A Comparative Analysis of Rhetorical Moves in Research Article Discussions of Thai Undergraduates and Internationally Published Thai Writers

การวิเคราะห์เปรียบเทียบอัตถภาคในการเขียนอภิปรายในบทความวิจัย ที่เขียนโดยนักศึกษาไทยระดับปริญญาตรีกับผู้เขียนไทยที่ตีพิมพ์ระดับนานาชาติ

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Abstract

Writing academic research articles, especially the discussion sections, often poses significant challenges for novice authors since they are required to adhere to specific rhetorical conventions such as employing effective rhetorical moves to structure arguments and present research findings and implications. This study was conducted to: 1) investigate the rhetorical moves used in the research article (RA) discussions by Thai undergraduate student writers and internationally published Thai writers, and 2) analyze the patterns of rhetorical moves employed in the RA discussions by Thai undergraduate students and internationally published authors. The data were collected from a sample of 40 applied linguistics research articles, comprising 20 articles authored by Thai undergraduate writers published in national journals and conference proceedings, and 20 articles authored by Thai academics published in international journals. The findings revealed that both groups of writers employed all types of RA discussion moves, primarily when commenting on results. While undergraduate student writers mostly adhered to some of the obligatory moves when commenting on results and applied other moves to a limited extent, internationally published writers demonstrated a broader range of moves, most notably when comparing results to literature and showing examples of results. The differences in the use of rhetorical moves between undergraduate and internationally published writers suggest that learning and applying rhetorical moves and academic discourse structures could significantly improve the academic writing capabilities of both new and experienced writers, enabling them to effectively communicate ideas to international audiences.

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บทคัดย่อ

การเขียนบทความวิจัยทางวิชาการ โดยเฉพาะการเขียนอภิปรายผลเป็นภารกิจที่ท้าทายยิ่งสำหรับผู้เขียนหน้าใหม่ เนื่องจากต้องปฏิบัติตามข้อกำหนดและแบบแผนทางการใช้ภาษา รวมถึงการใช้อัตถภาคที่เหมาะสมเพื่อนำเสนอผลการวิจัยและการนำไปใช้อย่างมีประสิทธิภาพ การศึกษานี้มีวัตถุประสงค์เพื่อ 1) ศึกษาการใช้อัตถภาคในส่วนการอภิปรายผลของบทความวิจัย ที่เขียนโดยนักศึกษาระดับปริญญาตรีชาวไทยและนักวิชาการไทยที่ตีพิมพ์ในระดับนานาชาติ 2) วิเคราะห์รูปแบบการใช้อัตถภาคในส่วนการอภิปรายผลที่เขียนโดยนักศึกษาระดับปริญญาตรีชาวไทยและนักวิชาการไทยที่ได้รับการตีพิมพ์ในระดับนานาชาติ โดยเก็บข้อมูลจากบทความวิจัยด้านภาษาศาสตร์ประยุกต์ 40 เรื่อง โดยแบ่งเป็น 20 เรื่องที่เขียนโดยนักศึกษาระดับปริญญาตรีชาวไทยที่ตีพิมพ์ในวารสารหรือรายงานการประชุมและวารสารระดับประเทศ และอีก 20 เรื่องที่เขียนโดยนักวิชาการไทยที่ตีพิมพ์ในวารสารนานาชาติ ผลการศึกษาพบว่าผู้เขียนทั้งสองกลุ่มใช้อัตถภาคทุกประเภทในส่วนการอภิปรายผลของบทความวิจัย โดยเฉพาะการแสดงความคิดเห็นต่อผลการศึกษา นักศึกษาระดับปริญญาตรีใช้อัตถภาคการแสดงความคิดเห็นต่อผลการศึกษาเป็นส่วนใหญ่ แต่ใช้กลวิธีอื่นๆ อย่างจำกัด ในขณะที่นักวิชาการที่ตีพิมพ์ในระดับนานาชาติสามารถใช้อัตถภาคที่หลากหลาย โดยเฉพาะการเปรียบเทียบผลการศึกษากับงานวิจัยที่ผ่านมาและการยกตัวอย่างผลการศึกษา ความแตกต่างในการใช้อัตถภาคระหว่างนักศึกษาปริญญาตรีและนักวิชาการที่ได้รับการตีพิมพ์ในระดับนานาชาติจากการวิจัยนี้ชี้ให้เห็นว่าการศึกษาใช้อัตถภาคสามารถนำไปพัฒนาขีดความสามารถในการเขียนเชิงวิชาการได้ทั้งสำหรับผู้เขียนหน้าใหม่และผู้เขียนที่มีประสบการณ์ เพื่อเพิ่มความสามารถในการสื่อสารแนวคิดไปสู่ผู้อ่านระดับนานาชาติได้อย่างมีประสิทธิภาพ

คำสำคัญ: อัตถภาควิเคราะห์ บทความวิจัย การอภิปรายวิจัย การเขียนเชิงวิชาการ

Introduction

Achieving proficiency in academic English writing requires consistent practice and a thorough grasp of discourse conventions. To attain publication, mastering the strategies related to rhetorical devices and patterns is crucial, as well as having regular exposure to the target genre. It is evident that the stylistic and procedural demands of writing for academic journals are markedly distinct from college assignments. According to Atkinson (1999), there has been a shift in the emphasis on writing for publications or conveying scientific information. The preference has shifted away from narrative genres or fictional stories towards explanations that are more grounded in evidence and theory.

