

What Communicative Functions to Begin Writing a Research Article Abstract in the Applied Linguistics Discipline?

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Abstract

Studies on abstract sections within research articles have received various scholars' attention, but none has investigated how to begin writing research article abstracts. To respond to this fundamental issue, this study intends to analyze how to begin writing research article abstracts in the applied linguistics discipline published in reputable journals because it may contribute to adding some more insights to the literature about the ways to write research article abstracts. Data in this study were research article abstracts published in the last five years. Several earlier analytical approaches were employed to analyze data in the present study. The results revealed that authors used two communicative functions to begin their research article abstracts: claiming centrality and presenting purposes. However, authors prefer employing claiming centrality rather than presenting purposes. Language signals used to indicate communicative functions are also analyzed and discussed in the body of this paper. Besides, sentence forms and syntactic choices to realize communicative functions are also discussed in the discussion section.

Keywords: *Commnucative functions, language signals, research article abstracts, sentence forms, syntactic choces*

Introduction

Studies in rhetorical structure within research articles have been carried out very widely. For example, such studies have been conducted in the abstract section (Can et al., 2016; Friginal & Mustafa, 2017; Khansari et al., 2016; Loan, 2018; Noguera, 2012). Besides, rhetorical studies also have been conducted in the introduction section (Abdi & Sadeghi, 2018; Adila, 2016; Arianto et al., 2021; Arsyad & Adila, 2018), method section (Kutay, 2016; Lim, 2006; Mozaheb, 2015; Zhang & Wannaruk, 2016), result sections (Alharbi, 2016; Lim, 2010; Ruiying & Allison, 2003; Williams, 1999), discussion section (Abbasi Montazeri et al., 2021; Al-Shujairi et al., 2019; Alotaibi, 2021; Arsyad et al., 2020; Cheng, 2020), and many more. All these studies indicate that comprehending rhetorical structure within research articles may play a very significant role in whether a research article is accepted or rejected. However, the present study focuses its analysis on rhetorical structures in the abstract section because it describes foreground issues whether the article goes through peer review or is rejected. Besides, the abstract represents the content, context, method, and research findings shortly (Scherer et al., 2018). To identify to what extent the research article abstract

has been analyzed this far, I review rhetorical studies in research article abstracts in the following paragraph.

In research article (RA) abstracts, a rhetorical study has been carried out both in single corpus and contrastive corpus. In a single corpus, a rhetorical structure study has been conducted on 135 literary research abstracts (LRA) using the Create a Research Space (CARS) model for examining the abstract rhetorical structures (Tankó, 2017). Data were coded in the corpus twice, with a one-month difference between one another coding to ensure reliability. The study revealed that LRAs follow a non-hierarchical structure consisting of eight distinct steps. Among these moves, four are consistently present, which involve introducing the context, goal, methodology, and outcomes of the research. The findings also revealed that LRA abstracts contain a combination of descriptive and informational elements, and they have a similar structure to the rhetorical framework seen in introductions of research articles. Besides, the abstracts have a high level of syntactic complexity and lexical density, predominantly consisting of low-frequency terms, which renders them challenging to comprehend. The study offers valuable findings about the organization, language expressions, and qualities of LRA abstracts.

In contrastive corpus, such studies were carried out in RAs published in English-native and non-native countries (Tovar Viera, 2020). The data are eighty RA abstracts in the disciplines of humanities and sciences. The study utilizes Hyland's rhetorical structure model to identify variations in rhetoric throughout the four fields. The result showed a non-hierarchical five moves and three consistent steps. This finding is influenced by various discursive conventions and practices within discourse communities. This finding presents how academic writings from various fields differ in their development of the rhetorical motion structure of abstracts, as well as the transfer of Spanish-L1 functions to English. Additionally, it highlights that writing serves as a means for authors to consolidate knowledge and showcase their comprehension.

Besides, a contrastive rhetorical study between native and non-native English speakers also has been conducted in the Applied Linguistics discipline using twenty abstracts (Al-Khasawneh, 2017). The study utilized a genre approach to investigate the rhetorical organization of research abstracts authored by native and non-native English writers. The finding revealed that abstracts written by both native and non-native writers adhered to three rhetorical structures: Purpose, Method, and Conclusion. However, native authors had a higher percentage of incorporating the introduction and conclusion moves in their abstracts than non-native authors did. Native speakers utilized the concluding move, which succinctly presents the conclusions derived from the findings, more frequently than non-native speakers.

