensive use of vocabulary and possibly more elaborate discourse in that department. This also implies that students in International Relations may be producing more complex texts, which could influence the frequency and variety of cohesive devices used.

Table 2

Type of Device	Frequency	Percentage
Reference	1273	12.53%
Conjunction	580	5.71%
Ellipsis	29	0.28%
Substitution	9	0.09%

The data indicates a dominant use of reference and conjunction devices, making up the vast majority of cohesive elements in student writing. Reference includes personal, demonstrative, and comparative categories, which help link ideas and maintain clarity. Conjunctions are used to establish logical relationships between clauses and sentences. However, the very limited use of ellipsis and substitution suggests that students may be unfamiliar with or hesitant to use these more nuanced and context-dependent forms of cohesion.

The minimal use of ellipsis (0.28%) and substitution (0.09%) implies that these devices are either under-taught or under-practiced in academic writing settings. These devices, although less frequent, are essential for avoiding repetition and enhancing the fluency of academic discourse. Their absence may result in more mechanical, less fluid writing.

4.1. Realization of Grammatical Cohesion in the Academic Discourse from the Department of Education

The following table presents the total frequency of grammatical cohesive devices in chapter five of theses written by the students from the Department of Education.

Table 3

Grammatical Cohesion	**Occurrence**	
Reference	Personal	**810**
	Demonstrative	**2994**
	Comparative	**248**
	Total	**4052**
Substitution	Nominal	**37**
	Verbal	**3**
	Clausal	**7**
	Total	**47**
Conjunction	Additive	**1460**
	Adversative	**23**
	Causal	**186**
	Temporal	**57**
	Total	**1726**
Ellipsis	Nominal	**79**
	Verbal	**4**
	Clausal	**0**

	Total	**83**
	Grand Total	**5908**

The present research analyzes ten theses from the Department of Education in which chapter five of each thesis is taken for data analysis. From ten theses, it is found that there are four types of grammatical cohesive devices used by the students in chapter five of their theses. The above table indicates the distribution of grammatical cohesive devices in chapter five of ten theses written by the students from the Department of Education.

Afterwards, by using AntConc software (3.5.8), the frequency count feature represents the number of times the types and sub-types of grammatical cohesion appeared in the selected corpus as listed in table above. The table shows that grammatical cohesive devices appeared 5908 times. In particular, the most frequently appeared type of grammatical cohesion is reference with the frequency 4052. Following that, types of conjunctions appeared 1726 times. Then, types of ellipsis appeared 83 times and instances of substitution are found 47 times.

Examples of Reference:

Demonstrative Reference:

It also connects the themes to the reviewed literature regarding Creative Writing in the Urdu Language that was discussed in chapter two of this dissertation (Source: Education Corpus)

From the above-mentioned instance, it is indicated that the word “the” is used as a neutral demonstrative. It is used as the noun determiner as in this example “the” is used as a determiner for the noun “themes” and “reviewed literature”.

Personal Reference:

This chapter discusses themes that emerged after analysis of data from interviews of research participants. It also connects the themes to the reviewed literature regarding Creative Writing in the Urdu Language that was discussed in chapter two of this dissertation (Source: Education Corpus)

From the above-mentioned example, it is clearly shown that the personal pronoun "it" is used by the students to refer back to something which was previously mentioned. As in this example, "it" referred back to the noun "chapter".

Comparative Reference:

Findings revealed that problem-solving strategies are based on cognitive, Meta-cognitive and other related strategies (Source: Education Corpus)

The aforementioned example reveals that the comparative reference "other" is used by the student to indicate the difference between two or more things, people, or opinions (etc.).

Examples of Conjunction:

Additive Conjunction:

*In presenting the result of this study and how these results confirm or contradict findings in the literature (*Source: Education Corpus)

In the above-mentioned examples, it is seen that "and" is used to add something to the sentence. In this example, "and" is used to join the clauses by adding further information.

Causal Conjunction:

The research participants feel that discussion method provides creative writing among students because, through discussion method, they compare their viewpoints and contrast it and clarify their knowledge and skills. (Source: Education Corpus)

In this example, "because" is used to give the reason why the discussion method is important for the students.

