RHETORICAL MOVES ANALYSIS ON SCOPUS-INDEXED RESEARCH ARTICLE ABSTRACTS BY NATIONAL AND INTERNATIONAL AUTHORS

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Abstract: Abstracts in research articles are important for readers in determining whether to continue reading the article or not. A plethora of studies involving abstracts' rhetorical moves has previously been published, but scant attention has been given to the relationship between the rhetorical moves and authors' nationalities. This study is aimed at comparing the rhetorical moves and linguistic realizations of abstracts by authors of different nationalities. This study analyzed 30 hard sciences abstracts written by national and international authors published in the International Journal of Science and Technology (IJoST). Hyland's (2000) model of rhetorical moves was employed as the framework of analysis. Findings showed that both groups similarly spent more space in manifesting the method and findings moves. However significant differences were evident in the steps of the introduction and method moves. National authors considered the conclusion move as optional, whereas the other moves in both groups were considered conventional. International authors considered topic generalization step as conventional, while all other steps in the introduction move of both groups were optional. No difference was found in the voices used. However, tense-wise, the international authors favored present tenses in describing the research purpose while the national authors favored past tenses. This study concludes that the differences in the rhetorical organizations between the international and national authors can mostly be found in the steps, instead of the moves. Additionally, as the use of voice does not show any difference, the use of different tenses in each move distinguishes the two groups of authors.
Keywords: *abstract; rhetorical moves; linguistic features; national authors; international authors.*

INTRODUCTION

Academic contexts, publications, including in the form of research articles, play an integral role regardless of which field of expertise they contribute to. Amongst the academic societies, publications are the means in which new knowledge is advanced and communicated (Martin-Martin, 2003; Yoon & Casal, 2020). In order to reach a wider range of readers, authors often times prefer to publish their research articles internationally, resulting in an increase of demands for international publications. Furthermore, international publications will also further boost the rate of publication productivity and enhance the individual and institutional reputations (Suherdi, Kurniawan, & Lubis, 2020) as it is one of the vital parameters in the assessments of world university rankings (Zheng & Gao, 2016).

In order to publish their works internationally, it is a well-understood convention among authors that their works must be written in an internationally preferred language, in this case, English. Due to English being the lingua franca in academic writing, particularly for international publications purposes, research articles published in non-English journals are likely to receive fewer citations and are often undervalued or ignored (Cianflone, 2014; Liang, Rosseau, & Zhong, 2012; Li, 2020). Moreover, publications in English may result in a faster circulation of knowledge, a higher chance of funding, and career promotion (Cianflone, 2014). As the demands for international publications arise, the standards would be strictly monitored to ensure the overall quality of the published research articles.

Out of all the accounted parameters in assessing the quality of a research article, the abstract is often considered as the main and most significant one used by editors to determine the content quality and whether an article is to be deemed worthy of being published or not (Suherdi et al., 2020; Fauzan, Lubis, & Kurniawan, 2020; Lorés, 2004). Moreover, the abstract tends to be the first part of a research article to be encountered by the readers apart from the title itself (Pho, 2008). Hence, the readers' impression on the abstract is important as it may reflect their overall impression on the rest of the article. As the gateway to the articles, abstracts promote the contents of their articles and help the readers determine whether to continue their reading further towards the articles or not (Swales & Feak, 2009; Hyland, 2000, 2009; Salager-Meyer, 1990; Lorés, 2004; Can et al., 2016). They also allow the readers to process information quickly and comprehensively as they determine the relevance of the articles' content to their interests (Kurniawan et al., 2019). Unlike their entailing research articles, abstracts are always available to be read online for free, even in cases of articles requiring payment for their access (Can, Karabacak, & Qin, 2016). Due to the importance of research articles abstracts, having excellent skills in composing and writing them is a must. However, the significant and pivotal roles of abstracts in research articles are often overlooked. As a result, abstracts with unsatisfactory quality are composed in many occasions.

For some authors, composing abstracts may prove to be a considerably challenging process in writing research articles (Can et al., 2016). The varying templates on how abstracts are to be constructed does not make it any easier (Kurniawan, Lubis, Suherdi, & Danuwijaya, 2019). Various skills and knowledge contribute to the authors' overall competency in composing satisfactory abstracts with their very own style of writing. One of the most determining factors in the production of well-structured abstracts is the authors' genre knowledge (Pratiwi & Kurniawan, 2021) due to abstracts being considered as a genre of its own for having distinguishable communicative purposes than the entailing research article.

