RHETORICAL STRUCTURE AND AUTHORIAL POSITIONING IN MEDICAL RESEARCH ARTICLE INTRODUCTIONS: A CORPUS-BASED COMPARISON OF ARTICLES PUBLISHED IN SELECTED VIETNAMESE AND INTERNATIONAL JOURNALS

CẤU TRÚC TU TỪ VÀ THIẾT LẬP LẬP TRƯỜNG CỦA TÁC GIẢ TRONG PHẦN ĐẶT VẤN ĐỀ CỦA BÀI BÁO NGHIÊN CỨU Y KHOA: NGHIÊN CỨU ĐỐI CHIẾU DỰA TRÊN NGỮ LIỆU CÁC BÀI BÁO ĐĂNG TRÊN MỘT SỐ TẠP CHÍ VIỆT NAM VÀ QUỐC TẾ

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Abstract - This study compares rhetorical structure and selected resources of authorial positioning in 154 English-language medical research article introductions published during 2021–2025. The Vietnamese and international journal samples contain 89 and 65 articles, with 37,650 and 34,452 Introduction words. An adapted CARS inventory identifies rhetorical functions; hedges and self-mentions are examined alongside a separate grammatical measure of overt be-passives. Explicit knowledge gaps occur in 66.3% and 93.8% of introductions, respectively (Holm-adjusted p<.001). Continuation of earlier work is also more frequent in the final IJI coding, although this category requires context-sensitive interpretation. None of the three linguistic comparisons reaches the adjusted .05 threshold. The findings provide examples for teaching research justification and author positioning. Sample composition and context-sensitive coding limit broader inference.

Key words - Medical research articles; move analysis; CARS model; authorial stance; academic writing

Tóm tắt - Nghiên cứu đối chiếu cấu trúc tu từ và cách định vị tác giả trong 154 phần Đặt vấn đề bằng tiếng Anh của các bài báo y khoa giai đoạn 2021–2025. Nhóm tạp chí Việt Nam gồm 89 bài, 37.650 từ; nhóm quốc tế gồm 65 bài, 34.452 từ. Bộ mã điều chỉnh từ CARS nhận diện chức năng tu từ; hedge và self-mention được khảo sát cùng phép đo riêng về cấu trúc bị động. Khoảng trống kiến thức tường minh xuất hiện ở 66,3% và 93,8% bài của hai nhóm (p hiệu chỉnh Holm < 0,001). Việc tiếp nối nghiên cứu trước cũng xuất hiện nhiều hơn trong mã hóa cuối ở nhóm quốc tế, nhưng hạng mục này cần được diễn giải thận trọng vì phụ thuộc vào ngữ cảnh. Cả ba so sánh ngôn ngữ chưa đạt ngưỡng ý nghĩa sau hiệu chỉnh. Kết quả cung cấp ví dụ cho dạy viết lập luận nghiên cứu và định vị tác giả; thành phần mẫu và các hạng mục mã hóa phụ thuộc ngữ cảnh giới hạn phạm vi khái quát.

Từ khóa - Bài báo nghiên cứu y khoa; phân tích bước tu từ; mô hình CARS; lập trường của tác giả; viết học thuật

1. Introduction

1.1. Motivation for the study

English is central to communication in international research [1]. Publishing in English also requires an understanding of disciplinary argument and genre conventions [2], [3]. Historical bibliometric evidence illustrates its prominence: Clarke *et al.* [4] identified 210,433 public-health publications indexed in SCI and SSCI during 1995–2004 and reported a non-English share of approximately 3.5%. That figure concerns a specific indexed dataset and period, rather than medical publishing today. For the present study, the practical question is how English-language introductions in two selected journal groups make a research rationale and the authors' contribution explicit.

Studies in Vietnam have approached academic writing from different perspectives. Evans [5] examined the genres students write and their experiences of these tasks. Tran [6] analysed syntactic and lexical features of English-language master's thesis introductions in Vietnam and Australia. These studies inform academic writing support, but neither directly compares published medical article introductions in the two journal groups examined here.