Moreover, a contrastive rhetorical study between native and non-native authors was also investigated in research paper abstracts. The corpora were authored by Turkish academics and non-Turkish researchers in the field of English Language Teaching (ELT) (Fatma & YAĞIZ, 2020). In this study, 390 abstracts, with 195 from each group, were examined utilizing Hyland's model. The Chi-Square test was employed to ascertain whether there were any significant disparities between the two groups in terms of move utilization. Although there were no notable disparities in the number of moves made by the two groups, Turkish authors showed a tendency to employ three moves (purpose, method, product) in their abstracts, whereas foreign writers often incorporated four steps (purpose, method, product, conclusion).

Furthermore, contrastive studies were conducted in an international corpus and a Thai corpus in the accounting discipline (Amnuai, 2019). The purpose is to analyze rhetorical strategies and linguistic features within 60 research article (RA) abstracts from the two distinct corpora. This study discovered both similarities and variations in the rhetorical organization and linguistic expressions of English research article (RA) abstracts in the accounting discipline. Besides, the utilization of tenses and voices in the abstracts exhibited variations not only between the international corpus and the Thai corpus but also deviated from prior research. The international corpus did not have any obligatory moves. In this regard, the Introduction, Purpose, Method, and Product moves were considered conventional, while the Conclusion was considered optional. Conversely, the Thai corpus consisted of one mandatory move (Product), while the Purpose and Method steps were conventional, and the Introduction and Conclusion moves were optional. This study may contribute to educational implications for instructing the skillful crafting of accounting English RA abstracts.

Besides comparing native and non-native authors, a contrastive rhetorical study was conducted by comparing research article disciplines: linguistics and literature abstracts (Doró, 2013). Data in this study are **forty research articles** published in two English Studies journals. The study employed a five-move pattern, and the abstracts were evaluated independently. The results revealed that linguistics abstracts frequently include explicit information on the research's scope, methods, and primary outcomes, while literature abstracts concentrate on situating the research within a broader context and make more cautious findings. The study identified differences in the sequence of actions performed in abstracts, with move 2 (presenting the research) and move 3 (methodology) being the most commonly observed. Move 5, which involves the discussion of findings, had the lowest frequency of employment. The study implies the need to craft concise abstracts, particularly for publications that have a broad readership in the field of English studies.

The review above shows that research article abstracts have been widely investigated either using single corpus or contrastive studies. It implies that abstracts play a fundamental role in research articles in various disciplines and language backgrounds. However, although rhetorical structures in the abstract section have received huge scholarly attention, my review hardly finds academics investigating one or more communicative functions in detail. For example, during my review, none has investigated how authors start writing their research article abstracts. Then, to what extent claiming centrality was employed in research articles? What language signals to indicate that authors' studies are important? What language signals do authors employ to present their claiming centrality? What sentence and syntactic choices do authors employ? All these issues remain unexplored and still questionable in research article abstracts, and understanding these unanswered questions has encouraged me to investigate abstract sections in the discipline of Applied Linguistics because this may provide new linguists or novice authors to write appropriately. The purpose of this study is to answer the following research questions:

1. What communicative function do authors start their research article abstract?
2. What language signals do authors use to indicate the used communicative functions?
3. What sentence and syntactic choices do authors employ at the beginning of their abstract?

Method

Research design

In this study, both qualitative and quantitative methods were employed to identify the first sentence of the abstract section whether authors begin it by presenting claiming centralities or research purposes. The appearances of these two functional units were then counted using a quantitative technique that was reported in table form.

Data sets

This study used 40 research article abstracts as data sets from the discipline of applied linguistics published in four international reputable journals with Scopus Q1 and Scimago Journal Rank (SJR) 0,61 or above. The journals are *Applied Linguistics*, *English for Academic Purposes*, *English for Specific Purposes*, and *International Journal of Applied Linguistics*. In this study, 40 research article abstracts were selected from these four prestigious applied linguistic journals.