Temporal Conjunction:

Gestalt Theory proposes that successful problem solving happens when a person can see the entire complexity of a problem without isolating any part of it (Source: Education Corpus)

The above example indicates that "when" is a temporal conjunction used to show the time of an action.

Adversative Conjunction:

This is also supported by Wallace, Stariha & Walberg (2004) said that teachers not only conduct lessons but also stimulate learners to become creative writers through encouragement and motivation (Source: Education Corpus)

According to this example, it is indicated that the students used "but" to show contrast between the statements within a sentence.

Examples of Ellipsis:

Nominal Ellipsis:

In his research, a total of 23 participants were involved; 19 were female and four were male (Source: Education Corpus)

In the above-mentioned example, the noun "participants" is omitted from the following clause, which is supposed to be placed after the words "female" and "male".

Clausal Ellipsis:

According to the conclusions of Quraishi, Aziz and Siddiquah (2018), which revealed both positive and negative factors experienced by these teachers and also different coping strategies adopted by teachers of different age groups (Source: Education Corpus)

In the above-mentioned example, the words "and also different" are omitted from the words "and also revealed different coping strategies…"

Examples of Substitution:

Nominal Substitution:

For the present study, three main objectives were made. The first one was, ―to identify occupational stress among teachers at secondary school level (Source: Education Corpus)

In this example, the noun "objectives" is substituted with the word "one".

Clausal Substitution:

68% of respondents agreed with the statement that separate physics laboratories are available in schools while 27% did not believe so (Source: Education Corpus)

In this example, the clause "separate physics laboratories are available in schools" is replaced with the word "so".

Verbal Substitution

The researcher was also interested in collecting data from students but due to restriction of time and resources he cannot do so (Source: Education Corpus)

In this example, the verb "collecting data" is replaced with the word "do" in the second clause.

Using Halliday and Hasan's cohesion theory, the data shows that reference is the most prominent cohesive device. Its frequent use implies that students are familiar with basic cohesive strategies. However, the dominance of demonstrative references suggests a limited range of techniques. Similarly, heavy reliance on additive conjunctions and less use of temporal or adversative ones indicates a lack of variety in constructing cohesion.

The rare use of substitution and ellipsis reveals students' limited exposure to advanced cohesion techniques. A stronger focus on these areas, especially

clausal ellipsis and substitution, could improve sentence complexity and enhance coherence in academic writing.

Overall, students in the Department of Education show a reasonable command of cohesive devices, primarily relying on reference and conjunction. However, broader training in varied cohesive strategies could elevate the effectiveness and quality of their writing.

4.2. Realization of Grammatical Cohesion in the Academic Discourse from the Department of International Relations

The following table shows the total frequency of grammatical cohesive devices in chapter five of the thesis written by the students from the Department of International Relations.

Table 4

Grammatical Cohesion	**Occurrence**	
Reference	Personal	1217
	Demonstrative	4765
	Comparative	310
	Total	6292
Substitution	Nominal	42
	Verbal	7
	Clausal	8
	Total	57
Conjunction	Additive	2437
	Adversative	352
	Causal	236
	Temporal	203
	Total	3228

Ellipsis	Nominal	141
	Verbal	27
	Clausal	0
	Total	168
	Grand Total	9745

A total of ten theses from the Department of International Relations are analyzed, specifically Chapter Five of each thesis. Using AntConc (3.5.8), a total of 8,947 grammatical cohesive devices is identified. Reference dominates with 6,239 instances, follows by conjunction (2,547), ellipsis (92), and substitution (69).

Examples of Reference

Demonstrative Reference

The Northern Sea Route is one of three possible future Sea routes in the Arctic Ocean (Source: International Relations Corpus)

In the aforementioned example, "the" is used as a noun determiner e.g. the nouns "Northern Sea Route" and "Arctic Ocean" are modified by the determiner "the".

Personal Reference

Prioritizing cyber security isn't the only issue. The difficulty is in comprehending it (Source: International Relations Corpus)

In the above-mentioned example, "it" refers back to "cyber security" which is already mentioned in the previous sentence.

Comparative Reference:

There has been a debate regarding the legal status of the Northern Sea Route, some social science scholars think that both NSR and NWP are synonymous while others argue that the NSR and the NWP are two different sea routes (Source: International Relations Corpus)

In this example; "other" indicates the difference between the opinions of the scholars.

