



Original Article

A Move-Based Analysis of Research Article Abstracts by Natives and Non-native Writers of English: A Comparative Study

Rajesh Kumar

Shaheed Benazir Bhutto University Shaheed Benazirabad - Pakistan

✉ raj.lohana@gmail.com

Tania Laghari

Shaheed Benazir Bhutto University Shaheed Benazirabad - Pakistan

✉ tania.laghari@sbbusba.edu.pk

ORCID <https://orcid.org/0000-0003-3328-396X>

Aniqa Arslan

Shaheed Benazir Bhutto University Shaheed Benazirabad - Pakistan

✉ aniqa@sbbusba.edu.pk

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Abstract

An abstract is the main part of a Research Article (RA) that gives a major outlook of the whole article and it makes the reader decide to read or leave a particular article. It is less studied part in terms of research, especially in the context of Pakistan. Therefore, this study is aimed to compare the abstracts of research articles written by native (American) and non-native (Pakistani) authors. The focus of the current study is to investigate the frequency and percentage of each move of RA abstracts composed by native and non-native writers of English. To achieve this end, a corpus of 30 native and 30 non-native abstracts is collected and Hyland's (2000) five-move model is applied to analyse the data. The results show that the move 1 (Introduction) occurred in all (60) abstracts and it is obligatory in Pakistani as well as American context. Furthermore, the results show that the difference in Conclusion move in Pakistani abstracts is 73%. On the other hand, the frequency of remaining three moves including purpose, method and product is similar in American and Pakistani contexts with minor differences. It is recommended that more comparative research be done on this specific subject utilizing more data sources.

Keywords: Comparative study, Corpus analysis, Research article abstracts, Rhetorical structure

INTRODUCTION

A Research Article has different parts including abstract, introduction, literature review, methodology, results, and conclusion. In recent years, the RA (RA) has been given much focus by the genre analysts. Many studies have been done to analyse different parts of RA by different scholars and researchers. However, this study investigates the generic conventions of the abstract section. According to Hyland (2002), the notion of genre and its application in language learning and teaching has gained the attention in the previous decades. According to Swales and Swales (1990) genre is a type of text or discourse designed to achieve a set of communicative purposes. And the researchers have been analysing different features of the language, i.e., rhetorical structure, verb form, use of specific grammatical features, and so on by using genre analysis as a method. Hence, a genre on the basis of rhetorical structure is constructed by the moves, and moves are the constituents of its steps. It is the organizational pattern of the language depending upon the discipline of the study and the style of the writer (stylistics). The aim of this study is to analyse the rhetorical structure of RA abstract employed by natives (American) and non-natives (Pakistani) speakers of English.

Research Objectives

The objectives of this research are:

- To find out moves of applied linguistics RA abstract.
- To investigate the frequency and percentage of each move utilized by abstract writers.
- To know the imperative distinction in move structure used by native and non-native writers of English in their RA abstracts

Research Questions

- What are the moves used in applied linguistics RA abstract?
- What is the overall frequency and percentage of moves in abstracts of applied linguistics RAs written by native (American) and non-native (Pakistani) speakers of English?
- What are main differences in the employment of moves in abstracts of applied linguistics RAs written by native (American) and non-native (Pakistani) speakers of English?

Problem Statement

The main problem is misuse of organizational patterns (moves) in the abstract section of the RA. Especially, the non-native speakers of English have lack of awareness in the proper employment of moves in their abstract. According to different researches non-native writers of English do not utilize some of the moves properly and they pay less attention to a few of moves as the native English writers do. Even all the five moves are conventional in the abstract with respect to the Hyland's (2000) five-move model.

In academic writings RA is considered as the most important genre, especially the abstract has been given more importance in the recent research as it persuades the reader to ponder on the article and to select specific journal. Besides, it also provides the major outcomes and major view of the article. However, majority of

the scholars are non-natives of English and they feel difficulty to write a good quality abstract. Therefore, this study will help L2 writers to improve their research writings by knowing its conventions and norms, so that it can be accepted by international journals, editors and reviewers. Mainly, there are more researches done by the foreign scholars in the field of corpus linguistics but only few or little study has been done in the context of Pakistan. However, Pakistani researchers as L2 writers of English can get beneficial insights form the writing conventions of this particular sub-genre.

