

# **Move and Steps Analysis on High Impact Scopus-Indexed Electrical Engineering Research Articles**

A Research Paper

Submitted as Partial Fulfillment of the Requirements for *Sarjana Sastra* Degree of English Language and Literature Study Program



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**2024**

**PAGE OF APPROVAL**

**MOVE AND STEPS ANALYSIS ON HIGH-IMPACT SCOPUS-INDEXED  
ELECTRICAL ENGINEERING RESEARCH ARTICLES**

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Sebuah skripsi yang diajukan untuk memenuhi salah satu syarat memperoleh gelar Sarjana Sastra  
pada Fakultas Pendidikan Bahasa dan Sastra

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# **Move and Steps Analysis on High Impact Scopus-Indexed Electrical Engineering Research Articles**

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## **Abstract**

Publishing research articles is essential in academia to add new knowledge and enhance previous discoveries. Engineering is a leading field in terms of publication volume. Therefore, understanding how to write research articles using proper language and a solid rhetorical framework, often the IMRD pattern, is essential. This study examines the rhetorical structures of 30 highly cited Electrical Engineering Research Articles (EERAs) published in international journals indexed by Scopus, using the combinatory framework for Abstract (Hyland, 2000), Introduction (Swales, 2004), Method (Cotos et al., 2017), and Results & Discussion (Moreno & Swales, 2018). The analysis was carried out to identify the presence of steps in each section, which was described through percentages with categorization by Kanoksilapatham (2005). The study identified the moves and steps in each section, with 11 conventional moves from the abstract to the conclusion (i.e. four steps in the abstract, three steps in the introduction, two steps in the method, and two steps in the results and conclusion) that showing framework applicability and highlighting structural flexibility based on purpose. This research provides new insights into EERAs' rhetorical structures and contributes to linguistics, though further studies with large corpora are recommended.

Keywords: Electrical Engineering, Linguistic, Move Analysis, Rhetorical Structure

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## Acknowledge

This research was part of the more extensive study conducted by Eri Kurniawan, whose vision and guidance were instrumental in shaping it. We also want to thank all the researchers and team members who contributed their time, expertise, and dedication throughout the research process.

## References

- Abarghoeeinezhad, M., & Simin, S. (2015). A structural move analysis of abstract in electronic engineering articles. *International Journal of Research Studies in Language Learning*, 4(4), 69-80. <https://doi.org/10.5861/ijrsl.2015.1073>
- Abdollahpour, Z., & Gholami, J. (2019). Rhetorical structure of the abstracts of medical sciences research articles. *Prensa Medica Argentina*, 105(1), 1-5. <https://doi.org/10.47275/0032-745x-114>
- Aghaei Chadegani, A., Salehi, H., Md Yunus, M. M., Farhadi, H., Fooladi, M., Farhadi, M., & Ale Ebrahim, N. (2013). A comparison between two main academic literature collections: Web of science and Scopus databases. *Asian Social Science*, 9(5), 18-26. <https://doi.org/10.5539/ass.v9n5p18>
- Alamri, B. (2020). A comparative study of Saudi and international journals of applied linguistics: The Move-bundle connection approach. *Journal of Language and Education*, 6(2), 9-30. <https://doi.org/10.17323/JLE.2020.10531>
- Annuai, W., & Wannaruk, A. (2013). Investigating move structure of English applied linguistics research article discussions published in international and Thai journals. *English Language Teaching*, 6(2), 1-13. <https://doi.org/10.5539/elt.v6n2p1>
- Bazerman, C. (1984). The writing of scientific non-fiction: Contexts, choices, constraints. *Pre/Text*, 5(1), 39-74.
- Bornmann, L., & Daniel, H. D. (2008). What do citation counts measure? A review of studies on citing behavior. *Journal of Documentation*, 64(1), 45-80. <https://doi.org/10.1108/00220410810844150>
- Bornmann, L., & Marx, W. (2013). How good is research really? Measuring the citation impact of publications with percentiles increases correct assessments and fair comparisons. *EMBO Reports*, 14(3), 226-230. <https://doi.org/10.1038/embor.2013.9>
- Cotos, E., Huffman, S., & Link, S. (2017). A move/step model for methods sections: Demonstrating rigour and credibility. *English for Specific Purposes*, 46, 90-106. <https://doi.org/10.1016/j.esp.2017.01.001>
- Couch, Y. (2020). Why does a high-impact publication matter so much for a career in research? *Nature*. <https://doi.org/10.1038/d41586-020-02875-4>
- Darabad, A. M. (2016). Move analysis of research article abstracts: A cross-disciplinary study. *International Journal of Linguistics*, 8(2), 125-140. <https://doi.org/10.5296/ijl.v8i2.9379>
- Davis, R. H. (2020). Moves and steps in the IMRD sections of medical research articles. *Taiwan International ESP Journal*, 11(1), 23-39. [https://doi.org/10.6706/TIESPJ.202008\\_11\(1\).0002](https://doi.org/10.6706/TIESPJ.202008_11(1).0002)
- Dos Santos, M. B. (1996). The textual organization of research paper abstracts in applied linguistics. *Text*, 16(4). <https://doi.org/10.1515/text.1.1996.16.4.481>
- Espina-Romero, L., & Guerrero-Alcedo, J. (2022). Fields touched by digitalization: Analysis of scientific activity in Scopus. *Sustainability*, 14(21), 14425. <https://doi.org/10.3390/su142114425>
- Flowerdew, J. (1999). Writing for scholarly publication in English: The case of Hong Kong. *Journal of Second Language Writing*, 8(2), 123-145. [https://doi.org/10.1016/S1060-3743\(99\)80125-8](https://doi.org/10.1016/S1060-3743(99)80125-8)

