

## An empirical, genre-based approach to Academic Writing for Doctoral Research

Modena, 13/11/24

### Conventions & Genres in Academic Research. From Science Communication to Practical PhD Writing

Josef Schmieid  
English Language & Linguistics  
Chemnitz University of Technology  
[https://www.tu-chemnitz.de/phil/english/sections/ling/presentations\\_js.php](https://www.tu-chemnitz.de/phil/english/sections/ling/presentations_js.php)  
[josef.schmieid@phil.tu-chemnitz.de](mailto:josef.schmieid@phil.tu-chemnitz.de)  
<http://tinyurl.com/Josef.Schmieid>



## Background: Personal Experience

BIG Research Projects:

- SFB: Identity in Africa: A5 Sociolinguistics of English variation in Africa, International Corpus of English – East Africa (=Kenya, Tanzania)
- Lampeter Corpus of EModE Tracts (1640-1740) (DFG)
- Internet Grammar of English (DFG; incl. stratified English-German Translation Corpus)
- Academic & Journalistic Writing (DAAD; SE Europe, Africa, China)
- SFB/CRC: Hybrid Societies: Humans interacting with embodied digital technologies: D03 Credibility & Language Varieties: Acceptance of conversational pedagogical agents (Chinese, Italian, Czech "Accents")
- Marie Curie: BIG DATA, Emilia+ coordinated by Bologna

## Background: 20 Years Research AcadWriting → SciCom Publications



- Ken Hyland, The "Other" English: Thoughts on EAP and Academic Writing, p. 34
- Philip Shaw, Text Purpose, Text Effects, Text Power: English for Specific Purposes, p. 39
- Maurizio Gotti, Creating a Corpus for the Analysis of Identity Traits in English Specialised Discourse, p. 44
- Michael Hoey, Clumsy English, p. 48

## Digital Scientific Communication

Identity and Visibility in Research  
Dissemination

Edited by  
Ramón Pilo-Alastrué · Isabel Corón

2023

## Background: my Approach to teaching Academic Writing

### methodology

to empower (non-native!) students to compare their own writing with similar texts (genres) in their **discourse community** world-wide at advanced English levels when editing their own writings and considering their **personal stance and identity** as research novices (Hyland 2002, 2012).

compare empirically linguistic and sociobiographical/textual variables

- students with other students,
- progress from BA to MA to PhD theses, 1<sup>st</sup> draft to final theses, etc.

### theoretical concepts:

- inductive learning = students discover usage patterns
- consciousness-raising = students may have noticed intuitively
- systematic functional instruction = form follows function
- integrated explicit instruction = discovery reading-->examples->function?
- based on practical project discussions of our research group with international partners in SE Europe, Czech Rep., Cameroon, China; Germany/Czech Rep./Italy
- general trend: included in MA (PhD) courses world-wide → global perspective

## Science Communication: Academic Research Circle

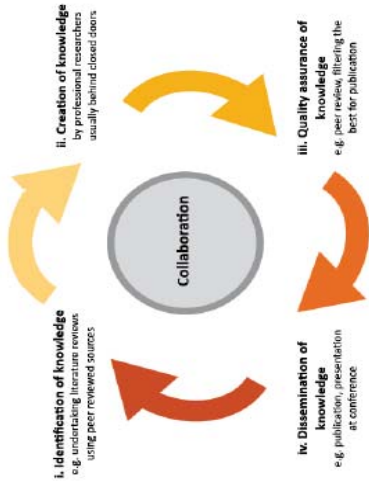


Figure 1: The Academic Research Cycle

(Image from: Carr, A., Dimitrovi, K. & Hooley, I. (2011). *Social Media: A Guide for Researchers*. London: *Research Information Network* p.15.)

## Definition "science communication"

### Answer

Science communication can be defined as:

The organized, explicit, and intentional activities aimed at communicating scientific knowledge, methodology, processes, or practices to audiences that include non-scientists

- 1.
- 2.

