



Rhetorical moves in medical research article introductions: Alternative strategies adopted by English and German native speakers

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Motivation

- Deepen understanding of cultural writing practices
- Further knowledge of existing conventions within students' discipline

=> Central aim: to broaden awareness of potential rhetorical strategies

Study focus

- Investigation into rhetorical moves/steps in introductions to German/English medical empirical research articles
- Adoption of an intercultural rhetoric approach
- Emphasis on robust methodology

Methodology

Step	Action
1	Construct two matched corpora of 50 English and 50 German language medical research article introduction sections
2	Use rhetorical move analysis to classify every move/step in each introduction
3	Determine the frequency of each step and the proportion of each introduction devoted to each step
4	Compare the frequencies and proportions of each move/step appearing in the two corpora
5	Use the Mann-Whitney statistical test to determine the statistical significance of any identified differences
6	Identify which texts in the two corpora embody the identified differences
7	Apply a qualitative text analysis approach to gain an insight into the nature of these differences

Move/step framework¹

Move 1: Establish the territory	Citation Toolbox
Step 1: Claiming centrality	Gait 1: Describing aims/methodology of existing studies
Step 2: Providing general background	Gait 2: Reporting findings of existing studies
Step 3: Providing a point of departure	Gait 3: Reporting speculations of existing studies
	Gait 4: Evaluating existing studies
Move 2: Identifying a niche	
Step 1: Indicating a gap	
Step 2: Highlighting a problem in practice	
Step 3: Raising general questions	
Step 4: Presenting potential benefits	

¹ Based on model proposed by Cotos, E., Huffman, S. & Link, S., 2015. Furthering and applying move/step constructs: Technology-driven marshalling of Swalesian genre theory for EAP pedagogy. *Journal of English for Academic Purposes*, 19, p56

Move/step framework (ctnd.)

Move 3: Addressing the niche

Step 1: Introduce current research (description/aim)

Step 2: Present research questions/hypothesis

Step 3: Clarify definitions

Step 4: Summarize methods

Step 5: State the value of current research

Step 6: Outline structure of article

Step 7: Detail assumptions

Significant differences observed in the way writers

- reference other scholars' contributions (Move 1)
- establish the necessity of their own research (Move 2)

Referencing others

- Some similarities in use and function of citations
- Some disparate cultural patterns in the use of Gaits 1 and 4

Gait 1

- more frequently used by US-American authors to:
 - I. point readers towards additional sources
 - II. establish credibility by illustrating knowledge of field

e.g. **“Organizations such as the American Medical Association (AMA), the Institute of Medicine, the Association of Academic Medical Colleges (AAMC) and the Clinical Research Forum (CRF) have analyzed clinical and translational research operations within member institutions (refs).”²**

² Harris, P.A., Swafford, J.A., Edwards, T.L., Zhang, M., Nigavekar, S.S., Yarbrough, T.R., Lane, L.D., Helmer, T., Lebo, L.A., Mayo, G., Masys, D.R., Bernard, G.R. and Pulley, J.M., 2011. StarBRITE: The Vanderbilt University Biomedical Research Integration, Translation and Education portal. *Journal of Biomedical Informatics*, 44(4), p.655.

Gait 1:

- more frequently used by US-American authors to:

III. contest others' scope of focus

e.g. **“Several studies have compared the GlideScope video laryngoscope and C-MAC to direct laryngoscopy (refs.) but no study has directly compared the GlideScope video laryngoscope with C-MAC in the ED, to our knowledge.”**³

³ Sakles, J., Mosier, J., Chiu, S. and Patanwala, A., 2012. 173 A Comparison of the GlideScope® Video Laryngoscope to the C-MAC® Video Laryngoscope for Tracheal Intubation in the Emergency Department. *Annals of Emergency Medicine*, 60(4), p.415

Gait 4:

- more frequently used by German authors to:

- I. contest the findings/methodology of others

e.g. **“While that report helped to clarify the indications for nonoperative management, it was limited by short follow-up and a small sample size.”⁴**

⁴ Chan, K., Macdermid, J.C., Faber, K.J., King, G.J.W. and Athwal, G.S., 2014. Can We Treat Select Terrible Triad Injuries Nonoperatively? *Clinical Orthopaedics and Related Research*®, 472(7), p.2093

Justifying research

- Similarity in use of Step 2.1 across both groups
- Disparate cultural patterns in alternative approaches

Step 2.2

- more frequently used by German authors to:

- I. root their research in practice with problem-oriented approach

e.g. „Vor diesem Hintergrund empfiehlt die International Medical Informatics Association (IMIA) Lehrveranstaltungen in Medizinischer Informatik im Umfang von 40 Stunden in der ärztlichen Ausbildung (ref.). **Dies wird derzeit in Deutschland nicht erreicht. In einer Umfrage der GMDS-Projektgruppe „MI-Lehre in der Medizin“ im Jahr 2012 lag der Umfang der Lehre in Medizinischer Informatik an den medizinischen Fakultäten in Deutschland zwischen 4 und 30 Stunden.**“⁵

⁵ Dugas, M., Röhrig, R. und Stausberg, J., 2012. Welche Kompetenzen in Medizinischer Informatik benötigen Ärztinnen und Ärzte? Vorstellung des Lernzielkatalogs Medizinische Informatik für Studierende der Humanmedizin. *GMS Medizinische Informatik, Biometrie und Epidemiologie*, 8(1), p.2

Step 2.4

- more frequently used by US-American authors to:

- I. highlight the potential benefits of their research

e.g. **“A better understanding of risk factors for BL-SCFE could help resolve the ongoing controversy surrounding the role of prophylactic pinning of the contralateral hip in patients presenting with unilateral SCFE (UL-SCFE)”⁶**

⁶ Nasreddine, A.Y., Heyworth, B.E., Zurakowski, D. and Kocher, M.S., 2013. A Reduction in Body Mass Index Lowers Risk for Bilateral Slipped Capital Femoral Epiphysis. *Clinical Orthopaedics and Related Research*[®], 471(7), p.2138

Implications

- Provided insights into discipline-specific rhetoric strategies
- Improved understanding of cultural similarities/differences
- Extended schema for introduction sections