Language Literacy: Journal of Linguistics, Literature, and Language Teaching
Volume 9, Number 1, pp: 125-134, June 2025
e-ISSN: 2580-9962 | p-ISSN: 2580-8672
DOI: https://doi.org/10.30743//ll.v9i1.10252

RHETORICAL MOVES IN RESEARCH INTRODUCTIONS: THE IMPACT OF PROMPT-BASED WRITING

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Received: 2025-05-01 Accepted: 2025-05-23 Published: 2025-06-26

Abstract

This study investigates the role of writing prompts in creating an appropriate introduction section in a research article. The study analyzes three texts generated from ChatGPT by using three distinct prompts formulated based on the writing prompt model proposed by Kroll & Reid and Chapman. Using a qualitative descriptive approach, the resulting texts were analyzed at the macro level to determine the realization of rhetorical moves. The findings indicate that prompt design significantly affects the quality and rhetorical completeness of the introductions. Prompt 3, which contained more explicit instructions regarding gap identification and research significance, produced a text most closely aligned with all three moves of the CARS model. In contrast, the more general prompts led to partial or less structured realizations of the rhetorical elements. These results suggest that structured and genre-sensitive prompts can effectively guide writers when they seek Artificial Intelligence (like ChatGPT) assistance in writing research articles. This study also highlights the pedagogical potential of prompt-based writing as a strategy to support academic writing instruction in higher education, especially when combined with emerging technologies.

Keywords: *artificial intelligence; cars model; chatgpt; efl writing; introduction section; power-writing ai; research article; writing prompts*

1. Introduction

Writing Research Articles (RAs) is a primary way for researchers to share their findings with the academic community. As interactions among scholars in the global academic community have become more frequent, RAs (specifically English RAs) have emerged as a key medium for sharing academic ideas and promoting scientific progress within international research circles (Yu & Liu, 2016). For students, writing RAs shows academic maturity and readiness to enter the research world. Many universities require research publications for graduation or promotion (Ganie, Sinar, Syahputra, & Veronica, 2025). Beyond that, this ability also adds value in the world of work, especially in education, research, and knowledge-based industries (Cassandra, Fithriani, Febriyanti, & Mukminin,

2024). However, without good writing skills, research results risk being undocumented or not disseminated effectively.

The scientific writing process (in RA) requires the writer to construct arguments, organize data, and explain methodology logically and objectively. This trains critical and systematic thinking skills (Weldy, Maes, & Harris, 2014). Furthermore, an RA contains sections including Introduction, Methods, Results and Discussion, and Conclusions. However, this study focuses on the Introduction Section (IS). The introduction in an RA plays an important role because it serves as the starting point for readers to understand the context, urgency, and contribution of the research (Zein, Sinar, Nurlela, & Syahputra, 2023). In addition, the introduction not only introduces the topic but also builds an argumentative foundation that shows what has been researched before, the gaps that still exist, and how this study intends to fill those gaps (Zein, Sinar, Nurlela, & Syahputra, 2023). However, many novice writers face challenges in writing this section (Rahman, Darus, & Amir, 2017; Zein, Sinar, Nurlela, & Syahputra, 2023).

These challenges include confusion in starting writing, unclear ideas about how to develop a logical flow towards the research gap, and a lack of understanding of the typical rhetorical structures commonly used in the RA genre (Rahman, Darus, & Amir, 2017). In addition, inappropriate reference selection, vague purpose statements, and less communicative writing styles often weaken the effectiveness of the IS. These challenges drive the need for a more focused writing learning strategy (Rahman, Darus, & Amir, 2017).

In this context, genre awareness becomes very important, because it helps writers understand the social function, structure, and linguistic conventions that are typical in the introduction of RA. Therefore, genre-based writing learning strategies and the use of writing prompts as utilization of current technology (especially Artificial Intelligence/AI) are deemed necessary to guide novice writers to produce directed, relevant, and communicative introductions. Various studies have also shown the use of AI in writing (Cheong & Hong, 2023; Fauzi et al., 2023; Imran & Almusharraf, 2023). However, on this occasion, a study has been designed to assess what type of writing prompts produce the IS that best fits the CARS Model by Swales (2004).

Based on this background, this study aims to explore the effectiveness of using writing prompts based on the (Kroll & Reid, 1994) and (Chapman, 2016) models in assisting the process of writing the IS of RA, and later the results of the writing will be analyzed using the CARS model by Swales (2004). Theoretically, this study is expected to contribute to the development of a genre-based academic writing learning approach. Practically, the results of this study can be used as a basis for developing teaching materials, teaching strategies, or even more targeted academic writing training modules, especially in the context of higher education in Indonesia.