Examples of Conjunction:

Additive Conjunction:

A website www.pakistan.gov.pk has been created for all government ministries and organizations to promote and facilitate E-governance along with the issuance of a policy for internet usage (Source: International Relations Corpus)

In the above-mentioned example, "and" is used to add various things to a list.

Causal Conjunction:

States had never shown interest in the NWP because it was thought to be risky to utilize the route for shipment in the presence of ice-packed Arctic (Source: International Relations Corpus)

In this example, "because" was used to give a reason why the states are not showing interest in the NWFP.

Temporal Conjunction:

In Arctic region, there had been successful contacts since 1973 when agreement on the protection of polar bears was signed (Source: International Relations Corpus)

In the above-mentioned example "since" is used to connect an event to a specific point in time.

Adversative Conjunction:

The route passes through the Arctic waters but most of those waters are within the EEZ or even in some areas in the internal waters of Russia (Source: International Relations Corpus)

In the above-mentioned example, "but" is used to show the contrast between two clauses within a sentence.

Examples of Ellipsis:

Nominal Ellipsis:

India exploits Pakistan's state by alleging that it lacks democratic credentials and has a challenge of extremism and terrorism (Source: International Relations Corpus)

In the above-mentioned example, the pronoun "it" is omitted from the underlined clause. The clause without an ellipsis could be "and it has a…"

Verbal Ellipsis:

Kashmir must be treated as a primary geo-political concern by the Pakistani state internally, and policy about it should be above political parties' politics and in front of the public to be scrutinized (Source: International Relations Corpus)

In this example, the underlined words "and in front" are omitted from "and it should be in front of". In this sentence "should be" is omitted from the verbal group which is a modal auxiliary verb.

Examples of Substitution:

Nominal Substitution:

A prospective Russian NSR legislation has them on edge, though, as they believe Russia will blackmail others for its gains (Source: International Relations Corpus)

In the above-mentioned example the underlined word "others" is used to substitute a noun such as regions, or states (etc.).

Clausal Substitution:

In the light of this saying Cohen, I analyze Pakistan's possible policy options on Kashmir post article 370, in doing so, like the previous chapter I divide this chapter into three key areas of geopolitics, geo-strategy and geo-economics (Source: International Relations Corpus)

In the above-mentioned example, the underlined word "so" substitutes the entire previous clause *"I analyse Pakistan's possible policy options on Kashmir post article 370"*.

Verbal Substitution:

Then the BJP government and the PM Modi will link it with Pakistan and by keeping the hatred and offensive approach of Modi against Pakistan as he previously did during the incident of Palwana (Source: International Relations Corpus)

In this example, the underlined word “did” is used to substitute the action of Modi which he did during the Palwama incident which led to a nuclear war between the two countries.

The data suggest that reference, again, is the most dominant cohesive strategy, showcasing students' strength in creating logical flow. However, the overwhelming use of demonstrative reference, particularly "these" and "those," may hint at repetition and lack of diversity.

Conjunction use is higher than in the Education corpus. Additive and causal conjunctions are common, but temporal and adversative types remain minimal. This trend reveals students’ inclination to develop linear arguments while missing out on nuance.

As with the Education corpus, ellipsis and substitution are rare. Though slightly more frequent, their underuse reflects limited competence in constructing compressed and sophisticated sentence structures.

In conclusion, students in the Department of International Relations demonstrate strong cohesion skills through references and conjunctions. Expanding their command over ellipsis and substitution could enhance their academic writing's depth and structural variety.

4.3. Realization of Grammatical Cohesion in the Academic Discourse from the Department of Pakistan Studies

The following table shows the total frequency of grammatical cohesive devices in chapter five of the theses written by the students from the Department of Pakistan Studies.

Table 5

Grammatical Cohesion	**Occurrence**	
Reference	Personal	1235
	Demonstrative	3736
	Comparative	237
	Total	5208
Substitution	Nominal	12
	Verbal	4
	Clausal	3
	Total	19
Conjunction	Additive	1573
	Adversative	252
	Causal	186
	Temporal	129
	Total	2140
Ellipsis	Nominal	95
	Verbal	8
	Clausal	0
	Total	103
	Grand Total	7,470

According to the table, there are 7470 instances of grammatical cohesive devices. Comparing different types of grammatical cohesion, reference is the most frequently used type of grammatical cohesion which occurred 5208 times. Then,

2140 different occurrences of conjunctions appeared. Then, the instances of ellipsis appeared 103 times followed by the substitution which occurs 19 times.

