

The Role of Cohesive Devices in the Coherence of Introduction Section of Research-Based Articles in Indonesian Journal of Applied Linguistics (IJAL)

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ABSTRACT

The objectives of this research are (1) to explain the types of cohesive devices used in the Introduction section of research articles published in the Indonesian Journal of Applied Linguistics (IJAL), (2) to describe how these devices organize ideas and build discourse cohesion, and (3) to identify the reasons behind the frequency of certain types of cohesive devices. This study employs a qualitative approach and genre analysis to obtain a contextual understanding of cohesive devices in research-based articles. The data consist of the Introduction sections of IJAL articles, chosen because this part introduces the topic, problem statement, research objectives, and the author's initial arguments that shape the overall content. To analyze cohesive devices, Halliday and Hasan's framework is applied, which classifies cohesion into grammatical and lexical types. The findings show that reference, conjunction, and reiteration are the most dominant cohesive devices in IJAL Introductions. These devices play a crucial role in constructing integrated ideas and maintaining discourse coherence through logical, thematic, and conceptual relationships. The dominance of these devices demonstrates that the authors' selection of cohesive devices is strategic and aligned with the characteristics of the

academic genre, which values clarity, consistency, and systematic argumentation.

Keywords: *Coherence, Cohesive Devices, Research-based Article, Introduction*

INTRODUCTION

Academic writing plays a vital role in higher education as a means of disseminating knowledge and research findings. It demands systematic organization, factual accuracy, and clarity of ideas supported by credible sources. Among various academic genres, research-based articles are considered essential because they function as official, peer-reviewed reports of empirical studies accessible to the global academic community. Writing such articles requires not only linguistic accuracy but also the ability to present ideas coherently, ensuring that readers can follow the logical flow of arguments (Faizah, Sutopo, & Faridi, 2020).

In academic writing, coherence and cohesion are two key aspects that determine textual quality. Cohesion refers to how linguistic elements are linked across sentences and paragraphs through grammatical and lexical means (Halliday & Hasan, 1976), whereas coherence concerns the logical relationship and meaningful unity of ideas in a text (Alfitri & Yuliasri, 2021). Cohesive harmony ensures that ideas are connected both linguistically and

conceptually, allowing the text to be easily understood and smoothly read (Hastomi, Sofyan, & Jumariati, 2024). The appropriate use of cohesive devices—such as reference, conjunction, substitution, ellipsis, and lexical reiteration—strengthens the coherence of discourse by maintaining unity and continuity of meaning. When these elements are absent or misused, the writing becomes fragmented and difficult to comprehend.

In the context of research article writing, the introduction section is particularly crucial because it establishes the research background, identifies the gap, and justifies the study. Swales (1990) describes this section as a rhetorical space in which authors “establish the territory, identify the niche, and occupy it.” Thus, cohesion and coherence in the introduction are essential for helping readers understand the research context and significance (Hyland, 2005). However, preliminary observation of an IJAL article by Emilia et al. (2025) revealed weaknesses in maintaining cohesion, particularly the minimal use of substitution and ellipsis, which led to repetition and weak inter-paragraph linkage. This finding suggests the need for a closer examination of how cohesive devices function to create coherence in article introductions.

While numerous studies have analyzed cohesive devices in various sections of research articles, most have focused on abstracts (Cabrejas, 2022; Wijayanto et al., 2025) or findings and discussions (Akbar, Mujiyanto, & Sutopo, 2022), overlooking how cohesion is established at the beginning of an article. Faizah, Sutopo, and Faridi (2020) examined cohesion across entire articles but did not specifically investigate how it operates in introductions. Therefore, this study aims to fill that gap by focusing exclusively on the introduction sections of research-based articles published in the Indonesian Journal of Applied Linguistics (IJAL). It explores the types of cohesive devices used, their role in organizing ideas and building discourse coherence, and the reasons behind their frequency of use.

LITERATURE REVIEW

The Principles and Functions of Academic Writing

Academic writing is a formal and structured mode of communication within the academic community, designed to convey ideas logically, systematically, and based on evidence. It differs from other forms of writing in its emphasis on objectivity, clarity, and critical reasoning. Swales (1990) defines academic writing as a communicative activity shaped by the conventions and expectations of specific discourse communities. Similarly, Cargill and O'Connor (2013) highlight that academic writing must present ideas coherently while adhering to accepted disciplinary norms. In the EFL context, academic writing represents an advanced language skill that integrates grammatical precision, vocabulary range, and rhetorical organization (Wilfitri & Fatimah, 2020). Writers must not only express ideas but also demonstrate logical connections and argument development. Therefore, cohesion and coherence are fundamental in ensuring that ideas are linked meaningfully, creating a unified and readable text.

The Concept and Structure of Research-Based Articles

Research-based articles serve as the primary medium for disseminating scientific knowledge. They present original empirical findings, follow academic conventions, and contribute to the scholarly community (Cargill & O'Connor, 2013). Such articles typically adhere to the IMRaD structure—Introduction, Methods, Results, and Discussion—which reflects the logical sequence of scientific inquiry. Swales (1990) views research articles as a genre within academic communication that embodies specific rhetorical and structural conventions. Writing research-based articles requires precision, clarity, and cohesion to ensure that readers can follow arguments effectively. In Indonesia, the ability to produce research-based articles in English is a key academic requirement for graduate

students (Faizah, Sutopo, & Faridi, 2020). Therefore, understanding how cohesive devices function in structuring such articles is essential, particularly in ensuring that arguments and findings are communicated effectively.