Research article introductions establish a topic, justify an investigation and present the study [7], [8]. Writers need to connect these purposes to the conventions of their target genre [9]. Studies of thesis literature reviews [10] and research article introductions in applied linguistics [11] show why findings from one genre or discipline should be transferred cautiously. In medical and biochemistry articles, rhetorical analysis also reveals the importance of disciplinary context [12], [13]. The present comparison therefore focuses on a defined medical corpus, rather than treating all academic introductions as interchangeable.

1.2. Aim and research questions

Swales' CARS model describes three moves: establishing a territory, establishing a niche and occupying the niche [7], [8]. It guides the analysis of how an introduction moves from background knowledge to a reason for undertaking the study. Here, selected steps are adapted for contextual coding; the inventory is not a complete reproduction of either version of CARS.

Hyland's account of stance includes hedges, boosters, attitude markers and self-mentions [14]. This study selects hedges to examine qualification of claims and self-mentions to examine explicit author reference. Medical hedging research supports attention to the function of a form in its proposition [15]. The two categories address these specific questions, rather than measuring stance as a whole. Passive voice is analysed separately as a grammatical choice whose effect depends on the represented agent [16].

Earlier research already connects evaluation with the argument of an introduction. Xu and Nesi [17] compared evaluative choices in Chinese and British authors' applied linguistics introductions; Pho [18] examined rhetorical structure and authorial stance in abstracts. Their findings motivate attention to both purpose and language, while their genres and disciplinary settings differ from this corpus. Vietnamese work on genre pedagogy also provides a teaching context [19]. The present study therefore offers a corpus-specific comparison of selected medical introductions, combining quantitative profiles with contextual examples of research justification and author representation.

The study compares rhetorical functions and selected positioning resources in articles published in the selected Vietnamese and international journals. It asks how the introductions justify a research niche, announce the study, qualify claims and refer to the authors. Passage-level examples illustrate how these choices work together. The statistical comparisons describe their distributions; they do not test an association between particular linguistic resources and particular moves.

Accordingly, the study addresses the following research questions (RQ):

RQ1. How prevalent are the selected rhetorical moves and steps in the two groups of medical research article introductions?

RQ2. How do the sampled introductions realize an explicit knowledge gap and continuation of earlier work within the adapted niche inventory?

RQ3. How do selected hedges, authorial self-mentions and overt be-passive constructions vary between the two groups?

2. Materials and methods

2.1. Research design and corpus construction

This study combines contextual discourse coding with corpus-based quantitative analysis to compare rhetorical structure and selected resources of authorial positioning in English-language medical research article introductions.

The corpus contains 154 English-language articles published during 2021–2025: 89 from selected Vietnamese journals (VDI) and 65 from selected international journals (IJI). Screening excluded eleven of 168 source PDFs on subject or genre grounds and left three with uncertain disciplinary scope outside the corpus. VDI comprises Biomedical Research and Therapy (24), Journal of Clinical Medicine – Hue Central Hospital (20), Journal of Medical Research (18), MedPharmRes (20), and VNU Journal of Science: Medical and Pharmaceutical Sciences (7). IJI comprises BMC Medicine (15), BMJ Open (14), PLOS Medicine (13), three JMIR journals (14), seven Frontiers journals (8), and Advanced Optical Technologies (1). The last article concerns retinal laser treatment. Inclusion thus follows medical or health-related content, rather than an exclusively medical journal remit.

This purposive archival sample includes clinical case series and one umbrella review of prostate-cancer risk factors (PDF_091); it is not restricted to original patient-level studies. The review is retained in the primary analysis and excluded in a sensitivity analysis. VDI year counts for 2021–2025 are 18, 16, 17, 19 and 19; IJI counts are 14, 13, 12, 13 and 13. The evidence workbook records individual journal and year counts. The groups are not matched by topic or journal, and these distributions do not guarantee representativeness or stable writing conventions.

