

SURAT KETERANGAN

Nomor: 802/UNUSA-LPPM/Adm.I/III/2025

Lembaga Penelitian dan Pengabdian Kepada Masyarakat (LPPM) Universitas Nahdlatul Ulama Surabaya menerangkan telah selesai melakukan pemeriksaan duplikasi dengan membandingkan artikel-artikel lain menggunakan perangkat lunak **Turnitin** pada tanggal 07 Maret 2025.

Judul : *The Nature Of Rhetorical Moves In Conlusion Sections Of Inter-national Research Journal Articles*

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No. Pemeriksaan : 2025.11.03.035

Dengan Hasil sebagai Berikut:

Tingkat Kesamaan diseluruh artikel (*Similarity Index*) yaitu 16%

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THE NATURE OF RHETORICAL MOVES IN CONCLUSION SECTIONS OF INTERNATIONAL RESEARCH JOURNAL ARTICLES

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Submission date: 07-Mar-2025 05:51PM (UTC+0700)

Submission ID: 2607876010

File name: onclusion_Sections_of_International_Research_Journal_Articles.pdf (1.16M)

Word count: 7402

Character count: 41817



THE NATURE OF RHETORICAL MOVES IN CONCLUSION SECTIONS OF INTERNATIONAL RESEARCH JOURNAL ARTICLES

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ABSTRACT:

The research article conclusions commonly follow generic patterns or they have their rhetorical moves, such as sections on the conclusion, limitations, suggestions or recommendations, and sometimes implications. However, not all research journal publishers suggest of using uniform guidelines for the conclusion sections. Therefore, it may lead to variations in structure even among articles published by the same journal. This research examines the rhetorical moves used in research articles claimed to be international journal publications. It analyzes 30 articles—15 from biology and 15 from economics—selected purposively based on the assumption that they underwent rigorous peer review and were claimed to be suitable for international publication. The analysis focuses on common rhetorical moves such as concluding, acknowledging limitations, and providing suggestions or recommendations. The findings reveal that articles from these two disciplines exhibit diverse moves in their conclusion sections. This study offers insights for journal publishers, editors, reviewers, and authors to promote consistency in the structure of conclusion sections within the same journal.

KEYWORDS:

APPLIED LINGUISTICS, MOVES, DISCOURSE COMMUNITY, RESEARCH ARTICLES (RAS).

PAPER ACCEPTED DATE:

3rd December 2024

PAPER PUBLISHED DATE:

5th December 2024

I. INTRODUCTION

When the researchers or writers writing the conclusion section of a research paper, they typically summarize and discuss the findings of their study. However, the conclusion goes beyond a mere summary and even focuses on capturing the essence of all the findings. It serves as a reflection on the research process and the key outcomes. After presenting the research findings and their implications, researchers or writers often acknowledge the limitations inherent in their study. This recognition of limitations is important as it indicates a critical evaluation of the research and highlights areas that may require further investigation or improvement. By acknowledging limitations, researchers maintain transparency and contribute to the overall integrity of the study (Haq & Rehman 2021 and also Djuwari, 2021).

It is worth noting that the specific structure and organization of the conclusion section may vary depending on the discipline and the requirements of the research paper. However, the general pattern described above—concluding the findings, acknowledging limitations, drawing implications, and providing suggestions or recommendations—is commonly followed to ensure a comprehensive and impactful conclusion to the research study (Haq & Rehman, 2021). However, in reality, not all articles that have various conclusions are written

like the moves mentioned above. This can be assumed in two factors. First, the guideline of the journal does not provide such instructions, and secondly, there are guidelines that mention moves like that, but they may not have been reviewed thoroughly. This condition can cause confusion for the main authors who are contributors to the journal. In addition, these international scientific journals do not have clear and neat standards so that in terms of formal scientific writing this is of lower value.

