Rhetorical Moves of Applied Linguistics Research Article Abstracts on Scopus-Indexed Journals: Contrastive Analysis among the Three Research Approaches

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Abstract

Background and Aim: Even though there are a lot of research articles in high-impact international linguistics journals, there aren't many studies that look at how their abstracts use rhetorical moves in different ways. This study aims to identify rhetorical patterns of research article abstracts in linguistics in Scopus-indexed journals

Materials and Methods: This study analyzed 54 research article abstracts in applied linguistics Scopus-indexed journals published between 2012 and 2022, employing the model of Hyland (2000) to identify rhetorical moves. To analyze the data, the frequencies, and percentages of rhetorical moves used in quantitative, qualitative, and mixed methods research articles were employed.

Results: The results showed that the concepts of purpose (P) and product (Pr) occupied the largest portion of the collected research article abstracts. Furthermore, the data revealed 23 rhetorical move patterns in the dataset. The 10 repetitive moves were also found in this study.

Conclusion: Furthermore, the data revealed 23 rhetorical move patterns in the dataset, indicating that linguistics researchers follow the model of Hyland (2000) and also use variant move patterns.

Keywords: Move Analysis; Research Article Abstract; Scopus-indexed Journal

Introduction

Academic publication is essential for success in the academic field (add citation). An academic manuscript for publication is composed of several parts, e.g., an abstract, an introduction, a methodology, results, a discussion, and a conclusion. An abstract is a 250–300 word summary of the entire research paper and is regarded as the first step in convincing an editor, reviewers, or reader to read the manuscript. A manuscript might be rejected if the abstract is not clearly written. Haynes et al. (1990) explained that a short, clear, and well-structured abstract may increase the chances of being published because a peer review process is facilitated and the text may seem more scientifically sound. Several studies such as (Qurratu'aini et al., 2022; Matzler, 2021; Darabad, 2016) have identified rhetorical patterns in the abstracts of hard science and soft science.

Hard science research article abstracts were investigated using a variety of models, and the result indicated that there were diverse patterns depending on the disciplines. Soft science is less variable than hard science in terms of patterns, but patterns were still differences among regions of the author. This study investigates the rhetorical moves of research article abstracts published in reputable journals in Scopus concerning different research approaches.

The study of rhetorical moves is important in the field of linguistics because there is a gap between theory and practice. Linguistics is mainly concerned with the practical application of knowledge and the response to real-world problems. As a result, the linguistics field research article has been widely read by people from a variety of disciplines, including policymakers, teachers, language learners, and so on. Finally, genre analysis in this field improves the understanding of complex theories for practical application.

In linguistics move analysis studies, the Hyland (2000) model is commonly used as a study framework. These studies collect data from Saudi Arabia, Iran, Indonesia, and Thailand (El-Dakhs, 2018; Kanafani, 2022; Kitjaroenpaiboon, 2021; Sukhapabsuk, 2020; Zand-Moghadam, 2022). Those studies attempted to identify rhetorical patterns and then compare them between international-based and local-based journals. However, the rhetorical move of research article abstracts regarding approaches used seems to indicate a discrepancy among previous studies. As a result, the purpose of this research is to fill that gap.

Research Objectives

1. To study the rhetorical patterns of research article abstracts in international own-ed high impacted journals listed in SCOPUS in language & linguistics.

2. To study the rhetorical moves of different types of research including qualitative, quantitative, and mixed methods.

Research Hypothesis

The hypothesis of this research is the rhetorical move patterns will be similar among the three research approaches.

Research Scope

According to the Scimago Journal and Country Rank databases, the analysis includes 54 abstracts that appeared between 2012 and 2022 in the top three applied linguistics journals (Those are the Modern Language Journal, Language Testing, and Foreign Language Annals.). The reason for choosing an 11-year period is the small number of accessible articles. The time frame was selected because this research intends to analyze the data in the current decades as well as previous studies using the same length of time such as (Zand-Moghadam, 2022; El-Dakhs, 2018). Another reason is that past studies used historical data between 8 and 9 years, so the researcher used historical data. During that time, the linguistics and language journals in this study were run internationally.