The analysis uses Introduction body text only, excluding abstracts, metadata, references and captions. Section boundaries and reading order were checked against the PDFs; OCR text was corrected where required. Cleaning removed citation markers and intrusive page numbers, joined line-break hyphenation, normalized ligatures and restored missing closing punctuation. A word is a whitespace-delimited token containing an ASCII letter or digit; punctuation-only tokens are excluded and internal hyphens remain. The cleaned sub-corpora contain 37,650 and 34,452 words. Article identifiers, source filenames and PDF hashes retain the link to the source documents.

2.2. Analytical framework

Six adapted steps operationalize the comparison: established knowledge (S1A), local contextualization (S1B), indicating a gap (S2A), continuing an established line of inquiry (S2B), announcing the study or its purpose (S3A), and announcing principal findings (S3B). These categories distinguish background, justification and study presentation, with particular attention to local relevance and niche construction. S1B requires developed geographical, institutional or healthcare context. S2A requires an explicit knowledge limitation, missing investigation, conflicting evidence or unresolved issue linked to the study; clinical importance or an aim alone is insufficient. S2B requires an explicit follow-up, extension or refinement of earlier work, rather than a citation or routine method alone. S3B requires a substantive current-study result, rather than an expected benefit. Categories may co-occur. In this inventory, M1 is S1A or S1B, M2 is S2A or S2B, and M3 is S3A or S3B. A negative M2 code means neither selected niche step was identified; it does not exclude other ways of justifying a study outside the inventory.

2.3. Coding procedure and data validation

The analytical dataset was established using the operational inventory and sentence-level contextual checking of all 154 articles and all 1,738 retrieved linguistic candidates. Ambiguous cases were re-examined against the source passages and decision rules before the dataset was finalized. During final verification, one continuation code and seven linguistic-candidate decisions were revised. The evidence workbook records article

identifiers, source passages, coding decisions and reasons, and the analyses reported here use this final checked dataset. As a separate reliability check, two human coders independently coded the same 154 introductions and 1,738 linguistic candidates in separate files using the same operational criteria, without access to each other's decisions during the independent coding stage.

Each linguistic record links an article identifier and matched form to its sentence context, character offsets, coding decision and reason. All 1,738 candidates were checked against the cleaned texts, and duplicate article–type–span records were removed. Rejected candidates and the original PDFs remain available for verification.

The final checked dataset contains 187 and 220 hedging instances, 82 and 126 authorial self-mentions, and 466 and 434 overt be-passive constructions in VDI and IJI, respectively. These are counts of accepted instances, not all retrieved forms. Totals and article-level tests were recalculated from these final records.

The hedge search uses a closed list of modal, lexical and approximating forms, including may, might, could, suggest, likely, seem, tend to, approximately and numerical about or around. Contextual coding excludes ability, permission, topic, location, hypothesis labels, fixed technical classifications and recommendations. A projected benefit can be hedged if its occurrence is qualified. Self-mentions are author-referential first-person pronouns or possessives; inclusive community references and this study alone are excluded. The grammatical measure counts overt be followed by a past participle, allowing intervening adverbs or negation. Relational forms such as associated with, related to and based on are retained; clear adjectives such as prepared to meaning ready are excluded. Coordinated participles sharing an auxiliary count once. Reduced clauses and get-passives are excluded. This form-based measure should not be read as an exhaustive measure of verbal passives or impersonality. The full search list and decision rules accompany the workbook.

Inter-rater agreement was calculated from the two independent human-coding files before any comparison of decisions. For rhetorical categories, raw agreement was 85.7% for S1B (κ=.715), 79.9% for M2 (κ=.603), 78.6% for S2A (κ=.578), 95.5% for S2B (κ=.206), 100% for M3 (κ=1.000), 99.4% for S3A (κ=.906), and 98.1% for S3B (κ=.000); M1 and S1A were invariant. For linguistic candidates, agreement was 95.2% for hedges (κ=.844), 84.3% for self-mentions (κ=.480), and 99.2% for overt be-passives (κ=.361), with 95.7% overall agreement (κ=.735). The low κ values for S2B, S3B and passives are interpreted alongside raw agreement because the coding distributions were strongly imbalanced. Shared candidate retrieval still leaves potentially missed forms unassessed. The inter-rater analysis serves as a reliability check; Tables 1 and 2 report the final checked analytical dataset.