To write a research article paper, writers are usually required to structure their manuscript according to the IMRD model, which stands for Introduction, Methods, Results, and Discussion. Among these, the discussion part is regarded as one of the most important sections that emphasizes the significance of the research findings and their implications, connecting the results within the broader academic context (Cargill & O'Connor, 2013). According to Swales (1990), the discussion is where the author makes a case for the relevance and impact of their findings, engaging with the scholarly community to argue the significance

of their work. Additionally, researchers must summarize, analyze, discuss the results of their study, and provide any remarks on issues generated by the research question or hypothesis (Thyer, 2008). For this reason, the research article (hereafter: RA) discussion part should be written in an argumentative manner that provides corroborating evidence as well as communicative manners.

In the RA discussion, authors are required to respond to the research questions and provide an explanation of the findings, including how the findings should be interpreted in light of the field's prevailing theories. According to Liu and Buckingham (2018), the discussion section's primary purpose is to summarize and defend the significance of the study findings. This section is crucial because the authors are expected to utilize argumentative rhetorical tactics to support their study findings and argue their relevance, validity, and reliability. Authors are expected to explain to readers how the data collected supports the author's knowledge claims in the RA debate (Parkinson, 2013). Furthermore, they are required to interpret and explain their findings in the discussion by addressing each of the research questions (Thyer, 2008). To fulfill the function of RA discussion section, academics need to acquire the rhetorical steps or moves that contribute to effective communication. As defined by Swales (2004, p. 228), a move is "a discoursal or rhetorical unit that performs a coherent communicative function in a written or spoken discourse." In this regard, Parodi (2010) remarked that the move analysis of a genre aims to identify the communicative purposes of a text by organizing different text units based on their specific communicative functions. Each segment of the text, or move, represents a distinct communicative function that not only stands on its own but also helps achieve the overall communicative goal. This notion has suggested that it is essential for authors to master these rhetorical moves in RA discussions to ensure the text meets academic standards and aligns with the expectations of the scholarly community.

Therefore, it is crucial for novice and non-native English academic writers to adopt critical rhetorical moves and other disciplinary discourse features to achieve publication and accreditation. Nevertheless, Saeeaw and Tangkiengsirisin (2014) remarked that non-native English speaking (NNS) academics and researchers often struggle with applying writing strategies and styles that align with the predominant conventions and expectations in their scholarly disciplines. These scholars usually come across challenges in making their writing conform to the established norms of structure, format, style, and discourse commonly used in their fields of study. Farnia and Khorramdel (2017) suggest an issue for NNS writing research articles can be unfamiliarity with expected English rhetorical style and conventions. As such, manuscripts with nonstandard interpretation methods or unconventional discourse organization may face publication challenges. This has called for a deeper investigation on how to develop NNS writers' rhetorical moves to achieve publication success in academia.

Rhetorical Moves in RA Discussions

According to Swales (1990) the discussion parts are expected to mirror the introduction part. In the introduction, the moves typically involve establishing the research niche and presenting opportunities for the study. Conversely, the discussion section serves similar communicative purposes but with an opposite orientation, where the research results are described from specific to general, and the findings are interpreted for potential future research applications

Several frameworks of discourse organization or rhetorical moves in RA discussion parts have been identified by previous research studies including Hopkins and Dudley-Evans (1988), Swales (1990, 2004), Peacock (2002), Ruiying and Allison (2003), and Kanoksilapatham (2007). Despite variations of rhetorical moves and steps found in earlier studies, common key features can be observed. First of all, all frameworks emphasize the importance of establishing background information or contextualizing the study within existing literature and knowledge. Secondly, stating major findings is a central feature in each framework which can be presented through declaring research results directly and consolidating results with reference to methodology. Furthermore, each framework requires an evaluation or interpretation of the results. This can involve commenting on the results, interpreting their significance, explaining unexpected outcomes, or making claims about the contribution of the research. Another common move across the frameworks is to support, compare, or contrast the current research findings with those in existing studies. After presenting the research finding perspectives, recognizing the study's limitations is a critical component to ensure that the discussion is balanced, credible, and grounded in the realistic scope and context of the research. For the final moves, most frameworks conclude with making deductions, suggesting further research, drawing pedagogic implications, or recommending practical applications of the findings. These rhetorical moves commonly identified in prior genre analysis studies have established conventions for how research article writers are expected to structure their argumentation.

In recent decades, the investigation of rhetorical structures in research articles written by non-native authors has attracted increasing attention from local and international researchers in recent years. Ruiying and Allison (2003) analyzed a corpus of 252 applied linguistics RAs and discovered differences in moves and cycles between NS/NNS writers in the results, discussion, conclusion, and pedagogic implications sections in RAs. The study revealed that the discussions, compared to the results section, offer a more comprehensive understanding of the findings and serve more communicative goals in interacting with the audiences, referencing the previous studies, and corresponding to the future implications. In line with this, Basturkmen (2009) stated that reporting results and comparing results with existing literature are fundamental moves of the discussion section in research writing. This practice of comparing with literature is widespread and thorough in academic discussions, demonstrating that the study has significant implications for the broader research community.