LITERATURE REVIEW

The Notion of Genre Analysis

Genre analysis is a technique for assessing a type or style of writing in order to understand the standards, expectations, purpose, and target audience for that genre. The term "genre" has only lately begun to be acknowledged, although it has a long history that dates back to the study of literature and rhetoric. At the moment, its application is very broad and covers the analysis of films, songs, and the spoken and written language that is used on a daily basis (Imtihani, 2010). According to Berkenkotter & Huckin (2016), stated in Flowerdew (2011) on page 516, "Genres are staged, structured, communicative events, motivated by various communicative purposes, and performed by members of specific discourse communities." According to a number of scholars (Amirian, et al., 2008), genre-based research is an important source of information and contributes to the literature, particularly for non-native research writers.

Furthermore, as was already noted, the term "genre" refers to a type or kind of writing. As a result, there are numerous writing styles that can be divided into two main groups: academic writings and non-academic writings. Academic writings are those pieces of writing that are used in educational settings such as schools, colleges, and universities as well as in libraries. These genres of writings can include academic books from primary to higher secondary levels that are related to any subject, while at the higher (university) level there are many fields and sub fields that have different books such as psychology, sociology, linguistics, literature, business, genetics, information technology, and math. Therefore, a variety of writing styles (genres) are utilized in academic settings, including research papers, book reviews, articles, theses, emails, letters, and applications. In addition, a variety of literary genres, including non-fiction and fiction, are frequently taught in literature classes. For example, fiction includes poetry, theatre, novels, novellas, short stories, prose, and fantasies. In contrast, non-fiction works like histories, biographies, and autobiographies are included. While non-academic writings are those that deal with other aspects of life, such as banking, businesses, industry organizations, hospitals, etc., non-academic writing can also take many different forms, such as newspaper articles, autobiographies, magazine articles, personal or business letters, novels, websites, text messages, diaries, Facebook posts, Instagram posts, WhatsApp posts, blogs, and other social media posts.

A genre of research paper has sections like abstract, introduction, literature review, methods, discussion, results, and conclusion. The foreword, prologue, epilogue, and other sections that make up a book are also referred to as its subgenres. There are two different categories for genres: pure genres and hybrid genres. There are numerous non-academic pure genres as well, such as newspaper, editorials, or business letters, thus it is not necessary for all academic genres to be pure genres. The majority of academic genres are pure forms of genres, such as books, research articles, letters, and applications. However, the term "pure genre" simply refers to a genre that, as evidenced by the examples above, has its own features and stands alone. While the term "mixed" or "hybrid" genre refers to the combination or mixing of two or more genres. Examples of this type of work can be found in literature, television, and film. Examples include "advertorials," which combine editorial and advertising, "docufiction," which combines documentary and fiction, "dramedies based on documentaries," and "comic science fiction," which combines comedy and science fiction.

Additionally, spoken forms like casual talks, official and informal lectures, public speeches, etc. also have genres, and each spoken form has its own structure. The aforementioned examples of several genres illustrate how each genre can be analysed in a different way, but there are numerous linguistic characteristics that can be used to analyse a particular genre. This study inspires new researchers to learn about conventional wisdom, broaden their expertise, and develop academic writing skills. However, when discussing the genre technique, move-analysis is most helpful in identifying how research articles are constructed. As a result, one of the most well-liked areas of study for researchers right now is the analysis of movements and steps-method, which can produce insightful recommendations for the forthcoming research writings and enhance their quality.

Notion of Move-Analysis

Move-analysis is a discourse analysis technique used in research and LSP (Language for Specific Purposes) for predetermined objectives. It is crucial to understand the move first before discussing the move analysis. For instance, the research paper has subgenres such as abstract, introduction, literature review, methods, results, discussion, and conclusion. This is similar to how different genres and their subgenres were addressed earlier. Similar to this, each genre has some of its unique components, also referred to as movements. But there are also steps in the moves. For instance, the introduction, purpose, method, product, and conclusion are just a few of the five various sections that make up a RA abstract. Additionally, there are several moves for the research paper subgenres of introduction, results, discussion, and conclusion. While "move analysis" is the study or analysis of a specific subgenre's moves. There are also a number of models offered by various academics for the move analysis, such as Hyland's (2000) five move model, which is appropriate for the abstract portion of research articles.

Therefore, the researchers typically gather a specific subgenre or genre, choose a suitable model, and then analyse it to obtain the results. The models listed below were developed by several academics and are useful for move-analysis study. Swales and Swales (1990) created the CARS (Create-A-Research-Space) Model in 1990. Hyland created the "Five Move Model" in 2000. The Rhetorical Structure Theory (RST) was developed by Mann and Thompson in 1988. The Generic Structure Potential (GSP) model was developed by Martin and Rose in 2003.