Swales and Feak (2009) and Swales (1990) defined genre as a set of discourse with distinct communicative purposes. Genre knowledge itself concerns how specific types of discourse, genres, are constructed in their particular organizational structures and linguistic realizations to deliver the communicative functions. The communicative functions and purposes of abstracts as a discourse are manifested in the rhetorical moves and steps, the units of communicative stages which are also the units of analysis in this study. Move analysis as a method of analyzing genre is proven to be effective, particularly considering the complexities of research articles (Pratiwi & Kurniawan, 2021), including the abstracts.

Indeed, there have been a plethora of studies concerning the rhetorical organization and linguistic features of research articles abstracts in the past. A wide variety of variables have also been previously covered by a great number of notable authors. Some of which concerns with the language background, particularly the first language (L1) of the authors (e.g., Chalak & Nourouzi, 2013; Al-Khasawneh, 2017; Kaya & Yagiz, 2020; Xiao & Cao, 2013). Other studies focus on the comparison of research articles abstracts written in different language mediums (e.g., Martin-Martin, 2003; Candarh, 2012; Li, 2020, Pratiwi & Kurniawan, 2021). As a matter of fact, the horizon in which the possibilities of variables have even explored as far as to compare abstracts of research articles in different disciplines (e.g., Juanda & Kurniawan, 2020; Gani, Kurniawan, Gunawan, & Lubis, 2021; Liang et al., 2012; Khany & Malmir, 2019). Despite being distinguished between one and another due to the difference in data source and variables, all of the said studies were aimed at uncovering and analyzing the rhetorical organizations of the moves and steps of

the research articles abstracts in each of their respective focus.

In the past, a number notable scholars have previously proposed their ideas of the ideal rhetorical organizations or structures of research article abstracts. Swales (1990), in his research involving applied linguistics research article abstracts, argued that abstracts should comprise of four moves; *Introduction, Method, Results* and *Discussion.* Santos (1996), proposed his five-move configuration comprising of *Situating the research, Presenting the research, Describing the methodology, summarizing the findings*, and concluded by *Discussing the research.* Hyland (2000), in his research on multi-disciplines research article abstracts, proposed his very own five-move configuration consisting of *Introduction, Purpose, Method, Product,* and *Conclusion*. Swales and Feak (2009), who also analyzed multi-disciplines research article abstracts, also proposed a five-move configuration extending Swales' (1990) model consisting of *Introduction, Purpose, Method, Results,* and *Conclusion*. Additionally, Lubis and Kurniawan (2020) proposed their configuration which was based on Hyland's (2000) model with slight tweaks and modifications on the sub-communicative units or steps.

Although previous studies regarding the rhetorical moves and linguistic realizations in abstracts have been abundantly published, exiguous attention is given on the authors' nationality, exclusively in respects of national and international authors of a particular nation. Andika, Safnil, & Harahap (2018) have previously covered a part of this domain by analyzing the rhetorical moves of abstracts by post-graduate students, national, and international authors in applied linguistics. Additionally, Kurniawan and Sabila (2021) have also covered a similar focus by analyzing the rhetorical moves and linguistic realizations of tourism research article abstracts by national and international authors.

However, to the authors' knowledge, little to no other studies have explored such a domain to date, especially in the discipline of hard sciences. In response, this study is aimed at analyzing the rhetorical organizations and linguistic features of Q1 Scopus-indexed research article abstracts written by national and international authors in hard sciences published in Indonesia. Additionally, the present study also analyzes the steps, sub-communicative stages, in the analyzed research article abstracts, which have also been given scant attention in previous studies involving the same group of variables. This study is expected to provide an in-depth knowledge on how these two groups of authors compose their abstracts and to provide insights for novice authors regarding abstracts construction.

In order to acquire the necessary information and achieve its purpose, this study is essentially driven by the following research questions: RQ 1: How do the rhetorical organization of RA abstracts written by national authors differ with those written by international authors? and RQ 2: How do the two groups of authors linguistically realize the moves and steps?

