

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

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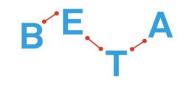
- Freelance trainer in English for Research Purposes
- Specialize in maths and the life sciences
- Deliver workshops for graduate schools in Germany



Motivation

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

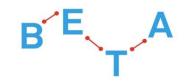
=> Central aim: to broaden awareness of potential rhetorical strategies



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

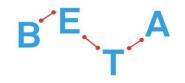
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Move 1: Establish the territory	Citation Toolbox
Step 1: Claiming centrality	Gait 1: Describing aims/methodology of existing studies
Step 2: Providing general background	Gait 2: Reporting findings of existing studies
Step 3: Providing a point of departure	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	



Move/step framework (ctnd.)

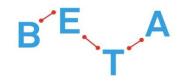
Move 3: Addressing the niche	
Step 1: Introduce current research (description/aim)	
Step 2: Present research questions/hypothesis	
Step 3: Clarify definitions	
Step 4: Summarize methods	
Step 5: State the value of current research	
Step 6: Outline structure of article	
Step 7: Detail assumptions	



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

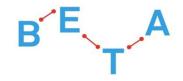


Gait 1

- 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.

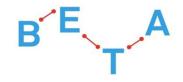


Gait 1:

• more frequently used by US-American authors to:

III. contest others' scope of focus

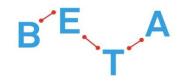
e.g. "Several studies have compared the GlideScope video laryngoscope and C-MAC to direct laryngoscopy (refs.) but no study has directly compared the GlideScope video laryngoscope with C-MAC in the ED, to our knowledge."³



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



Justifying research

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

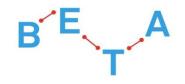


Step 2.2

- 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



Implications

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