2.4. Statistical procedures

Each rhetorical category is compared in a separate 2 × 2 table of journal group by presence or absence. Repeated realizations count once. Pearson's χ^2 without continuity correction is used when all expected counts are at least five; otherwise a two-sided Fisher exact test is used. Universal categories are descriptive. Holm correction covers nine planned comparisons, and rows are not pooled as independent occurrences.

Raw linguistic totals and pooled rates per 1,000 words describe the sub-corpora. Two-sided Mann–Whitney U tests compare per-article rates, with asymptotic tie and continuity corrections. Median [IQR] and rank-biserial r summarize distributions and effects; $r=2U/(nVDI \times nIJI)-1$, with negative values indicating lower VDI rates. Holm correction covers three comparisons at .05.

Sensitivity analyses exclude PDF_091 (89 VDI and 64 IJI articles). All tests are exploratory. They do not adjust for journal clustering, topic or year, and therefore do not estimate a national publication-context effect.

3. Results

The following results use the 154-article corpus and the final checked dataset. Unequal group sizes are retained, and linguistic comparisons use the actual Introduction word counts. The evidence workbook records the coding decisions and source passages used in the analysis.

3.1. Macro-Structural move configuration and step distributions (RQ1 & RQ2)

Move 1 and established knowledge (S1A) occur in every Introduction (Table 1). Local contextualization is coded in 56 VDI introductions (62.9%) and 34 IJI introductions (52.3%), with no adjusted statistical difference. Move 2 occurs in 59 VDI introductions (66.3%) and 63 IJI introductions (96.9%; $\chi^2=21.411$, adjusted $p<.001$). The gap step, S2A, occurs in 59 VDI introductions (66.3%) and 61 IJI introductions (93.8%; $\chi^2=16.578$, adjusted $p<.001$).

Table 1. *Article-level occurrence of rhetorical moves and steps*

Move / Step	VDI n (%)	IJI n (%)	Test / χ^2	p Holm
Move 1: Background	89 (100.0)	65 (100.0)	—	—
Step 1A: Established knowledge	89 (100.0)	65 (100.0)	—	—
Step 1B: Local context	56 (62.9)	34 (52.3)	1.742	1.000
Move 2: Niche	59 (66.3)	63 (96.9)	21.411	<.001
Step 2A: Research gap	59 (66.3)	61 (93.8)	16.578	<.001
Step 2B: Continuation	5 (5.6)	20 (30.8)	17.475	<.001
Move 3: Current study	86 (96.6)	64 (98.5)	Fisher	1.000
Step 3A: Present study/aim	86 (96.6)	64 (98.5)	Fisher	1.000
Step 3B: Principal findings	2 (2.2)	2 (3.1)	Fisher	1.000

Note*. Cells show articles with the category, n (%). Pearson χ^2 is shown where expected counts permit; "Fisher" denotes the exact test. Adjusted p-values use Holm correction across nine planned comparisons. A dash denotes no test because the category occurs in every article. Categories may overlap within an article.*

S2B occurs in 5 VDI and 20 IJI introductions (5.6% and 30.8%; adjusted $p<.001$). S3A is nearly universal (96.6% and 98.5%); S3B occurs in two articles per group (2.2% and 3.1%; adjusted $p=1.000$). The S2B contrast should be interpreted cautiously because identifying continuation requires contextual judgment.

3.2. Selected stance resources and passive constructions (RQ3)

None of the three adjusted linguistic comparisons reaches .05: hedges, U=2432.5, p=.185, r=−.159; self-mentions, U=2251, p=.0518, r=−.222; passives, U=2841, p=.852, r=−.018. IJI pooled hedge and self-mention rates are descriptively higher. When PDF_091 is excluded, the adjusted self-mention p-value decreases to .0498, indicating sensitivity to sample composition rather than a stable group difference. The rhetorical comparisons retain their significance conclusions in that exclusion analysis.