Characteristic of International Reputable Journal

International reputable journals serve as essential platforms for disseminating high-quality research to the global academic community. According to Day and Gastel (2012), such journals are characterized by several key features that ensure their credibility and scientific value. One of the main indicators is the implementation of a rigorous and transparent peer-review process, in which manuscripts are evaluated by experts to guarantee objectivity, academic integrity, and compliance with ethical publication standards. Reputable international journals also demonstrate global visibility through their wide readership, diverse authorship, and editorial boards composed of scholars from various countries. They are typically published in English, the lingua franca of global academia, enabling broader accessibility and citation across disciplines. Another hallmark of reputable journals is their indexation in recognized international databases, such as Scopus, Web of Science, or PubMed, which ensures both accessibility and the recognition of their scientific impact. In addition to technical and editorial excellence, reputable journals publish articles that provide original and significant contributions to the advancement of knowledge in specific fields. The consistency of publication, high editorial standards, and international scope further strengthen their reputation and credibility. Overall, these characteristics reflect the academic quality, transparency, and global influence that define reputable international journals.

Genre Analysis in the Context of Academic Discourse

Genre analysis provides a framework for understanding the organization and communicative purposes of academic texts. Swales (1990) defines a genre as “a class of communicative events, the members of which share some set of communicative purposes.” This definition emphasizes that genres are shaped by the social and professional expectations of the discourse community. Genre analysis identifies rhetorical patterns and linguistic strategies that writers use to fulfill these purposes (Bhatia, 1993). It enables the examination of how academic texts are organized and how authors negotiate meaning within specific disciplinary norms. In applied linguistics, genre analysis has been widely used to study the structure of research articles, focusing on how linguistic and rhetorical features contribute to academic communication. It also provides a useful lens for exploring how cohesion supports the rhetorical structure of texts, especially in the introduction section of journal articles.

CARS Model for Structuring Research Article Introductions

Within genre analysis, Swales’ (1990) Create A Research Space (CARS) model is one of the most influential frameworks for analyzing research article introductions. It identifies three major rhetorical moves: (1) establishing a territory—introducing the research topic and its importance; (2) establishing a niche—identifying gaps or weaknesses in prior studies; and (3) occupying the niche—stating the study’s purpose or contribution. These moves help authors position their research within the academic community and justify its significance. The CARS model demonstrates that academic writing is not only about presenting information but also about strategically constructing a research position. Cohesion plays a crucial role in realizing each rhetorical move, linking claims and transitions to maintain a smooth argumentative flow (Swales, 2004). Thus,

analyzing cohesive devices within the CARS framework provides insights into how linguistic and rhetorical structures interact to build coherence in academic texts.

The Relationship between Cohesion and Coherence

Cohesion refers to the linguistic means by which sentences and paragraphs are connected to form a unified text. Halliday and Hasan (1976) describe cohesion as the set of linguistic devices that tie elements of discourse together, making a text comprehensible as a whole. Cohesion is realized through grammatical and lexical relationships that establish continuity of meaning (Alwi & Indrawan, 2023). Grammatical cohesion includes reference, substitution, ellipsis, and conjunctions, while lexical cohesion involves reiteration and collocation. The use of these cohesive devices enables readers to follow the flow of information easily and interpret the logical relations between ideas. Without proper cohesion, a text may appear fragmented or disconnected (Nurhidayat, Apriani, & Edy, 2021). Therefore, effective use of cohesive devices is an essential indicator of writing proficiency, contributing to both textual unity and the reader's understanding. Meanwhile, coherence is closely related to cohesion but operates at the conceptual and semantic levels. It refers to the logical relationship among ideas that allows readers to perceive the text as meaningful and organized (Hasan, 1984; Thornbury, 2005). While cohesion provides surface links, coherence concerns the deeper sense of unity achieved through well-organized ideas and logical progression. Alfitri and Yuliasri (2021) assert that coherence depends on how readers interpret relationships among propositions and the overall purpose of the text. Coherent writing guides the reader through ideas smoothly, avoiding confusion or logical gaps. As Hastomi, Sofyan, and Jumariati (2024) note, coherence ensures that a text is not merely grammatically

connected but also conceptually consistent. Thus, both cohesion and coherence are interdependent; cohesion ensures linguistic ties, whereas coherence guarantees the logical integrity of discourse.

Halliday and Hasan's Theory of Cohesive Devices

The theory of cohesion proposed by Halliday and Hasan (1976) remains foundational in discourse analysis. They conceptualize cohesion as the semantic ties that connect textual elements, allowing sentences to function as a unified whole. Halliday and Hasan classify cohesive devices into grammatical cohesion—reference, substitution, ellipsis, and conjunction—and lexical cohesion, which includes reiteration and collocation. Reference establishes links between entities, substitution replaces repeated items, ellipsis omits understood elements, and conjunctions signal logical relationships such as addition, contrast, or cause. Lexical cohesion, on the other hand, relies on vocabulary relationships such as repetition, synonymy, or word association. Together, these devices create textual harmony and guide readers through the logical development of ideas. Mastery of cohesive devices is particularly vital in academic writing, as it strengthens both readability and the coherence of argumentation (Asrorov, 2024). This study adopts Halliday and Hasan's framework to identify how these devices contribute to the coherence of introduction sections in research-based articles.

MATERIALS & METHODS

This study employed a qualitative descriptive design to investigate how cohesive devices contribute to the coherence of research article introductions. As Creswell (2014) states, qualitative research allows researchers to interpret meaning in its natural context and to explore language phenomena in depth. This approach was chosen because the study analyzed naturally produced academic texts that required

contextual interpretation rather than numerical measurement. In line with Swales' (1990) concept of genre analysis, this research also considered how linguistic and rhetorical elements interact to achieve communicative purposes in academic writing.