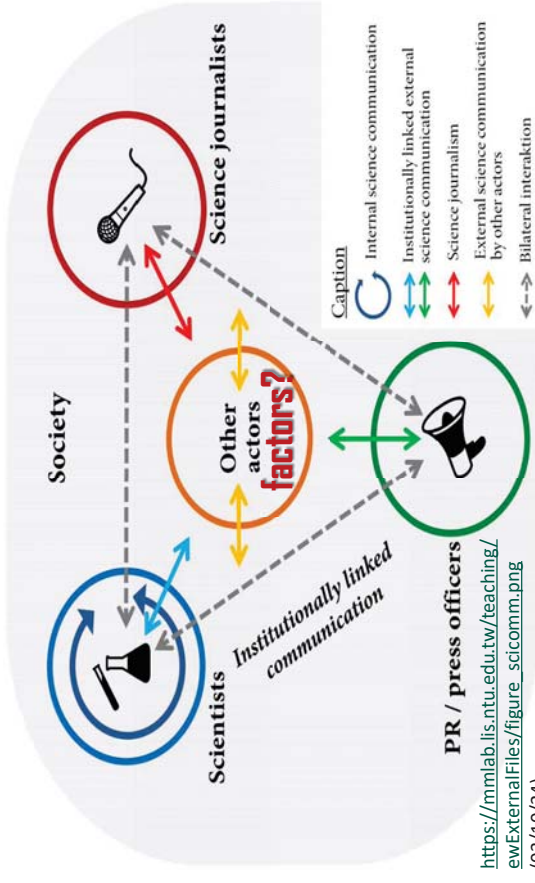
This definition encompasses several key aspects:

1. It involves deliberate efforts to share scientific information, not just incidental communication.
2. The content being communicated relates to science broadly, including scientific findings, methods, and practices.
3. The target audience includes people who are not experts in the scientific topic being discussed, though it may also involve communication between scientists.
4. It can take many forms, including journalism, public events, museum exhibits, social media, and more.
5. The goals often include informing, educating, raising awareness, influencing attitudes or behaviors, and engaging diverse communities on scientific topics.

Some definitions also emphasize that science communication aims to produce specific responses in the audience, such as increased awareness, enjoyment, interest, opinion-formation, and understanding of science. However, the field has moved beyond just a one-way transmission model to also include more dialogic and participatory approaches.

- 🔍 Search Images
- 📺 Search Videos
- 🖨️ Generate Image

## Perplexity image "science communication"



[https://mmlab.lis.ntu.edu.tw/teaching/ewExternalFiles/figure\\_scicomm.png](https://mmlab.lis.ntu.edu.tw/teaching/ewExternalFiles/figure_scicomm.png)  
(03/10/24)

## Perplexity “digital science communication”

### Answer

Digital science communication refers to the use of digital platforms, technologies, and media to share scientific information, engage audiences, and foster dialogue about scientific topics. This emerging field has transformed traditional science communication practices in several key ways:

### Platforms and Channels

Digital science communication utilizes various online platforms, including:

- Social media (e.g. Twitter, Facebook, Instagram, TikTok)
- Video sharing sites (e.g. YouTube)
- Blogs and websites
- Online forums and discussion boards
- Podcasts
- Interactive digital exhibits

These platforms allow for **more direct, immediate, and widespread dissemination** of scientific content compared to traditional media <sup>1</sup> <sup>2</sup>.

## “digital science communication” 2

### Key Characteristics

Digital science communication is characterized by:

- **Multimodality:** Combining text, visuals, audio, and interactive elements to convey scientific information <sup>2</sup>
- **Two-way interaction:** Enabling direct dialogue between scientists and audiences <sup>2</sup>
- **Broader reach:** Overcoming geographical boundaries to reach global audiences <sup>3</sup>
- **Speed and immediacy:** Allowing for rapid sharing of scientific developments <sup>3</sup>
- **User-generated content:** Empowering non-experts to participate in scientific discussions <sup>1</sup>

### Impacts and Challenges

The digital landscape has significantly impacted science communication:

- Increased visibility and accessibility of scientific information
- Pluralization of voices in science discourse
- Potential for misinformation spread and polarization
- Need for scientists to develop digital communication skills
- Blurring boundaries between communicators, content, and audiences <sup>3</sup>

While digital platforms offer new opportunities for engagement, they also present challenges in maintaining content quality, managing online discussions, and adapting to rapidly evolving technologies <sup>2</sup>.