Novice writers often face linguistic challenges when writing research or academic articles. The complexity lies in the task of expressing consecutive written moves that effectively persuade readers or fellow scholars to understand and embrace their viewpoints or arguments (Swales, 1990, 2004; Amnuai, 2019; Lu et al., 2020). According to Djuwari (2009), in an abstract of research paper, each move serves a distinct purpose, such as introducing the topic, stating the objective, describing the methodology, presenting the results, drawing conclusions, and making suggestions. While not all articles follow the exact same structure, there are usually obligatory moves found in abstracts, such as stating the purpose, outlining the methodology, and summarizing the conclusion.

Some previous studies, mostly they analyzed the abstract moves such as Sidek et al (2016). They analyzed the

rhetorical moves of research articles' abstract published in the conference proceedings. They took the sample of 23 articles. This was also the same done by Heyland (2009) using Biology research articles with 20 abstracts. Like Sidek et al (2016) and Djuwari (2009), he analyzed 40 abstracts of the conference international conference proceedings. Not all the authors have the same moves such as topic purpose, method, results, and conclusion. Therefore, mostly the authors of the research articles have different moves in their abstract writing.

Other previous studies related to the moves are mostly on the conclusions of the research articles. For effectiveness and efficiency, there are also several studies in research articles (RAs). For example, specifically the discourse community carried out by Swales (2014). He specifically analyzes the discourse community of the Biology discipline. He examined his abstracts as other researchers, such as Najjar (1989), Taylor, and Chen (1991) did. They analyzed the conclusion section of research articles although the analyzed article was in Portuguese in Brazil. They found in the conclusion sections of research articles also vary. On the other hand, the articles written in English by those being analyzed follow the moves of conclusion. They use data from documents taken from research articles, some use 20 articles (Hyland 1992).

For the purpose above, the present researchers, in this occasion, attempt to discover the rhetorical moves of conclusion section of international research articles (RAs). After browsing the RAs in Google scholar website, the present researcher couldn't find any related to the conclusion sections. Yet, the result of the present research will be beneficial not only the authors, and the readers, but also the reviewers, editors, and journal publishers for the clear guidelines in the publication. Others used about 40 articles (Djuwari 2009). Unlike in Malaysia, the postgraduate students were interviewed, while other previous studies, the researchers used the documents for the data to be analyzed. These documents are based on their specific discourse communities such as Biology and social sciences.

As based on the previous studies and the literatures described above, the present researchers try to do the research on a comparative study of rhetorical move especially in the conclusion sections of international research journal articles. This is done to provide more knowledge and skills for the researchers, academicians, and university faculties, especially for those who are the novice writers. The researchers, in this present study, want to explore how the authors of different discourse communities such as Education, Technology, and Biology express their language in the conclusion section: rhetorical moves.

Finally, in the conclusion section, researchers or writers provide suggestions or recommendations based on their findings and implications. These suggestions can guide future research directions, propose practical interventions, or offer recommendations for further exploration or action. The suggestions or recommendations aim to

inspire further investigation or to provide guidance for practitioners, policymakers, or other stakeholders in the field.

So far, there has not been a stipulated guideline special for a confusion section. This present study attempts to investigate the rhetorical moves of the conclusion sections of international research journal articles. This study addresses the issues such as how the authors express their rhetorical moves in their conclusion sections of their research articles published in the international research journal articles. The result will be beneficial for the authors, editors, reviewers, and the journal publishers.

II. THEORETICAL FRAMEWORK

It has been widely done by researchers who focus on the research articles (RAs) analysis. Genre approach can explore the rhetorical moves of any sub genres of the articles such as abstracts, introductions, frameworks, findings and discussions, and conclusions.

2.1 GENRE APPROACH

It is indeed true that researchers in linguistics have increasingly utilized the theories of genre approach when analyzing research articles (RAs). The genre approach involves various elements, including rhetorical analysis using genre concepts, a genre-based approach, and incorporating knowledge of language acquisition in genre studies (Knight, 2020). When studying the conclusion section of a research article, researchers typically follow a process that involves creating rhetorical moves for this section based on the genre approach. These established rhetorical moves can then be used as a framework for data analysis.