METHOD

As the goal of this study is to analyze and compare the rhetorical organizations and linguistic features of hard sciences research article abstracts written by two groups of authors, this study adopted a comparative approach using qualitative and quantitative research design. The comparison of the rhetorical organizations of the research article abstracts focused on the moves and steps occurrence and salience. Concerning the linguistic features, the comparison focused on the tense and voice. The descriptive qualitative design was employed in determining and coding of the rhetorical moves, steps, and the linguistic features. The comparison and classification of the rhetorical units and the linguistic features within the abstracts pivots on the sentences as the units of analysis. The findings of the analysis would be visualized in the form of tables. In addition to the visualizations of the findings, excerpts and further explanations would also be presented for a better comprehension.

A total of 30 research article abstracts were chosen as the data source for this study. All of which were retrieved from research articles published by the Indonesian Journal of Science and Technology (IJoST), a Q1 Scopus-indexed journal based in Indonesia, of the latest edition to date. The retrieved research articles were classified into two groups, based on the nationality of the authors, while 15 research articles were written by Indonesian or national authors, the other 15 RAs were written by international authors with multinational backgrounds, mostly from middle-eastern and other Asian nations. The year of

publications of the retrieved research articles ranged from as early as 2019 and as late as 2021. A short span of the latest publication period is chosen in an attempt to reveal the current trends in abstract writing.

In this study, Hyland's (2000) model of moves and steps classification of abstract rhetorical units was employed as the instrument of analysis of abstract rhetorical organizations. The said framework of classification consists of a five-move coding model widely used by authors as a guideline in composing research article abstracts. The first rhetorical move proposed in this model is the *Introduction* (I) which function is to establish the context of the paper and motivate the paper or discussion. The second move is the *Purpose* (P) which function is to indicate the purpose, thesis or hypothesis, and outline the intention behind the paper itself. The third move is the *Method* (M) which functions to provide information on the research design, procedure, assumptions, approach, data, etc. The fourth move is the *Product* (Pr) which function is to state the main findings or results, arguments, or what was accomplished in the study. The final move is the *Conclusion* (C) which function is to draw inferences, interpret or extend the results beyond the scope of the paper, and point to applications or wider implications.

Hyland's (2000) model was employed in this study over that of Santos' (1996) due to a more comprehensive definition of Move 5, the final move, which covers not only the discussion of the research, but also further implications or recommendations or that of Swales' (1990) and Swales' (2009) model in which the former does not exclusively separate the Purpose move from the Introduction and the latter is considered to be quite similar with that of Hyland's (2000). Additionally, Hyland's (2000) model is the most extensively employed model of analysis in previous studies in rhetorical organizations (Lubis & Kurniawan, 2020). Hence, further enhancing its proven credibility and reliability as a framework of analysis. Furthermore, Santos' (1996) definition on Move 4, *Summarizing the* findings, is considered to be insufficient due to the nature of certain research which may not present findings, but products or results instead. Complementing the analysis on rhetorical organizations, the salience classification model proposed by Kanoksilapatham (2005) in measuring the salience of the moves and steps is also employed in this study. The said model of classification measures salience based on the overall frequency of occurrences of the moves and steps in the corpus. The model proposes that a move or a step is considered to be *Optional* (Op) should its frequency is recorded at <60%, *Conventional* (C) when it is recorded at 60-99%, and *Obligatory* (O) in salience when the frequency of occurrence is recorded at 100%.

This study implemented a multi-step procedure of analysis. The said procedure began immediately after the collection of the corpus data consisting of the necessary research article abstracts had been completed. The first step taken after the data had been collected was to break apart the abstracts into individual sentences. Following that, the sentences were then put into an Excel file with two different sheets corresponding with the two data variables. The next step was to determine and label which move and step each of the sentences belongs to in accordance with Hyland's (2000) model of classification. Then, the following step was to determine and analyze the linguistic features, the voice and tense, of each of the labeled sentences. Once the sentences had been labeled and coded with the corresponding moves, steps, and linguistic features, the recorded results from the two data groups were compared and contrasted.

Due to the coding of the sentences' moves and steps being based on subjective observations, an inter-coder reliability test was conducted to achieve alignment in classifications. The test concluded that out of the entire sentences analyzed in the corpus, a satisfactory rate of inter-coder reliability was achieved at the rate of 88.7% alignment in coding results. The remaining 11.3% of inter-coder disagreement of coding results were then aligned and revised to reach even better coding results.