## Perplexity “Conventions”

What are the most important conventions in academic writing?

### Quellen

Key Elements In Academic Writing Conventions - LinkedIn  
 linkedin · 1

Academic Writing Style - Organizing Your Social Sciences Research ...  
 itguides.usc · 2

Conventions & Genres in Academic Writing - Soka University  
 soka · 3

Alle anzeigen

### Antwort

Academic writing is characterized by specific conventions that guide how ideas are presented and communicated within scholarly contexts. Understanding these conventions is crucial for producing clear, credible, and effective academic work. Here are the most important conventions in academic writing:

## Key Conventions in Academic Writing 1

### 1. Objectivity

Academic writing emphasizes objectivity, where the writer minimizes personal bias and focuses on facts and evidence. This often involves avoiding first-person pronouns and presenting arguments based on research rather than personal opinion

### 2. Formality

A formal tone is essential in academic writing. This means avoiding colloquialisms, slang, and contractions, and instead using precise language and complex grammatical structures. The writing should reflect a professional standard appropriate for scholarly communication

### 3. Complexity

Academic texts often exhibit lexical and grammatical complexity. Writers are encouraged to use discipline-specific vocabulary, complex sentences, and passive voice when appropriate to convey nuanced ideas effectively

### 4. Clarity and Explicitness

Clarity is vital; writers must ensure that their arguments are easy to follow. This includes using clear transitions between ideas and explicitly stating the relationships between different parts of the text

### 5. Evidence-Based Reasoning

Arguments in academic writing should be supported by credible evidence from scholarly sources. This involves thorough research and proper citation practices to enhance the validity of claims made

## Key Conventions in Academic Writing 2

### 6. Citing Sources

Proper citation is a cornerstone of academic integrity, allowing readers to verify sources and giving credit to original authors. Different disciplines may require specific citation styles (e.g., APA, MLA, Chicago) that must be adhered to consistently throughout the paper

### 7. Hedging

Writers often use hedging language—such as "may," "might," or "suggests"—to indicate uncertainty or to present claims cautiously. This helps avoid dogmatism and acknowledges the complexity of academic discussions

### 8. Thesis-Driven Structure

Academic papers are typically thesis-driven, meaning they begin with a clear thesis statement that guides the research problem being addressed. The structure should logically flow from the introduction through the body to the conclusion, reinforcing the main argument throughout

### 9. Cohesion and Coherence

The overall organization of an academic paper should be cohesive, with each section logically connected to form a unified whole. This includes using headings and subheadings appropriately to guide readers through the argument.

### 10. Discipline-Specific Conventions

Different academic disciplines may have unique conventions regarding style, structure, and formatting. Writers should familiarize themselves with these specific requirements within their field of study<sup>1</sup>

By adhering to these conventions, writers can produce high-quality academic work that effectively communicates their research findings and engages with existing scholarship in their field.

## ChatGPT: Key Conventions in Academic Writing

In academic writing, conventions help convey ideas clearly, uphold credibility, and maintain a formal, objective tone. Here are some key conventions:

### 1. Formal Language and Tone

- Use precise vocabulary and avoid slang or overly conversational phrases.
- Avoid contractions (use "do not" instead of "don't").
- Maintain an objective tone, focusing on evidence and analysis rather than personal opinions.

### 2. Clear Structure

- **Introduction:** Sets up the topic, context, and purpose, and often includes a thesis statement.
- **Body Paragraphs:** Develop each point logically, with evidence and analysis.
- **Conclusion:** Summarizes the main arguments, restates the thesis in light of the analysis, and may suggest further implications.

- Use headings or subheadings for longer works to enhance clarity.

### 3. Thesis-Driven Argumentation

- An academic paper typically revolves around a central argument or thesis.
- Each paragraph should support or relate to this thesis, developing a clear line of reasoning.