As it is also argued by (Morell & Pastor Cesteros, 2019), for the graduate students to enter the discourse community of their fields, genre approach has gained prominence in linguistic research, particularly in the analysis of research articles (RAs). Scholars have increasingly embraced this approach, which encompasses elements such as rhetorical analysis using genre concepts, a genre-based approach, and the integration of language acquisition knowledge within genre studies (Knight, 2020 and de Vroe et al., 2021). A key focus within this framework is the examination of the conclusion section in RAs.

More importantly, researchers typically adopt a systematic approach, employing rhetorical moves specific to this section based on the genre approach. This can also help the writers, especially students in writing class, to write using the moves of certain discourse community but they can also develop it by themselves. For that reason, they can typically adopt a systematic approach, employing rhetorical moves specific to this section based on the genre approach (Cotos & Link, 2020; and also Suwarni, 2021). By employing these established rhetorical moves as a framework for data analysis, researchers gain valuable insights into the structure and content of the conclusion section in RAs. This analytical process allows for a deeper understanding of how conclusions are constructed within

the genre of research articles

By employing the genre approach, researchers aim to understand the typical organizational structure and linguistic features of research article conclusions. They analyze how authors use specific moves to achieve their communicative goals and effectively convey the purpose, significance, and context of their research. This approach helps researchers identify patterns, strategies, and conventions employed in conclusions across various disciplines.

By examining a large corpus of research articles, researchers can identify common rhetorical moves such as providing background information, stating the research gap or problem, presenting the research objectives or questions, summarizing previous research, and outlining the structure of the article. These moves serve as a guide for researchers in their own data analysis, allowing them to compare and contrast the rhetorical choices made by

authors in different disciplines or within a specific field of study.

By applying the genre approach to the analysis of conclusion sections, researchers can gain insights into the conventions and expectations within a specific academic community. This approach aids in understanding the ways in which authors establish their credibility, situate their research within existing knowledge, and engage readers effectively (Rachayon, 2020). Ultimately, the genre approach provides a systematic framework for studying the rhetorical organization and linguistic features of research article conclusions, enhancing our understanding of academic discourse and facilitating effective communication within the scholarly community. Since there has not been the stipulated guideline of the research journal articles explicitly for the conclusion section, the following is adapted from Paltridge and Starfield (2019). This rhetorical move model is in their book about thesis and dissertation writing.

TABLE 1: RHETORICAL MOVES OF CONCLUSION SECTIONS

NO	RHETORICAL MOVES
1	Summarizing the key findings
2	Answering the research question (s) and addressing the research aims
3	Implying the findings
4	Acknowledging the Limitation
5	Recommending or Suggesting for future research

Adapted from Paltridge and Starfield (2019).

2.1 RESEARCH ARTICLES (RAS) ANALYSIS

Genre analysis is a crucial component in analyzing scientific texts, as it focuses on texts written by multiple authors within specific disciplines, known as discourse communities (White, 2019). Each discourse community has its own distinct language characteristics, including vocabulary, word choice, sentence patterns, and the presentation of ideas in scientific writing. These differences can pose challenges for readers and writers unfamiliar with the specialized jargon and diction of a particular community. To address these challenges, understanding rhetorical moves becomes essential.

Rhetorical moves, a central aspect of genre analysis, have received significant attention in applied linguistics, with the Sydney School of linguistics, based on corpus linguistics, being one prominent framework used to study them (White, 2019). This framework, along with others, has primarily focused on investigating research articles (RAs). Dudley (1995) and Poorhadi et al., (2017), argue that learners can benefit from genre analysis of specific RAs, particularly in English for Specific Purposes (ESP) classes. Even in this case, it is also good for the writers to be able to map the arguments and the rhetorical moves (Berdanier, 2019). By gaining knowledge of the prevalent genres within a discourse community, learners can better understand and engage with genre analysis results,

aligning with the principles of ESP and emphasizing the consistency between generic rhetorical moves and the research focus on RAs.

Studying the rhetorical moves used in research articles provides insights into the organization of ideas, the establishment of author credibility, and the presentation of studying the rhetorical moves used in research articles provides insights into the organization of ideas, the establishment of author credibility, and the presentation of information in scientific writing. This understanding enhances effective communication and comprehension within academic communities and contributes to the knowledge of genre conventions and linguistic features in scientific discourse (White, 2019; Dudley, 1995; and Shibani et al., 2019). As the model adopted from Paltridge and Starfield (2019), it is a good pattern for the analysis of conclusion section using the rhetorical moves as they open the path way for the researchers.