- Gao, S., & Pramoolsook, I. (2021). Move-step structure of the results and discussion section of electrical engineering research articles written by Chinese and Thai researchers. *Journal of Teaching English for Specific and Academic Purposes*, 9(4), 725-739. <https://doi.org/10.22190/JTESAP2104725G>
- Gheinani, M. T., & Tabatabaei, O. (2018). A structural move analysis of the abstract section of ISI articles of Iranian and native scholars in the field of agricultural engineering. *International Journal of Research Studies in Language Learning*, 7(3), 109-122. <https://doi.org/10.5861/ijrsl.2017.1864>
- Greene, M. (2007). The demise of the lone author. *Nature*, 450(713), 1165. <https://doi.org/10.1038/4501165a>
- Hamel, R. E. (2007). The dominance of English in the international scientific periodical literature and the future of language use in science. *AILA Review*, 20(1), 53-71. <https://doi.org/10.1075/aila.20.06ham>
- Huang, D. (2013). Genre Analysis of Moves in Medical Research Articles. *Stylus*, 5(1), 7-17.
- Hyland, K. (2000). Disciplinary discourses. Social interactions in academic writing. *Ann Arbor, MI: University of Michigan Press*. The University of Michigan Press.
- Kanoksilapatham, B. (2005). Rhetorical structure of biochemistry research articles. *English for Specific Purposes*, 24(3), 269-292. <https://doi.org/10.1016/j.esp.2004.08.003>
- Kanoksilapatham, B. (2012). Research article structure of research article introductions in three engineering subdisciplines. *IEEE Transactions on Professional Communication*, 55(4), 294-309. <https://doi.org/10.1109/TPC.2012.2223252>
- Kanoksilapatham, B. (2013). Generic characterisation of civil engineering research article abstracts. *3L: Language, Linguistics, Literature*. *3L: The Southeast Asian Journal of English Language Studies*, 19(3), 1-10.
- Kanoksilapatham, B. (2015). Distinguishing textual features characterizing structural variation in research articles across three engineering sub-discipline corpora. *English for Specific Purposes*, 37(1), 74-86. <https://doi.org/10.1016/j.esp.2014.06.008>
- Kaya, F., & Yağiz, O. (2020). Move analysis of research article abstracts in the field of ELT: A comparative study. *Journal of Language and Linguistic Studies*, 16(1), 390-404. <https://doi.org/10.17263/JLLS.712854>
- Koutsantoni, D. (2006). Rhetorical strategies in engineering research articles and research theses: Advanced academic literacy and relations of power. *Journal of English for Academic Purposes*, 5(1), 19-36. <https://doi.org/10.1016/j.jeap.2005.11.002>
- Kurniawan, E., Dallyono, R., & Cahyowati, A. (2019). Exploring logical connectors in journals with different indexing levels: A comparison between international and national indexed journals. *Indonesian Journal of Applied Linguistics*, 9(1), 76-84. <https://doi.org/10.17509/ijal.v9i1.16088>
- Kurniawan, E., Lubis, A. H., Suherdi, D., & Danuwijaya, A. A. (2019). Rhetorical organization of applied linguistics abstracts: Does Scopus journal quartile matter? *GEMA Online Journal of Language Studies*, 19(4), 184. <https://doi.org/10.17576/gema-2019-1904-10>
- Kurniawan, E., & Sabila, N. A. A. (2021). Another look at the rhetorical moves and linguistic realizations in international and Indonesian journal articles: A case of tourism research article abstracts. *Indonesian Journal of Applied Linguistics*, 11(2), 318-329. <https://doi.org/10.17509/ijal.v11i2.32055>
- Li, L. J., & Ge, G. C. (2009). Genre analysis: Structural and linguistic evolution of the English-medium medical research article (1985-2004). *English for Specific Purposes*, 28(2), 93-104. <https://doi.org/10.1016/j.esp.2008.12.004>
- MacDonald, S. P. (2010). *Professional academic writing in the humanities and social sciences*. SIU Press.
- Mack, C. A. (2018). *How to write a good scientific paper full book*.