2. Literature Review

2.1 Genre-Based Writing in Academic Contexts

Scientific writing cannot be separated from the understanding of academic genres. Genre, in this context, does not only refer to form or format, but includes the communicative function and social expectations attached to a type of text in the academic community (Swales, 1990; Hyland, 2004). One of the most influential approaches is the CARS (Create A Research Space) model introduced by Swales, which describes the rhetorical

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structure of a scientific article introduction in three main steps: establishing a territory, establishing a niche, and occupying the niche.

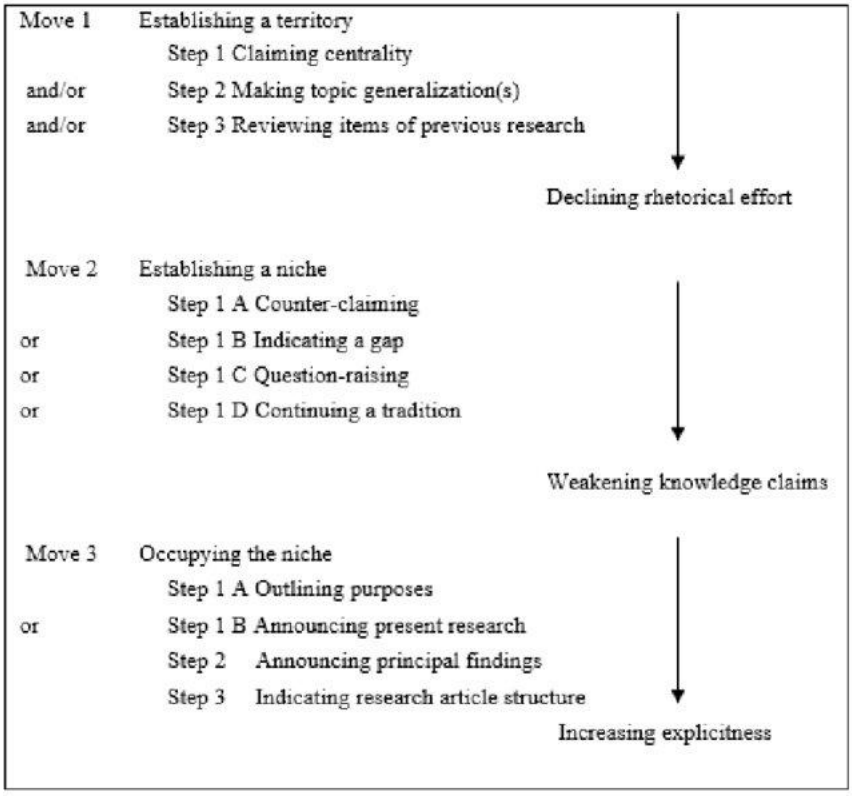

Figure 2.1. Swales' Create a Research Space (CaRS) Model

Furthermore, research by (Yu & Liu, 2016) shows that novice writers, such as Chinese master's students, often do not use complete rhetorical moves, especially Move 2, which results in weak argumentation in introducing research. Previous research conducted by (Zein, Sinar, Nurlela, & Syahputra, 2023) also noted this kind of act based on the data they took randomly from Scientific Publication RA. This shows the importance of increasing genre awareness in teaching academic writing. In addition, genre-based pedagogy has been shown to be effective in improving students' understanding of the communicative purpose of each section of an article (Hyon, 2001; Huang, 2014).

2.2 The Use of Writing Prompts in Academic Writing Instruction

Writing prompts are one of the pedagogical strategies used to stimulate ideas and guide the structure of students' writing. In the context of academic writing, prompts structured according to genre principles can serve as scaffolding tools, helping writers understand what needs to be conveyed in each section of the text (Hyland, 2007). Several studies have shown that prompts developed with rhetorical structure in mind (e.g. based on the CARS model) are more effective in helping novice writers structure their introductions systematically. For example, prompts such as “What are the general issues in this field?” or “What has not been researched by previous studies?” can explicitly stimulate the steps in Move 1 and Move 2. Thus, writing prompts not only help with ideas but also encourage awareness of genre and structure. Based on those ideas, this research proposes to utilize the writing prompt models by (Kroll & Reid, 1994) and (Chapman, 2016) combined with CARS Model by Swales.