The data were obtained from sixteen research-based articles published in the Indonesian Journal of Applied Linguistics (IJAL), Volume 14, Number 3 (2025). The journal was selected because it is an internationally indexed publication that represents the current trends and standards of academic writing in applied linguistics. Each article was written in English and followed the IMRaD structure (Introduction, Method, Results, and Discussion). Only the introduction sections of these articles were analyzed, as this section serves a central role in framing the research background, identifying the research gap, and outlining the study's objectives. All data were downloaded from IJAL's official open-access website to ensure transparency and accountability.

The analytical procedure followed several steps. First, each introduction was segmented according to Swales' (1990) Create a Research Space (CARS) model, which consists of three rhetorical moves: (1) establishing a territory, (2) establishing a niche, and (3) occupying the niche. This segmentation provided a systematic framework for analyzing the rhetorical structure of the texts. Next, cohesive devices were identified and classified based on Halliday and Hasan's (1976) theory of cohesion, which distinguishes grammatical cohesion (reference, substitution, ellipsis, conjunction) from lexical cohesion (reiteration and collocation). Each instance

of cohesion was recorded in a classification sheet to ensure systematic data organization and facilitate comparison across articles.

After identification, the cohesive devices were mapped to their corresponding rhetorical moves in the CARS model. This mapping allowed the researcher to observe how cohesion operated in different rhetorical contexts and how linguistic devices supported the communicative goals of each move. The analysis emphasized both the type and function of cohesive devices, providing insights into how linguistic forms contribute to the rhetorical coherence of research article introductions.

To ensure credibility and validity, this study applied expert judgment triangulation. Following Norman (2012), triangulation enhances trustworthiness by incorporating multiple expert perspectives to validate the interpretation of data. Two experts in applied linguistics reviewed the categorization and coding of cohesive devices. Their feedback was used to refine the analysis and ensure consistency between theoretical concepts and data interpretation. This process minimized subjective bias and strengthened the methodological reliability of the study.

RESULT

The Types of Cohesive Devices Used

The analysis identified a total of 358 cohesive devices distributed across the introduction sections of sixteen research-based articles published in the Indonesian Journal of Applied Linguistics (IJAL). Of these, grammatical cohesion occurred 213 times, while lexical cohesion appeared 145 times. Table 1 summarizes the distribution of grammatical cohesion.

Table 1 Types of Grammatical Cohesion

| A | Grammatical Cohesion | | | | Σ |
|---|--|---|---|---|----|
| | R | S | E | C | |
| 1 | We, Some, Others, Such, Voice, This, That | | | Though, as...as, And | 10 |
| 2 | Them, This, Their, These, The, Both, It, Which | | | And, In contrast, While, As a result, Similarly, On the other hand, however | 15 |
| 3 | The, Their, It, Which, As, This, | | | And, Whether/or, Although, However, While, But | 15 |

| | | | | | |
|----|--|---|---|---|-----|
| | These, Students | | | also, therefore | |
| 4 | This, Similar, These, As, It, Its, Others, the | | | And, But, Though, Particularly, Among others, While, regardless of the fact that, By | 16 |
| 5 | There, They, Its, Such, Which, Those, This study, This, These, It, where | | | And, However, Despite, Therefore, Thus, Meanwhile, Additionally, Firstly, Secondly, Or, Which, While | 23 |
| 6 | Those, Them, These, They, Their, This, It, Which, Its | | | And, While, Although, Despite, Because, Thus, Additionally, Such as | 17 |
| 7 | It, They, This, Who, These | | | And, Nevertheless, For instance, therefore | 9 |
| 8 | These, The, This, Which, Other, Their | | | And, While, Despite, Considering | 10 |
| 9 | Thus, That, This, These, More, What | | | While, Often, And, Such as | 10 |
| 10 | Her, A home country, They | | | Whether, However, Therefore, Either or, For that matter | 8 |
| 11 | This, Their, These, Visuals, the | | | Which, Thereby, As, Furthermore, But, however | 11 |
| 12 | These, It, This, Those, Their | | | According to, Ideally, Additionally, Therefore, Similarly, Moreover, Consequently, While, Unlike And, more...than, Such as, in summary, both...and, in conclusion, Considering, Further, By | 23 |
| 13 | The, one of the, Noticing, This, It, These, Our | | | While, However, not only...but also, Furthermore, to guide this exploration | 12 |
| 14 | This, It, Such, Its | | | Whereas, Although, to address, Therefore, additionally | 9 |
| 15 | There, These, Findings, This | | | However, And, For instance, In addition, Notably For example, While, Despite, furthermore | 13 |
| 16 | This, They, The, Such, These | | | While, But, Similarly, However, By, Firstly, And | 12 |
| Σ | 101 | 0 | 0 | 112 | 213 |

The analysis of grammatical cohesion revealed that only two of the four types—reference and conjunction—were present in the data. Reference appeared 101 times, while conjunctions occurred 112 times, resulting in a total of 213 grammatical cohesive ties. Among these, conjunctions were slightly more frequent than references. The frequent use of conjunctions demonstrates that IJAL authors rely heavily on explicit linking words such as and, however, therefore, and in addition to

connect clauses and express logical relationships, including addition, contrast, and cause-effect. Reference, particularly through personal and demonstrative forms like this, it, and these, served to maintain continuity of ideas and avoid unnecessary repetition. In contrast, no occurrences of substitution or ellipsis were found in the corpus, suggesting that the authors preferred overt linguistic connections rather than implicit or elliptical structures, possibly to ensure clarity in academic writing.

