

## CROSS-JOURNAL VARIATION IN ABSTRACT WRITING: BUNDLE-DRIVEN MOVE ANALYSIS IN APPLIED LINGUISTICS

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**Abstract:** This study examines how four-word lexical bundles function as indicators of rhetorical moves in research article abstracts from two applied linguistics journals representing different academic traditions: the Indonesian Journal of Applied Linguistics (IJAL) and Applied Linguistics (AL) by Oxford University Press. While previous studies have categorized bundles structurally and functionally, fewer have explored how they align with rhetorical moves across journal communities. Using a bundle-driven approach, with a specialized corpus, the Journal Abstracts of Applied Linguistics (JAAL) was compiled, comprising over 100,000 words from abstracts published between 2019 and 2025. Four-word sentence-initial bundles were extracted using AntConc 4.3.1 and analyzed with Hyland's five-move abstract model. Findings show that clause-based bundles dominate in both IJAL (59%) and AL (80%), while PP-based bundles are least frequent in IJAL (7%), challenging earlier claims. Product bundles occur most often in IJAL (49%), whereas AL abstracts prioritize purpose bundles (46%) and use more flexible patterns, including self-mentions that perform multiple rhetorical roles. These differences reflect broader cultural and linguistic conventions in academic voice. The study demonstrates the link between lexical bundles and rhetorical moves and underscores implications for EFL instruction and genre-based writing pedagogy.

**Keywords:** *Abstract writing; applied linguistics; corpus-driven approach; lexical bundles; rhetorical moves*

### INTRODUCTION

The notion of lexical bundles, introduced by Biber et al. (1999), refers to recurring sequences of three or more words that frequently co-occur in natural discourse. Corpus-based research has enabled the identification of these patterns through corpus analysis tools. Because lexical bundles occur frequently in academic writing, they are considered indicators of fluent and conventional academic discourse and play an important role in helping writers meet the expectations of academic readers (Coxhead & Byrd, 2007). Consequently, they are particularly valuable for foreign language learners in expressing ideas effectively in academic texts.

Lexical bundles have been categorized according to their structures and functions (Biber et al., 1999; Biber & Barbieri, 2007; Cortes, 2004; Hyland, 2008). In academic prose, about 60% of bundles are phrasal fragments of noun phrases or prepositional phrases, such as *as a result of* and *on the other hand* (Biber et al., 1999). Hyland (2008) also identified anticipatory *it* fragments, such as *it is possible to* and *it*

*should be noted that*. Functionally, bundles are commonly classified into referential bundles, text organizers, and stance bundles. Rather than focusing on these categories, the present study examines lexical bundles as discourse signals that realize rhetorical purposes within the move structure of abstracts proposed by Hyland (2004).

In research articles, the abstract is typically the first section encountered by readers and provides a concise overview of the study within strict journal word limits. As condensed representations of longer articles, abstracts are dense texts organized through conventional rhetorical moves recognized by the academic community. Each move may contain smaller components, referred to as steps (Swales, 1990), that collectively fulfill the move's communicative purpose. These moves often display recurring linguistic signals, such as lexical bundles. For example, *the aim of this study* commonly signals a purpose move (Li et al., 2020).

Move analysis was first introduced by Swales (1981) to identify rhetorical organizational patterns in research articles, particularly through the Create a Research

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Space (CARS) model for introductions. Since then, the model has been widely applied to other sections of research articles and adapted for analyzing abstracts across disciplines (Maswana et al., 2015; Yoon & Casal, 2020). However, Swales highlighted the need for further exploration of rhetorical moves in abstracts, as they represent a distinct genre reflecting discourse community conventions. In response, Hyland (2004) proposed a five-move model consisting of Introduction (M1), Purpose (M2), Method (M3), Product (M4), and Conclusion (M5), which is adopted in this study to examine the relationship between lexical bundles and rhetorical move structure.

Lexical bundles are often described as recurrent expressions retrieved from memory and used as “text building blocks” (Biber et al., 2002). Similarly, Hyland (2008) views them as essential components of coherent discourse and characteristic features of language use in particular contexts. Rhetorical moves have likewise been conceptualized as structural building blocks of genres. Biber et al. (2007) describe move types as the “main building blocks” of a genre, while Dudley-Evans (1995) argues that understanding rhetorical moves can help novice writers produce effective texts within a given genre.

Recent studies on lexical bundles in the context of Indonesian authors have primarily examined comparisons between research articles written in English and Indonesian (Yuliawati et al., 2021; Haq et al., 2021; Budiwiyanto & Suhardijanto, 2020; Samodra & Pratiwi, 2018), students’ argumentative essays (Oktavianti & Sarage, 2021), and articles published in Scopus Q1-indexed journals (Aji & Haryanto, 2023). Cross-language comparisons show that Indonesian undergraduate students frequently rely on bundles such as *penelitian ini* and *this research* in their abstracts (Samodra & Pratiwi, 2018), suggesting that bundle use is influenced by factors such as students’ knowledge, their proficiency with English lexical bundles, and cross-linguistic differences. In addition, studies of Scopus

Q1-indexed journals reveal that lexical bundles in conclusion sections are often dominated by noun phrase fragments with *of*-phrases, such as *the limit of* and *the scope of* (Aji & Haryanto, 2023). However, these studies largely focus on the structural and functional categories of lexical bundles, leaving their relationship with rhetorical moves in abstract writing underexplored.

Research on rhetorical moves among Indonesian authors has similarly concentrated on abstracts in research articles across different disciplines (Kurniawan & Sabila, 2021; Ramadhini et al., 2021), institutional contexts (Kanafani et al., 2021), and undergraduate thesis abstracts (Juanda & Kurniawan, 2020), mostly employing Hyland’s (2002, 2004) analytical framework. These studies indicate that move structures may vary across disciplines (Juanda & Kurniawan, 2020). Nevertheless, analyses of linguistic features supporting these moves have generally been limited to grammatical aspects such as voice and tense (Ramadhini et al., 2020; Kurniawan & Sabila, 2021). The present study addresses this gap by examining the relationship between lexical bundles and rhetorical moves in research article abstracts.