2.3 Common Difficulties in Writing Research Article Introductions

The IS is one of the most difficult parts of writing an RA because it requires the ability to summarize literature, state research gaps, and explain research contributions. In their research (Yu & Liu's, 2016) revealed that novice writers often fail to construct a complete introduction structure, especially in conveying Move 2 (indicating a gap), which is considered the core of creating research space. Several contributing factors include low genre awareness, lack of explicit training, and the influence of an academic culture that discourages open criticism of previous scholars' work. Failure to address these gaps makes Move 3 weak, as there is no strong basis for explaining the justification for the research.

3. Research Method

3.1 Research Design

This study employed a **qualitative descriptive design** to analyzed student-written introductions of scientific articles produced through prompt-based writing tasks. The aim was to explore how the rhetorical structure of these introductions aligns with the Create A Research Space (CARS) model by (Swales 1990, 2004).

3.2 Writing Prompt Design and Data Collection

The writing tasks were guided by three prompts developed based on the model proposed by (Kroll & Reid, 1994) and (Chapman, 2016). Here is the model:

1. The writing situation (contextual variables)
2. The subject matter (content variables)
3. The wording of both the prompt and the instructions (linguistic variables)
4. The task(s) (task variables)
5. The rhetorical specifications (rhetorical variables) and
6. The scoring criteria (evaluation variables)

Each prompt was designed to elicit a written *Introduction* section of a research article with the same communicative purpose but varied in wording and scaffolding. The use of multiple prompts allowed the researcher to examine whether different prompt formulations influenced students' rhetorical choices. Here are the prompts proposed to ChatGPT by Open.AI:

No.	Models (1-4)	Prompts
1	(2) The subject matter (content variables) (3) The wording of both the prompt and the instructions (linguistic variables)	(3)Please compose (2)an introduction of a scientific article titled ‘Composing Academic Writing: The Use of Prompts in Drafting Scientific Introductions’.
2	(1) The writing situation (contextual variables) (2) The subject matter (content variables) (3) The wording of both the prompt and the	(1)I am a student of language/linguistics study and try to write a scientific article. (3)Please compose (2)an introduction of a scientific article titled ‘Composing Academic Writing: The Use of Prompts in Drafting Scientific Introductions’.

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	instructions (linguistic variables)	
3	(1) The writing situation (contextual variables) (2) The subject matter (content variables) (3) The wording of both the prompt and the instructions (linguistic variables) (4) The task(s) (task variables)	(1)I am a student of language/linguistics study and try to write a scientific article. (3)Please compose (2)an introduction of a scientific article titled 'Composing Academic Writing: The Use of Prompts in Drafting Scientific Introductions'. (4)The Introduction can be divided into five paragraphs which consist of the reason why this research is important, the gap research and novelty.

Table 3.1. Prompts for ChatGPT to Create an Introduction proposed by (Kroll & Reid, 1994) and (Chapman, 2016)

The paragraphs produced from each of these prompts will later become the main data in this study which will be analyzed using the CARS model by Swales.

3.3 Data Analysis

The texts were analyzed using Swales' (1990, 2004) CARS model, which divides the Introduction section into three rhetorical moves:
Move 1: Establishing a territory,
Move 2: Establishing a niche, and
Move 3: Occupying the niche.

Each text was manually coded to identify the presence and realization of these moves and their associated steps. The analysis focused on how clearly and completely each move was realized in each written product. Cross-comparisons were made across the three prompt types to determine any patterns or notable differences.

4. Results and Discussion

4.1 Macro Analysis by CARS Model

The analysis of the three written texts produced through different prompts revealed distinct patterns in terms of genre realization and rhetorical completeness. Each introduction reflected a unique emphasis aligned with the way the prompts were framed, influencing how writers constructed their rhetorical moves.

Prompt 1 as Data 1:

Effective academic writing is a cornerstone of scientific communication, serving as the primary means through which researchers share their findings and contribute to the collective knowledge of their fields. However, the process of drafting a compelling and coherent scientific introduction remains a formidable challenge for many researchers, particularly those at the early stages of their careers. The introduction of a scientific article sets the stage for the research, providing necessary background, defining the scope, and highlighting the significance of the study. It must engage the reader, justify the research, and

clearly outline the objectives and hypotheses. Given these multifaceted demands, the initial drafting phase often becomes a bottleneck in the writing process.