III. METHODOLOGY

In this present research, a descriptive qualitative approach was utilized as the research design, with a genre approach underpinning the theoretical basis. Therefore, the study can be classified as qualitative research, incorporating content analysis of documents as the written data in the

form of research journal articles. The research analyzed research articles (RAs) obtained from international journals in the fields of Economics and Biology.

Purposive sampling was employed to select the documents based on specific criteria. These criteria included the assumption that the RAs had been published in international journals and were available online. It was also assumed that they met the required academic standards, having undergone review, editing, and publication for the target audience of academicians, researchers, and university faculties. As these RAs were published online and accessible worldwide, they were deemed suitable for research data analysis. Each discourse community consisted of 15 articles, resulting in a total of 30 RAs as sub-genres for analysis, specifically focusing on the conclusion sections of these RAs within the domains of Biology and Economics.

The research procedure followed the steps outlined by previous researchers. Firstly, the RAs from each discourse community were analyzed using the CARS instrument, which was adopted from Swales (2014) and Habibi (2008), as well as incorporating insights from Hyland (2002) on the genre of abstracts, and Khany and Tazik (2010), Safnil (2013), and Djuwari (2017) regarding rhetorical move exploration (as presented in Table 1). Secondly, the rhetorical moves identified within the two discourse communities (Biology and Economics) were presented and subsequently discussed, leading to the formulation of inferences (see Table 1 the adaptation of rhetorical moves for a conclusion section).

IV. FINDINGS AND DISCUSSION

This section of findings covers the results of analysis based on the moves of conclusion sections from three discourse communities: education, technology, and biology. Each discourse is presented on a table and the frequency was counted to see the degree of the authors of each discourse community writing their research articles (RAs) for their conclusion sections.

4.1 Rhetorical Moves of Conclusion in Economics

In the discourse community of economics, the moves of the conclusion section were analyzed and presented in Table 2. Among the 15 journal articles examined, 14 authors (95%) wrote the first rhetorical move, which is summarizing the key findings. There is only one author did not write the first move, summarizing the key finding. Additionally, all the authors, 15 authors (100%) expressed Move 2, answering the research questions, indicating a consistent pattern in this discourse community. The

rhetorical Move 4, implying the findings, was identified and there are 7 authors (45%) who wrote this Move. These 13 authors explicitly expressed the implications of their findings. Moving forward, the Move 4, acknowledging the limitations of the study was written by only 7 authors (45%). Finally, there are 14 authors (95%) who wrote their recommendation or suggestion.

When referring to the stipulated guidelines as asserted by Nicholson et al., (2018), Summers (2019), and Lu at al (2021) expressing the limitation of the research is obligatory because it can be used for directing other researchers for further research for improvement or development of the research. Moreover, the reviewers and authors should focus on the theoretical framework of the research in the conclusion which includes acknowledging the research limitation as discussed in the stipulated guidelines by Nicholson et al. (2018). This will serve as the basis for the researchers to assess and check the evidence provided.

Suggestion can be based on the research findings in relation to the implication for the related parties regarding the evidence. And, therefore, implication of the finding is also important (Lu at al., 2021) and Sarwat et al., (2021). The article submitted by the authors of the article no 5 and 6 should be commented by the reviewers when their papers were being reviewed. The authors should be reminded of writing the limitation concerning either the methodology such as the data collection, data analysis, and the like. It can also be related to the findings which need more generalizable and so on. Besides that, the authors should mention facts and conclusive pieces of evidence to support the limitation statement (Summers, 2019).

In another description, the statement should also include a brief discussion about the limitation, the support concerning the findings, and the future opportunities that can benefit from the proposed research (Lu at al., 2021). Moreover, Sarwat et al., (2021) have advocated for the statement to have clear and practical implications of the research rather than being only the summary. In conclusion, it is essential to state the limitation statement clearly and precisely as mandated in the stipulated guidelines asserted by Nicholson et al., (2018), Summers (2019), and Lu at al., (2021). It should also include an assessment of potential opportunities for the proposed research as well as the existing gaps. Furthermore, it should provide sufficient evidence in support and benefit the recommended findings.