Previous studies that share a similar concern and have guided the present study include those by Cortes (2013), who explored the connection between lexical bundles and rhetorical moves in research article introductions across various disciplines, and Li et al. (2020), who attempted to examine this connection in PhD abstracts from the arts and humanities disciplines. It has been shown that some lexical bundles are closely associated with particular moves or steps, while others merely complement surrounding expressions or function as evaluative comments (Cortes, 2013). Building on this observation, Li et al. (2020) adopted a bundle-driven approach focusing on five-word lexical bundles and introduced the concept of sentence-initial bundles, which often signal rhetorical moves. By examining bundles that occur at the beginning of sentences, they also identified an additional

move characteristic of PhD abstracts, namely, structure bundles that outline the organization of the text (e.g., *The thesis is divided into*). Drawing on this approach, the present study adopts the concept of sentence-initial bundles, referred to as lexical bundles throughout this paper.

To the best of our knowledge, the investigation of bundle-move analysis in Indonesian authors has only been carried out in the overall section of research articles in science and technology (Insani & Roselani, 2023). Using Nwogu's (1997) move classification, the findings confirm earlier research that some lexical bundles are strongly associated with specific rhetorical moves. However, certain bundles occur across multiple moves, while others do not clearly signal any move (e.g., *the value of the*). Conversely, not all moves are realized through lexical bundles; for instance, move eight may rely on other linguistic features to convey non-consistent observations. Grounded on these findings, there still needs to be further exploration in other fields. This study, therefore, focuses on the discipline of applied linguistics and the abstract section of two distinct journals.

In initial findings, we found distinct characteristics between Indonesian authors' abstract construction in the Indonesian Journal of Applied Linguistics (IJAL) and foreign authors' abstract construction in Applied Linguistics (AL) published by Oxford University. The most frequent lexical bundle used in IJAL is "This study aims to," which strictly links to one rhetorical move only: Purpose bundles. Meanwhile, the frequent pattern of lexical bundles appeared in the AL includes self-mentions, such as "In this article we". In contrast to lexical bundles in IJAL, the lexical bundle "In this article we" signals different moves at the same time, which function as introduction, purpose, and method bundles. Reflecting on these findings, it is significant to further uncover the variation of lexical bundles and their connection with rhetorical moves between these two journal communities.

These two journals originate from the same discipline but adhere to different standards within the academic community. The IJAL, organized by Universitas Pendidikan Indonesia, has received Scopus Q2 accreditation internationally and is indexed in SINTA 1 nationally. On the other hand, AL, published by Oxford University, has a Scopus Q1 rating, which indicates that it presents the highest quality journals that provide the most value, insights, and hence why it receives the highest citations. Investigating the variation of how the authors from these journals present their ideas in abstracts through lexical bundles, which can signal specific rhetorical moves, is valuable for the development of English for Academic Purposes, especially for non-native writers to succeed in their academic endeavors (Wray & Perkins, 2000). Based on these, we compiled and named the corpus as Journal Abstracts of Applied Linguistics (JAAL), and this study attempts to answer the following research questions:

- 1) How are the structural patterns of four-word lexical bundles found in the JAAL corpus?
- 2) How are the functional categories based on the move indicators found in those lexical bundles of the JAAL corpus?

## METHOD

This research adopted a typical corpus-driven approach, a bundle-driven approach, to analyze the variation of rhetorical moves across journals between Scopus Q1 and Scopus Q2 in the field of applied linguistics. In other words, the move analysis used a bottom-up approach (Biber et al., 2007). It began with the examination of linguistic features, specifically the four-word lexical bundles. Then, it continued to explore the connection of the lexical bundles within the moves proposed by Hyland (2004). A corpus consisting of a large number of texts was needed to implement this approach. The following is a description of the corpus used in this study.

### The Corpus Design

The corpus for this study was constructed using the abstract sections of research articles compiled in the Journal Abstracts of Applied Linguistics (JAAL) Corpus. This study specifically focuses on the field of applied linguistics. To ensure a meaningful comparison, data were selected from two reputable journals: (1) *Indonesian Journal of Applied Linguistics* (IJAL), published by Universitas Pendidikan Indonesia and indexed both in Scopus Q2 and SINTA 1, and (2) the *Applied Linguistics* (AL) journal, published by Oxford University Press and indexed in Scopus Q1. This comparison aims to uncover structural and functional patterns of lexical bundles in relation to rhetorical moves, as employed in abstracts by academics from both journal communities. It is important to highlight that only abstracts published between 2019 and 2025 were included in the dataset. On average, abstracts from both journals range between 150 and 250 words in length. Thus, the whole corpus comprises more than one hundred thousand words.

The abstracts were copied directly from both of the journal's sites and then pasted into the Text document. The keywords were excluded from the data. The clean texts were saved in the .txt format with Unicode 8 (UTF-8) encoding. The files were then labeled, consisting of the volume number, the issue number, the published year, and the order in which the articles appear on the website. The following table shows the detailed size of the JAAL corpus.

Table 1. *Description of the Journal Abstracts of Applied Linguistics (JAAL) Corpus*

Cross-Journal	Number of Texts	Number of Types	Number of Tokens
Scopus Q1 (Applied Linguistics)	270	5796	45576
Scopus Q2 (Indonesian Journal of Applied)	265	5839	59552

Linguistics)	
Total	105128

### Lexical bundles identification

The analysis of lexical bundles focused on four-word lexical bundles. It was found that four-word bundles are more frequent than five-word ones and often subsume three-word bundles and expressions such as *this study aims to* and *the results of the* frequently occur in academic writing and signal specific rhetorical moves (Biber & Barbieri, 2007; Cortes, 2013; Hyland, 2008). The raw frequency cut-off was established at three occurrences, and the distribution threshold requires at least three abstracts, due to the small corpus size used in this study. Furthermore, the concept of lexical bundles used in this study refers to all the bundles that start a sentence. This was adopted since Li et al. (2020) argued that this type of lexical bundle, which is referred to as "sentence initial bundles", is highly likely to start a move. Therefore, the frequencies were labeled as instances (the raw frequency of the sentence-initial bundles) and raw frequency (the total frequency of lexical bundles, including non-initial ones) (see Li et al., 2020). AntConc 4.3.1 version (Anthony, 2024) is utilized to extract the lexical bundles.