### 4. Evidence and Citation

- Support claims with credible evidence: data, quotations, or research findings.
- Cite sources using a specific citation style (e.g., APA, MLA, Chicago).
- Avoid plagiarism by giving credit to original authors and ideas.

### 5. Objectivity and Neutrality

- Present multiple perspectives where relevant.
- Avoid emotional language; instead, focus on factual analysis and logical reasoning.

## EAP

### Student EAP: "digesting" research

incl. independent search for appropriate information, its critical evaluation and media-specific presentation

prototype genre: "paper" (1-5,000 words)

BA/MA thesis? (20-30,000 words)

### Doctoral EAP: "developing" research

national?

incl. a long-term independent research agenda and presentation of result of a sophisticated innovative project

with subject-specific conventions (MLA, ASA/APA)

prototype genre: PhD thesis (100,000- words?)

### Research EAP: participating in research discourse

international

incl. peer-review procedures and the corresponding discourse

with subject- and journal-specific conventions

prototype genre: research article (5,000-20,000 words)

## Definitions of Academic Writing

### Academic Writing, an old and a new field

Rhetoric = traditional "art" of "persuasion", convincing presentation for an audience/readership --> figures of speech ...

New Rhetoric =

English for Academic Purposes (EAP) vs. English for Specific Purposes (ESP) etc.

### Academic Writing, a theoretical and a practical field

every writer needs to be aware of conventions from seminar paper to international journal publication to Humboldt (AvH) application

### new theoretical basis: from Swales to Hyland

= initiation into the culture and practices of various 'discourse communities' (Swales 1990).

From a social constructionist point of view,

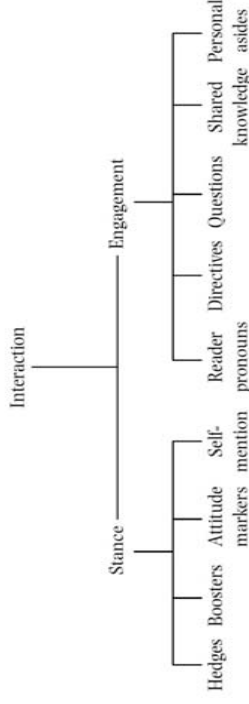
'writing is always a personal and socio-cultural act of identity whereby writers both signal their membership in a range of communities, as well as express their own creative presence' (Hyland 2006: 35; etc.).

## Metalanguage/Metadiscourse

- = language about language/discourse, i.e. information management/reader guidance beyond the plain proposition
- o [academic writing in advanced language/lingua franca \(ELF, Mauranen 2012\)](#)
- o textbooks for teaching:
  - international (Swales/Feak 2012) and national (Siepmann et al. 2011, Hannay/Mackenzie 2017)
- fields of study:
  - “global text management”, argumentation structure (see Schmieid 2018)
  - IMIRaD -> paragraphing -> cohesion (*thus, conclude*)
  - “local” text management”, text cohesion -> cognitive coherence (*first, then*)
  - writer - reader “interaction”, incl. address (*you, we*)
  - writer commitment to the truth value/reliability ... esp. hedging, (epistemic) modal aux/adv. (see also Gao 2012) (*... may contribute, may be correct, ... arguably*)
  - occasionally boosting (*certainly, in fact*)

## Metadiscourse

- o = linguistic devices that assist writers to organize propositions and present them in a way that will be easily understood by readers



Types of reader-writer interaction (Hyland 2005: 177)

- o “global rhetorical structures” and argumentation consistency in headers (title, sections), keywords, etc.

## Research Question

<https://www.scribbr.com/research-process/research-questions/> (28/11/22)



Starting your research

- + Choose your topic
- + Define your problem
- + Research questions
- + Research proposal
- Root cause analysis

### Interesting topics

- Parts of speech
- Working with sources
- IEEE
- Commonly confused words
- Commas
- Definitions
- UK vs. US English
- Research bias
- Nouns and pronouns
- AMA style

A **research question** pinpoints exactly what you want to find out in your work. A good research question is essential to guide your research paper, dissertation, or thesis.