Literature Review

Recent studies of the motion analysis of research abstracts in the hard sciences have shown that they are not all the same. For example, abstracts of multidisciplinary studies (Darabad, 2016), research abstracts in medical science (Suntara & Chokthawikit, 2018), and research abstracts in science and engineering (Qurratu'aini et al., 2022; Matzler, 2021; Rungnaphawet, 2016) are all different. In the fields of accounting and education, abstracts of research articles have been studied using the model of Hyland (2000) (Amnuai, 2019; Magday et al., 2022; Kaya & Yaz, 2020; Phonhan, 2021; Sükan & Mohamadzadeh, 2022). For the majority of research in soft science, the models of Hyland (2000) and Santos (1996) are also used as methodologies. However, writing patterns still vary depending on the regions of publishers.

For hard sciences, it is possible to conclude that rhetorical moves depend on the area of study, such as biological sciences research and engineering research, which have completely different patterns. There was less diversity in soft science. It can be concluded that each field of study has its own genre, as well as its own moves and writing patterns.

In the linguistics field, Hyland's model was commonly used as a study framework (Zand-Moghadam & Zhaleh, 2022; Kanafani et al., 2022; Sukhapabsuk, 2021; Kitjaroenpaiboon et al., 2021; El-Dakhs, 2018). These studies have found that I-P-M-Pr-C patterns are consistently detected in international journals.

It appears that common patterns I-P-M-Pr-C are used as conventional patterns in linguistics research article abstracts of the previous research. However, there was some variety. Several research article abstracts do not integrate this pattern but the article still gets published. It may happen because data was retrieved from various sources such as Web of Science, Scopus, Google Scholar, local databases, and so on. Therefore, this research aims to identify move structures and rhetorical moves in the article abstracts in language and linguistics research published in high-ranked internationally-run journals listed in the Scopus database. The characteristics of research article abstracts published in Scopus-indexed journals were examined in this study.

Conceptual Framework

This study used Hyland's (2000) five-move model because it has been used many times and is reliable. It was based on the analysis of 800 abstracts from 8 different disciplines, covering both the social sciences and natural sciences. The models of Santos (1993) and Bhatia (1993) have not been

widely used in research article abstract analysis, but Hyland's five-move model covers all aspects of move analysis (Table 1).

Table 1. Comparison of a move analysis model

Bhatia (1993)	Santos (1996)	Hyland (2000)
1. Introducing the purpose	1. Situating the research	1. Introduction
2. Describing the methodology	2. Presenting the research	2. Purpose
3. Summarizing the results	3. Describing the methodology	3. Method
4. Presenting the conclusions	4. Summarizing the findings	4. Product
	5. Discussing the research	5. Conclusion

Methodology

Data Size: This study used the top three journals. To determine the size of a corpus, both Flowerdew (2004) and Biber (2006) suggested that the diversity of grammatical features determines the size of the corpus. The size of the corpus can be minimized if the target features a frequent grammatical structure. In addition, previous research on step-by-step research article abstracts used several samples between 40 and 200. Therefore, the 54 abstracts in total that this study analyzed are a reasonable number.

Data Selection: The selected journal must meet all the criteria required for the study. The first criterion is to be credited as "linguistics and language," according to SJR. The second criterion is to provide open-access articles, in which anyone can download at least 20 full-length articles within the timeframe of 2012–2022. The third criterion is to publish research articles in qualitative research, quantitative research, and mixed method research during 2012–2022. Finally, the first three journals that satisfied the three criteria defined by SJR 2021 were selected. They were the Modern Language Journal, Language Testing, and Foreign Language Annals.