TABLE 2: RHETORICAL MOVES OF CONCLUSION IN ECONOMICS

Rhet. Moves	Articles Number Being Analyzed															Σ	%
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
1	v	v	v	v	v	v	X	v	v	v	v	v	v	v	v	14	95
2	v	v	v	v	v	v	v	v	v	v	v	v	v	v	V	15	100

3	v	v	v	v	X	X	v	v	v	v	v	v	v	V	v	13	90
4	v	X	X	X	v	v	v	v	V	X	X	X	v	v	X	7	45
5	v	v	v	X	X	v	v	v	v	v	v	v	v	v	v	13	90

In the following, there are some examples of the rhetorical moves in the conclusion sections. For example Table 3, it shows that the author of article No 1 wrote the conclusion section of his article completely with 5 rhetorical moves. Whereas in Table 4, the author of article No 2 and in Table 5, the author of article No: 3 did not write the rhetorical move No 4, which is acknowledging the limitation. These articles should have been recommended by the reviewer that they should write the limitation of the research in the conclusion section.

In general, as presented in Tables 3, 4, and 5, the conclusion sections of Articles 1, 2, and 3, respectively, illustrate a range of both complete rhetorical moves and the missing rhetorical moves. Article 1 includes all five moves, the others omitting the fourth move of acknowledging the limitations of the research. As such, these articles should include this point in the conclusion

that should have been recommended by the reviewer when they were in the process of blind reviewing.

The next is in Table 6, in which among 15 authors, only this author of article No: 7 who did not write the rhetorical Move No 1 that is summarizing the key findings. Whereas the author of article No: 5, in Table 7, did not write the implication. Both rhetorical move No 1, summarizing the key findings and rhetorical Mover No: 3, stating the implication are essential. The key finding summary can be used for writing both suggestion and implication (Baron, 2008). All moves are important in the section of conclusion. This is also good for the reviewers or editors, as well as the managing editors for making the clear and standard guidelines for all (Paltridge and Starfield, 2019) although some are optional for different discourse communities (White, 2019).

TABLE 3: ARTICLE NO 1, IN ECONOMICS WITH THE COMPLETE 5 MOVES

RHETORICAL MOVES	SENTENCES
1. Summarizing the key findings	<i>Market economies are likely to underprovide innovation, primarily due to knowledge spillovers between firms. ...etc.</i>
2. Answering the research question (s) and addressing the research aims	<i>.....the overall benefits minus costs (that is, the net benefit), in terms of a light bulb ranking where three is the highest. This ranking is meant to represent a composite of the strength of the evidence and the magnitude of average effects...etc</i>
3. Implying the findings	<i>In the short run, research and development tax credits and direct public funding seem the most effective, whereas increasing the supply of human capital (for example, through expanding university admissions in the areas of science, technology, engineering, and mathematics) is more effective. ... etc.</i>
4. Acknowledging the Limitation	<i>Of course, others will undoubtedly take different views on the policies listed in.....etc</i>
5. Recommending or Suggesting for future research	<i>Nevertheless, we hope that this framework at least prompts additional debate over what needs to be done to restore equitable growth in the modern economy.. etc.</i>

TABLE 4: ARTICLE 2, IN ECONOMICS WITHOUT MOVE 4 (ACKNOWLEDGING THE LIMITATION)

RHETORICAL MOVES	SENTENCES
1. Summarizing the key findings	<i>This review takes stock of the research on immigrant entrepreneurship, maps it using multiple correspondence analyses, and offers directions for future researchers with regard to theories, methods, and context....etc</i>
2. Answering the research question (s) and addressing the research aims	<i>Based on the integrative review, we have revealed six major research themes and focal theoretical foundations of the field of immigrant entrepreneurship. Given the relevance of immigrant entrepreneurship for job creation and wealth creation</i>
3. Implying the findings	<i>it is important that we advance knowledge creation in this field in terms of the theories, concepts, and methods used when studying in this area</i>
4. Acknowledging the Limitation	---
5. Recommending or Suggesting for future research	<i>...we hope that this review will bring about renewed vigor and interest in researching immigrant entrepreneur... etc</i>

TABLE 5: ARTICLE NO: 3 WITHOUT MOVE 4 (ACKNOWLEDGING THE LIMITATION) IN ECONOMICS.