*Recent pedagogical advancements have highlighted the potential of **prompts** as a tool to facilitate academic writing (**Step 1**). **Prompts**, which are targeted questions or statements designed to elicit specific types of responses, can guide writers in organizing their thoughts, ensuring that all critical components of an introduction are addressed **(Step 2)**. By **prompting** writers to consider various aspects such as the context of the study, the existing gaps in the literature, and the specific aims of the research, this approach can help overcome writer's block and improve the overall quality of the writing **(Step 3)**.*

*This article explores the use of **prompts** in drafting scientific introductions, investigating their effectiveness in enhancing the clarity, coherence, and comprehensiveness of academic writing **(Step 1)**. Through a combination of theoretical analysis and empirical research, we aim to provide insights into how **prompts** can be integrated into writing instruction and support **(Step 2)**. We also seek to understand the perspectives of researchers who have utilized **prompts** in their writing process, examining the perceived benefits and potential limitations of this approach **(Step 2)**. By illuminating the role of **prompts** in academic writing, we aspire to contribute to the development of more effective writing strategies that can aid researchers in articulating their work with precision and impact **(Step 3)**.*

Genre Type	Generic Structure	
Expository Text/ To explain, describe, or inform, not necessarily to argue.	Move 1: General Statement/ Thesis (paragraph 1)	Step 1: Introduction to the topic and the issue. Step 1: Introducing the concept of prompts.
	Move 2: Explanation/ Argument (paragraph 2)	Step 2: Describing the function of prompts. Step 3: Explaining the benefits of prompts. Step 1: Outlining the method of investigation.
	Move 3: Conclusion (paragraph 3)	Step 2: stating research aims Step 3: Reasserting purpose and broader contribution.

Table 4.1. *Macro Level Analysis (Prompt 1)*

Prompt 2 as Data 2:

*In the realm of academic **writing**, the introduction serves as the cornerstone of any scientific article. It sets the stage for the research, presents the central argument, and engages readers, guiding them into the complexities of the **study.** However, crafting an effective introduction can be a daunting task, especially for novice writers and those for whom English is not a first language. In recent years, there has been growing interest in the use of prompts as a pedagogical tool to assist in the drafting of scientific introductions. Prompts, when thoughtfully designed, can provide writers with structured guidance, helping them to articulate their research objectives, contextualize their **study** within existing literature, and present their findings in a coherent manner.*

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*This article, titled "Composing Academic **Writing**: The Use of Prompts in Drafting Scientific Introductions," aims to explore the efficacy of prompts in facilitating the **writing** process for students and researchers **(Step 1)**. By examining various types of prompts and their impact on the quality and clarity of introductions, this **study** seeks to offer insights into how prompts can be integrated into **writing** instruction and support **(Step 2)**. Through a comprehensive review of existing literature and analysis of empirical data **(Step 3)**, we will highlight best practices and potential challenges in implementing prompt-based approaches in academic **writing**.*

*The significance of this research lies in its potential to enhance academic **writing** pedagogy, providing educators with effective tools to support students in developing their **writing** skills. As academic **writing** remains a critical skill across disciplines, improving the way introductions are taught and written can contribute to the overall quality of scientific communication. This **study** not only addresses a gap in the current literature but also offers practical implications for educators, students, and researchers striving for excellence in academic **writing.***

Genre Type	Generic Structure	
Exposition Text/ To present arguments and persuade readers.	Move 1: General Statement/ Thesis (paragraph 1)	Step 1: Introduction the topic, problem, and suggested prompts as a solution
	Move 2: Explanation/ Argument (paragraph 2)	Step 1: Research aim Step 2: Method of Investigation Step 3: Types of data
	Move 3: Conclusion (paragraph 3)	Step 1: Highlighting significance and practical implications

Table 4.2. *Macro Level Analysis (Prompt 2)*

Prompt 3 as Data 3:

*Academic writing, particularly in the realm of scientific research, presents a unique set of challenges that require clear and effective communication of complex ideas. One critical component of this process is the introduction, which sets the stage for the entire paper. The introduction not only introduces the topic but also outlines the research problem, objectives, and the significance of the study **(Step 1).** In this context, the use of prompts has emerged as a potentially powerful tool to aid researchers in crafting comprehensive and engaging introductions. This study explores the effectiveness of prompts in assisting the drafting of scientific introductions, a topic of increasing relevance in the field of academic writing (**Step 2)**.*