Data analysis

In analyzing data, this study employed three different frameworks to answer the three research questions in the present study. The frameworks are as follows:

The framework to indicate communicative functions in the first sentence in RA abstracts

To indicate what communicative functions are employed in the beginning sentence of research article abstracts, this study used functional approaches in identifying communicative functions from earlier studies (Al-Khasawneh, 2017; Amnuai, 2019; Andika et al., 2018; Swales, 1990, 2004). In this regard, two possible communicative functions may appear in the beginning sentence of research article abstracts: claiming centrality and presenting purposes. To indicate these two possible communicative functions, this study identified linguistic signals and comprehended the context to ensure the appropriate meanings.

The framework to discover language signals

To indicate whether the communicative functions as a means of claiming centrality, this study employed earlier studies the create a research space (CARS) model (Swales, 1990) that is the importance of current research topics. To indicate this meaning, several signals can be employed, such as increase, clearly reflected, ubiquitous, interest, staple, underpins, Change, almost all, quickly, the need, increasingly, has led to, often, a spirited debate over, important, significant, and many more. However, to ensure the meanings, this study identified the context of the sentence.

To discover whether communicative functions have a meaning presenting purposes, this study also employed language signals and identified the context. Language signals included "This article investigates, discusses, aims, examines, explores, studies, addresses, etc.". However, identifying the context of the sentence may ensure whether a sentence states the purpose of the research.

The framework to identify sentence forms and syntactic choices

To identify sentence form, this study employed an earlier framework for whether the sentence is active or passive (Mustika, 2017). Then, to identify whether the sentence is a simple, complex, compound, or compound-complex sentence, this study used a long earlier framework (Verspoor & Sauter, 2000). By employing these two separate frameworks, the results may answer the third research question.

Results

This section aims to report the analysis results for answering the three research questions as presented in the introduction section. Thus, this section is divided into three subsections:

Communicative functions

The first sentence at the beginning of the abstract section has two possible communicative functions: claiming centrality or presenting purposes. However, this analysis result revealed that authors tend to begin their research abstracts by claiming centrality more than presenting their purposes. In this regard, they tended to state that their current research is significant rather than beginning by presenting their purposes. More details about this finding are presented in Table 1.

Table 1. Communicative functions in the beginning sentence of research article abstracts

Communicative functions	Numbers of appearance	Percentages of appearances
Claiming centrality	27	67,5%
Presenting purposes	13	32,5%
Total abstracts	40	100%

As presented in Table 1, claiming centrality dominates the appearances over the presenting purposes in the first sentence of research article abstracts. It appeared in 67,5% of the total abstracts. This finding means that authors tend to begin their abstracts by justifying the importance of their current research topics more than presenting the purposes. More exploration of this finding is also presented in Figure 1.

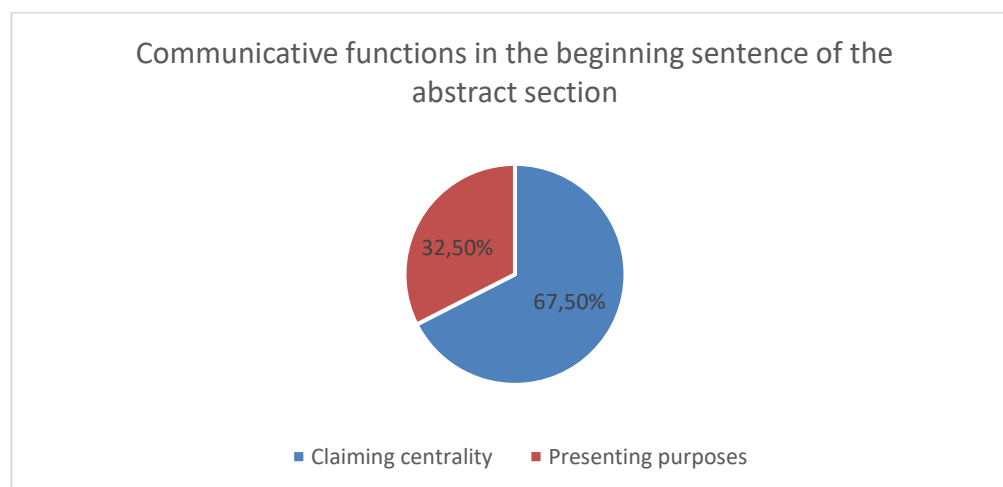


Figure 1. Communicative functions in the beginning sentence of research article abstracts

As presented in Figure 1, claiming centrality appears to be more dominant than presenting purposes in the beginning sentence of the research article abstracts. It has 67,5% appearances while presenting purposes occur in 32,5%. This finding implies that authors of research articles tend to begin their research article abstracts by claiming centrality. More details about how article authors begin their abstract section are exemplified in both claiming centrality and presenting purposes.