RHETORICAL MOVES	SENTENCES
1. Summarizing the key findings	<i>According to the literature studied in the current article, on the one hand, some scholars have analyzed the determinants that encourage entrepreneurial activity. On the other, entrepreneurship research has focused on the effects of new business creation.</i>
2. Answering the research question (s) and addressing the research aims	<i>In this article, a systematic literature analysis based on an institutional approach ... etc. Using the idea that institutions shape human behavior in order to enhance economic growth, we explored the papers that analyze how institutional factors...etc.</i>
3. Implying the findings	<i>Regarding the impact of entrepreneurial activity on economic growth, we found that neo-classical economic growth theory...etc</i>
4. Acknowledging the Limitation
5. Recommending or Suggesting for future research	<i>Also, the interplay between entrepreneurship and institutions where a Etc... needs further research. Institutions shape entrepreneurship but at the same time entrepreneurs tend to affect institutions...etc.</i>

TABLE 6: ARTICLE NO 7: IN ECONOMICS, WITHOUT MOVE NO 1 (SUMMARIZING THE KEY FINDINGS)

RHETORICAL MOVES	SENTENCES
1. Summarizing the key findings	--
2. Answering the research question (s) and addressing the research aims	<i>Our review showed that each discipline can contribute unique and useful angles, both theoretically and methodologically. In terms of achieving research objectives outlined above,...etc</i>
3. Implying the findings	<i>At the micro-level, we need to pay greater attention to individual behavior and motivations, and ...etc.. At the GVC level, we need to engage in rigorous GVC mapping, by ...etc</i>
4. Acknowledging the Limitation	<i>yet this work is presently characterized by a number of ... and a lack of a unifying theory.</i>
5. Recommending or Suggesting for future research	<i>...we need to investigate carefully and objectively the intermingling of GVCs and new technologies, and...etc.</i>

TABLE 7: ARTICLE NO: 5, IN ECONOMICS, WITHOUT MOVE 3 AND 5 (IMPLYING FINDING AND RECOMMENDATION/ SUGGESTION)

RHETORICAL MOVES	SENTENCES
1. Summarizing the key findings	<i>As the coronavirus pandemic may be categorized as a broader healthcare crisis than has been experienced in recent history, for example as experienced during the SARS outbreak.</i>
2. Answering the research question (s) and addressing the research aims	<i>Our study concludes that, to date, consumer behavior in the form of panic buying, herd mentality and discretionary spending as anticipated by ... etc</i>
3. Implying the findings	--
4. Acknowledging the Limitation	<i>Moreover, the current inexistence of a vaccine means that until one is developed and administered on a widespread basis, uncertainty and fear will continue to manifest in unstable...etc</i>
5. Recommending or Suggesting for future research	---

4.2 RHETORICAL MOVES OF CONCLUSION OF ECONOMICS

In the field of Biology, a set of 15 research articles and their conclusion sections were analyzed to identify patterns in comparison to Economics discourse communities. The analysis revealed distinct findings, indicating a divergence from the patterns observed in

Economics. Specifically, when examining the five rhetorical moves employed by the researchers for analysis, it was evident that all 14 authors included these moves in their conclusion sections. As in Table 3, the identified rhetorical

moves encompassed: (1) summarizing key findings, (2) addressing research questions and aims, (3) implying the findings, (4) acknowledging limitations, and (5) recommending future research. Therefore, the authors adhered to the prescribed rhetorical moves for the conclusion section, as outlined by Paltridge and Starfield (2019).