- A popular paradigm for analysing the structure of academic publications is the Move Analysis paradigm put out by Swales and Swales (1990). The model identifies six moves that are frequently used in academic writing: (1) establishing a research area, (2) pointing out a gap in the literature, (3) laying out the purpose and goals of the study, (4) presenting the methodology, (5) presenting the findings, and (6) drawing conclusions and implications.
- Hyland (2002) presented the Move-Step Model of Text Structure as a framework for the analysis of literary genres including essays and research articles. According to the paradigm, there are four steps: (1) establishing the research setting; (2) expressing the research topic; (3) presenting the data; and (4) drawing conclusions.

Here are a few of the motion analysis models for writing genres that have been put out by various academics. Each model is intended to analyse various writing genres and pinpoint the actions or phases that are frequently found in those genres. The structure and organization of many textual genres are analysed and understood using these models, which are frequently employed in discourse analysis, text linguistics, and composition studies.

Genre Theory

According to John Swales' definition in his book "Genre Analysis: English in academic and research settings," "genre theory" refers to a framework for examining and understanding the linguistic and rhetorical characteristics of written texts within a certain genre, or form of text. Swales and Swales (1990) describe genres as repeating communicative events or social processes that may be identified by their linguistic characteristics, organizational patterns, and intended audience. In his work, Swales and Swales (1990) apply genre theory to academic research articles and presents the CARS model, which provides a systematic approach for analysing the structure, organization, and linguistic features of these writings. By examining the distinctive patterns of language use in a particular genre, genre theory can help authors better understand the conventions and expectations of their audience and generate more effective, genre-appropriate written work.

It examines how various genres have changed over time and how they are used in various social and cultural situations. Michael Halliday first put forth the genre idea in the 1970s, and other researchers like John Swales expanded on it. Swales and Swales (1990) define a genre as a "typified rhetorical act" with a number of distinguishable characteristics, including specific speech patterns, lexis, and structural characteristics. These characteristics help set one genre apart from another and offer a set of guidelines for how a piece belonging to that genre, ought to be created and read. Identification of patterns and expectations in diverse kinds of communication is a component of genre theory. A genre is essentially a common, recurrent language-based category that influences how communication occurs. Genres can be found in a variety of media, such as literature, film, music, and other forms of artistic expression, in today's culture. Since there are two main modes of communication—written and oral—genres can be characterized as different types of text as well as different forms of communication. Additionally, oral communication genres including conversations, lectures,

and presentations are covered by genre analysis. However, several written genre examples, including books, newspapers, and research articles, are already discussed in the section of "Notion of genre analysis" above. The term "audio-visual genre" is used to describe a variety of categories of audio and visual content, including movies, TV shows, commercials, documentaries, music videos, and others, that have similar characteristics and are created for certain target audiences and objectives. Action, comedy, drama, horror, science fiction, romance, and other genres are examples of audio-visual genres that can be examined using the genre method and each genre has unique structural characteristics.

Move-Analysis in Academic Genre

John Swales initially presented the idea of move analysis in academic genres in his book "Genre Analysis: English in Academic and Research Settings" published in 1990. Move-analysis is a technique for examining written texts and pinpointing the stages and structures that belong to a certain genre. In the case of academic genres, this can entail examining the format of research papers, theses, or dissertations in order to spot recurring elements such as the introduction of the subject, literature review, formulation of the research question, etc. Move-analysis is a helpful tool for comprehending the norms and expectations of a specific genre and can assist writers in creating works that adhere more closely to these norms.

Analysing the logical structures utilized in academic writing is known as "move analysis" in this context. Examining the typical steps or movements seen in particular academic genres, such as research articles, theses, dissertations, conference papers, etc., is part of this. The purpose of move analysis is to assist students and researchers write successfully within the bounds of their area by understanding the normal structure and conventions used in academic writing. Move analysis is frequently used to examine the abstract section of research articles, a vital piece that summarizes the key conclusions and contributions of the study. Introduction, research problem, methods, results, and conclusion are frequently included in a research journal abstract. Moves are frequently presented in a precise order and make use of particular linguistic and discourse elements in academic genres. Move analysis is useful in recognizing these language traits, patterns, and standards as well as in understanding how other academic disciplines use discourse. It is a helpful tool for academic writers to hone their craft and comprehend the standards of academic writing across disciplines.