### Data analysis

To answer the questions in this study, frequency analysis of the lexical bundles was first carried out in both journal abstracts. Next, the structure and patterns of lexical bundles were examined based on the classification provided by Biber et al. (2004). Then, the functional analysis began by specifying the functions of lexical bundles in relation to their contexts, and these functions were then grouped to generate a framework. It became clear as the analysis progressed that many of the discourse functions carried by the lexical bundles could be identified as rhetorical moves relating to the organisation of research article abstracts suggested by Hyland (2002b, 2004).

## RESULTS AND DISCUSSION

### Lexical Bundle-Driven Move Analysis in the Indonesian Journal of Applied Linguistics (IJAL) Abstracts

The present study set out to investigate the connection between lexical bundles and rhetorical moves in the abstract writing of two journal communities. The findings on lexical bundles focus exclusively on sentence-initial bundles, which have been shown to start a move (Li et al., 2020). The complete list of lexical bundles is provided in Table 1, which discusses the lexical bundles in the IJAL abstracts, and in Table 4, which covers the lexical bundles in the Applied Linguistics (AL) abstracts, showing the number of instances and raw frequency. The

number of instances refers to the calculation centered on sentence-initial bundles, where the bundles are always positioned at the beginning of a sentence. Meanwhile, the raw frequency indicates the total number of each lexical bundle found within the corpus.

The analysis reveals that lexical bundles *This study aims to* used much more frequently than the rest of the bundles in IJAL abstracts. On the other hand, the least used lexical bundles, each with only one occurrence, are: *In the form of*, *Data were analyzed using*, and *In relation to the*. In total, there are 38 types of lexical bundles found in the IJAL abstracts.

Table 2. *The Lexical Bundles in the IJAL Abstracts*

Lexical bundles	Instances	Raw Frequency
This study aims to	22	34
The results of the	12	17
The findings of this	13	16
Data were collected through	6	14
The findings show that	13	14
The results showed that	13	14
The data were collected	13	13
In the context of	3	12
In the form of	1	12
In terms of the	6	11
This study aimed to	7	11
Data were collected from	6	10
The data were analyzed	8	10
The purpose of this	9	10
Data were analyzed using	1	9
The findings indicate that	7	9
The results show that	8	9
This study examines the	6	9
The findings reveal that	7	8
The findings revealed that	8	8
The findings showed that	8	8
The result of the	5	8
The study found that	5	7
This research aims to	3	7
Findings reveal that the	2	6
It was found that	4	6
On the other hand	5	6
Data were collected using	2	5
In relation to the	1	5
The collected data were	5	5
The participants of this	4	5
The present study aims	2	5
This paper aims to	2	5
This study concludes that	5	5
This study employed a	4	5

This study investigated the	3	5
This study revealed that	3	5
This study seeks to	4	5

The structural categories and patterns that were initially used as a reference point to classify bundles were developed from Biber’s studies (Biber et al., 1999, 2004). Table 3 categorizes the data into four major categories: NP-based, VP-based, PP-based, and Clause-based. NP-based bundles refer to noun phrases with post-modifier fragments,

mainly of-phrase in this study. VP-based bundles refer to a verb followed by the infinitive marker “to”. PP-based bundles refer to a prepositional phrase + noun phrase. Clause-based bundles under the pattern of *noun phrase + verb phrase fragment* were identified in the IJAL abstracts.

Table 3. *The Distribution of Structural Categories and Patterns of Lexical Bundles in IJAL Abstracts*

Categories	Patterns	Examples	Types (%)	Instances (%)
NP-based	Noun phrase with post-modifier fragment	<i>The results of the The findings of this The purpose of this The result of the The participants of this</i>	5 (13%)	43 (18%)
VP-based	Verb + infinitive marker “to”	<i>This study aims to This study aimed to This research aims to This paper aims to This study seeks to</i>	5 (13%)	38 (16%)
PP-based	Preposition + noun phrase	<i>In the context of In the form of In terms of the In relation to the On the other hand</i>	5 (13%)	16 (7%)
Clause-based	Noun phrase + verb phrase fragment	<i>Data were collected through The findings show that The results showed that The data were collected Data were collected from The data were analyzed Data were analyzed using The findings indicate that The results show that This study examines the The findings reveal that The findings revealed that The findings showed that The study found that It was found that Data were collected using The collected data were This study concludes that This study employed a This study investigated the This study revealed that The present study aims Findings reveal that the</i>	23 (61%)	139 (59%)
<b>Total</b>			38 (100%)	236 (100%)

The findings of lexical bundles in the IJAL abstracts generally follow what has been found by Biber et al. (1999, 2004). The most frequent lexical bundles are those clause-based bundles, which accounted for 59% in frequency. On the other hand, the least used lexical bundles in the IJAL abstracts are prepositional phrases with 7% in frequency. This finding contrasts with those found in Biber et al. (1999, 2004), where it was revealed that the academic prose accounted for 60% with prepositional phrase structures. In a similar vein, Li et al. (2020) reveal in the abstracts of their PhD theses that there is no appearance of PP-based bundles. They, then, argued that the absence of this specific structure might be because of how abstracts function as “hooks” that only highlight the most important information (Hyland, 2004), therefore, the lexical bundles used to express detailed information, such as *in the case of* and *as a result of* are less likely to occur in abstracts. In the IJAL abstracts, the pp-based bundles are used to convey

move 1 (introduction bundles), for instance, in the form of *and in relation to the*. Conversely, clause-based bundles are generally among the most effective grammatical tools for expressing move 4 (product bundles) as well as move 3 (method bundles) in the IJAL abstracts.