Examples of Reference:

Demonstrative Reference:

The Media which had been given various compensations by General Musharraf's regime provided full coverage to the incident of Earth Quake (Source: Pakistan Studies Corpus)

In the above-mentioned example, "the" is used as a noun determiner as it was modifying the nouns "media" and "incident".

Personal Reference:

The analysis of above-processed data shows that most of the female members of UCs belong to old age group ((i.e.,) 55 and above) and these ladies are mostly uneducated and have no awareness about <u>their</u> jobs and rights (Source: Pakistan Studies Corpus)

In this example "their" is used to refer back to the noun "female members" which is mentioned within a sentence.

Comparative Reference:

Water production in Pakistan is much lower than <u>other</u> countries, including our neighbouring India which is 0.1kg / m3 less than 0 (Source: Pakistan Studies Corpus)

In the above example "other" is used to refer to countries other than Pakistan. It referred to the thing being mentioned within a sentence.

Examples of Conjunction:

Additive Conjunction:

In the above discussion, the research concludes that the Kashmiris are robbed of basic rights: right to live, right to health, right of self-determination <u>and</u> many more basic rights (Source: Pakistan Studies Corpus)

In this example, "and" is used to add something to the human rights which is mentioned in the sentence.

Causal Conjunction:

So Jahanara along with other ladies approached various women associations and women conferences and committees for the women to support the women financial independencies bill to be passed, so the bill was added through a joint effort of the ladies of women association and political workers (Source: Pakistan Studies Corpus)

In this example, "so" is to connect reasons or causes, and results of a statement.

Temporal Conjunction:

Kashmir conflict arose when the humiliating treaty of Amritsar was signed between Gulab Singh (Raja of Jammu) and by Harding, Frederick Currie and Lawrence from the British side (Source: Pakistan Studies Corpus)

In the above-mentioned example, "when" is used to indicate when an action took place by demoting a specific point in time.

Adversative Conjunction:

He said that though the motive of business tourists is to meet with their business partners, they would also like to visit different historical archaeological and historical sites in Mardan (Source: Pakistan Studies Corpus)

In this example, "but" is used to show the contrast between two statements within a sentence.

Examples of Ellipsis:

Nominal Ellipsis:

Similarly Pakistan has never left Saudi Arabia alone at its difficult time and has always stood by their side as a nation for any cause (Source: Pakistan Studies Corpus)

In the above-mentioned example, the noun "Pakistan" is omitted from the underlined phrase. The phrase without omission of a noun would be "and Pakistan has always stood".

Verbal Ellipsis:

They could easily develop and simultaneously destroy the destination‖ (Source: Pakistan Studies Corpus)

In this example, "and simultaneously destroy" is omitted from "and they could simultaneously destroy". A modal verb "could" be omitted within a verbal group.

Examples of Substitution

Nominal Substitution

Neither can change nor influence the system… Without practical work one cannot triumph over issues like the current example is IK government (Source: Pakistan Studies Corpus)

In this example, the underlined word "one" is used for a political party or government.

Clausal Substitution:

UN ordered both parties to call back their forces and the whole matter was supposed to be solved democratically but it was never the case as India refused to do so and took over Kashmir" (Source: Pakistan Studies Corpus)

In the above-mentioned example, the underlined word "so" substitutes the entire previous clause "UN ordered both parties to call back their forces and the whole matter was supposed to be solved a democratically".

Verbal Substitution:

Another respondent replied that ―I don't agree with this question. CSOs don't do such tasks rather they should not do (Source: Pakistan Studies Corpus*)*

In this example, the underlined word "do" is used to substitute the verb.

4.4. Comparative Analysis of Grammatical Cohesive Patterns Used in the Academic Discourse from the Departments of Education, International Relations, and Pakistan Studies

After an individual analysis of academic discourse from the chosen departments, a comprehensive comparative analysis is done to see which department used cohesive patterns more and whose academic discourse lacked cohesion the most. The following table shows the overall distribution of cohesive devices in the selected departments.