Surprisingly, only one author deviated from this trend by omitting rhetorical move number 3, in which he does not involve implying the findings, as it is shown in Table 8. This deviation is noteworthy, considering that most authors followed the established guidelines. Cotos and Link (2020) emphasize the importance of authors adopting a systematic approach and employing

genre-specific rhetorical moves in the conclusion section. This analytical process, guided by the established rhetorical moves, offers valuable insights into the structure and content of conclusion sections in research articles, aligning with the observations made by Cotos and Link (2020).

Furthermore, the genre approach, as outlined by Knight (2020), has gained substantial acceptance among scholars. This approach incorporates rhetorical analysis using genre concepts, a genre-based approach, and the integration of language acquisition knowledge within genre studies. By employing this genre-based framework, researchers are able to gain a deeper understanding of how conclusions are constructed within the genre of research articles.

TABLE 3: RHETORICAL MOVES OF CONCLUSION IN BIOLOGY

Rhet. Moves	Articles Number Being Analyzed															Σ	%
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
1	v	v	v	v	v	v	v	v	v	v	v	v	v	v	V	15	100
2	v	v	v	v	v	v	v	v	v	v	v	v	v	v	V	15	100
3	X	v	v	v	v	v	v	v	v	v	v	v	v	v	v	15	100
4	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	14	95
5	v	v	v	v	v	v	v	v	v	v	v	v	v	v	v	15	100

TABLE 8: ARTICLE NO 1, IN BIOLOGY, WITHOUT MOVE 3 (IMPLYING THE FINDINGS)

RHETORICAL MOVES	SENTENCES
1. Summarizing the key findings	<i>A key factor in sustainable management of whale shark–human interactions is a clear understanding of the population dynamics of the animal. Until both seasonal and interannual variability in etc.</i>
2. Answering the research question (s) and addressing the research aims	<i>If segregation by age occurs, which appears to be the case from anecdotal evidence, sightings in the area are not a random sample of the population. ...Etc.</i>
3. Implying the findings	--
4. Acknowledging the Limitation	<i>Population studies require large sample sizes and this is a major problem when working with rarely encountered species...etc. At present it is impossible to fix the spatial boundaries of the population, as there is no indication where the sharks may migrate... etc.</i>
5. Recommending or Suggesting for future research	<i>A long-term aerial survey program to monitor interannual variability in the whale shark population is a high priority for future management of human–whale shark interaction in...etc.</i>

In Biology, there is only one of the 15 articles which has no rhetorical move No 3, implying the findings of the research result. In general, most of the 15 articles which had been taken purposively and analyzed, are proved to be complied with the rhetorical moves as adopted by the research in this study. This indicates that the authors have followed the moves completely using the five rhetorical moves stipulated in this methodology (Paltridge and Starfield, 2019) and also as argued by Berdanier (2019).

Even though in some cases, the writers are also said to be optionally to write using the rhetorical moves as in genre approach and each discourse community has their own styles (White, 2019), following the same rhetorical moves

as prescribed in the conclusion sections would be beneficial (Sarwat et al, 2021). The readers of the journal articles can read more comprehensively in relation to further research. It can be done by referring to the limitations stated in it or suggestions based on the implication of the study.

Out of the 15 articles analyzed in Biology, only one article does not include a specific move (rhetorical move No 3) that presents the research findings. However, the majority of the articles examined in this study do adhere to the recommended rhetorical moves, as outlined by Paltridge and Starfield (2019) and also supported by Berdanier (2019) and Djuwari (2014). This suggests that the authors

have diligently followed the prescribed moves, which consist of five rhetorical components, in their conclusion sections.

When viewing that some authors may choose to write their articles using alternative rhetorical moves, such as those based on genre approach or specific discourse community preferences (White, 2019), it is advantageous

to adhere to the same rhetorical moves as indicated in the conclusion sections (Paltridge and Starfield, 2019;). By doing so, readers of journal articles can gain a more comprehensive understanding of the research and its potential implications. And this can be achieved by referring to the limitations stated within the articles or suggestions based on the study's implications.