Table 1. *Hyland's (2000) five-move model of RA abstracts rhetorical organization*

Move	Step	
Introduction (I)	Step 1	Arguing for topic significance
	Step 2	Making topic generalization
	Step 3	Defining the key term(s)
	Step 4	Identifying gap
Purpose (P)	Stating the research purpose(s)	
Method (M)	Step 1	Describing participants/data

		sources
	Step 2	Describing instrument(s)
	Step 3	Describing procedure and context
Product (Pr)		Describing the main results
	Step 1	Deducing conclusion
	Step 2	Evaluating research significance
Conclusion (C)	Step 3	Stating limitation
	Step 4	Presenting recommendation or implication

RESULTS AND DISCUSSION

The analysis showed that out of the 30 research article abstracts collected and analyzed, a total of 393 moves and steps were manifested in the two data groups. 78 steps in 122 moves were recorded to be manifested by the first group of research article abstracts written by international authors. Quite similarly, 73 steps in 120 moves were recorded to be manifested by the second group consisting of national authors. Henceforth, the following subsections will provide further explanations in terms of the similarities and differences in the manifestation of the rhetorical moves and steps, and the linguistic features of the two data groups.

Move-step occurrences
The occurrences of the moves in both data groups recorded evident similarities based on the statistical calculations. The calculations were conducted under the conditions of $\alpha = 0.05$ and the null hypothesis which states that the moves occurrence's proportions in the two data groups were similar. Move-wise, a striking statistical similarity of the two was that both data groups showed an evidently similar distribution in terms of the moves occurrence's proportions. As shown in table 2, Move 3 (Method) in both data groups had the highest proportion compared to the other moves at 30% and 33% with the national authors being the one recording the higher number. The differences in terms of the moves occurrence's proportions were evidently insignificant, as the highest difference in number was only as much as 4%, in Move 1 (Introduction), and as little as 2%, in Move 5 (Conclusion). Although, the discovered differences were evidently insignificant due to the calculated *p*-value of > .05.

The comparable distribution pattern of the moves occurrence's proportion is parallel with the findings of Gani et al. (2020), Kurniawan and Sabila (2021), and Harisbaya, Qurratu'aini, Kanafani, Nurcik, Kurniawan, & Lubis (2021) in which all three recorded that Move 1 (Introduction), 3 (Method), and 5 (Conclusion) have the highest number of proportions compared to the other two moves. Furthermore, the resemblance in the pattern is made even clearer due to the fact that the first two of the three also recorded that Move 3 (Method) holds the highest proportions. This may indicate that notable differences are non-existent across the authors' nationalities and disciplines. Perhaps, this is due to a common understanding or conventions that the proportions of abstract composition should focus on Move 1 (introduction), 3 (Method), and 5 (Conclusion).

Excerpt 1
A very challenging problem in mobile robot systems is mostly in obstacle avoidance strategies. (Step 1 of Move 1, National author)

Table 2. *Moves occurrence proportions*

Move	International	National	Z-score	*P*-value
1	25%	21%	0.844	.399
2	11%	11%	-0.045	.964
3	30%	33%	-0.641	.522
4	25%	28%	-0.513	.608
5	9%	7%	0.679	.497

Table 3. *Steps occurrence proportions*

Move	Step	International	National	Z-score	*P*-value
	1	16.1%	8%	0.914	.846
	2	71.0%	60%	0.862	.388
1	3	6.5%	20%	-1.524	.128
	4	0%	12%	-1.983	.047
	5*	6.5%	0	1.293	.196
2		N/A			
	1	8.3%	2.5%	1.137	.255
3	2	30.6%	12.5%	1.928	.054
	3	58.3%	85%	-2.596	.009
	4*	2.8%	0	1.061	.289
4		N/A			
	1	45.5%	75%	-1.288	.198
5	2	9.1%	12.5%	-0.239	.811
	3	9.1%	0%	0.876	.381
	4	36.4%	12.5%	1.166	.243

However, the presented data in table 3 showed that the distribution of certain steps' proportions were distinct between one another. Based on the statistical standard score calculations, the occurrences' proportions of a number of steps showed significant differences. The calculations were conducted under the same conditions as of the

moves occurrence'. It was found that Step 4 of Move 1 (Introduction) and Step 3 of Move 3 (Method) of the two groups showed significant differences proven by the low *p*-values of $p < .05$. Step 4 of Move 1 (Introduction) had no proportions at all in abstracts written by the international authors, but had 12% of proportions in the national authors' abstracts. The 12% gap between the two may seem trivial, but was evidently significant. Additionally, the Step 3 of Move 3 (Method) had 58.3% of proportions in the international authors' abstracts, but 85% in the national authors' abstracts. The 26.7% gap was evidently enough to point out the significant difference between them. In both cases, compared to the international authors, the national authors spent more space in their abstracts to manifest step 4 of move 1 and step 3 of move 3.