All research questions should be:

- ✓ **Focused** on a single problem or issue
- ✓ **Researchable** using primary and/or secondary sources
- ✓ **Feasible** to answer within the timeframe and practical constraints
- ✓ **Specific** enough to answer thoroughly
- ✓ **Complex** enough to develop the answer over the space of a paper or thesis
- ✓ **Relevant** to your field of study and/or society more broadly

You will usually write a single research question to guide your progress in a research paper or academic essay. Your answer then forms your thesis statement —the central assertion or position that your paper will argue for. A bigger research project, such as a thesis or dissertation, may necessitate multiple research questions or problem statements. However, they should all be clearly connected and focused around a central research problem.

Characteristics of a strong research question



## Research Question



Proofreading & Editing

Pricing

Citation Tools

Resources

ORDER NOW

### What is a Research Question?

A research question is the main question that your study sought or is seeking to answer. A clear research question guides your research paper or thesis and states exactly what you want to find out, giving your work a focus and objective. Learning how to write a hypothesis or research question is the start to composing any thesis, dissertation, or research paper. It is also one of the most important sections of a research proposal.

A good research question not only clarifies the writing in your study; it provides your readers with a clear focus and facilitates their understanding of your research topic, as well as outlining your study's objectives. Before drafting the paper and receiving research paper editing (and usually before performing your study), you should write a concise statement of what this study intends to accomplish or reveal.

### Research Question Writing Tips

Listed below are the important characteristics of a good research question:

- Manuscript Preparation
- Writing Help Center
- Industry Hot Topics
- Online Courses

#### Admissions

- Undergraduate Admissions
- Graduate Admissions
- Admission Videos
- Resume/CV/Cover Letter
- Scholarship/ Fellowships

## Research Question

<https://uwaterloo.ca/writing-and-communication-centre/develop-research-question>

### From a Topic to a Problem

Once you narrow your topic, you need to think about related problems. The goal of research is to answer questions that help to solve one of these larger problems. Using bicycle lanes in urban areas as our topic, we can start to generate some potential problems:

- Bike lanes are not being used
- Bike lanes interfere with traffic flow
- Bike lanes are not consistently integrated into cities
- Bike lanes are not being respected

### Where do I find problems?

Look at current research on your topic in academic articles or reliable web sources. The motivation (or problem) behind others' research is often discussed in the abstract or introduction.

### From a Problem to a Question

Once you find a current problem that can help to motivate your research, you need to develop a question that helps to answer the problem. Let's use one of the problems above as an example.

e.g. **Bike lanes are not consistently integrated into cities.**

- How does public perception of safety affect policy toward bike lane infrastructure?
- How do economic incentives affect policy-making for bicycle lane infrastructure?
- How do municipal level policies affect the design and building of bike lane infrastructure?

### Characteristics of a good question

## Research Question

<https://uwaterloo.ca/writing-and-communication-centre/develop-research-question>

Characteristic	What this means?	Examples
<b>Relevant and interesting</b>	The question is interesting to researchers and others. It seeks to provide some answers to a larger problem in society that has not been fully addressed.	<ul style="list-style-type: none"> <li>• <b>Good:</b> What is the relationship between bicycle lanes in urban commercial zones and business revenue?</li> <li>• <b>Poor:</b> Why is cycling good for your health?</li> </ul>
<b>Focused and precise</b>	The question specifies a research target and variables that will be investigated.	<ul style="list-style-type: none"> <li>• <b>Good:</b> To what degree do bike parks encourage cycling in mid-size metropolitan areas?</li> <li>• <b>Poor:</b> Can good design encourage cycling?</li> </ul>
<b>Novel</b>	The question builds upon previous research on the subject - confirming past research or adding new information.	<ul style="list-style-type: none"> <li>• <b>Good:</b> What is the effect of urban bike lanes on suburban communities?</li> <li>• <b>Poor:</b> What effect do bicycle lanes have on surrounding neighbourhoods?</li> </ul>
<b>Arguable</b>	The question is open-ended with more than one possible answer; however, research is required to provide answers to the question.	<ul style="list-style-type: none"> <li>• <b>Good:</b> How much do dedicated bicycle lanes contribute to lower CO<sub>2</sub> emissions and other air pollutants in urban areas in Canada?</li> <li>• <b>Poor:</b> DO dedicated bicycle lanes lower CO<sub>2</sub> emissions?</li> </ul>
<b>Feasible</b>	The research required to answer the question is available and accessible. Data can be collected and analyzed in the time frame of the project.	<ul style="list-style-type: none"> <li>• <b>Good:</b> How much do dedicated bicycle lanes contribute to lower CO<sub>2</sub> emissions and other air pollutants in Vancouver, Montreal, and Toronto?</li> <li>• <b>Poor:</b> How much do dedicated bicycle lanes contribute to lower CO<sub>2</sub> emissions in major world cities?</li> </ul>