Kanoksilapatham (2007) investigated moves and steps in research discussion in Thai and English research corpus. There are four common moves in the introduction including Contextualizing the study, Consolidating the result, Stating limitations, and Suggesting further research. It was found that Contextualizing the study and Consolidating the results were featured in both corpora. However, Stating limitations were not prevalent in the Thai corpus but was frequently found in the English corpus, suggesting that the target audience communities might have influenced how the researchers organize their results and discussion moves. In English papers, the manuscripts are carefully prepared to meet the standards of global academic audiences and are anticipated to meet high-quality studies in such domains. It is also suggested that the limitations and shortcomings are often provided for the benefit of future research. This trend of RA discussion move occurrences has been supported by several subsequent studies. For example, Dujsik (2013) investigated the rhetorical structure found in the discussion sections of published research articles from five top peer-reviewed journals, compiling a corpus of 50 research discussions. Analysis revealed that certain common moves, Stating main findings and Referencing previous research, were used obligatorily by all authors, while other moves were frequent or conventional without being mandatory. It is suggested that Presenting results, Providing background, Referencing to past literature, and Interpreting the outcomes comprised the four predominant moves. However, discussing limitations of the study was the least common of the moves explored. Amnuai (2017) discovered rhetorical moves in the discussion sections of 20 English accounting research articles. Reporting results and Commenting on results were identified as obligatory moves. In the accounting field, it is considered conventional to provide background information and discuss the implications of the research. This is important as it allows writers to suggest contributions that the study has made to other research in similar disciplines.

Similar findings were also observed in a study by Sithlaothavorn and Trakulkasemsuk (2016). RA discussions were collected from Thai and international journals as data for move analysis and found that the obligatory moves were revisiting results, interpreting results, and comparing results with literature. The most common linear move pattern was Background information → Revisiting results → Interpreting results. Although the occurrence of moves in RA discussions in Thai and international journals was not different, the researchers remarked that discussion sections in Thai journals mainly incorporate informative moves, while evaluative moves markedly appeared more in international journals. Therefore, an integration of evaluative moves in the discussion section is highly recommended for international publications. From a relevant research framework, Boonyuen (2017) studied the textual organization of research article discussion sections from five journals in the second language writing disciplines. Using the units of moves based on Swales (2004) and classification proposed by Kanoksilpatham (2007), it was found that the most frequently appeared moves were: Reporting results, Background information, Commenting on results, Evaluating the Study, and Making Deductions. The least frequent moves were Managing the Section and Summarizing the Study. Overall, the result suggested that Commenting on results was the move that served as the main function of the discussion part. In addition, some typical move

sequences were identified, such as Reporting results → Commenting on results, Reporting results → Commenting on results → Making deductions, Background information → Reporting results → Commenting on results, and Evaluating the study → Making deductions. It is also suggested that expert writers tend to incorporate Commenting on results, Evaluating the study, and Making deductions in writing research discussion sections. Additionally, in many academic genres, Interaction with audiences is also encouraged in the discussion section of RA (Boonyuen & Tangkiengsirisin, 2018; Thanajirawat & Chuea-nongthon, 2022). In the discussion section, it is important to provide recommendations, potential areas for further exploration, discuss pedagogical implications, and outline the key points of the study. This facilitates effective communication and enhances the reader's understanding of the purpose of the discussion section in RAs.

Nevertheless, previous studies have indicated that writers with varying skill levels tend to use different rhetorical techniques in RA discussion sections (Salmani, 2023). Less experienced authors may organize content in discussion sections differently than their more proficient counterparts, suggesting that the choices made by novice and professional writers could highlight differences in how effectively they communicate ideas to readers. Writers with high proficiency are likely to employ these techniques more strategically and effectively, reflecting a deep understanding of genre expectations and the ability to engage critically with their disciplinary community (Swales, 1990). They might also demonstrate greater awareness of their audience, tailoring their rhetorical strategies to communicate the significance and novelty of their research more persuasively. Similarly, a writer's cultural background and language also influence the textual organization. Santikul (2019) analyzed the rhetorical moves in research article discussion sections written by native English-speaking and non-native English-speaking academics. According to the study, both groups employed all rhetorical moves in the model proposed by Ruiying and Allison (2003). However, there were some variations in frequency, obligatory moves, and in the complexity of cycling patterns. Native speakers or higher proficient writers tended to have more complex multi-move cycles while non-natives used more circular repetitions of moves. Reporting and Commenting on results were the most predominant moves. The differences reflect contrastive rhetorical notions of cultural influence on discourse styles – native speakers favored a direct, linear organization, contrasting with the indirect, circular approach of non-native speakers.

Overall, previous literature has highlighted the approaches in which expert and novice writers, as well as native and non-native English speakers, employ rhetorical moves in research articles to meet the expectations of their disciplinary communities and effectively communicate their research findings. The use of rhetorical strategies in academic writing appears to be shaped by cultural orientation, writer expertise, and awareness of the target discourse community and its expectations.

Rationale of the Study

To support academic writers in publishing internationally, it is necessary for instructors and learners in English for Academic Purposes (EAP) courses to understand and apply effective rhetorical strategies in research article writing. Although previous studies have explored these strategies for non-native speaker (NNS) authors, other factors such as the authors' levels of expertise and the target audiences of the articles have not been thoroughly investigated. In discussing the academic discourse strategies of NNS, Hyland (2009) noted that writers from non-English speaking backgrounds might underuse rhetorical strategies to engage their audience due to cultural and expertise factors. This discussion sheds light on a broader discourse concerning how academic writers establish their authority and communicate with their audience, with experts demonstrating more confidence in employing sophisticated strategies that directly address and involve the reader. Therefore, further research is necessary to fully understand the academic writing styles of non-native English speakers and to meet the increasing demand for research publications across academic disciplines at both national and international levels. Comparing the rhetorical moves in RA discussion writing of Thai undergraduate students published in national proceedings and journals with those of Thai authors published internationally may help identify areas for developing the writing abilities of less experienced writers who are progressing towards writing for an international audience worldwide. This shortfall prompted the researchers to examine how novice, or undergraduate student writers, and experienced writers who have successfully published internationally organize their discussion in research articles.