The analysis of the lexical bundles in the IJAL abstracts resulted in all the generated bundles being identified as move indicators. These comprised: introduction bundles (e.g., *In the context of*), purpose bundles (e.g., *The purpose of this*), method bundles (e.g., *Data were collected from*), product bundles (e.g., *The results of the*), and conclusion bundles (e.g., *This study concludes that*). It should be noted here that rhetorical moves are flexible functional segments that can be realized in many different ways, and these lexical bundles, specifically sentence-initial bundles, are only a part of a rhetorical move because, as Swales (2004) explained, the move itself is bigger and defined by function, not form.

Table 4. *The Functional Categories of Lexical Bundles in IJAL Abstracts*

Bundles	Moves	Examples	Types (%)	Instances (%)
Introduction bundles	Establishes the context of the paper and motivates the research or discussion	<i>In the context of</i>	1 (3%)	3 (1%)
Purpose bundles	Indicates purpose, thesis, or hypothesis, outlines the intention behind the paper	<i>This study aims to</i> <i>This study aimed to</i> <i>The purpose of this</i> <i>This research aims to</i> <i>The present study aims</i> <i>This study examines the</i> <i>This paper aims to</i> <i>This study investigated the</i> <i>This study seeks to</i> <i>In relation to the</i>	10 (26%)	59 (26%)
Method bundles	Provides information on design, procedures, assumptions, approach, data, etc.	<i>Data were collected through</i> <i>The data were collected</i> <i>Data were collected from</i> <i>The data were analyzed</i> <i>Data were analyzed using</i> <i>Data were collected using</i> <i>The collected data were</i> <i>The participants of this</i> <i>In terms of the</i>	9 (24%)	47 (21%)
Product bundles	States the main findings or results, the argument, or what was accomplished	<i>The results of the</i> <i>The findings of this</i> <i>The findings show that</i> <i>The results showed that</i>	16 (42%)	112 (49%)

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		<i>The findings indicate that</i>		
		<i>The results show that</i>		
		<i>The findings reveal that</i>		
		<i>The findings revealed that</i>		
		<i>The findings showed that</i>		
		<i>The result of the</i>		
		<i>The study found that</i>		
		<i>Findings reveal that the</i>		
		<i>It was found that</i>		
		<i>This study revealed that</i>		
		<i>In the form of</i>		
		<i>In terms of the</i>		
Conclusion bundles	Interprets or extends results beyond the scope of the paper, draws inferences, points to applications, or wider implications.	<i>This study concludes that</i> <i>In terms of the</i>	2 (5%)	6 (3%)
<b>Total</b>			38 (100%)	227 (100%)

The most common lexical bundles used in the IJAL abstracts are those related to product bundles, which account for 49% in total. Meanwhile, the least used bundles are introduction and conclusion bundles, which make up only 1% and 3%, respectively. The format guidelines for IJAL abstracts consist of a series of rhetorical moves, beginning with the study's background, followed by its purpose, methodology, main findings, and conclusion, all within a length of 200 to 250 words. In other words, this format follows the rhetorical moves of abstracts proposed by Hyland (2004). However, the frequency distribution of bundle functions based on rhetorical moves, which are overlapped and dominated by product bundles, may be due to the focus of this study, which only considers lexical bundles that initiate a sentence. In addition, the authors published in the IJAL abstracts used another linguistic feature and did not heavily rely on lexical bundles to convey their ideas in constructing the introduction and conclusion parts.

#### ***Linguistic Features of Bundle-Based Move Indicators in the IJAL Abstracts***

From here, we examine the linguistic features of bundle-based move indicators found in the IJAL abstracts. Starting with the first type, the introduction bundles, there is only one type of lexical bundle: In the context of. The language pattern follows a preposition + noun phrase and is used to provide context

for the research and to introduce the direction of the study's discussion. The following excerpt (1) is an example:

- 1) *In the context of the role of culture in language learning, many textbook analysts have so far investigated the representations of cultures in EFL textbooks.* [8-3-2019-3]

The second type, purpose bundles, is the second most common after product bundles. The research primarily identified four patterns: verb + infinitive "to," a noun phrase with a post-modifier fragment, preposition + noun phrase, and noun phrase + verb phrase fragment. Both present and past tenses were used to express purpose, with the simple present being more prevalent. The past tense appeared only in two bundles with the subject *study* (e.g., *This study aimed to*, *This study investigated the*). This aligns with Li et al. (2020), which found that subjects like *This study* and *The present study* often accompany both past and present tense verbs, either to report past research or to emphasize the research's significance. Additionally, other subjects in IJAL abstracts include *This research* and *This paper*.

The third category, method bundles, made up nine lexical bundles that follow three main patterns: noun phrase + verb phrase fragment, noun phrase with post-modifier fragment, and preposition + noun phrase. The frequent use of the past tense

reflected the research activities completed regarding what was done during the study. The consistent use of passive voice removed agents (e.g., the researchers published in IJAL) and foregrounded the objects of activities (such as *The data* and *The participants*) at the start of sentences. This pattern generally aligns with findings in Li et al. (2020). Additionally, prepositional phrases like "In terms of the" appear to emphasize a specific framework or analytical approach. The following excerpt (2) illustrates this.

- 2) *In terms of the methodology, the approach is analytic-descriptive with a cohort method.* [9-2-2019-14].

The fourth category, product bundles, is among the most common lexical bundles in IJAL abstracts. It includes four patterns: a noun phrase with a post-modifier fragment, a noun phrase + a verb phrase fragment, a quantifier + a verb phrase + a post-modifier, and a preposition + a noun phrase. These purpose bundles aim to present the main findings of the study, typically introduced with combinations of past and present tense verbs such as show, showed, indicate, reveal, revealed, and found. The subjects in these patterns are usually *The findings*, *The results*, *The study*, and *This study*. According to Li et al. (2020), these patterns "allow writers to depersonalize their arguments."