Table 6

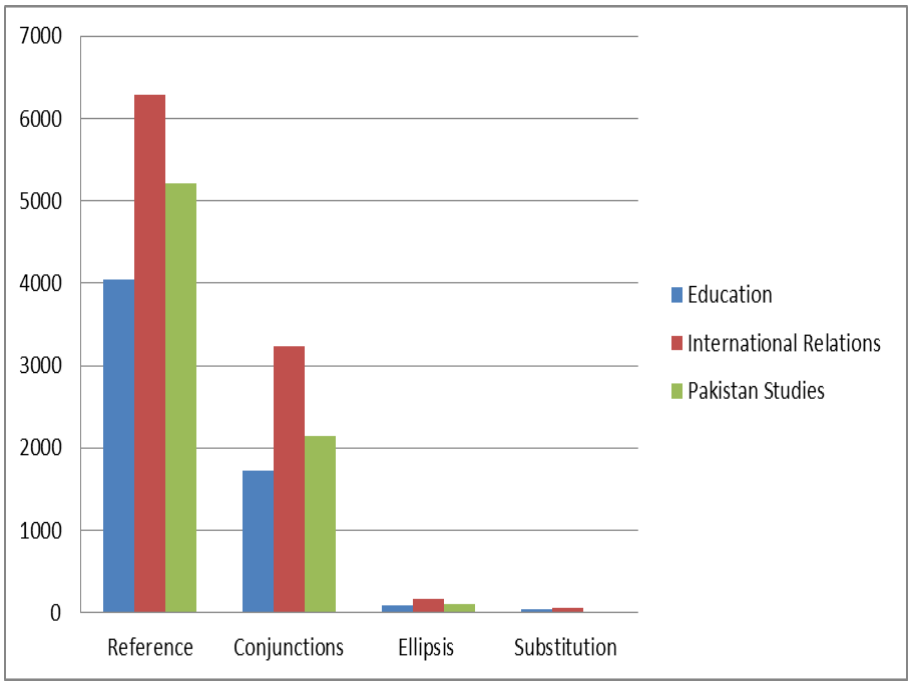
Department	Reference	Conjunction	Ellipsis	Substitution
Education	463	247	17	4
International Relations	412	201	7	3
Pakistan Studies	398	132	5	2

The Education department students demonstrate the highest and most consistent usage of cohesive devices. Their higher usage rates, especially for conjunctions and ellipses, suggest better instruction or stronger academic writing support. This consistency reflects a comparatively higher proficiency in structuring arguments and managing coherence within texts.

The International Relations department, while contributing the most in terms of corpus size, shows less balanced usage. The lower use of ellipsis and substitution, in particular, might indicate a preference for explicitness or unfamiliarity with advanced cohesive structures. Similarly, Pakistan Studies

students show the lowest use of all devices, especially substitution, highlighting a significant gap in cohesion-related writing strategies.

Overall, the findings suggest a strong reliance on basic cohesive devices, while more sophisticated elements remain underused. These results underline the importance of direct and focused instruction in the full range of grammatical cohesion, with special emphasis on ellipsis and substitution. The interdepartmental differences also stress the need for tailored writing support programs based on specific disciplinary writing practices.



Further insights into the academic discourse of the three departments such as Education, International Relations, and Pakistan Studies have been provided by a comparative analysis of the three departments based on the distribution of grammatical cohesive devices in a graph.

According to the data presented in the above figure, the Department of International Relations has the highest frequency of reference, with several 6292.

This is followed by the use of reference in academic discourse by the Department of Pakistan Studies, with a frequency of 5208. The Department of Education has the lowest frequency of references, with several 4052. Despite variations in frequency, it is clear that reference is important in students' academic writing in all of these departments. In the case of conjunction, the Department of International Relations has a frequency of 3228, which is the highest frequency of conjunction across the selected departments. It is followed by the use of conjunction by the Pakistan Studies department ‘s students with a value of 2140. On the other hand, students from the Department of Education use conjunctions the least frequently (1760 times on average). The difference in frequencies suggests that the use of conjunctions might vary across the chosen departments because of their disciplinary preferences along with their writing styles. In terms of ellipsis, it has been found that the category of ellipsis had the highest frequency in the Department of International Relations, with an amount of 168, follows by the use of ellipsis in academic discourse of Pakistan Studies with a frequency of 103. The Department of Education has the lowest frequency of ellipsis, which are 83. Lastly, in the case of substitution, the Department of International Relations has a frequency of 57, which is comparatively higher than the substitution in the other two departments. Substitution in the Department of Education has a frequency of 47, and the use of substitution in the academic discourse by the Department of Pakistan Studies is 19, which is the lowest frequency of substitution across the three departments.