Table 2 Types of Lexical Cohesion

| A | Lexical Cohesion | | Σ |
|---|--|--|---|
| | R | C | |
| 1 | <ul style="list-style-type: none"> English, Englishes Goals, hopes Voice, voices Voice quality, authorial voice, getting a voice | <ul style="list-style-type: none"> Employment, education, material rewards, access to knowledge Valued, taken seriously, treated with respect Language as an assemblage, as an active process, dynamic, constructed, open-ended | 7 |
| 2 | <ul style="list-style-type: none"> Ethnic languages, Sundanese Preserve, survival, safeguarding Translation Cultural, integrity, richness Short stories, folklore | <ul style="list-style-type: none"> Language reservation, Language shift, Language endangerment Translation techniques, Adaptation, Amplification, Explicitness changes Bahasa Indonesia, Sundanese | 8 |
| 3 | <ul style="list-style-type: none"> Speaking skills | <ul style="list-style-type: none"> Planning phase, self-monitoring phase, self- | 9 |

| | | | |
|---|--|--|----|
| | <ul style="list-style-type: none"> • Self-Regulated Learning, SFL • Learners, students, EFL students • Improve, enhance, attain • Foreign language, target language • Motivation, intrinsic motivation | <ul style="list-style-type: none"> • reflection phase • Language learning, language teaching, language task • Quantitative data, qualitative data | |
| 4 | <ul style="list-style-type: none"> • Language policy • English, Mandarin, Spanish, French • Policies, regulations decisions • National identity, cultural heritage • ASEAN countries, Indonesia, Thailand, Vietnam | <ul style="list-style-type: none"> • Language planning, language management, language education policy, foreign language education policy • Economic opportunity, business • Primary, secondary, higher education • Global engagement, international communication, regional cooperation | 9 |
| 5 | <ul style="list-style-type: none"> • Linguistic discrimination • Indonesian migrant workers, IMWs • Language barrier, language obstacle, language-based discriminatory experiences • Employment opportunities, job opportunities • Accents, accentism • Host countries, Middle East, Kuwait • Integration, inclusive settings, inclusive society | <ul style="list-style-type: none"> • Employment, labour market, workplaces • Race, ethnicity, nationality, gender • Psychological welfare, mental health status | 10 |
| 6 | <ul style="list-style-type: none"> • Proverbs • Values • Norms • Belief, worldviews, cultural views • Metaphors • Indonesian proverbs, Acehese proverbs • Life experiences, lived experiences • Figurative expressions, metaphorical language • Cultural • Similarities, commonalities, differences • Language, linguistic • Adaptations | <ul style="list-style-type: none"> • Anthropologists, linguists, and philosophers, linguistic anthropology and cross-cultural communication • Comparison or metaphorical language • Denotative and connotative meanings, semantic analysis, metaphorical language | 15 |
| 7 | <ul style="list-style-type: none"> • Listening and speaking skills, listening and speaking, these two skills • English, the global lingua franca, dominant and influential language • Problems, difficulties, struggles • Bangladesh, Bangladeshi Higher Education Institution (BHEI), Bangladeshi classrooms | <ul style="list-style-type: none"> • Curriculum, course design, syllabi • Global technological and innovation ecosystem, IR 4.0, 21st century learning • Teachers, students, educational planners, policymakers | 7 |
| 8 | <ul style="list-style-type: none"> • Public speaking, public speaking practices • TED Talks, TEDx conferences, TEDx talks • Genre • Structure, structural organisation, organisational structures, rhetorical structures • Stage, staged, stages • Speech, talks, oratory, monologue | <ul style="list-style-type: none"> • Communication, communicative goals, meaning-making • Audience, speakers, public speakers • Language patterns, paralinguistic elements, rhetorical devices, linguistic strategies • Technology, information and communication technology, online video | 10 |
| 9 | <ul style="list-style-type: none"> • Corpus linguistics (CL) • Public administration | <ul style="list-style-type: none"> • Authentic language data, naturally occurring texts | |