Aside from the significant difference between step 4 of Move 1 (Introduction) and Step 3 of Move 3 (Method), the other remaining steps' proportions were considerably stable and similar. Although there were found gaps of occurrence's proportions between one step and another, statistically speaking, said gaps were considered insignificant. Such a premise is due to the high *p*-value of the data as shown in table 3. As a matter of fact, there is no step in Move 5 (Conclusion) which has significant difference, implying that the two groups evidently have similar distributions of steps occurrence's proportions in Move 5 (Conclusion). An excerpt of Move 5 is as follows:

> Excerpt 2
> The implication is that teaching and learning process must be equally fostering all these variables to achieve a high level of students' achievement, especially in Mathematics subjects. (Step 4 of Move 5, International author)

As shown in table 3, two additional steps were found in the international authors' abstracts; Step 5* of Move 1 (Introduction) and Step 4*of Move 3 (Method). The two new steps were included in the analysis due to certain sub-communicative functions yet to be defined in Hyland's (2000) model. Step 5* of Move 1 (Introduction) which function is to present previous studies and Step 4* of Move 3 (Method) which function is to describe the research design were Lubis and Kurniawan's (2020) extended model of rhetorical organization, which was based on that of Hyland's (2000). Despite the low recorded proportions, the occurrences of these new steps may potentially spark a new trend and chart new horizons in abstracts' rhetorical organizations. Additionally, the emergence of the previously unclassified sub-communicative stages may indicate the eligibility of Hyland's (2000) extended model proposed by Lubis and Kurniawan (2020) for future studies. The following excerpts demonstrate the use of the additional steps:

> Excerpt 3
> However, there are works related to applications directed to the human body, especially in replacement devices for the upper limb. (Step 5* of Move 1)
> Excerpt 4
> In the past there have been important works in physician recommendation. (Step 5* of Move 1)
> Excerpt 5
> In this work, we adopt Neural Networks and undertake a comparative analysis between several different available supervised algorithms to identify one best suited neural architecture that can work best in the applied fields. (Step 4* of Move 3)

Table 4. *Moves and steps salience*

Move	International	National	Step	International	National
1	73% (C)	67% (C)	1	27% (Op)	13% (Op)
			2	67% (C)	53% (Op)
			3	13% (Op)	27% (Op)
			4	0% (Op)	13% (Op)
			5*	13% (Op)	0% (Op)
2	73% (C)	73% (C)		N/A	
3	93% (C)	87% (C)	1	20% (Op)	7% (Op)
			2	47% (Op)	27% (Op)
			3	67% (C)	80% (C)
			4*	7% (Op)	0% (Op)
4	93% (C)	87% (C)		N/A	
5	73% (C)	47% (Op)	1	33% (Op)	40% (Op)
			2	7% (Op)	13% (Op)
			3	7% (Op)	0% (Op)
			4	27% (Op)	13% (Op)

Move-step salience

Another point of analysis is the salience of the moves and steps. As shown in table 4, as no moves were recorded to have a 100% frequency across all of the analyzed abstracts, none of the five moves were considered obligatory in salience in both data groups. The highest recorded salience in the data were those of Move 3 (Method) and 4 (Product) of the international authors group at 93% each, which means that 14 out of 15 abstracts in the said group employed those moves in their organizations.

Interestingly, the same moves in the national authors group also recorded the same level of salience with both recorded at 87%. Hence, both moves in both data groups were considered to have similar standings in the level of importance as both were classified as conventional in salience. Aside from the similar salience degree of Move 3 (Method) and 4 (Product), the salience of Move 2 (Purpose) in both data groups also recorded an uncanny resemblance. In both data groups, Move 2 (Purpose) had a salience of 73%, which then also classified as conventional.