Previous Studies

Numerous studies on genre analysis have been conducted in recent years. By changing and extending its scope and context, it has, however, broadened conceptions and views regarding genre. The opening section of research publications is move-based analysis. While the Create- A Research-Space (CARS) model developed by Swales and Swales (1990) is the most pertinent model to examine for the introduction section. The introduction parts of the RAs have been the subject of numerous studies (Afshar, et al., 2018; Chahal, 2014). The conclusion and discussion sections of research articles are the most often researched parts, ranking second after the introduction (Amnuai & Wannaruk, 2013a; Amnuai & Wannaruk, 2013b; Ruiying & Allison, 2003). On the other hand, studies on RAs abstract portions have grown in popularity. Therefore, the abstract section has increasingly increased in significance for research studies. Due to the significance of the abstract part, academic researchers have advanced to study its various characteristics, such as the comparative study of the introduction and abstract sections (Ebadi, et al., 2019; Zand-Vakili & Kashani, 2012), metadiscoursal characteristics (Hu & Cao, 2011).

In a more recent study by Sükan and Mohammadzadeh (2022) investigated in their study the moves of M.A. and Ph.D. abstracts on foreign language instruction at Cyprus International University authored by Turkish students between the academic years 2009 and 2019. The findings of their investigation show that 40 abstracts did not adhere to the five suggestions made by Hyland. Furthermore, it can be said that readers may find it difficult to understand these studies for communication purposes because some moves in the abstracts are missing. Furthermore, Pratiwi, and Kurniawan (2021) analysed the identification of theses and dissertations' abstracts in English and Indonesian, using Hyland's (2000) five-move analysis model. According to the analysis, there are certain distinctions and affinities between the abstract speech patterns that appear in the final paper abstracts of English and Indonesian.

Amnuai (2019) used Hyland's model to analyse the movement patterns and linguistic usage in international and Thai-based abstracts. The analysis discovered that introduction and conclusion moves were more common in the international corpus. This demonstrated how cultural differences have an impact on writers' tastes. The background and justification of a study are very important to English writers, although they may not be as important to other writers, like Thai authors. When comparing the two corpora, these differences

may produce statistically significant results. To comprehend the rhetorical structure and linguistic characteristics of the abstracts part, however, there has only been a small amount of research in some subjects.

Another study in the Turkish setting was carried out by Coşmuş (2011), who compared abstracts in the disciplines of Applied Linguistics and Educational Technology that were published in English and Turkish. A mixed model of IMRD and CARS was used in the study to analyse 100 RA abstracts, 50 of which were authored in English and 50 in Turkish. The results revealed that both English and Turkish abstracts most frequently employed the Introduction, Methodology, and Results steps. Although nearly half of English abstracts included the discussion move, the usage was the complete opposite for Turkish abstracts. The author attributed this to the editorial practises of Turkish journals, where authors may prefer to briefly summarise the goal and conclusions without going into detail about the outcomes in the abstract section. Turkish authors frequently neglect the concluding move. This practice may be due to Turkish academic writing traditions or a face-saving tactic. As a result, the study identifies a critical literature gap that Turkish scholars must address in order to effectively use step 1 in move 2.

Additionally, it implies the necessity for additional study to comprehend the underlying causes of this problem. In contrast to Kafes (2012)'s study, Coşmuş (2011) examined abstracts written in Turkish and English. The study looked at 100 abstracts in the areas of Applied Linguistics and Educational Technology, with half in English and half in Turkish. The analysis discovered that both English and Turkish abstracts most frequently employed the introduction, methodology, and results moves. However, English abstracts tended to use the discussion move more frequently. The author thought that this discrepancy was caused by the editing policies of Turkish journals, as authors may prefer to highlight the purpose and findings in the abstract section without going into detail about the findings.

El-Dakhs (2018), on the other hand, looked at the variations between abstracts in PhD theses and research publications. The study discovered that while both genres' primary focus was on presenting data, thesis abstracts did it in a more condensed manner. The researcher explained this discrepancy by pointing out that research articles and thesis are two distinct genres and that research articles are competitive in character. These differences emphasize the value of comparative research in establishing the rules and conventions of academic writing specific to various genres, and they should not be disregarded when interpreting findings and drawing broad conclusions about the rhetorical organization and linguistic characteristics of abstracts.