| | | | |
|----|--|---|----|
| | <ul style="list-style-type: none"> • Vocabulary, terminology • Quantitative analysis, qualitative approaches • Corpus, corpora • Word list, vocabulary list | <ul style="list-style-type: none"> • Policy analysis, effective communication • Frequency-based vocabulary list, high-frequency words • Semantic scales, expert consultation | |
| 10 | <ul style="list-style-type: none"> • Heritage language • Second language • Japanese lecturer, Japanese skills • Family Language Policy, FLP | <ul style="list-style-type: none"> • Multilingualism, bilingual speakers • Minority language, majority language • Child agency, children's linguistic experiences | |
| 11 | <ul style="list-style-type: none"> • Visuals, visual elements, images, pictures, visual symbols, political visuals • News reporting, online news, news stories, newspaper coverage, news media, newsworthiness values • Audience engagement, audience perceptions, audience interpretations, engage audiences • Ideology, ideological stance, implicit ideologies, ideological tools, ideologically charged messages • Political figures, political leaders, politicians, political perspectives, political discourse, political issues | <ul style="list-style-type: none"> • Communication, meaning-making, narratives, interpretation, discourse • Camera technology, high-quality images, composition, framing, color, gaze • Protests, crowds, governance, economic challenges, social justice • Eliteness, negativity, positivity | 9 |
| 12 | <ul style="list-style-type: none"> • Feedback • Self-efficiency • Self-regulation, Self-Regulated Learning, SFL | <ul style="list-style-type: none"> • Oral feedback, spoken corrections • Written feedback, written comments, corrections, or suggestions • Motivation, achievement, goal-oriented actions | 6 |
| 13 | <ul style="list-style-type: none"> • Gesture, gestures, innovative gestures • Corrective feedback • Noticing • Second Language Acquisition • Language instruction language acquisition • Enhance, enhancement, improving • Integration, integrate, integrating | <ul style="list-style-type: none"> • Indonesia, Thailand, Ukraine • Classroom, classroom dynamics • Visibility, salience | 10 |
| 14 | <ul style="list-style-type: none"> • Corpora, corpus linguistics, compiled corpus • Grammar, grammatical, grammatical accuracy, grammar instruction • Data-Driven Learning (DDL) • Errors, mistakes, writing errors, persistent errors • Subject-Verb Agreement (SVA), SVA rules, SVA patterns | <ul style="list-style-type: none"> • English as a Second Language (ESL), English as a Foreign Language (EFL) • Teacher-centred process ↔ student-centred process • Authentic texts, contextually relevant grammatical patterns, up-to-date knowledge | 8 |
| 15 | <ul style="list-style-type: none"> • Language, language abilities, language typology, language breakdown • Aphasia, Broca's aphasia, mixed transcortical aphasia, mixed aphasia, agrammatic aphasia, Wernicke's • Morphological, morphology, morphosyntactic, morpho-syntactic • Syntactic, syntax, syntactic processing, syntactic deficits • Speech production, comprehension, speech samples, spontaneous speech | <ul style="list-style-type: none"> • Production, comprehension, output, processing, recovery, encoding • Inflections, derivations, affixation, reduplication • Errors, deficits, impairments, breakdown • Indonesia, Sundanese-Indonesian speaker, multilingual context of Indonesia | 9 |
| 16 | <ul style="list-style-type: none"> • Arab-Indonesian community, Arab- | <ul style="list-style-type: none"> • Language, Arabic loanwords, bilingual | 11 |

| | | | |
|---|---|--|-----|
| | Indonesians, Arab-Indonesian identity <ul style="list-style-type: none"> • Language, linguistic • Social media platforms, platforms, social media • Identity, identities, identity construction • Culture, cultural identity • Integration, integrating, integrated • Heritage, traditions, cultural heritage | practices <ul style="list-style-type: none"> • Traditional music, dance, culinary arts, clothing, calligraphy • Prayers, greetings, expressions of faith • Preservation, adaptation, transformation | |
| Σ | 91 | 54 | 145 |

Lexical cohesion appeared 145 times in total, consisting of 91 instances of reiteration and 54 instances of collocation. Reiteration was the dominant form of lexical cohesion and typically involved repetition or synonymy of key terms to emphasize central concepts and maintain thematic unity throughout the introductions. For example, writers often repeated specific academic terms to reinforce the topic and guide readers' focus. Collocation occurred less frequently but still played an important role in creating semantic associations between related ideas, such as language–communication or learning–classroom. The use of collocation added lexical variation and strengthened the semantic relationships among concepts discussed within each introduction.

The Role of Cohesive Devices in Organizing Ideas and Building Discourse Coherence

Cohesive devices played a crucial role in maintaining the logical organization of ideas and ensuring coherence across rhetorical moves. In the first rhetorical move (Establishing a Territory), conjunctions such as *and*, *in addition*, *moreover*, and *furthermore* linked background statements and prior research smoothly. These additive connectors helped authors build the research context and show the relevance of previous studies. Reference words like *this issue* and *these studies* were used to point back to previously mentioned ideas, reinforcing continuity between sentences. Through such devices, the opening parts of the introductions established the general area of

research while maintaining cohesive flow between sentences.

In the second rhetorical move (Establishing a Niche), causal and adversative conjunctions such as *however*, *although*, and *yet* were frequently used to contrast earlier studies and highlight gaps or limitations. These connectors signaled shifts in focus and prepared readers for the statement of the research problem. The use of references such as *previous research*, *those findings*, and *the existing studies* also maintained coherence by connecting the author's critique to what had been mentioned earlier. Lexical cohesion contributed here as well, with repeated use of central terms like *writing* and *cohesion* to emphasize the gap being addressed. Together, these devices provided structural and logical transitions that guided readers through the shift from general background to problem identification.

Finally, in the third rhetorical move (Occupying the Niche), cohesive devices functioned to introduce the study purpose, scope, and contribution clearly. Personal and demonstrative references such as *this study*, *this paper*, and *the present research* occurred frequently to specify the writer's own work, linking it to the established research gap. Conjunctions like *therefore*, *thus*, and *in order to* marked the logical conclusion of the argument and the transition to the purpose statement. Repetition of key lexical items such as *cohesion*, *coherence*, and *academic writing* strengthened thematic unity and coherence at the end of the introduction. Collectively, these findings demonstrate that cohesive devices not only connect sentences

grammatically but also support the rhetorical development and coherence of ideas across the three moves of the introduction section.

The Reasons Behind the Frequency of Cohesive Device Use

The frequency pattern observed in the data reflects both linguistic and rhetorical motivations. The dominance of grammatical cohesion, particularly conjunctions (112) and references (101), suggests that IJAL authors prioritized explicit logical and referential connections. In academic discourse, such explicitness is valued for its clarity and precision, especially when presenting background information and justifying research purposes. The absence of substitution and ellipsis indicates that writers preferred to use complete forms rather than omitted or replaced structures, which could cause ambiguity for international readers. This preference aligns with the conventions of English academic writing, which emphasize clarity over brevity.