## Research Question

<https://uwaterloo.ca/writing-and-communication-centre/develop-research-question>

### From a Topic to a Problem

Once you narrow your topic, you need to think about related problems. The goal of research is to answer questions that help to solve one of these larger problems. Using bicycle lanes in urban areas as our topic, we can start to generate some potential problems:

- Bike lanes are not being used
- Bike lanes interfere with traffic flow
- Bike lanes are not consistently integrated into cities
- Bike lanes are not being respected

### Where do I find problems?

Look at current research on your topic in academic articles or reliable web sources. The motivation (or problem) behind others' research is often discussed in the abstract or introduction.

### From a Problem to a Question

Once you find a current problem that can help to motivate your research, you need to develop a question that helps to answer the problem. Let's use one of the problems above as an example.

e.g. **Bike lanes are not consistently integrated into cities.**

- How does public perception of safety affect policy toward bike lane infrastructure?
- How do economic incentives affect policy-making for bicycle lane infrastructure?
- How do municipal level policies affect the design and building of bike lane infrastructure?

### Characteristics of a good question

## Research Question ChatGPT

give examples of strong research questions on academic writing

### Quellen

Writing Strong Research Questions: Examples & Scribbr

scribbr · 1

Research Question Examples: The ULTIMATE LIST

gradcoach · 2

10 Research Question Examples to Guide Your Research Project

scribbr · 3

Alle anzeigen

### Antwort

Strong research questions are essential for guiding academic inquiries, as they define the focus and scope of the research. Here are examples of well-formulated research questions across various disciplines:

Examples of Strong Research Questions

Education

- **How does class size affect students' academic performance in primary schools?**
  - This question targets two clearly defined variables, making it measurable and analyzable.
- **Do online courses result in better retention of material than traditional courses?**
  - This question is timely and specific, addressing a relevant issue in educational methods.

## Research Question Perplexity

### Quellen

Hedging Techniques in Academic Writing with Examples

ref-n-write · 1

How to Use Hedging and Boosting in Scientific Writing - LinkedIn

linkedin · 2

PDF! Definitely Maybe: Hedges And Boosters in the HCI Literature

inria.hal · 3

Alle anzeigen

### Antwort

Here are some examples of strong research questions focused on **hedging and boosting** in science communication, drawing from the context of academic writing and the nuances of conveying uncertainty and confidence in scientific discourse:

Examples of Strong Research Questions

#### 1. Impact of Hedging on Public Perception

- **Question:** How does the use of hedging language in scientific communication affect public trust in scientific findings?
- **Explanation:** This question investigates the relationship between linguistic choices and public perception, allowing for empirical analysis through surveys or experiments.

#### 2. Boosting and Engagement

- **Question:** What is the effect of boosting language on audience engagement with scientific content shared on social media platforms?
- **Explanation:** This question explores how assertive language influences engagement metrics, such as shares and likes, providing insights into effective science communication strategies.