METHODOLOGY

Corpus

The present study deals with the corpus analysis that includes two corpora (native and non-native) abstracts. However, total number of corpora was 60 for the move analysis. Thirty abstracts written by native English (American) writers and 30 abstracts written by non-native writers of English from Pakistan were included for the research. Moreover, three journals were chosen to take the RA abstracts that include Journal of Pragmatics, Journal of English for Specific Purpose (ESP), As Journal, for American abstracts while, International Research Journal of Arts and Humanities (IRJAH) was chosen from the years 2020 to 2022. Hence, 30 research article's abstracts were collected from International Research Journal of Arts and Humanities (IRJAH). The researcher could find only 10 American abstract in the three recent years in the journal of English for Specific Purpose (ESP). In order to avoid older RA abstracts, the researcher chose the journal of Pragmatics to collect 20 more American abstracts from 2020 to 2022. Hence, the total number of American abstracts was 30.

Instrument

In move-based analysis of abstracts, different models are used. In present study, Hyland's (2000) five-move model is used to analyse the RA abstracts. This model is chosen because it contains five key sections: introduction, objective, method, product, and conclusion. Unlike the IMRD Model (Introduction-Method-Result-Discussion) devised by Swales and Swales (1990), Introduction and purpose moves are separated in Hyland's model (Ghasempour & Farnia, 2017). Another reason for selecting Hyland's model is that it was derived from the analysis of 800 abstracts spanning eight scientific and social disciplines (Amnuai, 2019; Asim, et al., 2015) and was therefore more applicable to the current study. Table 1 outlines the structure of this model. In addition, Hüttner's classification model was used to ascertain the status of each move group of native and non-native author's abstracts writers by focusing on their percentage, as shown in Table 2 (Hüttner & Rieder-Bünemann, 2010).

Table 1
Hyland's (2000) Five Move Model in RA Abstract Analysis

Move	Function
Introduction	Establishes the context of the paper and motives the research or discussion
Purpose	Indicates purpose, thesis or hypothesis. outlines the intention behind the paper
Method	Provides information on design, procedures, assumption, approach, data etc.
Product	States main findings or results, the argument or what was accomplished
Conclusion	Interprets or extends results beyond the scope of the paper, draws inferences, points to applications or wider implications

The status of the moves is determined by the guidelines provided by Huttner which is based on the percentage of occurrence of moves, comprises obligatory, core, ambiguous, and optional moves (Hüttner & Rieder-Bünemann, 2010). As the percentage of move occurrence is shown in the table 3 and 4, while the status of each move in the form of percentage is shown in figure 1 and 2 separately for Pakistani and American moves.

Table 2
Huttner's Model for Determining the Status of Moves

Status	Percentage of Occurrence
Obligatory	90% - 100%
Core	50% - 89%
Ambiguous	30% - 49%
Optional	1% - 29%

Source: Hüttner and Rieder-Bünemann (2010)

Data Analysis

There were multiple phases of data analysis. Initially, each motion was analysed separately from the other abstracts in terms of frequency and proportion. Each abstract was read, and each move and step were manually highlighted and annotated with their respective names using five distinct colours by the researcher. In order to avoid subjectivity, a genre analysis expert was consulted for a second opinion. Second, a comparison was made between the works of L1 (American) and L2 (Pakistani) English authors. And differences and similarities in the frequency and percentage of movements in the abstracts were observed between native and non-native English writers. Abandoning the linear, i.e., Introduction-Purpose-Method-Product or non-linear, i.e., Introduction-Product-Method-Purpose sequences, the prevalent moves used in abstracts were identified.

RESULTS AND DISCUSSION

In the current study, the abstract part is generally classified into five moves; Introduction, Purpose, Method, Product and Conclusion, according to the Hyland's five move model (2000). And the answer of our first research question is that all the five moves are not completely utilized by every author, whether he or she belongs to America or Pakistan. The second research question deals with the frequency and percentage of each move employed by native (American) and non-native (Pakistani) authors. So, the Table 3 shows the frequency and percentage of moves in American abstracts, while, the percentage and frequency of moves in Pakistani abstracts are shown in the Table 4. However, in this study, the researcher has analysed the native and non-native abstracts separately by observing each move. While, focusing on the third research question the researcher compared the frequency of each move in groups like, the percentage and frequency of move 1 Introduction of abstracts written by non-native (Pakistani) authors with the frequency and percentage of Introduction move in the RAs by native (American) writers. Additionally, the status of the moves is determined by the guidelines provided by Huttner which is based on the frequency of occurrence, comprises obligatory,

core, ambiguous, and optional moves (Hüttner & Rieder-Bünemann, 2010). The percentage of the occurrence is presented in Table 2.