4.5. The Appropriate and Inappropriate Use of Grammatical Cohesive Devices in the Academic Discourse from the Selected Departments

After describing the overall use of grammatical cohesive devices in the academic discourse from the selected departments of social sciences, the researcher

explains the appropriate and inappropriate use of those types of grammatical cohesion in a tabular form to assist readers in interpreting the data precisely.

The following table indicates the appropriate and inappropriate use of the grammatical cohesive devices in the academic discourse from the selected departments.

Table 7

Department	References		Conjunction		Substitution		Ellipsis	
	Correct use	Misuse	Correct use	Misuse	Correct use	Misuse	Correct use	Misuse
Education	3909	143	1700	26	47	0	81	2
International Relations	6069	223	3186	42	57	0	166	2
Pakistan Studies	4957	251	2097	44	19	0	101	2
Total	14,935	617	6983	112	123	0	346	6

The above table indicates the total number of appropriate and inappropriate uses of grammatical cohesive devices which are realized in academic discourse from the three chosen departments of Social Sciences. From the above-mentioned table; it is found that the students mostly used the grammatical cohesive devices appropriately while inappropriate use of those cohesive devices is less found. In detail, among the grammatical cohesion devices, reference is used appropriately 14,935 times which is the predominant of the correct use of grammatical cohesive devices and inappropriate use of reference is found 617 times. Meanwhile, in the above table, it is seen that conjunctions are used 6983 times correctly and only 112 times of inappropriate use of conjunctions is realized. The inappropriate use of ellipsis and substitution is found less.

Thus, it is discovered that, in general, students from the selected departments of social sciences used grammatical cohesive devices correctly;

nonetheless, there are considerably fewer instances of incorrect use. Through this, it is implied that students had some difficulty using references to produce cohesiveness. In the subcategories of reference inappropriate use, demonstrative reference accounts for the most misused type of grammatical cohesion, followed by personal reference and comparative reference. This suggests that students require more directions and training to properly use these particular forms of reference.

Furthermore, it is also implied that students from the selected department used conjunctions 112 times incorrectly, but students have sufficient understanding of using conjunctions in their writings because they could use those devices to construct the sentences correctly. However, the occurrence of some inappropriate use suggests that students might require more instruction and direction on how to use conjunctions correctly in academic writing.

Ellipsis misuse is realized 6 times and no error in substitution is found. It does not imply that students do not make mistakes in using ellipsis and substitution, but it could be implied that students from the selected departments might be unaware of using those grammatical features or they might intentionally avoid using them due to the fear of making mistakes.

The result of the analysis indicates that although students from the chosen departments of social sciences tend to employ cohesive devices appropriately, there is still room for improvement in some areas where they might benefit from additional guidance as well as instruction on how to use particular types of cohesive devices effectively. These results highlight the significance of teaching and promoting the use of proper grammatical cohesive devices in academic discourse to improve the ability of students to create cohesive and coherent pieces of writing.

5. Discussion

The focus of the present study is to investigate the use of grammatical cohesive patterns in the academic discourse from the departments of Education, International Relations, and Pakistan Studies at NUML. The analysis is carried out progressively by incorporating several research tools, establishing a theoretical framework, and providing an interpretation of the selected academic discourse. The findings of the present study have been explained below.

Findings of the First Research Question

The first research question of the present study is:

- What types of cohesive devices are frequently employed in the academic discourse of students in the Faculty of Social Sciences (FSS) at NUML?