The final category, conclusion bundles, consists of the least frequent lexical bundles in IJAL abstracts. This supports Hyland's (2004) study, which indicates that conclusions are often optional across

disciplines. However, this finding contradicts results from social and humanities PhD abstracts (Li et al., 2020). In this research, the lexical bundles fell into two patterns: noun phrase + verb phrase fragment and preposition + noun phrase. Additionally, the prepositional phrase *In terms of the* has been extended beyond presenting method bundles to include conclusion bundles. The phrase *In terms of the* is used to connect findings to their implications, as illustrated in excerpt (3).

- 3) *In terms of the* students' levels of thinking, this learning strategy had successfully promoted students' thinking skills from applying to creating levels as indicated from the inferences made by the students. [11-1-2021-12]

The results of this bundle-driven move analysis in the IJAL abstracts will be examined and compared with those in the AL abstracts in the following section.

#### **Lexical Bundle-Driven Move Analysis in the Applied Linguistics (AL) Abstracts**

The analysis of the lexical bundles in the AL abstracts is fewer than those found in the IJAL abstracts. There are only 26 types of lexical bundles found in the AL abstracts. The most frequently used is the one using self-mention *In this article we*. Nevertheless, the least used lexical bundles, which respectively have only one occurrence, are: *In the context of*, *Little is known about*, *Before and after the*, *In order to explore*, and *Results of the study*.

Table 5. *The Lexical Bundles in the AL Abstracts*

Lexical Bundles	Instances	Raw Frequency
In the context of	1	14
In this article we	11	11
This study investigates the	7	8
In this article I	7	7
In this study we	6	6
Little is known about	1	6
The results show that	6	6
The results showed that	4	5
In this paper we	4	4
Results showed that the	2	4
The findings show that	4	4
The findings suggest that	3	4

The present study investigated	2	4
The results of the	3	4
This article investigates the	4	4
This study aims to	3	4
This study examines the	3	4
Based on the findings	2	3
Before and after the	1	3
In order to explore	1	3
On the other hand	2	3
Results of the study	1	3
The aim of the	3	3
The analysis focuses on	2	3
The analysis showed that	3	3

The structural categories and patterns initially used as a reference point for classifying lexical bundles were derived from Biber's studies (Biber et al., 1999, 2004). As shown in Table 6 below, four major categories were identified from our lexical bundle data: NP-based, VP-based, PP-based, and Clause-based. NP-based bundles refer to *noun phrases with post-modifier fragments*, mainly *of*-phrases in this study. VP-based

bundles start with infinitive verb components, such as *in order to explore*, which is present in our corpus. PP-based bundles consist of *preposition + noun phrase*. Clause-based bundles include clause fragments, and two different patterns were identified: *noun phrase + verb phrase fragment and quantifier + verb phrase + post-modifier*.

Table 6. *The Distribution of Structural Categories and Patterns of Lexical Bundles in AL Abstracts*

Categories	Patterns	Examples	Types (%)	Instances (%)
NP-based	Noun phrase with post-modifier fragment	<i>The results of the</i> <i>Results of the study</i> <i>The aim of the</i>	3 (12%)	7 (8%)
VP-based	(in order) to-clause fragment Verb + infinitive marker "to"	<i>In order to explore</i> <i>This study aims to</i>	2 (8%)	4 (5%)
PP-based	Preposition + noun phrase	<i>In the context of</i> <i>Before and after the</i> <i>Based on the findings</i> <i>On the other hand</i>	4 (16%)	6 (7%)
Clause-based	Noun phrase + verb phrase fragment	<i>In this article we</i> <i>This study investigates the</i> <i>In this article I</i> <i>In this study we</i> <i>The results show that</i> <i>The results showed that</i> <i>In this paper we</i> <i>Results showed that the</i> <i>The findings show that</i> <i>The findings suggest that</i> <i>The present study investigated</i> <i>This article investigates the</i> <i>This study examines the</i> <i>The analysis focuses on</i> <i>The analysis showed that</i>	16 (64%)	69 (80%)

Quantifier + verb phrase + *Little is known about*  
 post-modifier

<b>Total</b>	25 (100%)	86 (100%)
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The findings show that the most common lexical bundles in the AL abstracts are clause-based bundles, making up 80% of the total. This is similar to what is found in the IJAL abstracts. Additionally, the least frequently used lexical bundles are VP-based bundles, accounting for 5% of the total frequency. Comparing the structure of clause-based lexical bundles with their rhetorical functions reveals that AL abstracts are much more versatile than those in IJAL abstracts. The clause-based bundles are used to signal moves 1, 2, 3, and 4. The following paragraphs will discuss this finding.

The analysis of the lexical bundles in the AL abstracts revealed that all the generated bundles in the list were identified as move indicators. These comprised: introduction bundles (e.g., *In this article we*), purpose bundles (e.g., *This study investigates the*), method bundles (e.g., *In this article I*), product bundles (e.g., *The findings suggest that*), and conclusion bundles (e.g., *Based on the findings*). Several lexical bundles found in the AL abstracts may signal different moves. For instance, bundles like *In this article we* used to indicate introduction, purpose, and method within the abstracts.