Procedures: A schematic of the research design is presented in Figure 1. There were 54 research article abstracts, and each corpus contained 18 research article abstracts. A professor of applied linguistics verified the sorting procedure. After that, inter-rater reliability tests were used to validate the results. Finally, the analytical process was adopted in the coding process.
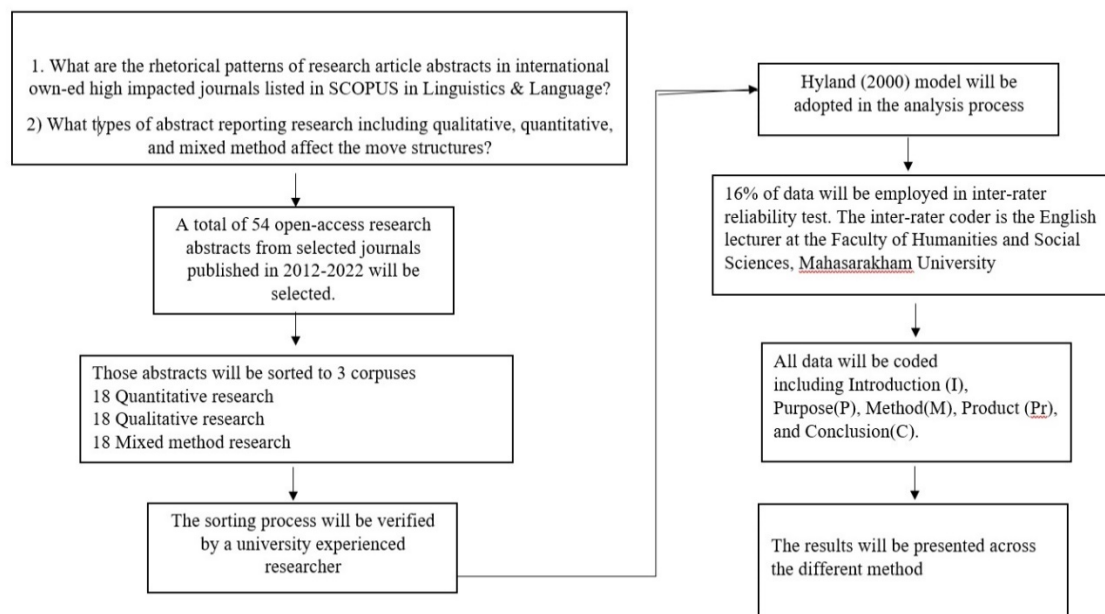

Figure 1. Schematic of research design

Data analysis: According to Biber et al. (2007), "move analysis was developed as a top-down approach to analyze the discourse structure of texts from a genre". Therefore, the top-down approach to movement identification was selected in this study. Firstly, each sentence was carefully investigated to determine its meaning and rhetorical meaning. Second, a minimum of one sentence occurred in each move. When several moves were represented by a single sentence, the most salient move was focused on. The first clause of the sentences was determined first, followed by the subordinate clause. Thirdly, as long as texts express the same communicative functions, a message can be expressed by one sentence, several sentences, one paragraph, or several paragraphs. According to Holmes (1997), subjectivity among researchers is inevitable during the analysis process. In order to decrease this issue, inter-rater reliability was used, as discussed in the next section.

Inter-rater: This study used multiple coders to ensure the reliability of the analysis. The researcher was assigned as the first coder, and two coders were involved in the coding of 16% of the whole data. There were two sessions of coder training, with the researcher initially describing the overall goals and methodology and explaining the move coding instructions and coding framework. The cut-off frequencies for obligatory, conventional, and optional moves and steps are 90%, 60%, and less than 60%. The results of inter-rater reliability was 87%, with sufficient inter-coder agreement suggesting that 9 out of 54 articles (16% of the corpus) were coded independently by the two coders.

Results

This section describes the move frequency and occurrence of moves in research article abstracts that were used by writers.
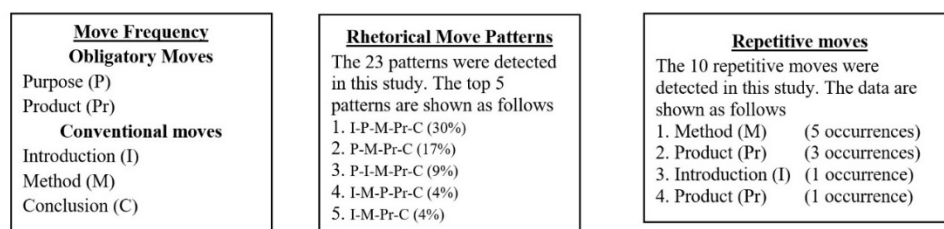
Overall Findings

Figure 2. The overall findings of this study

The finding overview is shown in Figure 2. The next section will describe the findings of this study in detail.