To answer this question, the researcher uses the analytical framework of Cohesion proposed by Halliday and Hasan (1976) to analyze the types of grammatical cohesion used in the academic discourse of students in the faculty of social sciences at NUML. For that, the researcher used AntConc (3.5.8) to find out the frequency of each type of grammatical cohesion employed in the selected academic discourse. The academic discourse from each department has been analyzed individually to see the most frequently used cohesive devices in this selected academic discourse. The findings of the study indicate that reference is the most frequently used type of grammatical cohesion in the academic discourse from the selected departments in FSS at NUML. The excessive use of references in the academic discourse does not imply that the student's academic discourse is effective because of the predominant use of references; rather it implied that they used references repeatedly which is ineffective. Following references, conjunctions came in second place in the academic discourse from the departments of Education, International Relations, and Pakistan Studies, showing that students link concepts and make logical relationships between paragraphs and sentences using conjunctions. This is a crucial skill in writing for students

since it makes an argument more logical and cohesive. In addition, ellipsis is the third most commonly used grammatical cohesive device, indicating that the students used ellipsis to omit words or phrases. This can help students minimize repetition and keep their writing clear and simple. Meanwhile, substitution is the least commonly used type of grammatical cohesion in the academic discourse from the selected departments. Substitution is the replacement of a word with another that conveys the same meaning. Due to its limited use, it may be inferred that students found it difficult to effectively use this cohesive element in their writings.

Findings of the Second Research Question

The second research question of the present study is:

- How do cohesion patterns deviate in the academic discourse of students in FSS at NUML?

To answer this question, the researcher used textual analysis of the selected academic discourse individually to see the inappropriate use of cohesion patterns by the students from FSS at NUML. Following this analysis, it is discovered that reference predominated in the inappropriate use of grammatical cohesive devices in the academic discourse from the departments of Education, International Relations, and Pakistan Studies. Moreover, the inappropriate use of conjunctions is the second common type of deviation in academic discourse from the chosen departments. In terms of ellipsis and substitution, it is discovered that there are only six cases of inappropriate ellipsis use in the academic discourse from the selected departments, and there are no instances of inappropriate substitution use.

These findings indicate that students from the chosen departments might find it challenging to use suitable cohesive devices in their academic writing, especially when it comes to references and conjunctions. These deviations from traditional academic writing patterns might result in confused and unclear pieces

of writing, which could hurt their academic performance and grades. Therefore, educational institutions must give students clear instructions and assistance as they develop their abilities to use cohesive devices effectively.

Furthermore, it is also crucial to remember that the current study solely concentrated on the academic discourse written by students from three departments at a single university. As a result, the results may not be representative of other academic settings or departments. To acquire a deeper understanding of the difficulties students, have while using cohesive devices in academic writing, future studies should look into cohesion pattern deviations in a broader variety of academic discourse.

6. Conclusion

The present research examines the use of cohesion in academic discourse. Cohesion is classified into two categories: grammatical cohesion and lexical cohesion. In this study, the researcher focuses on grammatical cohesion only. Grammatical cohesion is divided into four types: reference, conjunctions, substitution, and ellipsis. Reference embodies personal, demonstrative, and comparative references, and conjunctions have four types, such as additive, adversative, causal, and temporal conjunctions. Substitution has three types: nominal, verbal, and clausal substitution. Likewise, ellipsis consists of three subtypes, such as nominal, verbal, and clausal ellipsis.

Moreover, the data is taken from the academic discourse of students from FSS at NUML, and the researcher select 30 theses from three departments of social sciences with 10 theses from each department for the year 2020-2021. The researcher employs the cohesion model proposed by Halliday and Hasan (1976) for analyzing the data.

Based on the results of the data analysis, the researcher finds that students from the selected departments used a sufficient number of grammatical cohesive

devices in their academic discourse, particularly references and conjunctions along with their subtypes. Ellipsis and substitution are found infrequent in the selected academic discourse.

Furthermore, after analyzing the data, the researcher discovers that the most common type of grammatical cohesion was reference (12.53%), followed by conjunctions (5.71%), and ellipses (0.28%). Substitution (0.09%), on the other hand, is the least used type of grammatical cohesion in the academic discourse from the selected departments.

Although the current research provides results regarding grammatical cohesive devices, it has its limitations. This study has some implications for teaching and learning English. It is, therefore, suggested that educational institutions review the contents of English courses and include mechanics of academic writing as well as knowledge about the features of cohesion and coherence in the curriculum. It is important that students become aware of the significance of cohesive devices in producing well-structured sentences in their academic writing and should be trained for the same. Such actions could ultimately result in improved language skills and academic discourse.

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