Research Questions

1. What rhetorical moves were used in the RA discussion by Thai undergraduate student writers and Thai internationally published writers?

2. What patterns of rhetorical moves were used in the RA discussion by Thai undergraduate students and international published authors?

Research Methodology

1. Framework of Analysis

This study investigated the rhetorical moves in English research article (RA) discussion sections employed by two groups of writers: Thai undergraduate students who had published in national journals and proceedings and Thai scholars who had published in international journals. The RA discussion sections of 20 applied linguistics papers written by Thai undergraduate students were taken from national conference proceedings and refereed journals published in Thailand in 2020-2022, while the RA discussion sections of 20 applied linguistics papers written by Thai academics were taken from three international journals of 2020-2022. Drawing on Hopkins and Dudley-Evans (1988), Swales (2004), and Kanoksilapatham (2007), the RA discussion data were analyzed according to the five major moves including the six sub moves in Commenting on results, which serve as the dominant function in the discussion part, as shown in the following table.

Table 1

Move Analysis Framework in RA Discussions (Adapted from Hopkins and Dudley-Evans (1988), Swales (2004), and Kanoksilapatham (2007)

Types	Coding	Moves & Submoves	Examples of Texts
Move 1	1	Background information (BI)	- It is widely acknowledged that… - Research in this area has consistently demonstrated that... - Generally, research studies in this area suggest that… Across various studies, it appears that...
Move 2	2 2.1	Commenting on results - Restating methodology (RM)	- The factors of … were classified and analyzed based on… - As outlined in the methods section, data collection was conducted through...
	2.2	- Stating major findings (SF)	- The findings show/reveal that… - The data revealed/demonstrated that.
	2.3	- Comparing results with literature (CL)	- The findings coincide with/ are in line with... - Consistent with the findings of..., this study also found that..
	2.4	- Explaining differences in Findings (EF)	- The result of this study is different from... - In contrast to..., it was observed that....
	2.5	- Interpreting the results (IR)	- This could be explained that … - This might be due to/because of… - Given these results, it is possible to infer that...
	2.6	- Showing examples (SE)	For instance/example, /i.e.…/such as… This can be exemplified/demonstrated by...
Move 3	3	Stating limitations (SL)	- This study has some limitations, including... - A potential limitation of this study is…
Move 4	4	Suggesting further studies (SS)	- This study suggests the need for further investigation into... - Future studies could expand upon this research by investigating...
Move 5	5	Suggesting pedagogic implication (SI)	- Teachers can utilize the results of this research as a guideline for… - This research supports the integration of... into the curriculum

2. Data collection and analysis

The corpus of this study included 40 RAs from language and linguistics research articles and conference proceedings according to the conformity with the standard Introduction-Method-Results-and Discussion (IMRD) according to the previous genre-based investigation into research articles (Swales, 1990; Wu, 2011; Lim, 2012). The undergraduate student writers' RA discussion (URAD) dataset was selected from 20 RAs in applied linguistics papers in national conference proceedings hosted for undergraduate research publication and a national peer-reviewed journal for undergraduate students in 2020-2022. The international published writers' RA discussion (IRAD) dataset consisted of applied linguistics RAs written by Thai authors in three Scopus-indexed journals in 2020-2022. The selection of these three journals was informed by their prevalence among Thai authors; a significant representation of Thai scholars was noted across the issues published in recent years. The names of conference proceedings and journals were listed in Table 2.

Table 2

Selected Proceedings and Journal for URAD and IRAD datasets

URAD dataset		IRAD dataset	
Names of proceedings & journals	Number of selected papers	Names of journals	Number of selected papers
Buriram Rajabhat University National Academic Conference and Exhibition on Humanities and Social Sciences for Undergraduates 2021	6	LEARN Journal (2020-2022)	7
Prince of Songkla University National Undergraduate Conference on Humanities and Social Sciences 2020	6	PASAA (2020-2022)	7
Dokkaew Paritat: Journal of Humanities Naresuan University (2020-2022)	8	3L: Language, Linguistics, Literature (2020-2022)	6
Total	**20**		**20**

The research articles from both datasets were screened based on the IMRD (Introduction, Methods, Results, and Discussion) structure proposed by Swales and Feak (2004). Discussion sections from both datasets were purposively selected to meet specific criteria. For instance, the discussion section needed to be identified by subheadings such as

'Conclusion', 'Discussion', 'Conclusion and Discussion', or other headings that include limitations and recommendations and were placed after the Results or Findings section and before the References. The total number of words found in the URAD corpus was 19,849 words, while the total number of words found in the IRAD corpus was 22,967 words.

The classification of moves in the RA discussion was conducted according to the moves mentioned earlier in Table 1. The analysis was as follows: (1) the researchers read the discussion section of each RA, and identified the moves as well as their boundaries through linguistic evidence and text comprehension; (2) the researchers examined the sentences and assigned them to a move; (3) inter-rater agreement was established by cross-checking the individual classifications made by each researcher, revealing a substantial correlation with an 86% reliability rate that signified strong alignment between their assessments; (4) intra-rater agreement was obtained by the researchers re-analyzing the types of moves that appear in five randomly selected RA discussions one month after the first classification.