Move Occurrence of American Abstracts

In the American RA abstracts the frequency of move 1 (Introduction) is 100% and it shows that the status of first move is obligatory in the American abstracts according to Huttner's classification model (Hüttner & Rieder-Bünemann, 2010). It suggests that American linguists make it sure to introduce the title and focus of their research in the abstract. While, the percentage of Move 2 (Purpose) and move 4 (Product) was 90%. It shows that these both moves are also close to obligatory. On the other hand, Move 3 (Method) and Move 5 (Conclusion) appeared 26 times out of 30 abstracts and their percentage was 86.66%. Therefore, their status would be core because of having the frequency between 50% and 89%. For reference, the occurrences of Move analysis are further shown in the Table 3.

Table 3

Frequency and percentages of moves in American abstracts

Moves	American Abstracts	
	Frequency	Percentage
Introduction	30	100 %
Purpose	27	90 %
Method	26	86.66 %
Product	27	90 %
Conclusion	26	86.66 %
Total	136	

Move Occurrence of Pakistani Abstract

The occurrence of moves in Pakistani abstracts was not same by all means. While the first move of Introduction was utilized by all the Pakistani authors, and some of the Introduction moves included the Purpose move as well. But the researcher has analysed each move individually. So, the frequency of move 1 Introduction was 30 out of 30, and its percentage was 100%, and it is obligatory for the Pakistani authors with respect to Huttner's classification model. Hence, the third move Method appeared in 27 abstracts so, its percentage was 90% and it is also obligatory in the non-native context. On the other hand, the percentage of move 2 Purpose, move 4 Product, and move 5 Conclusion was 83.33%, 80% and 73% respectively, and their status is core (89% - 50%). As shown in the figure 1 and 2.

Table 4

Frequency and Percentages of Moves in Pakistani Abstracts

Moves	Pakistani Abstracts	
	Frequency	Percentage
Introduction	30	100 %
Purpose	25	83.33 %
Method	27	90 %
Product	24	80 %
Conclusion	22	73.33 %
Total	128	

Comparison of American and Pakistani RA Abstracts Moves

The researcher has compared each move group of Native American authors' RA abstracts with the move group of non-native Pakistani authors' RA abstracts. Consequently, the results indicate that there is a similarity between the Introductions of Pakistani and American authors, and that it is used by both L1 and L2 authors in all abstracts. It demonstrates that the first step is required for both research communities. While L1 English authors give the move 2 Purpose a slight edge over L2 English authors, as it appeared in 27 of 30 American abstracts, it only appeared in 25 of 30 Pakistani abstracts. However, the Move 3 Method did not demonstrate a significant difference between the two RA abstracts, as 26 American authors and 27 Pakistani authors utilized it. In contrast, the researcher discovered a greater disparity between moves 4 Product and 5 Conclusion than between the remaining moves.

Because the frequency of Move 4 Product in the American context is 27, but it is only present in 24 abstracts in the Pakistani context. In addition, 26 American authors and 22 Pakistani authors employed the conclusion move. And it was observed that in Pakistani and American contexts, it is more essential to introduce the topic in the abstracts section of research articles. While non-native Pakistani authors typically place less emphasis on the fifth conclusion than their American counterparts, this study found that the overall English language used by the Pakistani authors in all the abstracts was simpler and easier to identify each move than that of the American authors; perhaps this simpler language has not been given more weight in the American context. Although it could also be due to the fact that the researcher was not a native Pakistani speaker, it was simple for him but may be challenging for L1 authors of English.