Table 7. *The Functional Categories of Lexical Bundles in AL Abstracts*

Bundles	Moves	Examples	Types (%)	Instances (%)
Introduction bundles	Establishes the context of the paper and motivates the research or discussion	<i>In the context of</i> <i>Little is known about</i> <i>In this article we</i> <i>In this article I</i> <i>In this study we</i> <i>In this paper we</i> <i>On the other hand</i>	7 (22%)	9 (11%)
Purpose bundles	Indicates purpose, thesis, or hypothesis, outlines the intention behind the paper.	<i>This study investigates the</i> <i>The present study investigated</i> <i>This article investigates the</i> <i>This study aims to</i> <i>This study examines the</i> <i>In order to explore</i> <i>The aim of the</i> <i>In this article we</i> <i>In this article I</i> <i>In this study we</i> <i>In this paper we</i>	11 (34%)	37 (46%)
Method bundles	Provides information on design, procedures, assumptions, approach, data, etc.	<i>In this article we</i> <i>In this article I</i> <i>In this study we</i> <i>In this paper we</i> <i>Before and after the</i> <i>On the other hand</i>	6 (19%)	10 (12%)
Product bundles	States the main findings or results, the argument, or what was accomplished	<i>The results show that</i> <i>The results showed that</i> <i>Results showed that the</i> <i>The findings show that</i> <i>The findings suggest that</i> <i>The results of the</i> <i>Results of the study</i>	7 (22%)	23 (30%)
Conclusion bundles	Interprets or extends results beyond the scope	<i>Based on the findings</i>	1 (3%)	2 (1%)

of the paper, draws inferences, points to applications, or wider implications.

<b>Total</b>	32	81 (100%) (100%)
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The most common lexical bundles used to realize rhetorical moves are those in purpose bundles, accounting for 46% overall. In contrast, the least used are those in conclusion bundles, which make up only 1%. This finding suggests that the authors tend to use other linguistic features to convey the information in the conclusion. Unlike abstracts in the IJAL corpus, the AL abstracts are much more varied in how they construct their moves. Data show that rhetorical moves often begin with lexical bundles signaling move two (purpose bundles), followed by others. Additionally, lexical bundles containing self-mentions, such as “I” and “We,” are used by authors in this journal to signal different moves, including introduction, purpose, or even method bundles. PP-based bundles (e.g., *On the other hand*), however, also indicate two different moves: introduction and method bundles. The prevalence of authorial stances, like self-mention, is higher in the social sciences and humanities (Hyland, 2001) and in fields like applied linguistics (Pho, 2013). This may be because authors in these areas need to promote their work and establish authority. Referring to Pho’s (2013) study, authors use self-mention in lexical bundles like *In this article we*, *In this article I*, *In this study we*, and *In this paper we* to initiate move two as purpose bundles. These serve to establish their authority and mark the shift from reporting others’ studies to presenting their own.

**Linguistic Features of Bundle-Based Move Indicators in the AL Abstracts**

Building on the discussion in the IJAL abstracts, it is also important to explore the linguistic features of bundle-based move indicators in the AL abstracts. The first category, introduction bundles, involves three patterns: preposition + noun phrase, noun phrase + verb phrase fragment, and

quantifier + verb phrase + post-modifier. Lexical bundles like “On the other hand” and “Little is known about,” which serve to introduce information in abstracts, are unique to the AL corpus. Additionally, clause-based bundles often feature self-mentions such as “we” and “I” to set the context for the study. Examples include phrases like *In this article we*, *In this study we*, *In this paper we*, and *In this article I*. The following excerpts illustrate these points.

- 4) *In this article we explore the ways in which academic citation practices have changed over the past 50 years.* [40-1-2019-4]
- 5) *In this study, we analyze the calls for action in a corpus of tweets with the hashtag #FashionRevolution, related to the 2020 Fashion Revolution week.* [45-6-2024-8]
- 6) *In this paper, we argue that critical applied linguists must work towards the materially transformative, dialogic inclusion of marginalized voices in order to create more just social relations.* [44-3-2023-2]
- 7) *In this article, I propose the idea of public applied linguistics: ...* [42-6-2021-6]

The second category is purpose bundles, which are the most common in AL abstracts, with 11 types and 37 instances (see Table 6). The research’s purpose is expressed through three patterns: a noun phrase + a verb phrase fragment; a noun phrase with a post-modifier fragment; a verb + infinitive marker “to”, and (in order) to-clause fragment. Subjects like *This study* and *This article* are paired with present-tense verbs (e.g., investigates, examines, aims) to emphasize the research’s significance. On the other hand, subjects like *The present study* are followed by past-tense verbs (e.g., investigated), indicating an awareness of the

research being a one-off effort and adding caution against overgeneralization or overstated claims (Swales, 1990). Additionally, self-mentions in clause-based bundles also appear in purpose bundles after introduction bundles. The following examples can be found.

- 8) *In this article, we provide a brief summary of the literature as it pertains to intelligible and comprehensible speech, and then report on an exploratory study seeking to determine what specific features of accented speech make it difficult for global listeners to process.* [41-4-2020-1]
- 9) *In this study, we propose a time-series clustering methodology for researching informal mobile language learners' learning and development of another language, with a view to unravelling the essential uniquenesses and commonalities in learners' developmental processes.* [43-5-2022-3]
- 10) *In this paper, we present an innovative approach to exploring what is in an ELF text.* [44-3-2023-6]
- 11) *In this article, I begin by discussing a selection of those reports, before arguing that there is a general process shared by these varied cases: linguistic dissociation.* [44-6-2023-8]

The third category, method bundles, is primarily characterized by patterns such as noun phrase + verb phrase fragment, followed by preposition + noun phrase. In the AL abstracts, the lexical bundles used to describe methodology do not typically appear in the past tense or passive voice, contrasting with the patterns observed in IJAL's abstract and in previous research (Li et al., 2020). Additionally, prepositional phrases like "Before and after the" and "On the other hand" are found in the corpus to emphasize experimental control, as mentioned in the prior sentence, and to introduce details about the control group relative to the previous sentence. These are

illustrated in (12) and (13). Lexical bundles that include self-mentions are also identified within these method bundles, following earlier moves. Examples can be seen in excerpts (14), (15), (16), and (17).