To ensure the reliability of study findings despite differences in the sizes of the corpora, normalized frequencies were computed. The two datasets were balanced by calculating the density of moves per 1000 words. Rather than looking at raw counts of moves, the study measures how frequently these moves appear relative to every 1000 words in each corpus. Normalization technique is regarded as a standard practice that helps researchers obtain a more accurate and comparable measure across different texts or corpora, regardless of their absolute sizes (Biber & Conrad, 2008; Hyland, 2005).

The patterns of rhetorical moves or move strings in the RA discussions of the two datasets were identified and categorized based on the occurrences of three or more moves appearing in sequential order. This study concentrated on the move patterns in Move 2 (Commenting on results), where each move string commenced with "Stating major findings" (SF). This initial move highlights the pivotal importance of research article discussions, as noted by Liu and Buckingham (2018) and Swales (1999). In this case, to qualify as a move string, it must start with the SF move and be followed by at least two subsequent moves. Consequently, other individual moves or pairs of moves were not included.

Findings

Research Question 1: What rhetorical moves were used in the RA discussion by Thai undergraduate student writers and Thai internationally published writers?

Table 3 displays the frequency and the normalized frequency of moves used in RA discussion employed by undergraduate student writers and international published writers. It was found that the two groups employed all types of moves with high frequencies on the obligatory moves, Commenting on the results. The overall frequency of all moves is higher in IRAD (731) than in URAD (343), with normalized frequencies generally reflecting a similar trend.

Table 3

Comparison of moves in the RA discussion by Thai undergraduate and international writers

Types	Coding	Moves & Submoves	URAD		IRAD	
			Frequency	**Normalized Frequency**	**Frequency**	**Normalized Frequency**
Move 1	1	Background information (BI)	9	26.24	67	91.66
Move 2	2	Commenting on results				
	2.1	- Restating methodology (RM)	15	43.73	75	102.60
	2.2	- Stating major findings (SF)	65	189.5	68	93.02
	2.3	- Comparing results with literature (CL)	88	256.56	222	303.69
	2.4	- Explaining differences in findings (EF)	8	23.32	57	77.98
	2.5	- Interpreting the results (IR)	65	189.5	49	67.03
	2.6	- Showing examples (SE)	49	142.86	129	176.47
Move 3	3	Stating limitations (SL)	14	40.82	22	30.10
Move 4	4	Suggesting further studies (SS)	20	58.31	22	30.10
Move 5	5	Suggesting pedagogic implication (SI)	10	29.15	20	27.36
		Total	343		731	

The distinction between the two groups of writers can be observed in several discourse actions. First of all, in Move 1, IRAD writers mention background information more often (67 times with a normalized frequency of 91.66) compared to URAD writers (9 times with a normalized frequency of 26.24). This substantial difference suggests that IRAD writers place a higher emphasis on establishing a solid background for their studies. For Move 2, Restating methodology (RM) is more prominent in IRAD (75) than URAD (15). Stating major findings (SF) is nearly equal in frequency between URAD (65) and IRAD (68), but when normalized,

it is more emphasized in URAD (189.5) than in IRAD (93.02). This high proportion of use among undergraduate authors may indicate that novice writers tend to focus their discussions on fulfilling the primary purpose of the discussion section. Similarly, more instances of Interpreting the results (IR) were observed in URAD than in IRAD (65 and 49 respectively). This indicates a concentrated effort of undergraduate writers on interpreting results as a significant component of their discussions. As previously stated by Boonyuen (2017) and Boonyuen and Tangkiengsirisin (2018), the primary goals of the RA discussion are Presenting and Interpreting research findings. Stating major findings (SF) and Interpreting the results (IR) are both considered as major moves found in other corpus of RA discussions (Amnuai, 2017; Sithlaothavorn & Trakulkasemsuk, 2016).

However, the IRAD writers are likely to engage more extensively with other types of sub-moves in their discussions compared to their URAD counterparts. For example, Comparing results with literature (CL) with 88 occurrences in URAD and a notably higher frequency (222) in IRAD indicates that IRAD writers prioritize comparing and referencing the results with previous studies. The findings align with Basturkmen (2009) Dujsik (2013) observations, indicating that referring to the relevance of findings to earlier studies is one of the most crucial discourse moves found in RA discussion. This practice not only validates the research by connecting it with established knowledge but also highlights the contribution of the new findings to the field, demonstrating how they expand, challenge, or refine existing frameworks or results. Previous studies have stated that the writers' experience and proficiency level (Salmani, 2023) as well as the awareness of target readers (Kanoksilpatham, 2007) may influence the author's choice of rhetorical moves in the RA discussion.

Interestingly, explaining differences in findings (EF) appears more frequently in IRAD than in URAD (57 and 8 respectively), with the normalized frequencies reflecting a similar pattern. This may suggest that experienced writers often critically discuss their findings, even when there is a deviation from the previous literature. Presenting complex discussions for international audiences is highly regarded as a vital skill (Kanoksilapatham, 2007; Santikul, 2019) since it demonstrates the researcher's competence to establish new findings that contribute to the body of research. Showing examples (SE) is another area where IRAD (129) significantly exceeds URAD (49). Giving examples of findings is a strategy to enhance the argument in the RA discussion part. This rhetorical move is crucial for academic writers to persuade readers of the validity of the results and interpretations. Through illustrative evidence, authors can make stronger claims and establish relevance to the practical implications in the field.