Table 2. *Selected stance resources and overt be-passive*

Measure / feature	VDI raw (per 1,000)	IJI raw (per 1,000)	p Holm
Articles	89	65	—
Introduction words	37,650	34,452	—
Selected hedging resources	187 (4.97)	220 (6.39)	.185
Authorial self-mentions	82 (2.18)	126 (3.66)	.052
Overt be-passive constructions	466 (12.38)	434 (12.60)	.852

Note*. Feature cells show count (pooled rate per 1,000 words); p-values are Holm-adjusted article-level Mann–Whitney comparisons. Median [IQR]: hedges, VDI 4.02 [2.48–7.04], IJI 5.28 [2.71–9.59]; self-mentions, 2.03 [0.00–3.39], 3.18 [0.91–5.52]; overt be-passives, 11.53 [7.46–17.24], 12.64 [7.19–16.09].*

4. Discussion

4.1. Rhetorical structure and the realization of move 2 (RQ1 & RQ2)

Explicit knowledge gaps are more prevalent in the selected IJI introductions. This pattern is clear in the final dataset, although recognition of a rhetorical gap still depends on contextual judgment. The result concerns the presence of a selected rhetorical function in these texts; it does not establish a general difference in national writing conventions or article quality.

Local contextualization can give a study clinical relevance without identifying missing knowledge. PDF_160 presents the Vietnamese burden of childhood pneumonia before stating an antibiotic-use objective; this motivates a local investigation without explicitly asserting a literature gap. PDF_017, by contrast, reviews limitations of earlier galectin-3 studies before introducing a Vietnamese prognostic investigation. IJI also uses contextual grounding: PDF_071 discusses atrial-fibrillation prevalence and telehealth provision in Taiwan. A country mentioned only as the study site or within a cited study does not serve the same rhetorical function. These distinctions explain why local context and gap construction require separate decisions.

Continuation connects the present investigation to an established line of work. PDF_071 links earlier telehealth research to an unresolved question about atrial-fibrillation patients; PDF_025 extends psychiatric-disorder research through broader coverage and methodological refinement. These passages can both identify a limitation and continue earlier work, allowing S2A and S2B to co-occur. S2B is more frequent in the IJI sample in the final coding, but this contrast should be read cautiously because continuation is a context-sensitive category. The documented passages are therefore important to its interpretation.

Principal-finding previews are rare and require a different decision from aim announcements. PDF_012 (DOI: 10.15419/bmrat.v12i5.979) reports improved growing-oocyte quality after combined supplementation; PDF_038 (DOI: 10.1186/s12916-022-02699-1) identifies a candidate gene found in the current analysis. Each gives an empirical outcome that answers what the study found. By contrast, PDF_088 (DOI: 10.1371/journal.pmed.1004807) says the findings could help optimize screening resources: this predicts a use without specifying the supporting result. An aim states what was investigated; an outcome preview states what emerged; an application projects why it may matter. These distinctions also explain why a vague reference such as “our findings” is insufficient for S3B unless a substantive current-study result is explicitly stated. A preview lets readers see the contribution early, while an aim-led introduction leaves its outcome to later sections. Neither choice by itself establishes quality. With only two final instances per group, the result supports case analysis rather than a general claim about journal practice.

4.2. Stance and syntax: authorial positioning in medical research writing (RQ3)

Self-mention identifies what the authors take responsibility for. In PDF_017, we designed this study introduces a prognostic objective; in PDF_071, our group previously showed connects the current work to the authors’ earlier investigation. These roles help interpret author presence beyond a count. The higher pooled IJI rate does not establish greater authority, and its adjusted comparison is not significant in the primary analysis.

The passive comparison gives no clear evidence of a group difference. PDF_005 uses can be associated in a biomedical relationship; PDF_019 describes how a score is calculated. Neither construction alone establishes authorial impersonality. Grammatical form must be interpreted with its participants and proposition [16], [20], especially because the operational measure retains relational participial forms.