- 12) *Before and after the training period, participants carried out an identical pre- and posttest which consisted of reading four dialogues aloud.* [43-4-2022-7]
- 13) *On the other hand, the control treatment involved working with 12 FonF tasks during 12 45-min sessions.* [44-3-2023-5]
- 14) *In this article, we present findings from a study that investigated the depth to which participants (n = 90) from a range of cultural and linguistic backgrounds (the UK, Spain, and China) were found to process 30 real-world adverts featuring creative metaphor and metonymy in multimodal format.* [40-6-2019-5]
- 15) *In this study, we extend the use of multivariate approaches to L2 Spanish writing.* [45-6-2024-3]
- 16) *In this paper we apply Hyland (2005a) engagement framework to a corpus of 120 3MT presentations to explore how academics establish interpersonal rapport with non-specialist audiences.* [43-1-2022-2]
- 17) *In this article, I employ a Bakhtinian lens to explore this couple's perspectives on their encounters with raciolinguistic ideologies; ...* [43-1-2022-3]

The fourth category, product bundles, ranks second in frequency after purpose bundles in the AL abstracts. These patterns include noun phrase + verb phrase fragment and noun phrase with post-modifier fragment. Nearly all lexical bundles employ the present tense, except for two: *The results showed that* and *Results showed that the*. The past tense is used to highlight significant outcomes from the research, as seen in excerpt (18). Bundles in the present tense typically provide information with subjects

like *The results* or *The findings*, followed by reporting verbs such as *show* and *suggest*, as illustrated in excerpt (19).

18) *The results showed that L2 researchers' identities often crossed multiple boundaries, as L2 learners, teachers, as well as researchers.* [43-4-2022-1]

19) *The results show that the teachers' work goes beyond the role of language teacher per se.* [44-4-2023-4]

Finally, the least common type is conclusion bundles in the AL abstracts. There is only one type and two instances of this bundle. The pattern is preposition + noun phrase. A lexical bundle like *Based on the findings* is used to inform interpretations, implications, or subsequent actions directly derived from the research results. This can be seen in excerpt (20) below.

20) *Based on the findings, we built a machine learning classification algorithm with the ability to predict UD patient cohorts with 87.0% accuracy, effectively demonstrating the feasibility of using clinical discourse to classify patients and directly impact the clinical environment.* [45-1-2024-6]

Cortes's (2013) exploration of lexical bundles and rhetorical moves found that lexical bundles with more than five words act as triggers because they initiate the move. These bundles are used at the beginning of the clause that triggers the move or step. Following this finding, Li et al. (2020) also focus on five-word bundles and those lexical bundles that start the moves or steps, which they call "sentence-initial bundles." These studies demonstrate a strong connection between lexical bundles and rhetorical moves. However, this study adopts a different approach by analyzing more specialized corpora to gain a deeper understanding of their discourse structure. It was found in a specialized corpus, which is much smaller than those used in previous research, that focusing on four-word bundles enables the exploration of the relationship

between lexical bundles and moves in abstracts across various journal communities.

Through this study, we argue that even within the same discipline, applied linguistics, variation remains common across communities of journals from different cultural backgrounds. This is evident in how they construct their abstracts. Perhaps the most noticeable difference is the frequency of self-mentions in the AL abstracts, mainly authored by native speakers. In contrast, the IJAL abstracts, primarily written by Indonesian authors, lack self-mentions. This indicates a different stylistic choice in shaping the academic voice, which can be linked to cultural and linguistic norms that value modesty and impersonality in scholarly writing. According to Lehman (2018), non-native English-speaking academic writers often carry over rhetorical conventions from their native languages, leading to the avoidance of overt authorial presence. While this may meet local expectations, it can create a disconnect with Anglo-American norms, where explicit self-mention is typically used to establish authorial stance and textual ownership (Hyland, 2002). Therefore, the lack of self-mentions among Indonesian authors may reflect a deeper cross-cultural variation in how rhetorical moves, especially those involving authorial identity, are expressed in their abstract writing.

## CONCLUSION

This study demonstrates clear cross-journal contrasts in how four-word lexical bundles that start the sentence are deployed to realize rhetorical moves in applied linguistic abstracts. While both IJAL and AL abstracts are structurally dominated by clause-based bundles, they differ markedly in the rhetorical priorities. IJAL abstracts favor product-oriented bundles, foregrounding research outcomes, whereas AL abstracts privilege purpose-oriented bundles and display greater functional flexibility, including the strategic use of self-mentions to accomplish multiple moves simultaneously. These patterns suggest that abstract writing is shaped not only by disciplinary norms but

also by journal-specific and culturally embedded conventions of authorial stance.

Building on the discussions of bundle-move connection in research articles, this study strengthens the view that lexical bundles function as integral resources for rhetorical move construction rather than as isolated formulaic sequences. Further research is needed to examine this relationship across a wider range of genres and disciplines, using larger corpora and extending the analysis beyond four-word lexical bundles to include all bundle occurrences, to develop a more comprehensive and reliable understanding of bundle-move patterns in academic writing.

Finally, the bundle-move relationship in abstract writing should be incorporated as a key instructional focus in academic writing courses. EFL pedagogy needs to move beyond presenting lexical bundles as fixed formulaic units and instead highlight their functional flexibility across academic contexts. Moreover, raising learners' awareness of cross-journal variation, particularly patterns associated with non-native and native scholarly communities, can foster greater rhetorical sensitivity and adaptability when preparing manuscripts for international publication.