In Move 3, URAD writers mentioned limitations 14 times with a normalized frequency of 40.82, whereas IRAD writers did so 22 times, but with a slightly lower normalized frequency of 30.10. This suggests that even though IRAD writers state limitations more frequently in absolute terms, URAD writers dedicate a proportionally larger segment of their discussion to addressing limitations when considering the overall volume of discussion moves. This might imply that URAD writers are more cautious, consistently emphasizing constraints in the interpretation of their findings. While IRAD writers also frequently discuss limitations, they engage in a broader array of discussion moves when analyzing their study. A similar pattern is

observed in Move 4, where URAD and IRAD writers nearly equally suggest further studies (20 and 22 times, respectively), indicating a common recognition of the importance of future research directions.

Nevertheless, in Move 5, both groups suggest pedagogic implications in their discussions, with URAD doing so 10 times (normalized frequency of 29.15) and IRAD 20 times (normalized frequency of 27.36). Despite IRAD's higher absolute frequency, the normalized frequencies are relatively close, suggesting both groups consider the educational implications of their research important but allocate their discussion space differently. Providing suggestions to further research study has been previously emphasized in earlier studies (Amnuai, 2017; Boonyuen & Tangkiengsirisin, 2018) as a recommended strategy for RA writers, as it clearly demonstrates an ability to critically analyze existing gaps in the literature and propose steps to advance the field.

Research Question 2: What are the patterns of rhetorical strategies in the RA discussion by Thai undergraduate students and international published authors?

Table 4

*Comparisons of move patterns between URAD and IRAD*

	Move Patterns	**URAD**	**Percentage**	**IRAD**	**Percentage**
1	Stating major findings – Interpreting results – Showing examples (SF – IR – SE)	3	0.78	9	6.57
2	Stating major findings – Comparing results with literature - Interpreting the results (SF – CL – IR)	3	0.78	19	13.87
3	Stating major findings - Interpreting the results -Comparing results with literature (SF – IR – CL)	13	3.38	8	5.84
4	Stating major findings – Comparing results with literature – Explaining differences – Interpreting the results (SF – CL– EF– IR)	2	0.52	9	6.57
5	Stating major findings – Interpreting results – Showing examples - Comparing results with literature (SF – IR – SE – CL)	1	0.26	6	4.38
6	Stating major findings – Comparing results with literature – Interpreting results – Showing examples (SF – CL – IR – SE)	2	0.52	12	8.76
7	Others	1	0.26	3	2.19
	Total	**25**		**68**	

According to Table 4, IRAD writers exhibit a greater variety and complexity in their

move patterns compared to URAD writers. Among URAD writers, the most dominant three move pattern "SF – IR – CL" occurs at 3.38%. This contrasts with IRAD, where the same pattern is less common (5.84%), indicating a preference among undergraduate writers for a straightforward presentation and analysis before situating their findings in the broader research context. An example of URAD writers' most frequent move pattern is presented in Figure 1.

Figure 1

*Example of URAD "SF –IR – CL" move pattern*
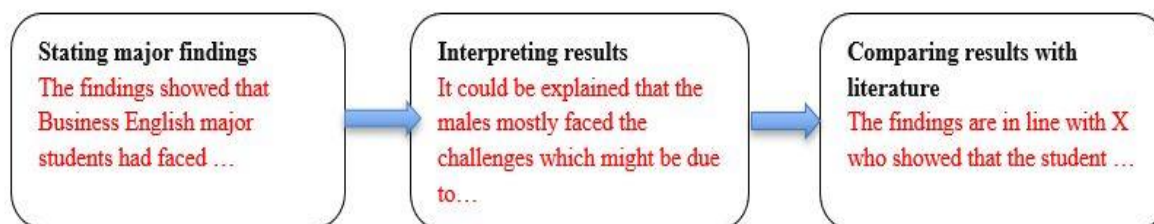
This pattern indicates a preference for presenting findings, providing interpretations, and then positioning these findings within the broader scholarly dialogue. It suggests that the undergraduate writers are inclined to interpret their findings before establishing relationships with previous literature.

On the contrary, IRAD shows a different trend where the pattern "SF – CL – IR" dominates, occurring 19 times and constituting 13.87% of the cases. This suggests a stronger preference in IRAD for comparing results with literature immediately after stating the findings. Examples of the most prevalent three and four move patterns employed by IRAD writers are presented in Figure 2, 3, and 4.