The frequent use of conjunctions shows that authors consciously structured their arguments in a way that made logical relations visible to readers. Additive conjunctions linked related points, adversative connectors signaled contrast, and causal ones established reasoning. This choice reflects an awareness of the rhetorical need to make argumentation explicit in English academic texts. Similarly, the frequent use of references ensured topic continuity, allowing readers to trace ideas smoothly across sentences and paragraphs. These cohesive features supported coherence by signaling relationships among ideas while maintaining the unity of discourse.

Lexical cohesion, though less frequent, played an important complementary role. The repeated use of key terms such as study, writing, and language helped maintain thematic focus, while collocations like teacher–student or learning–process enriched the text semantically without

redundancy. The balance between grammatical and lexical cohesion indicates that IJAL writers combined clarity with thematic consistency. The overall frequency distribution demonstrates that cohesion in IJAL introductions arises not from density of devices but from the strategic selection of forms that promote clarity, logical organization, and coherence. These patterns highlight the writers' awareness of academic discourse conventions and their ability to use cohesive devices effectively to achieve communicative clarity.

DISCUSSION

The Types of Cohesive Devices Used

The analysis revealed a total of 358 cohesive ties, consisting of 213 instances of grammatical cohesion and 145 instances of lexical cohesion. Among grammatical devices, reference and conjunction were present, while substitution and ellipsis did not appear. Lexical cohesion was realized through reiteration and collocation. These findings align with Halliday and Hasan's (1976) claim that written academic discourse tends to rely more heavily on grammatical cohesion to establish explicit textual relationships, whereas lexical cohesion provides thematic reinforcement. Reference was one of the most frequently used cohesive devices, appearing 101 times. According to Halliday and Hasan (1976), reference establishes a relationship between linguistic elements where the interpretation of one item depends on another. The IJAL authors employed all three subtypes of reference—personal, demonstrative, and comparative. Personal references, such as *it*, *they*, and *there*, referred to previously mentioned research objects or phenomena, thereby maintaining topical continuity across sentences. Demonstrative references (*this*, *these*, *that*, *such*) functioned to connect new information with previously established ideas (e.g., “This study extends previous work on academic writing”), guiding readers through the logical flow of the introduction. Comparative references (*similar*, *different*, *same*) were used to

contrast previous studies and emphasize research gaps. These patterns indicate that references not only link clauses but also structure rhetorical argumentation across Swales's (1990) Create a Research Space (CARS) model. As Hyland (2005) and Zhang (2015) observed, reference is particularly vital in academic discourse because it creates coherence while minimizing redundancy, a key feature of professional academic writing.

Conjunctions were the most frequent grammatical cohesive device, occurring 112 times. They serve to signal logical relationships among clauses and sentences and to indicate the writer's reasoning and argument progression. Halliday and Hasan (1976) categorize conjunctions into additive, adversative, causal, and temporal. In the IJAL corpus, all types were identified, though additive (and, moreover, in addition) and causal (therefore, thus, because) conjunctions dominated. Additive conjunctions typically appeared in Move 1 (establishing a territory) to link background statements, while adversative conjunctions (however, on the other hand) were used in Move 2 (establishing a niche) to highlight contrasts and research gaps. Causal conjunctions connected claims in Move 3 (occupying the niche) to justify the study's rationale. The use of conjunctions aligns with Witte and Faigley's (1981) view that conjunctions function both as logical connectors and rhetorical organizers. Similarly, Tanskanen (2006) emphasizes that explicit conjunctions are crucial for coherence in written discourse because they reduce ambiguity. The frequency of conjunctions in IJAL introductions mirrors findings from Nurhidayat, Apriani, and Edy (2021), who also reported that conjunctions are integral to constructing logical arguments in EFL research articles.

No instances of substitution or ellipsis were found in the IJAL corpus. Substitution replaces a linguistic item with another (e.g., do, one, so) to avoid repetition, whereas ellipsis omits recoverable items from the context (Halliday & Hasan, 1976). Their

absence highlights the nature of academic writing, which demands explicitness and precision. As Taboada (2004) and Tanskanen (2006) note, substitution and ellipsis are common in spoken or informal discourse, where shared situational context allows the listener to infer omitted elements. In contrast, written academic texts are context-independent and read by a wider, often international audience. Hence, authors must ensure that meaning remains transparent without relying on inference. Halliday and Matthiessen (2014) argue that formal written discourse avoids ellipsis and substitution because these devices can obscure argumentation. The non-use of these devices in IJAL introductions thus reflects the authors' awareness of the norms of scientific communication, where clarity and full lexical realization are prioritized to facilitate comprehension.

Lexical cohesion was realized primarily through reiteration, which appeared 91 times. Halliday and Hasan (1976) define reiteration as the repetition of a lexical item, or the use of a synonym, near-synonym, or superordinate term. Reiteration serves to maintain the thematic unity of the text. In IJAL introductions, writers frequently repeated keywords such as cohesion, coherence, academic writing, and EFL learners to reinforce the topic. Repetition was also used rhetorically to emphasize the research focus and maintain topic salience throughout the introduction. This pattern is consistent with Eggins (2004), who notes that reiteration helps construct a semantic chain that connects sentences and paragraphs into a coherent whole. Synonymy (e.g., students–learners, teaching–instruction) was also employed to maintain lexical variation while preserving meaning. These findings echo Faizah, Sutopo, and Faridi (2020), who observed that reiteration supports textual unity and signals rhetorical emphasis in EFL academic writing.