*Despite the abundance of resources available on academic writing, many researchers, especially those at the beginning of their careers, struggle with composing effective introductions (**Step 1)**. Traditional methods often fall short in providing the necessary support to structure and articulate the essential components of the introduction (**Step 2)**. Prompts, which can guide writers through the key elements and logical flow, offer a structured approach that can alleviate some of these challenges (**Step 2**). However, empirical evidence*

*on their efficacy remains sparse, highlighting a significant gap in the existing literature. (**Step 2)**.*

*The novelty of this research lies in its focus on the specific application of prompts in the drafting process of scientific introductions. While prompts have been utilized in various educational contexts to enhance writing skills, their targeted use in scientific writing has not been thoroughly examined **(Step 2).** This study seeks to fill this gap by providing a systematic analysis of how prompts can facilitate the creation of well-organized, clear, and impactful introductions. By doing so, it aims to contribute to the development of effective writing strategies that can be adopted by researchers across disciplines. **(Step 3)***

*To address this research gap, the study employs a mixed-methods approach, combining quantitative and qualitative data to assess the impact of prompts on the quality of scientific introductions. The quantitative component involves a comparative analysis of introductions written with and without prompts, evaluating factors such as coherence, clarity, and completeness. The qualitative aspect includes interviews with researchers to gather insights into their experiences and perceptions of using prompts. This comprehensive methodology ensures a robust examination of the potential benefits and limitations of prompts in academic writing. **(Step 1)***

*In conclusion, this research is significant for its potential to enhance the quality of scientific writing by providing practical tools for researchers. By investigating the use of prompts, it not only addresses a critical gap in the literature but also offers actionable insights for improving the drafting process of scientific introductions. The findings of this study could lead to more effective writing practices, ultimately contributing to the advancement of knowledge dissemination in the scientific community. **(Step 1)***

Genre Type	Generic Structure	
Exposition Text/ To present arguments and persuade readers.	Move 1: General Statement/ Orientation (paragraph 1)	Step 1: Introduction to the topic and the issue. Step 2: Outlining purpose
	Move 2: Indicating GAP and Novelty (paragraph 2,3)	Step 1: Explanation of the background problem Step 2: Identifying gap Step 3: research aim
	Move 3: Methodology (paragraph 4)	Step 1: Method of investigation
	Move 4: Conclusion	Step 1: Highlights the research's importance for scientific writing

Table 4.3. *Macro Level Analysis (Prompt 3)*

4.2 Discussion

Prompt 1 resulted in a general-expository type of introduction that focused on defining the role of prompts in academic writing. While it successfully established the topic (*Move 1*) and outlined the pedagogical value of prompts (*Move 2*), it lacked a clear articulation of a research gap or methodological grounding, limiting its alignment with

Swales' CARS model. This suggests that when prompts are broad and conceptual, the AI tends to produce descriptive rather than argumentative introductions.

Meanwhile, Prompt 2 demonstrated a more structured exposition with stronger alignment to pedagogical discourse. It incorporated key elements such as research aims, method, and significance, fulfilling *Move 1* and *Move 3* of the CARS model. However, *Move 2* (establishing a niche) remained implicit, suggesting that even with clearer objectives. When AI produces this kind of text, students may avoid explicitly identifying gaps by editing it, unless guided directly to do so. This aligns with findings from Yu & Liu (2016), who argue that novice writers, especially non-native speakers, often omit *Move 2* due to a lack of genre awareness or cultural reluctance to critique prior work.

On the other hand, Prompt 3 yielded the most research-oriented text. The AI articulated a clear problem, identified a gap, and outlined a specific methodology, fulfilling all three moves of the CARS model. The presence of *Move 2* and a detailed *Move 3* indicates that when prompts are explicitly structured to elicit justification and novelty, AI is more likely to engage with research discourse conventions. This confirms Swales' (1990) assertion that *Move 2* is the rhetorical "hinge" that enables authors to establish scholarly space.

These findings support the notion that the way prompts are designed has a direct impact on the quality and structure of AI's writing (Ganie et al., 2025). Echoing genre-based pedagogical principles (Hyland, 2007; Hyon, 2001), prompt formulation that scaffolds rhetorical moves, especially gap-indication and justification, can enhance students' ability to meet academic discourse expectations.

5. Conclusion

The results of the analysis show that the prompt design has a significant effect on the rhetorical structure of the introduction written by AI. More explicit and directed prompts produce writing that is more in line with the CARS model, especially in terms of stating the research gap and the contribution of the study. These findings confirm that the use of clear and complete prompts can be an effective strategy in teaching academic writing, as it helps novice writers understand and apply scientific writing conventions more systematically.