Hedges qualify different aspects of a claim: a numerical approximator limits precision, whereas a modal or tentative reporting verb can qualify an explanation or projected effect [14], [15]. Although IJI has a higher pooled rate, article-level variation prevents an adjusted significant comparison. This selected-form measure does not describe every possible expression of caution.

The passage examples connect rhetorical purpose and author representation: PDF_017 moves from limitations in earlier research to a first-person aim, while PDF_071 links continuity with author identity. This is a qualitative interpretation of their argument. The tables compare parallel distributions and do not establish a statistical association between resources and moves.

4.3. Implications for English for research publication purposes

Vietnamese academic writing research provides a useful educational context [5], [21], but this study does not investigate training, writing processes or editorial feedback. Its teaching implications arise from the texts, rather than an explanation of why their authors wrote differently.

An ERPP task can ask learners to distinguish clinical importance from missing knowledge. PDF_160 and PDF_017 offer contrasting ways to connect a Vietnamese healthcare concern to an investigation. Learners can identify whether the aim follows from a stated gap or a local clinical need, then revise their own rationale accordingly.

Further tasks can separate a result preview from an expected application and ask what a first-person reference contributes to the argument. Passive examples can prompt discussion of which participant is backgrounded. These are choices for a target journal and research purpose; classroom effectiveness was not tested.

Genre-based guidance supports feedback on whether the rationale is clear, the aim follows from it and claims are appropriately qualified [9], [19]. Both groups provide useful examples. The comparison is a resource for discussing writing choices, rather than a model that ranks one group above the other.

4.4. Limitations and future research

The purposive groups differ in journal, topic and article composition. Article-level tests avoid treating repeated occurrences as independent but leave journal clustering unadjusted. Year counts do not establish stable conventions. Although the full corpus received an independent reliability check, some sparse or highly prevalent categories produced low κ despite high raw agreement, so context-sensitive categories should still be interpreted cautiously. Shared candidate retrieval may also miss forms, while the closed hedge list and overt be-passive rule limit coverage. Excluding the umbrella review shows sensitivity to sample composition rather than removing uncertainty.

Further research could match journals and topics, obtain another trained human reader's adjudication of disputed passages, and link linguistic instances to rhetorical segments. Writing-process evidence would be needed to explain the patterns through training or editorial expectations.

5. Conclusion

In these 154 English-language introductions, explicit gap construction is more prevalent in the selected international-journal sample. Continuation of earlier work is also more frequent in the final IJI coding, although this context-sensitive category should be interpreted cautiously. Principal findings are rarely previewed. None of the three linguistic comparisons reaches the adjusted threshold in the primary sample, and self-mention remains sensitive to review inclusion.

The contribution is a corpus-specific account of how sampled introductions justify research and represent authors. Rhetorical functions, selected stance resources and grammatical voice remain distinct; passive frequency alone does not measure stance. The findings do not establish national conventions or differences in academic quality.

Declaration on the use of generative AI: ChatGPT (OpenAI) was used solely for language editing to improve wording, grammar, sentence clarity and readability. The author reviewed and approved the final manuscript and takes full responsibility for its content.

REFERENCES

[1] J. Flowerdew, "Some thoughts on English for Research Publication Purposes (ERPP) and related issues," *Language Teaching*, vol. 48, no. 2, pp. 250–262, 2015. DOI: https://doi.org/10.1017/S0261444812000523

[2] K. Hyland, *Disciplinary Discourses: Social Interactions in Academic Writing*. Ann Arbor, MI, USA: University of Michigan Press, 2004. DOI: https://doi.org/10.3998/mpub.6719

[3] M. Cargill and P. O'Connor, *Writing Scientific Research Articles: Strategy and Steps*, 3rd ed. Hoboken, NJ, USA: Wiley-Blackwell, 2021.