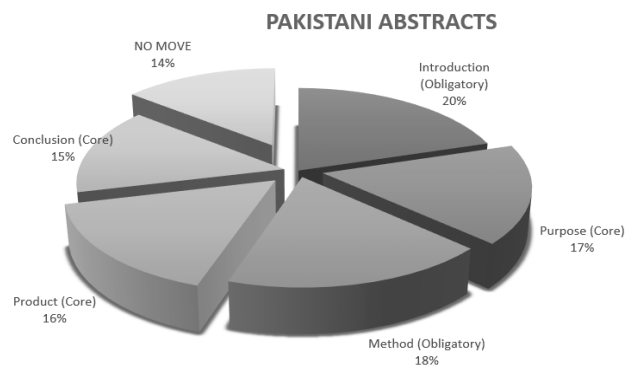


Figure 1. Determining Status of Moves in Pakistani Abstracts

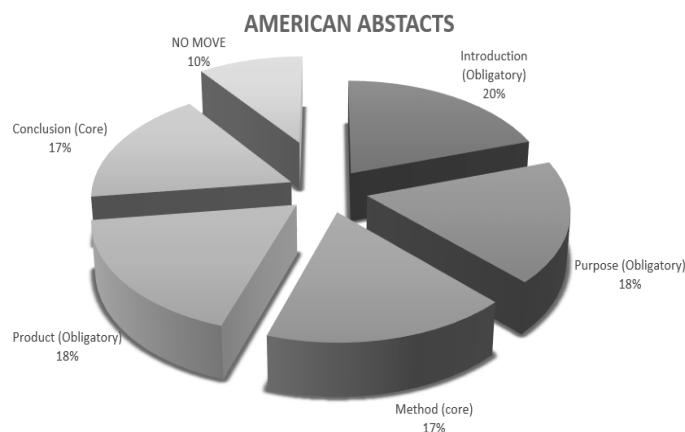


Figure 2. Determining Status of Moves in American Abstracts

CONCLUSION

The RA abstract is one of the most important part of the genres of research articles. However, this study aimed to explore the Native American and non-native Pakistani abstracts from three valuable journals. Hence, the five moves of RA abstracts were analysed and compared with respect to the difference and similarities between L1 English writers and L2 English writers of the research article. Consequently, the researcher found that the move 1 Introduction was obligatory in both contexts. While, the move 5 Conclusion was employed by 73% of the Pakistani authors. But the other three moves; Purpose, Method and Product were equal to similar with a little difference in terms of frequency and percentage, but they were not same.

Therefore, this study suggests that the non-native (Pakistani) researchers should also pay more attention to the move 5 (Conclusion) of the RA abstracts, and try to enhance their English writing competency as it would be more beneficial for their research articles to be accepted by international high category journals and review papers.

Limitations

- Small sample size: With only 30 articles for each group, the results of this study may not be generalizable to larger populations of native and non-native writers.
- Lack of control for other factors: There may be other factors that influence the moves used in abstracts, such as the field of study, the journal, or the author's individual writing style. These factors were not controlled for the current study. Therefore, it is unclear, if the differences found are due to nationality or other factors. Only a few factors are identified.
- Rater reliability: If the rater's interpretation of the moves was subjective, the results of the study may be affected by bias. To address this, it would be helpful to use multiple raters or establish a clear and consistent methodology for defining and identifying moves. As there was only one expert contacted to identify the moves in this research.
- Methodological limitations: It is also possible that the method used to identify moves may not be appropriate or sensitive enough to accurately capture the complexity of abstract writing. There might be some better ways and use of move analysis models to proceed the study because here the Hyland's (2000) five move model is applied.
- The reliability of the comparison: It's possible that the difference between the native and non-native writers is due to other factors such as the type of article, topic, or journal. This would make the comparison unreliable, and further research may be necessary to determine the cause of any observed differences.

Recommendations for Future Research

Moreover, further studies should be done by the future researchers in other field of studies like biology, genetics, and Information Technology (IT) research articles written by other non-native writers of English like Indian, Bangladesh, Chinese, Saudi Arabia, Japanese etc., by comparing L1 writers of English from Anglo-phone countries like America, British, Australia, Canada and New Zealand. And the move pattern or sequence also can be seen, which was not analysed by the researcher in the current study.

Competing Interest

The authors had no competing interests.

References

- Afshar, H. S., Doosti, M., Movassagh, H., & Sina, B. A. (2018). A genre analysis of the introduction section of applied linguistics and chemistry research articles. *Iranian Journal of Applied Linguistics*, 21(1).
- Amirian, Z., Kassaian, Z., & Tavakoli, M. (2008). Genre analysis: An investigation of the discussion sections of applied linguistics research articles. *The Asian ESP Journal*, 4(1), 39-63.
- Amnuai, W. (2019). Analyses of rhetorical moves and linguistic realizations in accounting research article abstracts published in international and Thai-based journals. *Sage open*, 9(1), 2158244018822384.
<https://doi.org/10.1177/2158244018822384>
- Amnuai, W., & Wannaruk, A. (2013a). Investigating Move Structure of English Applied Linguistics Research Article Discussions Published in International and Thai Journals. *English Language Teaching*, 6(2).
- Amnuai, W., & Wannaruk, A. (2013b). A Move-Based Analysis of the Conclusion Sections of Research Articles Published in International and Thai Journals. *3L: Southeast Asian Journal of English Language Studies*, 19(2).
- Asim, M., Chambers, C., González, R. O., Morote, E. S., & Walter, R. J. (2015). A study about the academic integrity of second-year aviation students in US higher education. *Journal of College and Character*, 16(3), 169-179.
- Berkenkotter, C., & Huckin, T. N. (2016). *Genre knowledge in disciplinary communication: Cognition/culture/power*. Routledge.
- Chahal, D. (2014). Research article introductions in cultural studies: A genre analysis exploration of rhetorical