Table 2 below presents the frequency and percentage of the three corpuses of different approaches.
Table 2. The frequency of occurrences

Move structures	Total (N=54)	Qualitative approach (N=18)	Quantitative approach (N=18)	Mixed method approach(N=18)
Introduction (I)	40 (70%)	15 (83%)	14 (78%)	11 (61%)
Purpose (P)	**52 (96%)***	**18 (100%)***	16 (89%)	**18 (100%)***
Method (M)	48 (89%)	13 (72%)	**17 (94 %)***	**18 (100%)***
Product (Pr)	**49 (91%)***	14 (78%)	**18 (100%)***	**17 (94%)***
Conclusion (C)	45 (83%)	15 (83%)	**17 (94%)***	13 (72%)

The percentage of five moves among three approaches is shown in Table 2. Introduction (70%), Purpose (96%), Method (89%), Product (91%), and Conclusion (83%). Purpose (P) and Product (Pr) were the most recurrent among the three approaches, while Method (M) and Conclusion (C) were the less frequent. The introduction (I) was the least frequent. This research found that only two moves were obligatory, Purpose (P) and Product (Pr), which is different from Zand-Moghadam & Zhaleh (2022) and Kanafani et al. (2022) who claimed that three obligatory moves occur in linguistics research article abstracts.

Move characteristics

The researchers investigated 54 abstracts from 3 categories of research using the framework of Hyland (2000), such as introduction, purpose, method, product, and conclusion. The abstracts explicitly present each move's characteristics. Introduction (I) is to provide background information or to encourage readers to read the research article by discussing prior studies. Purpose (P) is used to express the article's major focus and introduce the objectives of the study to readers. Method (M) describes the study's methodology. The product (Pr) provides the readers with the major findings of the study. Conclusion (C) discusses the significance of the study by drawing conclusions or providing readers with recommendations and limitations.

Move patterns

In each approach, the three most preferred structural moves for abstracts were presented in five common rhetorical moves. The findings of the rhetorical move are shown in Table 3.

Table 3. Rhetorical move patterns in each approach

Overall (N=54)	Qualitative approach (N=18)	Quantitative approach (N=18)	Mixed method approach (N=18)
I-P-M-Pr-C (30%)	**I-P-M-Pr-C (33%)**	**I-P-M-Pr-C (33%)**	**I-P-M-Pr-C (22%)**
P-M-Pr-C (17%)	I-P (11%)	**P-M-Pr-C (22%)**	P-I-M-Pr-C (22%)
P-I-M-Pr-C (9%)	I-P-Pr-C (11%)	I-M-Pr-C (11%)	**P-M-Pr-C (17%)**
I-M-P-Pr-C (4%)	**P-M-Pr-C (11%)**	I-M-P-M-Pr-C (6%)	I-P-M-Pr (6%)
I-M-Pr-C (4%)	I-M-P (6%)	I-M-P-Pr-C (6%)	I-P-M-Pr-P (6%)

Table 3 summarises the rhetorical variations that exist in research using three different approaches. Twenty-three movement patterns were detected in this study. Overall, the rhetorical pattern shows that I-P-M-Pr-C was the most preferred pattern (30%). The second most preferred pattern was P-M-P-C (17%), in which the introduction (I) was missing. Patterns in the first rank of each approach were the same, but the next rank was different according to the approach used in the research. The results from Table 3 were similar to the previous studies of linguistics research article abstracts (Zand-Moghadam & Zhaleh, 2022), but the most frequent pattern was different from Kanafani et al. (2022), Sukhapabsuk (2021), and El-Dakhs (2018).

Repetitive move

Some repetitive movements were found in this study. The data was presented in Table 3.

Table 4. Repetitive move distribution by approach

Qualitative approach	**Quantitative approach**	**Mixed method approach**
M-P-**M**-Pr-C	**I**-P-Pr-**I**	P-I-**M**-Pr-**M**-C
	I-**M**-P-**M**-Pr-C	**P**-M-**P**-Pr
	P-I-**P**-M-Pr-C	I-**P**-M-Pr-**P**
	P-**M**-I-**M**-Pr-C	P-**M**-Pr-**M**-Pr

It was found that English abstracts always repeat moves and put moves inside other moves. They happened in 19% of abstracts in all corpora, but the number varied. The mixed method approach had the most repetitive moves, with 5 out of 18 abstracts (28%) having them. Both quantitative and qualitative research article abstracts had 17% and 11%, respectively, of repetitive movements. The results were based on a small sample, so it was not possible to compare and contrast the different ways that different corporations were organized.