Despite the similarities in terms of the moves' salience, there was also a striking difference between the two data groups. As the data in table 3 suggests, the salience in Move 5 (Conclusion) was notably different in the two groups. In abstracts written by international authors, with 73% of salience rate, Move 5 (Conclusion) was classified as conventional in salience as did the other moves. On the contrary, with only 47% of salience rate, it was classified as optional in abstracts written by national authors. Thus, making it the only optional move due to its lowest degree of salience in the data.

The low salience of Move 5 (Conclusion) resonates with the findings of Kurniawan and Sabila (2021) in which it was found that the abstracts by Indonesian authors typically focus more on Move 1 (Introduction) and less on Move 5 (Conclusion) in terms of the moves' salience. However, it contrasts with the findings of Andika et al. (2018) in which Move 5 (Conclusion) recorded a higher salience than Move 1 (Introduction) with a minor gap of only 5% and with that of Ramadhini, Wahyuni, Ramadhani, Kurniawan, Gunawan, & Muniroh (2020) with a larger gap of 20%. Interestingly, the salience of Move 1 (Introduction) and 5 (Conclusion) of international authors' abstract do not correspond with Swales' (2009) as it is more similar with that of the national authors' abstracts. Additionally, the high salience of Move 3 (Method) and Move 4 (Product) in both data groups is parallel with the premises of Hyland's (2000; 2004) regarding the typical constructions of hard sciences research article abstracts. The absence of moves classified as obligatory in both data groups is comparable with that of Andika et al. (2018) and Gani et al. (2020) as the former also did not record any obligatory moves in international and national authors, and the latter in hard sciences research article abstracts, which indicates that both national

and international authors do not necessarily employ all moves in their abstracts.

The comparison on the steps' salience also showed a number of interesting findings. No data regarding the steps of Move 2 (Purpose) and 4 (Product) were presented in table 4 nor will it be analyzed in this subsection due to the fact that Hyland's (2000) classification model of rhetorical moves did not include any steps in the said two moves.

As shown in table 4, all of the steps in Move 3 (Method) and 5 (Conclusion) of both data groups showed similar degrees of salience. The differences in percentage of occurrence were not drastic enough to change the group of salience classifications in which they belong to. The salience of Step 1 of Move 3 (Method) could demonstrate this premise. In the international authors' abstracts, the said step was classified as optional at 20% of salience, and still classified as optional despite recording only 7% of salience in the national authors' abstracts. The 13% gap in salience was not enough to demonstrate a difference in the salience classifications. However, the similarity in the salience of the steps of Move 3 (Method) and 5 (Conclusion) was found to be contradictory with the findings of Ramadhini et al. (2020) in which the steps of Move 3 (Method) were either conventional or obligatory, and those of Move 5 (Conclusion) were mostly conventional. Nevertheless, the notably high salience of Step 3 of Move 3 (Method) is evidently similar with the findings of Kurniawan and Sabila (2021) and Kanafani, Nurcik, Harisbaya, Qurratu'aini, Kurniawan, & Lubis (2021).

Although the salience of all the steps in Move 3 (Method) and 5 (Conclusion) was evidently similar in both data, the steps of Move 1 (Introduction) do not share the same level of similarities. International authors had a rather higher tendency to provide the generalizations of their research topic in their abstracts when compared to national authors. This was due to the striking difference recorded in the salience of Step 2 of Move 1 (Introduction). As presented in table 4, the said step in international authors' abstracts was conventional in salience, but in that of the national authors', it was optional in salience. Nevertheless, the other steps of Move 1 (Introduction) have similar degrees of salience in both data with all of them being evidently optional in salience.