Figure 2
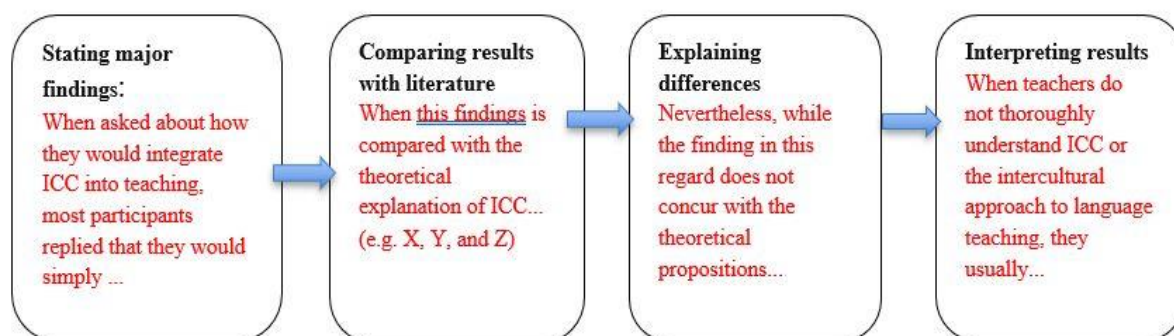
Example of IRAD "SF – CL – IR" move pattern
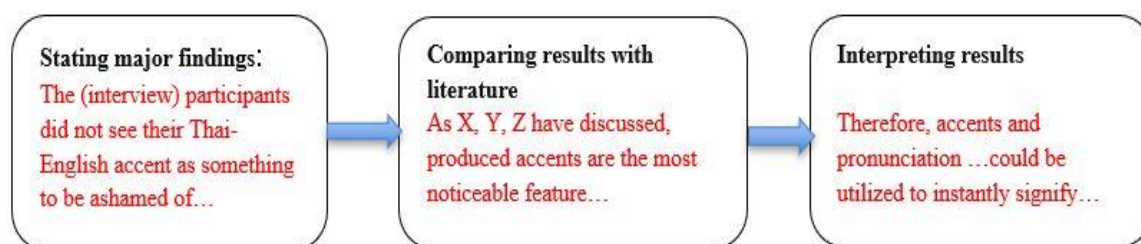
Furthermore, the IRAD ability to engage in discussing how their findings differ from or align with existing studies is evident in the high occurrence four move pattern "SF – CL– EF– IR", This suggests a more thorough engagement with the literature and a deeper analytical approach to situating their findings within the existing body of knowledge.
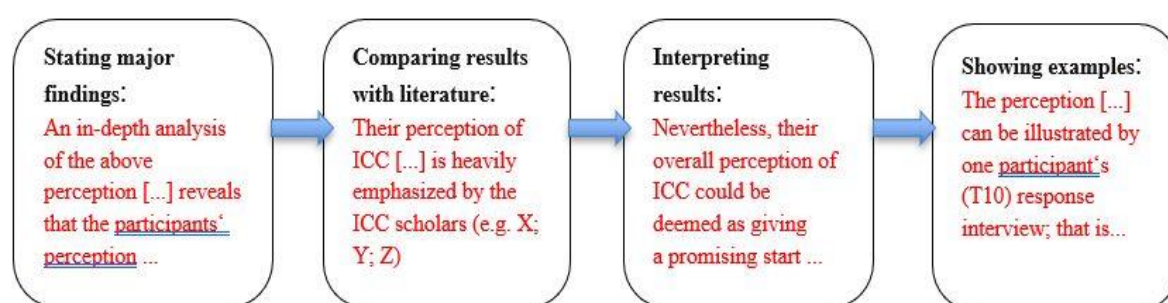
Figure 3

Example of IRAD "SF – CL– EF– IR" move pattern

Figure 4

Example of IRAD "SF – CL- IR – SE" move pattern

According to Figure 4, IRAD writers more frequently employ the four-move pattern of stating major findings, comparing results with literature, interpreting the results, and then showing examples (SF – CL – IR – SE) at 8.76%, compared to 0.52% for URAD as shown in Table 3. This implies that IRAD writers possess greater proficiency in integrating their findings into the existing body of knowledge, offering sophisticated interpretations, and reinforcing their arguments with concrete examples.

The comparison of move patterns between URAD and IRAD suggests notable differences. The URAD use of rhetorical moves seems restricted to the obligatory moves that require that they state the major findings, interpret the results, and compare their research to related studies. It is unlikely for the URAD writers to extend their discussion to a more complicated cycle or to give examples or evidence to support their findings. This move approach aligns with Sithlaothavorn and Trakulkasemsuk (2016) in which they argue that authors of national publications are likely to provide informative moves, while internationally published authors typically employ evaluative moves. The ability to use multiple strategies is crucial for persuading the reader and enhancing the writer's argument. In this regard, the IRAD writer's use of more complex strategies can be recognized as crucial for persuading the reader and enhancing the writer's justification in the discussion section of an RA, as addressed in previous studies (Boonyuen, 2017; Santikul, 2019).

Furthermore, the data reveals a striking contrast in the complexity of discussion moves between international journal writers (IRAD) and undergraduate writers (URAD). A key observation is the preference for more intricate move patterns by IRAD, as evident in the higher

occurrence of the four-move pattern "SF-CL-IR-SE". This pattern, which includes stating major findings, comparing them to related studies, interpreting the results, and showing examples to reinforce these interpretations, is markedly more common in IRAD. In contrast, such a multifaceted approach is seldom utilized by undergraduate writers in URAD. The analysis of the move patterns employed by URAD writers reveals that they have not sufficiently utilized more complex and multifaceted moves, particularly those that involve explaining differences and showing examples in conjunction with other rhetorical strategies. As suggested by Santikul (2019), employing complex multi-move cycle strategies could be crucial for persuading the reader and enhancing the writer's argument. The use of these more complex strategies might be recognized as essential for meeting the expectations of a global audience and presenting the scholarly authority of the writers. It is widely acknowledged that internationally published papers are expected to engage target readers by implementing strategic moves and patterns to strengthen discourse conventions. In other words, international published writers may have invested more effort in structuring their discussions with the intent of impressing reader communities.