Collocation appeared 54 times and was used to establish associative meaning between words that are semantically related or

frequently co-occur in the field. Halliday and Hasan (1976) describe collocation as cohesion created by lexical items that “tend to occur in similar environments.” In the IJAL corpus, collocations such as teacher–student, language–learning, and translation–communication were common, showing the writers’ awareness of discipline-specific vocabulary. Halliday and Matthiessen (2014) argue that collocation contributes to the semantic density of academic texts by linking related concepts, while Hyland (2009) adds that collocational fluency signals disciplinary identity in professional academic discourse. The use of collocation in IJAL introductions indicates that authors are capable of employing field-specific lexis to convey nuanced relationships between ideas. As observed by Asrorov (2024) and Zhang (2015), collocation enriches academic writing by enhancing lexical diversity and reinforcing semantic coherence across sentences.

The Role of Cohesive Devices in Organizing Ideas and Building Discourse Coherence

Cohesive devices in the IJAL introductions serve not only as linguistic links between clauses but also as rhetorical tools that structure and clarify the flow of ideas. Based on the findings, the 213 grammatical and 145 lexical cohesive ties were distributed strategically across the introduction sections, indicating that cohesion was employed deliberately to construct coherence both at the surface textual level and at the deeper rhetorical level. This function aligns with Halliday and Hasan’s (1976) view that cohesion provides the semantic continuity that transforms a sequence of sentences into a unified text.

Grammatical cohesion, particularly reference and conjunction, was central to organizing ideas and maintaining textual flow. The 101 references functioned to connect participants, concepts, and propositions throughout the introduction. Personal and demonstrative references such as *this study*, *these findings*, and *it* allowed

authors to maintain continuity of meaning without unnecessary repetition. For instance, when an author introduces a phenomenon and subsequently refers to it with *this issue* or *it*, cohesion is established through the reader’s ability to trace the referent. This practice supports Eggins’s (2004) claim that reference chains are essential for building thematic progression, enabling readers to follow the development of ideas across sentences. Comparative references like *similar* and *different* also helped authors contrast previous research and highlight the niche their study intended to fill, which corresponds with Move 2 in Swales’s (1990) CARS model. In this way, references not only connected linguistic elements but also served as rhetorical markers signaling the transition from background to research gap.

Conjunctions, which occurred 112 times, further strengthened coherence by linking ideas logically. Additive conjunctions such as *and*, *in addition*, and *moreover* appeared mainly in the early part of the introduction (Move 1) to connect general background information. Adversative conjunctions like *however* and *on the other hand* marked the shift to Move 2, indicating contrast with previous findings or identifying research problems. Causal conjunctions such as *therefore* and *thus* often occurred in Move 3 to connect the gap with the purpose of the study. This rhetorical sequencing demonstrates that IJAL authors employed conjunctions not randomly but strategically according to the communicative functions of each move. Similar patterns were noted by Nurhidayat, Apriani, and Edy (2021), who found that conjunctions play an integral role in structuring reasoning and highlighting cause–effect relationships in EFL academic texts. By explicitly signaling logical relations, these cohesive devices helped readers follow the argumentation smoothly, confirming Hyland’s (2005) notion of reader-oriented academic writing. Lexical cohesion, although less frequent than grammatical cohesion, also played an important role in building coherence by

maintaining the thematic focus of the text. The 91 instances of reiteration reflected the authors' tendency to emphasize important key terms—such as academic writing, cohesion, coherence, and EFL context—to ensure that the central theme remained salient throughout the introduction. Repetition and synonymy, as components of reiteration, are not signs of lexical poverty but of rhetorical control: they ensure that readers consistently perceive the same topic focus. This finding supports Eggins (2004), who argued that reiteration contributes to the texture of discourse by connecting clauses into a consistent semantic field. The 54 instances of collocation, such as language learning, teacher education, and translation process, further reinforced conceptual unity by linking semantically associated terms common in applied linguistics. Halliday and Matthiessen (2014) note that collocational patterns in scientific texts create field-specific coherence by linking terms that belong to the same experiential domain. Thus, while grammatical devices structured logical relationships, lexical devices maintained thematic and conceptual coherence, fulfilling what Tanskanen (2006) calls the “global” dimension of cohesion.

The Reasons Behind the Frequency of Cohesive Device Use

The data show a clear dominance of grammatical cohesion (213 instances) over lexical cohesion (145 instances), with reference (101) and conjunction (112) emerging as the most frequent devices. This tendency reflects IJAL authors' preference for explicit cohesion—a feature widely associated with academic writing. According to Halliday and Hasan (1976), explicit grammatical ties are essential in formal written texts because they make logical relationships overt and minimize the need for inferencing. This pattern is also consistent with findings by Alfitri and Yuliasri (2021), who observed that EFL academic writers rely heavily on grammatical devices to ensure clarity, as

these devices clearly show the relationships among ideas, arguments, and supporting evidence.

The high frequency of conjunctions can be explained by the functional demand of academic writing to construct logical and argumentative progression. As Witte and Faigley (1981) suggest, conjunctions serve as “logical operators” that guide readers through the cognitive structure of a text. In research article introductions, authors are expected to connect claims, contrasts, and rationales explicitly. Hence, IJAL writers frequently used additive and causal conjunctions to link general statements with specific findings and to justify their study's relevance. The predominance of reference likewise reflects the need for cohesion across multiple propositions in the introduction. References enable writers to maintain textual economy while ensuring continuity of participants and ideas. Hyland (2005) notes that this practice is central to effective academic writing because it fosters accessibility for readers by connecting propositions explicitly.