Table 5. *Tenses and voices used in the abstracts*

Moves	Tense		Voice	
	International	National	International	National
1	Pr (90%)	Pr (88%)	Ac (90%)	Ac (68%)
	Pa (10%)	Pa (12%)	Pa (10%)	Pa (32%)
2	Pr (85%)	Pr (46%)	Ac (92%)	Ac (85%)
	Pa (15%)	Pa (54%)	Pa (8%)	Pa (15%)
3	Pr (44%)	Pr (42%)	Ac (31%)	Ac (30%)
	Pa (56%)	Pa (58%)	Pa (69%)	Pa (70%)
4	Pr (47%)	Pr (50%)	Ac (93%)	Ac (76%)
	Pa (53%)	Pa (50%)	Pa (7%)	Pa (24%)
5	Pr (82%)	Pr (88%)	Ac (82%)	Ac (75%)
	Pa (18%)	Pa (12%)	Pa (18%)	Pa (25%)

Linguistic features

This subsection presents the comparison of the two data groups in terms of the linguistic features, particularly the tenses and voice. As shown in table 5, a number of considerable similarities and differences were found in the data. In general, both data groups only used present and past tenses. Both international and national authors extensively used the same tenses in Move 1 (Introduction), 3 (Method), and 5 (Conclusion). However, in Move 2 (Purpose), international authors dominantly used present tenses with a gap of 60% between the proportions of the two tenses. On the other hand, national authors tend to favor past tenses in the same move with gap of only 8% between the proportions of the two tenses. Interestingly, national authors recorded an equal proportion of both tenses in Move 4 (Product), while their international counterparts favored the use of past tenses over present tenses. Surprisingly, the analysis on the proportions of the use of voice in the two data groups did not record any difference whatsoever as the dominantly used voice were similar across all the moves.

> Excerpt 6
> This study was conducted to produce samples under various mixing speed conditions. (Move 2, National author)
> Excerpt 7
> The main purpose of this work is to compare two main types of FFR schemes; respectively; Strict FFR and Soft Frequency Reuse with the proposed scheme. (Move 2, International author)

The dominant use of present tenses in Move 1, 3 and 5 echoes with the findings of Andika et al. (2018), Kurniawan and Sabil (2021), and Ramadhini et al. (2020). Thus, indicating that the authors nationality and disciplinary background do not exceptionally affect the choice of tenses.

Furthermore, Lubis and Kurniawan (2020) also pointed out that present tenses are generally used extensively in Move 1, 2, and 5 due to the functions of those moves commonly presenting generalizations, intentions, and interpretations of the findings. Past tenses are generally used in presenting the method and result/product moves (Lubis & Kurnaiwan, 2020). Hence, confirming that the high proportion of past tenses in Move 3 of both data groups and Move 4 of international authors' abstracts is in accordance with the typical characteristics of the moves. Voice-wise, the extensive use of active voice dominating the voice's proportion across all the moves resonates with the findings of Kanafani et al. (2021), Gani et al. (2020), Andika et al. (2018), Harisbaya et al. (2021), and Kuniawan and Sabila (2021).

CONCLUSION

Based on the conducted analysis on the sentences constructing the research article abstracts of international and national authors exclusively published in Q1 Scopus-indexed journal, a number of conclusions describing the overall characteristics of the two groups were derived. In terms of the proportion of moves' occurrence, it can be concluded that there was no significant difference between the two data groups. However, the proportions of steps' occurrence, particularly that of Step 4 of Move 1 and Step 3 of Move 3 was evidently significant in favor of the national authors' abstracts. Two additional steps outside the sub-communicative stages proposed by Hyland (2000) were found and labeled with the extended model by Lubis and Kurniawan (2020) due to the convenient description of the said steps.

In terms of the moves and steps' salience, both data groups were in agreement that no moves were considered obligatory. The international authors considered all moves to be conventional, while the national authors considered move 5 as optional. The only difference in steps' salience was found in Step 2 of Move 1, in which international authors manifested more attention to the topic generalization.

The comparison on the linguistic features of the two data groups showed more variations in terms of the tenses, but was strikingly similar in terms of the voice. Both groups of authors were recorded to use only present and past tenses. Furthermore, both also extensively used present tense in Move 1, 3, and 5.

Additionally, no considerable difference was recorded in terms of the voice used in all of the moves. This resonates with the findings and premises of previous studies which may have established a shared knowledge among authors on the linguistic features of research article abstracts.

Despite the considerably low number of abstracts or samples analyzed in this study, it is expected to be able to provide in-depth insights on how these two groups of authors compose their research article abstracts. Although accurate generalizations on both the rhetorical organizations and linguistic features may still require a larger sample and more sophisticated methods or instruments of analysis. In addition to that, it is also expected that novice and emerging authors in this particular field of study or those beyond it could learn and apply the accepted exemplary norms of abstracts' writing which some of those are as showcased in this study.

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