Claiming centrality

This communicative function is commonly found in the present data as it appeared in 67,5% of the total corpus. It states that the present research topics are significant. It can be seen in the following examples:

Example 1: **The rise** of English-medium education **has led to considerable academic interest** in communicative practices in multilingual university settings. AL06

Example 2: Conversely to **plenty of studies** describing how L1 transfer affects L2 systems, where the two grammars, L1/L2, often only come to interact later in life, **less is known** of dominant language transfer in heritage language grammars. AL09

Example 3: **Experts are generally in agreement** that anthropogenic climate change is happening and **will increase in severity**, but **this view is not clearly reflected** in more non-specialist texts. AL10

All the examples appeared in the beginning sentence of the abstract section. They indicate implicitly that their research topics are important. Thus, they are included in claiming centrality.

Presenting purposes

This communication function also appears in the beginning sentence of research article abstract. However, it only appears in a few research articles. Here are the examples found in the present data.

Example 4: **The article discusses** epistemic stance in spoken L2 production. AL05

Example 5: **The aim of the study was to find out** to what extent low socio-economic status (SES) children enrolled in government-run primary schools in Hyderabad are ready to receive instruction through the medium of English (English medium instruction [EMI]). AL08

Example 6: **This study aims** to describe the rhetorical features of Japanese and English research article introductions (RAIs) in the discipline of Japanese Literature. AL21

The above examples also appear in the beginning sentence of research article abstracts. In this regard, authors present their purposes in the first sentence of their abstracts as indicated by the bolded texts.

Language signals

To indicate whether the first sentence of the abstract section employs claiming centrality or presenting purposes, two approaches, identifying language signals and comprehending the contexts of the sentences, were employed. The results revealed that various language signals are used to make claiming centrality and presenting purposes. In claiming centrality, language signals, such as significant, important, or key features, have the highest appearances in research article abstracts. For presenting purposes, the signal word

'investigate' appeared in four research article abstracts. More details about language signals to indicate claiming centrality and presenting purposes are presented in Table 2.

Table 2. Language signals that indicate communicative functions in research article abstracts

Communicative functions	Language signals	Numbers of appearance
Claiming centrality	Significant, important, a key feature	6
	increase, increasing, rise, has led to, increasingly, vastly outnumbers.	5
	recent or many studies, plenty studies, extensive, widely	4
	most common, commonly, usually investigated	3
	interest	2
	contribute, help readers	2
	crucial	1
	ubiquitous	1
	staple	1
	underpins	1
	Change almost quickly	1
	the need	1
	Often viewed	1
	a spirited debate over	1
	contribute to an emerging line	1
	scarce	1
	neither easily	1
Total signal words of claiming centrality		33
Presenting purposes	Investigates, under investigation	4
	aims	2
	examines	2
	explores	2
	discusses	1
	studies	1
	addresses	1
Total signal words for presenting purposes		13

Table 2 above shows the signals to state either claiming centrality or presenting purposes. However, claiming centrality has more employment in the beginning sentence of research article abstracts than presenting purposes. In claiming centrality, the key point is that authors promote the importance of their current research. In presenting purposes, the authors present the aims of their current research.

Sentence forms and syntactic choices

The present data analysis revealed that research article authors tend to employ active sentences more than passive ones when beginning to write their abstract section. More details about sentence forms used in the beginning sentence within the abstract section are presented in Table 3.

Table 3. Sentence forms in the beginning sentence of research article abstracts

Sentence forms	Appearance numbers	Percentage numbers
Active	35	87,5%
Combined active-passive sentences	4	10%
Passive	1	2,5%
Total numbers	40	100%

In terms of syntactic choices, authors prefer employing simple sentences more than the other three syntactic sentences. More details about the syntactic choices in the beginning sentence within research article abstracts are presented in Table 4.