- Maswana, S., Kanamaru, T., & Tajino, A. (2015). Move analysis of research articles across five engineering fields: What they share and what they do not. *Ampersand*, 2, 1-11. <https://doi.org/10.1016/j.amper.2014.12.002>
- Meng, Y. (2021). Move-step structure of the introduction section of English medical science research articles written by Chinese researchers Published in International Journals. *Review of Educational Theory*, 4(2), 36-41. <https://doi.org/10.30564/ret.v4i2.3111>
- Moreno, A. I., & Swales, J. M. (2018). Strengthening move analysis methodology towards bridging the function-form gap. *English for Specific Purposes*, 50, 40-63. <https://doi.org/10.1016/j.esp.2017.11.006>
- Musa, N. F., Khamis, N., & Zanariah, J. (2015). The structure of method section in engineering research articles. *Asian Social Science*, 11(17), 74. <https://doi.org/10.5539/ass.v11n17p74>
- Nasirizadeh, Z., Paramasivam, S., Nimehchisalem, V., & Omar, N. (2022). Rhetorical Structures and Cyclical Patterns in Forestry Research Articles. *GEMA Online Journal of Language Studies*, 22(2), 288–311. <https://doi.org/10.17576/gema-2022-2202-15>
- Nwogu, K. N. (1997). The medical research paper: Structure and functions. *English for Specific Purposes*, 16(2), 119-138. [https://doi.org/10.1016/S0889-4906\(97\)85388-4](https://doi.org/10.1016/S0889-4906(97)85388-4)
- Orwin, R. G., & Vevea, J. L. (2009). Evaluating coding decisions. *The handbook of research synthesis and meta-analysis*, 2, 177-203.
- Peacock, M. (2011). The structure of the methods section in research articles across eight disciplines. *The Asian ESP Journal*, 7(2), 99-124.
- Posteguillo, S. (1999). The schematic structure of computer science research articles. *English for Specific Purposes*, 18(2), 139–160. [https://doi.org/10.1016/S0889-4906\(98\)00001-5](https://doi.org/10.1016/S0889-4906(98)00001-5)
- Pratiwi, S. N., & Kurniawan, E. (2021). Rhetorical move and genre knowledge development of English and Indonesian abstracts: A comparative analysis. *Studies in English Language and Education*, 8(3), 885–900. <https://doi.org/10.24815/siele.v8i3.21038>
- San, L. Y., & Tan, H. (2012). A comparative study of the rhetorical moves in abstracts of published research articles and students' term papers in the field of computer and communication systems engineering. *International Journal of Applied Linguistics and English Literature*, 1(7), 40-50. <https://doi.org/10.7575/ijalel.v.1n.7p.40>
- Shi, H., & Wannaruk, A. (2014). Rhetorical structure of research articles in agricultural science. *English Language Teaching*, 7(8), 1–13. <https://doi.org/10.5539/elt.v7n8p1>
- Swales, J. M. (1990). *Genre analysis: English in academic and research setting*. Cambridge: Cambridge University Press.
- Swales, J. M. (2004). *Research Genres: Exploration and Applications*. Research Genres.
- Syifa Fauzia Qurratu'aini, Eri Kurniawan, & Arif Husein Lubis. (2022). Rhetorical move analysis of science and engineering abstracts rejected in a Scopus-indexed journal. *RETORIKA: Jurnal Ilmu Bahasa*, 8(1), 38-47. <https://doi.org/10.55637/jr.8.1.4846.38-47>
- Tikhonova, E. V., Kosycheva, M. A., & Golechkova, T. Y. (2023). Research article discussion moves and steps in papers on medicine: academic literacy and respect for readers. *Research Result. Theoretical and Applied Linguistics*, 9(2), 97-128. <https://doi.org/10.18413/2313-8912-2023-9-2-0-6>
- Wannaruk, A., & Amnuai, W. (2016). A comparison of rhetorical move structure of applied linguistics research articles Published in International and National Thai Journals. *RELC Journal*, 47(2), 193–211. <https://doi.org/10.1177/0033688215609230>
- Yang, M. (2022). Connecting the Functions of Lexical Bundles and Moves in Published Research Articles: The Case of Developmental and Educational Psychology. *Nordic Journal of English Studies* 21(1), 141-189.

- Ye, Y. (2019). Macrostructures and rhetorical moves in energy engineering research articles written by Chinese expert writers. *Journal of English for Academic Purposes*, 38, 48-61. <https://doi.org/10.1016/j.jeap.2019.01.007>
- Yoon, J., & Casal, J. E. (2020). Rhetorical structure, sequence, and variation: A step-driven move analysis of applied linguistics conference abstracts. *International Journal of Applied Linguistics (United Kingdom)*, 30(3), 462–478. <https://doi.org/10.1111/ijal.12300>