Conclusion

This study presented the analysis of distinctions between the rhetorical strategies or moves employed by undergraduate student writers (URAD) and internationally published writers (IRAD) in the discussion sections of research articles in applied linguistics. The comparison of the two datasets reveals a more frequent and diverse use of discussion moves by IRAD compared to URAD. Overall, the analysis suggests that the IRAD group tends to compare their results with the literature more frequently and incorporates a more diverse range of move patterns in their writing. The URAD group, on the other hand, appears to focus more on interpreting their results before comparing them with the literature. While both groups prioritize obligatory moves such as Commenting on results, IRAD writers demonstrate a broader engagement with discourse actions, including a notable emphasis on Restating methodology and Comparing results with existing literature. This reflects the ability of more advanced writers to strategically anchor their research within the broader scholarly conversation, thereby validating the findings and underscoring their contribution to the field. The practice of comparing results with previous literature and explaining differences, in particular, is highlighted as a crucial discourse move, which serves to not only validate the research but also to position it within the existing knowledge base, showcasing how it may challenge, refine, or expand upon established frameworks.

Furthermore, the study illuminates the significance of employing a variety of rhetorical moves to enhance the argumentation in RA discussions. The use of examples to support arguments, the acknowledgment of study limitations, and the implications of research findings are all areas where IRAD writers outpace their URAD counterparts. This not only reflects a mature capacity to engage with the research discourse but also indicates a more pronounced

awareness of the importance of critical discussion, transparency in research limitations, and the pedagogic implications of findings. Less experienced writers should study the rhetorical moves

and argumentation strategies of experienced writers, as this will make their research discussions more credible and allow them to expand the perspectives of their findings that connect or differ from other works in the same academic field.

In conclusion, the distinct rhetorical move approaches observed between IRAD and URAD writers reflect broader trends in academic writing that underscore the importance of experience, audience awareness, and strategic use of discourse moves in crafting compelling research discussions. These findings highlight the need for explicit instruction in strategic rhetorical moves to enhance the persuasiveness and scholarly impact of research articles. Such insights are invaluable for emerging writers who aim to navigate the complexities of academic discourse effectively.

Implications

This investigation into rhetorical strategies in applied linguistics RA discussion written by expert and novice writers has clear relevance for the teaching of English for Academic Purposes. Since the rising importance of research instruction in both undergraduate and graduate programs, NNS student writers need discipline-specific intensive research writing practices of genre-specific approaches to achieve their broader publication goals. The findings suggest that additional practice in move patterns may assist teachers in designing lessons and activities to facilitate learners in mastering of typical discourse orientation and rhetorical sequences. Providing more focus on the use of typical discourse organization, including obligatory and optional moves and cycles, would offer student writers practical models to enhance their academic writing awareness and produce texts for global audiences.

To address the academic writing challenges, novice NNS writers should be immersed in the target discourses and practice writing for global academic audiences. By utilizing key rhetorical structures or moves from higher level corpora, they can convey their ideas with clarity and effectiveness. This, in turn, has the potential to advance academic research and scholarship, and enable NNS scholars to excel in international academic publications. Students would benefit from assignments that analyze texts to uncover how elements like rhetorical moves, obligatory steps, and cyclical organization patterns manifest differently depending on the author's writing experience and fluency in the target language. To enhance students' rhetorical abilities in research writing classes, EAP instructors can implement several strategies and activities focusing on developing critical writing skills, understanding rhetorical moves, and effectively structuring arguments. Model analysis exercises of well-written research articles should be used in both undergraduate and graduate EAP classes to analyze and discuss how experienced writers use various rhetorical moves to enhance the clarity and impact of their discussions. Writing exercises may include assignments that require students to practice specific rhetorical moves. For example, instructors can ask students to write a section where they compare their findings with existing literature or explain differences in results. Additionally, students should be encouraged to experiment with more complex move patterns, integrating multiple moves within a single section to create more sophisticated arguments.

Ultimately, cultivating this meta-linguistic awareness will empower students to make more deliberate stylistic choices aligned with the expectations of their discipline and academic audiences.

Limitations

This study is subject to several limitations that warrant mention. Primarily, the scope of comparison was constrained by the number of papers analyzed, which may affect the generalizability of the findings. The comparison of RA discussions between undergraduate students' proceeding papers and those of internationally published writers may initially appear impractical due to differences in target audiences and levels of discourse complexity. However, analyzing how these two distinct groups of writers discuss their research results and implications could significantly benefit novice writers by enabling them to refine their rhetorical techniques and strategies, potentially expanding their scholarly reach and enhancing their impact within the academic community. Furthermore, the selection of papers presented a limitation in terms of diversity, encompassing a narrow range of subjects and methodologies. This research also predominantly focused on the commenting on results move, which is the primary function of research article discussions, without examining other subtypes of moves in different sections of the discussion. This approach may have limited the comprehensive understanding of the strategic deployment of various rhetorical moves across the entirety of the discussion section. Therefore, future research could address these limitations by incorporating a broader and more varied dataset to enrich the analysis. Additionally, a deeper exploration of the types of moves used by both novice and experienced writers could offer more nuanced insights into the development of academic writing skills. Examining RA discussions across different disciplines may also shed light on the unique rhetorical strategies employed by non-native English writers, contributing to a more detailed understanding of academic discourse in a global context.

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