Table 4. Syntactic choices in the beginning sentence of research article abstracts

Syntactic choices	Appearance numbers	Percentage numbers
Simple sentences	27	67,5%
Complex sentences	10	25%
Compound sentences	2	5%
Compound-complex sentences	1	2,5%
Total numbers	40	100%

Table 4 above shows that simple sentences appear to be the most dominant in the beginning sentence of research article abstracts. It was then followed by complex sentences, compound sentences, and compound-complex sentences, respectively. This finding suggests that authors prefer starting to write abstracts in simple ways rather than complex ways.

In short, the data analysis results show that in starting writing abstracts, authors tend to show the importance of their current research. It was employed by employing several language signals to indicate the importance as presented in Table 2. Besides, authors tend to employ active form and simple syntactic form to begin their research article abstracts. The implications of these findings are discussed further in the discussion section in the following section.

Discussion

After analyzing data in the present study and reporting them in the results section, the findings show two communicative functions to begin their research article abstracts: claiming centrality and presenting purposes. However, of these two communicative functions, authors prefer claiming centrality more than presenting purposes to begin their research article abstracts. This finding implies that authors prefer to present the importance of current research topics. The reason for doing so is possibly that their writing is intended to attract readers to read their academic work more deeply. Besides, authors may assume

that by doing so, they can promote their academic works, and thus, their research paper may become accepted and published in public podiums (Wang & Yang, 2015).

This finding seems similar to the introduction section of research articles in that authors also present the significance of their current research topics (Abdi & Sadeghi, 2018; Swales, 1990, 2004; Warsidi, 2021). These similarities indicate that presenting the significance of current research topics is important both in research article abstracts and introductions because it may promote our research papers to targeted readers. Thus, our research paper may have more possibilities to be accepted and published.

In terms of language signals, to indicate claiming centrality or the importance of the current research topics, authors used various language signals. However, of the various language signals, authors tend to use signals 'significant' and 'important' to present that their research topics are truly important. This finding implies that comprehending language signals for either analyzing or writing abstracts section seems important because it may make students more easily analyze or write good article abstracts as likely studied in Cangelosi (2001) that understanding language signals can identify meanings, syntax, and symbols.

In terms of sentence form, the present study showed that active sentences dominate over passive sentences in the research article abstracts. This finding implies that authors tend to show the agent of the texts and employ direct communication. The reason for this finding may be that authors intend to directly show the importance of their current research topics to their audiences. Although the context is different, this finding is similar to those found in my earlier study in that active sentences also dominated the passive sentences in the whole section of research articles in Indonesian History and Law disciplines (Warsidi, 2021).

In terms of syntactic choices, the present finding revealed that authors tend to use simple sentences to begin their research article abstracts. This finding indicates that authors prefer to communicate their ideas in the beginning abstracts in simple ways more than others. It seems similar to the majority of findings in the whole section of research articles (Warsidi, 2021) or the other sections (Saragih & Hutajulu, 2020; Wu et al., 2020), but different from those written by both Anglophone and Turkey academics (Deveci, 2019). However, hardly found research article authors employed more complex sentences. During this study, my comparison only shows one finding that tends to use complex sentences. These comparisons indicate that writing ideas in research articles, more particularly at the beginning of the abstract section, in simple sentences is still more dominant than the other syntactic choices.

Conclusion

After analyzing data, reporting the results, and discussing the findings, this study finally draws three conclusions to answer the research questions in the present study. Firstly, to begin writing the abstract section, the present finding shows that authors used two different communicative functions: claiming centrality and presenting purposes. However, authors tend to use claiming centrality rather than presenting purposes to begin their abstracts. Secondly, several language signals have been discovered to communicate both claiming centrality and presenting purposes. However, authors tend to employ language signals 'significant' and 'important' over others. Thirdly, this study also found that authors tend to

use active sentences more than passive ones. Besides, they also tend to use simple sentences to begin their abstract section.

However, this study is limited to only investigating how to begin writing research article abstracts. Thus, it only analyzes the first sentence of the abstract section. However, although it is limited to only analyzing the first sentence of the abstract section, it may draw two implications. First, it may contribute to the theoretical implication that genre in research article abstract is conventionally written by claiming centrality over the presenting purposes. Second, it may practically contribute to providing comprehension for novice authors about the ways to write research article abstracts. It also can be used as a writing guide when writing research article abstracts. However, as this study has limitations, further studies that can expand this finding are very welcome.

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