The discrepancy in the study

This study showed that research article abstracts in each approach had a different frequency of move appearances and a different obligatory move. This study was different from others because it used three different research methods to look at rhetorical movement patterns in high-impact journals from the Scopus database (rank 1st–30th of 2021). Compared to other studies, this one shows that there are 23 patterns of writing, while other studies say that there are only 12 patterns in an abstract of an international linguistics research article. The next section presents the overall results of this study and makes suggestions for more research based on those results.

Conclusion and Discussion

This study showed that I-P-M-Pr-C and P-M-Pr-C were the most preferred patterns for research article abstracts in highly-ranked academic journals in the field of linguistics. The overall rhetorical pattern among the three approaches showed that two patterns dominated with a frequency of almost 50%. The move frequency found from the retrieved data shows only two moves were obligatory moves, while the frequencies of the other three moves were indicated as conventional moves. The common patterns were not different between each research design, but each research approach has unique variations in the second frequency of distribution. Variations may occur because authors may design abstracts in a complex manner to catch readers' attention, according to Ngai & Singh (2020).

The result from the study shows linguistics field uses I-P-M-Pr-C and P-M-Pr-C as conventional patterns. There were similarities and differences as follows. This research is similar to the accounting field in terms of using I-P-M-Pr-C as conventional patterns (Amnuai, 2019). Within the linguistics field, the most frequent move patterns were similar to Zand-Moghadam & Zhaleh (2022) but the rhetorical patterns were different.

Move frequency and patterns compared with previous research

This study showed that purpose (P) and product (Pr) occupied the largest portion of research article abstracts in high-impact Scopus journals. The most frequent movement patterns were similar to those of Zand-Moghadam and Zhaleh (2022). However, this study was different from El-Dakh (2018), Kanafani et al. (2022), and Sukhapabsuk (2021), which also used data from internationally based journals in the field of linguistics. These studies claimed that the most frequent move patterns were P-M-Pr or P-M-Pr-C. It is also noticeable that qualitative research articles included less information on the study's methodology and conclusions. Some abstracts from qualitative research articles frequently employed uncommon move patterns, such as I-P. Mixed-method article abstracts frequently employ P-I-Pr-C-M patterns that have been infrequently observed in previous studies.

As mentioned in the previous part the similarity between this study and previous research. Some other researches and other field show differences such as Engineering (Qurratu'aini et al., 2022) use I-P-M-Pr as conventional patterns. In the ELT field, mathematics and chemistry (Kaya & Yagiz, 2020; Darabad, 2016) use P-M-Pr-C as conventional move patterns. To sum up, the rhetorical patterns from this study confirms that the linguistics field has different genre and writing style from some mentioned field.

This study showed that the five-move model, I-P-M-Pr-C, tends to influence the rhetorical strategy of research article abstracts. It can be applied to all research approaches to language and linguistics. However, there are 22 more patterns that proved to be published in high-ranked journals.

Recommendations

Data should be analyzed on a lexico-grammatical basis using elements such as tenses, verbs, subordinators, coordinators, or the passive and active voice. Further study should focus on the rhetorical structure of the research article abstract composed by authors from different cultures, the readability, and vocabulary used in article abstracts, and metadiscourse markers.

Suggestions

Data should be analyzed on a lexico-grammatical basis using elements such as tenses, verbs, subordinators, coordinators, or the passive and active voice. Further study should focus on the rhetorical move of the research article abstract composed by authors from different cultures, readability, vocabulary used in article abstracts, and metadiscourse markers.

Pedagogical Implication

This study highlights the importance of multiple approaches to research studies by dividing the analysis into three separate approaches (qualitative, quantitative, and mixed-method). It also offers in-depth comprehension of the rhetorical moves used in each approach. I-P-M-Pr-C moves only account for 30% of the total data, but this suggests that this pattern is important. Other 70% of versions can also be accepted for publication. Students can be taught to recognize conventions and create their own patterns using the results.

Implication for researchers

The finding of 23 patterns provides significant implications for researchers. The frequent patterns I-P-M-Pr-C and P-M-Pr-C are simple for novice researchers to apply when starting to write research article abstracts. Expert researchers may modify other variations based on the results of this study according to their research approach. Those patterns have been validated for publication in a high-impact journal.

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