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## REFERENCES

- Anthony, L. (2024). *AntConc (Version 4.3.1)* [Computer Software]. Tokyo, Japan: Waseda University.  
<https://www.laurenceanthony.net/software/AntConc>
- Aji, A. K., & Haryanto, S. (2023, August). Structure of Lexical Bundles in Journal Scopus One: International Journal of English Studies. In *International Conference on Learning and Advanced Education (ICOLAE 2022)* (pp. 280-292). Atlantis Press.
- Biber, D., & Barbieri, F. (2007). Lexical bundles in university spoken and written registers. *English for Specific Purposes*, 26(3), 263-286.
- Biber, D., Conrad, S., & Cortes, V. (2004). If you look at...: Lexical bundles in university teaching and textbooks. *Applied Linguistics*, 25(3), 371-405.
- Biber, D., Conrad, S., & Leech, G. (2002). *Longman student grammar of spoken and written English*. Pearson.
- Biber, D., Johansson, S., Leech, G., Conrad, S., & Finegan, E. (1999). *Longman grammar of spoken and written English*. Pearson.
- Biber, D., Upton, T. A., & Connor, U. (2007). *Discourse on the Move: Using corpus analysis to describe discourse structure*. John Benjamins Publishing Company.
- Budiwiyanto, A., & Suhardijanto, T. (2020). Indonesian lexical bundles in research articles: Frequency, structure, and function. *Indonesian Journal of Applied Linguistics*, 10(2).
- Cortes, V. (2004). Lexical bundles in published and student disciplinary writing: Examples from history and biology. *English for Specific Purposes*, 23(4), 397-423.
- Cortes, V. (2013). The purpose of this study is to: Connecting lexical bundles and moves in research article introductions. *Journal of English for Academic Purposes*, 12(1), 33-43.
- Coxhead, A., & Byrd, P. (2007). Preparing writing teachers to teach the vocabulary and grammar of academic prose. *Journal of Second Language Writing*, 16(3), 129-147.
- Dudley-Evans, T. (1995). Genre: How far can we, should we go? *World Englishes*, 16, 353-358.
- Haq, A. S., Amalia, R. M., & Yuliawati, S. (2021). Lexical bundles of Indonesian and English research articles: Frequency analysis. *Journal of Applied Linguistics and Literacy*, 5(1), 37-53.
- Hyland, K. (2001). Humble servants of the discipline? Self-mention in research articles. *English for Specific Purposes*, 20(3), 207-226.
- Hyland, K. (2002a). Authority and invisibility: Authorial identity in academic writing. *Journal of Pragmatics*, 34(8), 1091-1112.
- Hyland, K. (2002b). Genre: Language, context, and literacy. *Annual Review of Applied Linguistics*, 22(1), 113-135.
- Hyland, K. (2004). *Disciplinary discourses, Michigan classics ed.: Social interactions in academic writing*. University of Michigan Press.
- Hyland, K. (2008). As can be seen: Lexical bundles and disciplinary variation. *English for Specific Purposes*, 27(1), 4-21.
- Insani, I., & Roselani, N. G. A. (2023). Bundle-move analysis in research article of science and technology: Connecting lexical bundles and rhetorical move. *SULUK: Jurnal Bahasa, Sastra, dan Budaya*, 5(1), 109-130.

- Juanda, M. R., & Kurniawan, E. (2020, December). A comparison of rhetorical moves in students' undergraduate thesis abstracts. In *4th International Conference on Language, Literature, Culture, and Education (ICOLLITE 2020)* (pp. 443-448). Atlantis Press.
- Kanafani, A., Nurcik, A. B., Harisbaya, A. I., Qurratu'aini, S. F., Kurniawan, E., & Lubis, A. H. (2021, November). Rhetorical move and linguistic features comparative analysis of research article abstracts by authors of different organizational backgrounds. In *Fifth International Conference on Language, Literature, Culture, and Education (ICOLLITE 2021)* (pp. 129-135). Atlantis Press.
- Kurniawan, E., & Sabila, N. A. A. (2021). Another look at the rhetorical moves and linguistic realizations in international and Indonesian journal articles: A case of tourism research article abstracts. *Indonesian Journal of Applied Linguistics*, 11(2), 318-329.
- Li, L., Franken, M., & Wu, S. (2020). Bundle-driven move analysis: Sentence initial lexical bundles in PhD abstracts. *English for Specific Purposes*, 60, 85-97.
- Maswana, S., Kanamaru, T., & Tajino, A. (2015). Move analysis of research articles across five engineering fields: What they share and what they do not. *Ampersand*, 2, 1-11.
- Nwogu, K. N. (1997). The medical research paper: Structure and functions. *English for Specific Purposes*, 16(2), 119-138.
- Oktavianti, I. N., & Sarage, J. (2021). Lexical Bundles in Students' Argumentative Essays: A Study of Learner Corpus. *Indonesian Journal of EFL and Linguistics*, 6(2), 510-534.
- Pho, P. (2013). *Authorial stance in research articles: Examples from applied linguistics and educational technology*. Springer.
- Ramadhini, T. M., Wahyuni, I. T., Ramadhani, N. T., Kurniawan, E., Gunawan, W., & Muniroh, R. D. D. A. (2021, April). The rhetorical moves of abstracts written by the authors in the field of hard sciences. In *Thirteenth Conference on Applied Linguistics (CONAPLIN 2020)* (pp. 587-592). Atlantis Press.
- Samodra, M. C., & Pratiwi, V. D. R. (2018, August). Lexical bundles in Indonesian and English undergraduate thesis abstracts. In *Fourth Prasasti International Seminar on Linguistics (Prasasti 2018)* (pp. 183-191). Atlantis Press.
- Swales, J. (1981). *Aspects of Article Introductions*. University of Aston.
- Swales, J. M. (1990). *Genre analysis*. Cambridge University Press.
- Swales, J. M. (2004). *Research genres: Explorations and applications*. Cambridge University Press.
- Wray, A., & Perkins, M. (2000). The function of formulaic language. *Language and Communication*, 20, 1-28.
- Yoon, J., & Casal, J. E. (2020). Rhetorical structure, sequence, and variation: A step-driven move analysis of applied linguistics conference abstracts. *International Journal of Applied Linguistics*, 30(3), 462-478.
- Yuliawati, S., Ekawati, D., & Mawarrani, R. E. (2021). Investigating lexical bundles in the corpora of English and Indonesian research articles with the sketch engine. *Jurnal Sosioteknologi*, 20(2), 188-200.