TABLE 9: ARTICLE NO: 2, IN BIOLOGY WITH COMPLETE 5 RHETORICAL MOVES

RHETORICAL MOVES	SENTENCES
1. Summarizing the key findings	<i>Despite improvements in diagnosis, surgical techniques, general patient care, and local and systemic adjuvant therapies, most deaths from cancer result from metastases that are resistant to conventional therapy... etc</i>
2. Answering the research question (s) and addressing the research aims	<i>Thus, the growth of metastases represents the endpoint of many events that few tumor cells survive. Primary tumors consist of multiple subpopulations of cells with invasive and... etc</i>
3. Implying the findings	<i>It is critical to improve our understanding of metastatic cell characteristics that will allow us to target them for therapeutic intervention. Clearly, the pathogenesis of metastasis depends on multiple interactions between metastatic cells and host homeostatic mechanisms</i>
4. Acknowledging the Limitation	<i>We posit that the interruption of these interactions will inhibit or help eradicate metastasis... however, strategies to treat metastatic tumor cells and modulate the host microenvironment now offer new treatment approaches</i>
5. Recommending or Suggesting for future research	<i>Therefore, a long-term aerial survey program to monitor interannual variability in the whale shark population is a high priority for future management of human-whale shark interaction in...etc.</i>

TABLE 10: ARTICLE NO: IN BIOLOGY ALSO WITH COMPLETE 5 RHETORICAL MOVES

RHETORICAL MOVES	SENTENCES
1. Summarizing the key findings	<i>Epo is a pleiotropic cytokine that exerts diverse biological effects in many nonhematopoietic tissues. Epo is involved in the wound-healing cascade, functions as...etc.</i>
2. Answering the research question (s) and addressing the research aims	<i>The recent characterization of Epo variants, such as asialo-Epo and carbamylated-Epo, that retain nonhematopoietic...etc. ... Epo without stimulating erythropoiesis has uncovered new areas of research into mechanisms of Epo-mediated signaling in nonhematopoietic tissues as well as novel clinical applications for... etc.</i>
3. Implying the findings	<i>The expression of EpoR in cancer cells has suggested the possibility that exogenous rEpo may exert direct effects on tumor cells associated with stimulation... etc.</i>
4. Acknowledging the Limitation	<i>The expression of EpoR alone is not always sufficient to modulate these pathways as shown by the variable effect of rEpo on chemoradiation sensitivity and...etc.</i>
5. Recommending or Suggesting for future research	<i>Characterization of the mechanisms of the biological effects of Epo on nonhematopoietic cells, in particular cancer cells, should continue to be explored to optimize the use of Epo in anticancer therapy.</i>

Table 9 and Table 10 are the examples of the authors in Biology discourse community who write their conclusion sections completely using five rhetorical moves of the conclusion section. Among 15 articles, 14 authors or 95 wrote their rhetorical moves of the conclusion completely like the authors of articles in Table 9 and Table 10. All of them are preferable (Baron, 2008; Habibi, 2008; Djuwari, 2017) than the only one who missed one rhetorical move.

V. CONCLUSION

This study addresses the issues related to how the authors

in two discourse communities, Economics and Biology, present their conclusion sections. As based on the prescribed rhetorical moves in this study, it can be stated that the authors in economics discourse community in variably have their rhetorical moves differently. The researchers found that only one author adheres to writing the conclusion section completely with five moves. Unfortunately, only 7 or 45% of the authors did not write the implication of the studies.

Unlike the Biology discourse community, almost all of the authors comply with the stipulated rhetorical moves as in

this study. Only one author who did not write the rhetorical move No 3 that is implying the findings. Yet, in general they adhere to writing their conclusion sections using 5 rhetorical moves. This finding shows that the authors adhere to writing the rhetorical moves as prescribed for the conclusion section.

The researchers acknowledge that there is a limitation in this study. The discourse communities taken as the sample is only two due to the time shortage. It would be more interesting when the discourse communities can be added more than two. Therefore, the researchers suggest that further research by another researchers can get more samples from more discourse communities.

It can be implied, however, that writing five rhetorical moves in a conclusion section is beneficial for the readers. They can read and get a complete information about the research. Such as what is the finding, the problem and solution, implication and suggestion for both the researchers for knowledge development and further research with improvements?

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