## Research Question Perplexity2

3.  **Hedging in Different Disciplines**
  - **Question:** How do hedging strategies differ across various scientific disciplines, and what implications do these differences have for interdisciplinary communication?
  - **Explanation:** This comparative question allows for an analysis of hedging practices in different fields, highlighting potential barriers to effective communication across disciplines.
4. **Cultural Variations in Hedging**
  - **Question:** How do cultural backgrounds influence the use of hedging and boosting in academic writing among international researchers?
  - **Explanation:** This question examines the impact of cultural factors on rhetorical strategies, providing a basis for understanding diversity in academic communication styles.
5. **Effects of Hedging on Research Credibility**
  - **Question:** To what extent does the use of hedging language in research articles affect their perceived credibility among peer reviewers?
  - **Explanation:** This question addresses the relationship between linguistic caution and credibility, potentially leading to insights about publication success rates.
6. **Longitudinal Changes in Hedging Practices**
  - **Question:** How have hedging and boosting practices evolved in scientific literature over the past two decades?
  - **Explanation:** This historical analysis can track trends in language use, offering insights into changing norms and expectations in scientific writing.

## Research Question

How do hedging and boosting differ in various sections of a research paper?

Hedging and boosting are crucial linguistic strategies in scientific writing, and their usage varies significantly across different sections of a research paper. Here's an overview of how these strategies differ in various parts of a typical research paper structured around the IMRAD format (Introduction, Methods, Results, and Discussion). **Differences in Hedging and Boosting Across Research Paper Sections**

### 1. Introduction

**-Hedging:** In the introduction, authors often employ hedging to acknowledge gaps in existing literature or to present the context of their research. Phrases like "may suggest" or "could indicate" are common as they signal uncertainty and invite further exploration.

**-Boosting:** Conversely, when stating the research question or hypothesis, authors may use boosting to assert the significance of their study. Phrases such as "this study clearly demonstrates" or "this research must address" emphasize the importance of the investigation!

### 2. Methods

**-Hedging:** In the methods section, hedging is typically used to acknowledge limitations or assumptions inherent in the chosen methodologies. For example, researchers might say, "This approach may not capture all variables," indicating a cautious stance regarding the comprehensiveness of their methods.

**-Boosting:** However, when describing procedures or instruments, authors often use boosting to convey confidence in their methods. Statements like "We employed a robust statistical analysis" reflect certainty about the reliability of their approach!\_5

### 3. Results

**-Hedging:** In reporting findings, hedging is frequently used to present results with caution, especially when discussing statistical significance. For instance, phrases such as "the results suggest that" or "there appears to be a correlation" allow for interpretation without overcommitting to definitive conclusions.

**-Boosting:** On the other hand, boosting is employed to highlight key findings that are particularly impactful or significant. Researchers might state, "These results clearly indicate a strong effect," which emphasizes the importance of specific outcomes!\_3

### 4. Discussion

**-Hedging:** The discussion section often contains more hedging as authors interpret their findings and relate them to existing literature. Phrases like "these findings could imply" or "it is possible that" reflect a careful consideration of alternative interpretations and implications.

**-Boosting:** However, when drawing conclusions or suggesting implications for future research or policy, boosting becomes more prominent. Authors might assert, "These findings must be taken into account for future studies," which conveys a strong recommendation based on their results!\_4

## Research Question Perplexity2

3.  **Hedging in Different Disciplines**
  - **Question:** How do hedging strategies differ across various scientific disciplines, and what implications do these differences have for interdisciplinary communication?
  - **Explanation:** This comparative question allows for an analysis of hedging practices in different fields, highlighting potential barriers to effective communication across disciplines.
4. **Cultural Variations in Hedging**
  - **Question:** How do cultural backgrounds influence the use of hedging and boosting in academic writing among international researchers?
  - **Explanation:** This question examines the impact of cultural factors on rhetorical strategies, providing a basis for understanding diversity in academic communication styles.
5. **Effects of Hedging on Research Credibility**
  - **Question:** To what extent does the use of hedging language in research articles affect their perceived credibility among peer reviewers?
  - **Explanation:** This question addresses the relationship between linguistic caution and credibility, potentially leading to insights about publication success rates.
6. **Longitudinal Changes in Hedging Practices**
  - **Question:** How have hedging and boosting practices evolved in scientific literature over the past two decades?
  - **Explanation:** This historical analysis can track trends in language use, offering insights into changing norms and expectations in scientific writing.

## Research Question

How do hedging and boosting differ in various sections of a research paper?