[4] A. Clarke et al., "A bibliometric overview of public health research in Europe," *European Journal of Public Health*, vol. 17, suppl. 1, pp. 43–49, 2007. DOI: https://doi.org/10.1093/eurpub/ckm063

[5] M. J. Evans, "A study of academic genre: Exploring writing in English for university purposes with Vietnamese students," *VNU Journal of Foreign Studies*, vol. 35, no. 1, pp. 68–83, 2019. DOI: https://doi.org/10.25073/2525-2445/vnufs.4338

[6] T. N. P. Tran, "Examining syntactic and lexical features of the introduction of English M.A. theses in linguistics in Vietnam and Australia," *The University of Danang - Journal of Science and Technology*, vol. 6, no. 103, pp. 101–105, 2016. URL: https://jst-ud.vn/jst-ud/article/view/3489

[7] J. M. Swales, *Genre Analysis: English in Academic and Research Settings*. Cambridge, UK: Cambridge University Press, 1990.

[8] J. M. Swales, *Research Genres: Explorations and Applications.* Cambridge, UK: Cambridge University Press, 2004.

[9] B. Paltridge and S. Starfield, *Thesis and Dissertation Writing in a Second Language: A Handbook for Students and Their Supervisors*, 2nd ed. London, UK: Routledge, 2019. DOI: https://doi.org/10.4324/9781315170022

[10] B. S. C. Kwan, "The schematic structure of literature reviews in doctoral theses of applied linguistics," *English for Specific Purposes,* vol. 25, no. 1, pp. 30–55, 2006. DOI: https://doi.org/10.1016/j.esp.2005.06.001

[11] M. R. Atai and P. Habibie, "Genre analysis of applied linguistics research article introductions: Exploring sub-disciplinary variations," *Taiwan International ESP Journal*, vol. 4, no. 1, pp. 25–44, 2012.

[12] K. N. Nwogu, "The medical research paper: Structure and functions," *English for Specific Purposes*, vol. 16, no. 2, pp. 119–138, 1997. DOI: https://doi.org/10.1016/S0889-4906(97)85388-4

[13] B. Kanoksilapatham, "Rhetorical structure of biochemistry research articles," *English for Specific Purposes*, vol. 24, no. 3, pp. 269–292, 2005. DOI: https://doi.org/10.1016/j.esp.2004.08.003

[14] K. Hyland, *Metadiscourse: Exploring Interaction in Writing*, 2nd ed. London, UK: Bloomsbury Academic, 2018.

[15] F. Salager-Meyer, "Hedges and textual communicative function in medical English written discourse," *English for Specific Purposes,* vol. 13, no. 2, pp. 149–170, 1994. DOI: https://doi.org/10.1016/0889-4906(94)90013-2

[16] M. A. K. Halliday and C. M. I. M. Matthiessen, *Halliday's Introduction to Functional Grammar, 4th ed*. London, UK: Routledge, 2014.

[17] X. Xu and H. Nesi, "Evaluation in research article introductions: A comparison of the strategies used by Chinese and British authors," *Text & Talk,* vol. 39, no. 6, pp. 797–818, 2019. DOI: https://doi.org/10.1515/text-2019-2046

[18] P. D. Pho, "Research article abstracts in applied linguistics and educational technology: A study of linguistic realizations of rhetorical structure and authorial stance," *Discourse Studies*, vol. 10, no. 2, pp. 231–250, 2008. DOI: https://doi.org/10.1177/1461445607087010

[19] T. L. Dinh, "Improving structures of students' argumentative essays through genre pedagogy," *The University of Danang - Journal of Science and Technology,* vol. 6, no. 127, pp. 59–63, 2018. URL: https://jst-ud.vn/jst-ud/article/view/700

[20] D. Biber and B. Gray, *Grammatical Complexity in Academic English: Linguistic Change in Writing.* Cambridge, UK: Cambridge University Press, 2016. DOI: https://doi.org/10.1017/CBO9780511920776

[21] K. N. Trinh and P. D. Pho, "English academic writing through the lens of culture: Implications for current practices in Vietnam," *VNUHCM Journal of Science and Technology Development*, vol. 27, Special Issue, pp. 56–63, 2024. DOI: https://doi.org/10.32508/stdj.v27iSI.4409