- structure. *Journal of Teaching English for Specific and Academic Purposes*, 2(1), 1-20.
- Coşmuş, C. (2011). *Structural organisation of abstracts in English and Turkish research articles* (Doctoral dissertation, Bursa Uludag University (Turkey)).
- Ebadi, S., Salman, A. R., Nguyen, T. T. L., & Weisi, H. (2019). Rhetorical structure variations in abstracts and introductions of applied linguistics master's theses by Iraqi and international students. *Iranian Journal of Language Teaching Research*, 7(1), 101-117.
- El-Dakhs, D. A. S. (2018). Why are abstracts in PhD theses and research articles different? A genre-specific perspective. *Journal of English for Academic Purposes*, 36, 48-60.
<https://doi.org/10.1016/j.jeap.2018.09.005>
- Flowerdew, J. (2011). Action, content and identity in applied genre analysis for ESP. *Language Teaching*, 44(4), 516-528.
<https://doi.org/10.1017/S026144481000042X>
- Ghasempour, B., & Farnia, M. (2017). Contrastive move analysis: Persian and English research articles abstracts in law discipline. *Journal of Teaching English for Specific and Academic Purposes*, 739-753.
- Hu, G., & Cao, F. (2011). Hedging and boosting in abstracts of applied linguistics articles: A comparative study of English-and Chinese-medium journals. *Journal of pragmatics*, 43(11), 2795-2809.
<https://doi.org/10.1016/j.pragma.2011.04.007>
- Hüttner, J., & Rieder-Bünemann, A. (2010). A cross-sectional analysis of oral narratives by children with CLIL and non-CLIL instruction. *Language use and language learning in CLIL classrooms*, 61-80.
- Hyland, K. (2000). *Disciplinary discourses: Social interactions in academic writing*. Longman.
- Hyland, K. (2002). Authority and invisibility: Authorial identity in academic writing. *Journal of Pragmatics*, 34(8), 1091-1112.
[https://doi.org/10.1016/S0378-2166\(02\)00035-8](https://doi.org/10.1016/S0378-2166(02)00035-8)
- Imtihani, N. (2010). Genre analysis in the frame of systemic functional linguistics. *Humaniora*, 22(1), 86-93.
<https://doi.org/10.22146/jh.988>
- Kafes, H. (2012). Cultural traces on the rhetorical organization of research articles. *International Kafes*, H. (2012). Cultural traces on the rhetorical organization of research article abstracts. *International Journal on New Trends in Education and Their Implications*, 3(3), 207-220.
- Pratiwi, S. N., & Kurniawan, E. (2021). Rhetorical move and genre knowledge development of English and Indonesian abstracts: A comparative analysis. *Studies in English Language and Education*, 8(3), 885-900.
- Ruiying, Y., & Allison, D. (2003). Research articles in applied linguistics: Moving from results to conclusions. *English for Specific Purposes*, 22(4), 365-385.
[https://doi.org/10.1016/S0889-4906\(02\)00026-1](https://doi.org/10.1016/S0889-4906(02)00026-1)
- Sükan, S., & Mohammadzadeh, B. (2022). Challenges of writing theses and dissertations in an EFL context: genre and move analysis of abstracts written by Turkish MA and ph. D. Students. *Frontiers in Psychology*, 13, 925420.
<https://doi.org/10.3389/fpsyg.2022.925420>
- Swales, J. M., & Swales, J. (1990). *Genre analysis: English in academic and research settings*. Cambridge University Press.
- Zand-Vakili, E., & Kashani, A. F. (2012). The contrastive move analysis: An investigation of Persian and English research articles' abstract and introduction parts. *Mediterranean Journal of Social Sciences*, 3(2), 129-137.