In contrast, ellipsis and substitution did not appear at all in the corpus. Their absence can be attributed to both linguistic and pragmatic reasons. Linguistically, these devices rely on contextual inference to recover omitted or substituted elements. In spoken or informal genres, shared situational context allows such inference, but in academic writing, the context must be self-contained. As Halliday and Matthiessen (2014) explain, ellipsis and substitution are typical of dialogic exchanges, where meaning is co-constructed by interlocutors; their absence in research articles reflects the monologic and explicit nature of written scientific communication. Pragmatically, academic authors avoid ellipsis and substitution because they can obscure argument clarity for an international readership. Taboada (2004) and Tanskanen (2006) both emphasize that in expository texts, implicit cohesion may lead to misinterpretation. Thus, by avoiding these devices, IJAL authors adhered to

conventions of clarity and precision that characterize scholarly communication.

The presence of reiteration and collocation in moderate frequencies shows that lexical cohesion played a complementary role rather than a dominant one. Reiteration was used to reinforce the research focus and ensure that the key concepts remained prominent, while collocation reflected the authors' familiarity with the discourse of applied linguistics. Fitriani (2018) and Zhang (2015) observed similar tendencies among advanced EFL writers, who balance grammatical cohesion to structure ideas with lexical cohesion to enrich thematic and disciplinary depth. The proportion of 213 grammatical to 145 lexical ties in the IJAL corpus suggests a mature and balanced approach: grammatical cohesion guarantees readability and logical progression, while lexical cohesion maintains field-specific relevance and cohesion of meaning.

Ultimately, the frequency and distribution of cohesive devices in the IJAL introductions demonstrate that Indonesian academic writers are highly aware of the expectations of international academic discourse. Their dominant use of reference and conjunction shows linguistic precision and rhetorical control, while their strategic use of reiteration and collocation highlights their growing mastery of lexical patterning in disciplinary writing. The deliberate avoidance of ellipsis and substitution further confirms that they prioritize explicitness over economy, aligning with Halliday and Hasan's (1976) principle that successful cohesion in written texts depends on the explicit signaling of relationships among ideas. This cohesive pattern reveals that IJAL authors have effectively integrated linguistic resources to produce introductions that are coherent, reader-oriented, and rhetorically persuasive.

CONCLUSION

This study investigated the role of cohesive devices in creating coherence within the introduction sections of sixteen research-based articles published in the Indonesian

Journal of Applied Linguistics (IJAL). The findings showed that cohesive devices were used systematically and purposefully to construct coherent, well-organized, and reader-oriented introductions. A total of 358 cohesive ties were identified, consisting of 213 grammatical and 145 lexical devices. Grammatical cohesion was found to be more dominant, with reference (101 instances) and conjunction (112 instances) being the only two types used, while substitution and ellipsis were absent. Lexical cohesion was realized through reiteration (91 instances) and collocation (54 instances). These results indicate that the IJAL authors relied primarily on grammatical cohesion to maintain logical relations and textual clarity, while lexical cohesion was used to sustain thematic focus and strengthen conceptual unity throughout the introduction.

Cohesive devices played a central role in organizing ideas and achieving coherence both linguistically and rhetorically. References helped link concepts across sentences and paragraphs, allowing the flow of information to remain continuous and easy to follow. Conjunctions served as logical connectors that marked relationships of addition, contrast, and cause, guiding readers through the authors' reasoning and rhetorical structure. Lexical devices such as reiteration and collocation contributed to topic maintenance and semantic density, ensuring that the main ideas were reinforced and that the terminology reflected the academic field accurately. The balanced use of grammatical and lexical cohesion demonstrates that IJAL writers not only have linguistic competence but also rhetorical awareness, enabling them to produce coherent and cohesive introductions aligned with international academic writing standards.

The dominance of grammatical cohesion also reflects a deliberate preference for explicitness and clarity. By making relationships between ideas overt, the writers ensured that their arguments could be easily understood by an international

readership. The absence of ellipsis and substitution further confirms their awareness of the conventions of formal academic writing, which values precision over brevity. Lexical cohesion, while less frequent, supported the coherence of discourse by maintaining consistency in key terms and reinforcing the overall unity of the text. These cohesive patterns suggest that IJAL authors used cohesion not merely as a linguistic mechanism but as a rhetorical strategy to enhance clarity, persuasiveness, and coherence in presenting their research background and purpose.

The results of this study carry several implications for academic writers, educators, and future researchers. For writers, understanding how cohesive devices operate is essential for producing coherent and readable texts. Writers should use reference and conjunction carefully to ensure logical flow, while employing lexical cohesion strategically to maintain thematic unity and academic precision. For teachers of academic writing, explicit instruction on the use of cohesive devices can help students develop awareness of how linguistic choices influence the clarity and organization of their writing. In classroom practice, activities that focus on identifying and applying cohesive devices in research writing could foster students' ability to produce texts that meet academic and rhetorical expectations. For future researchers, further studies could explore cohesive patterns in other sections of academic articles or compare cohesion across journals and disciplines to identify broader tendencies in academic discourse. Such research would deepen the understanding of how cohesion contributes to coherence in different genres and contexts of English academic writing.

In conclusion, cohesive devices play a vital role in shaping the coherence of IJAL introductions. The effective and balanced use of reference, conjunction, reiteration, and collocation reflects the writers' ability to construct texts that are clear, structured, and rhetorically sound. The cohesive

strategies observed demonstrate not only linguistic skill but also rhetorical competence in organizing ideas for an international audience. The study confirms that coherence in academic discourse depends on the deliberate and context-sensitive use of cohesive devices that link ideas logically and thematically, resulting in introductions that are communicative, coherent, and academically persuasive.

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