Acknowledgements

This article is funded by the TALENTA 2023 Research Funding, Government Collaborative Research Scheme from Universitas Sumatera Utara's Research Institutions. The authors express their greatest gratitude to the Rector of Universitas Sumatera Utara (USU), the director of the USU's research institutions (LP – USU), the Dean and all Vice deans of the Faculty of Cultural Sciences, the Head and Secretary of the English Literature Study Program, and all the stakeholders who helped with this research.

References

Cassandra, N. W., Fithriani, R., Febriyanti, R. H., & Mukminin, A. (2024). Becoming Scholarly Writers through Professional Learning Community: A Phenomenological Case Study of Indonesian Teacher-Educators. *LEARN Journal: Language Education and Acquisition Research Network*, *17*(1*)*, 8–29.

Chapman, M. (2016). *The effect of the prompt on writing product and process: a mixed methods approach*. University of Bedfordshire.

Cheong, W., & Hong, H. (2023). The Impact of ChatGPT on Foreign Language Teaching and Learning: Opportunities in Education and Research. *Journal of Educational Technology and Innovation*, 37–45.

Fauzi, F., Tuhuteru, L., Sampe, F., Ausat, A. M. A., & Hatta, H. R. (2023). Analysing the Role of ChatGPT in Improving Student Productivity in Higher Education. *Journal on Education*, *5*(4), 14886–14891. https://doi.org/10.31004/joe.v5i4.2563

Ganie, R., Sinar, T. S., Syahputra, F. P., & Veronica, A. (2025). Prompt writing and linguistic syntax collaboration in power-writing AI utilization to assist introduction writing. *Multidisciplinary Science Journal*, *7*(10). https://doi.org/10.31893/multiscience.2025341

Huang, J. C. (2014). Learning to write for publication in English through genre-based pedagogy: A case in Taiwan. *System, 45*, 175–186. https://doi.org/10.1016/j.system.2014.05.010

Hyland, K. (2004). *Disciplinary Discourses: Social Interactions in Academic Writing* (2nd ed.). University of Michigan Press.

Hyland, K. (2007). Genre pedagogy: Language, literacy and L2 writing instruction. *Journal of Second Language Writing, 16*(3), 148–164. https://doi.org/10.1016/j.jslw.2007.07.005

Hyon, S. (2001). Long-term effects of genre-based instruction: A follow-up study of an EAP reading course. *English for Specific Purposes, 20*(4), 417–438. https://doi.org/10.1016/S0889-4906(01)00019-9

Imran, M., & Almusharraf, N. (2023). Analyzing the role of ChatGPT as a writing assistant at higher education level: A systematic review of the literature. *Contemporary Educational Technology*, *15*(4), ep464. https://doi.org/10.30935/cedtech/13605

Kroll, B. & Reid, J. (1994). Guidelines for Designing Writing Prompts: Clarifications, Caveats, and Cautions. *Journal of Second Language Writing*, *3*(3), 231-255.

Rahman, M., Darus, S., & Amir, Z. (2017). Rhetorical Structure of Introduction in Applied Linguistics Research Articles. *International Journal for Educational Studies*, *9*(February), 69–84.

Swales, J. M. (1990). *Genre Analysis: English in Academic and Research Settings*. Cambridge University Press.

Swales, J. M. (2004). *Research Genres: Explorations and Applications*. Cambridge University Press. https://doi.org/10.1017/CBO9781139524827

Weldy, T., Maes, J., & Harris, J. (2014). Process and practice: Improving writing ability, confidence in writing, and awareness of writing skills' importance. *Journal of Innovative Education Strategies*, *3*(1), 12–26. http://www.intl-academy.org/wp content/uploads/2016/11/Weldy_Maes_Harris-JIES-Fall-2014.pdf

Yu, Z., & Liu, M. (2016). A Contrastive Study on Generic Structure of Introduction to English Chemistry Research Articles: L1 Chinese Student Writers versus L1 English Published Writers. *International Journal of English Linguistics*, *6*(5), 112. https://doi.org/10.5539/ijel.v6n5p112

Zein, T. T., Sinar, T. S., Nurlela, & Syahputra, F. P. (2023). Rhetorical Structure in Scientific Article Introduction Section Written by Tertiary Students. *Celt: A Journal of Culture, English Language Teaching & Literature*, *23(*1), 138–154. https://doi.org/10.24167/celt.v22i2.5045