Hedging and boosting are crucial linguistic strategies in scientific writing, and their usage varies significantly across different sections of a research paper. Here's an overview of how these strategies differ in various parts of a typical research paper structured around the IMRAD format (Introduction, Methods, Results, and Discussion). **Differences in Hedging and Boosting Across Research Paper Sections**

### 1. Introduction

**-Hedging:** In the introduction, authors often employ hedging to acknowledge gaps in existing literature or to present the context of their research. Phrases like "may suggest" or "could indicate" are common as they signal uncertainty and invite further exploration.

**-Boosting:** Conversely, when stating the research question or hypothesis, authors may use boosting to assert the significance of their study. Phrases such as "this study clearly demonstrates" or "this research must address" emphasize the importance of the investigation!

### 2. Methods

**-Hedging:** In the methods section, hedging is typically used to acknowledge limitations or assumptions inherent in the chosen methodologies. For example, researchers might say, "This approach may not capture all variables," indicating a cautious stance regarding the comprehensiveness of their methods.

**-Boosting:** However, when describing procedures or instruments, authors often use boosting to convey confidence in their methods. Statements like "We employed a robust statistical analysis" reflect certainty about the reliability of their approach!\_5

### 3. Results

**-Hedging:** In reporting findings, hedging is frequently used to present results with caution, especially when discussing statistical significance. For instance, phrases such as "the results suggest that" or "there appears to be a correlation" allow for interpretation without overcommitting to definitive conclusions.

**-Boosting:** On the other hand, boosting is employed to highlight key findings that are particularly impactful or significant. Researchers might state, "These results clearly indicate a strong effect," which emphasizes the importance of specific outcomes!\_3

### 4. Discussion

**-Hedging:** The discussion section often contains more hedging as authors interpret their findings and relate them to existing literature. Phrases like "these findings could imply" or "it is possible that" reflect a careful consideration of alternative interpretations and implications.

**-Boosting:** However, when drawing conclusions or suggesting implications for future research or policy, boosting becomes more prominent. Authors might assert, "These findings must be taken into account for future studies," which conveys a strong recommendation based on their results!\_4

## Research Question Perplexity2

3.  **Hedging in Different Disciplines**
  - **Question:** How do hedging strategies differ across various scientific disciplines, and what implications do these differences have for interdisciplinary communication?
  - **Explanation:** This comparative question allows for an analysis of hedging practices in different fields, highlighting potential barriers to effective communication across disciplines.
4. **Cultural Variations in Hedging**
  - **Question:** How do cultural backgrounds influence the use of hedging and boosting in academic writing among international researchers?
  - **Explanation:** This question examines the impact of cultural factors on rhetorical strategies, providing a basis for understanding diversity in academic communication styles.
5. **Effects of Hedging on Research Credibility**
  - **Question:** To what extent does the use of hedging language in research articles affect their perceived credibility among peer reviewers?
  - **Explanation:** This question addresses the relationship between linguistic caution and credibility, potentially leading to insights about publication success rates.
6. **Longitudinal Changes in Hedging Practices**
  - **Question:** How have hedging and boosting practices evolved in scientific literature over the past two decades?
  - **Explanation:** This historical analysis can track trends in language use, offering insights into changing norms and expectations in scientific writing.

## Research Question

How do hedging and boosting differ in various sections of a research paper?

Hedging and boosting are crucial linguistic strategies in scientific writing, and their usage varies significantly across different sections of a research paper. Here's an overview of how these strategies differ in various parts of a typical research paper structured around the IMRAD format (Introduction, Methods, Results, and Discussion). **Differences in Hedging and Boosting Across Research Paper Sections**

### 1. Introduction

**-Hedging:** In the introduction, authors often employ hedging to acknowledge gaps in existing literature or to present the context of their research. Phrases like "may suggest" or "could indicate" are common as they signal uncertainty and invite further exploration.

**-Boosting:** Conversely, when stating the research question or hypothesis, authors may use boosting to assert the significance of their study. Phrases such as "this study clearly demonstrates" or "this research must address" emphasize the importance of the investigation!

### 2. Methods

**-Hedging:** In the methods section, hedging is typically used to acknowledge limitations or assumptions inherent in the chosen methodologies. For example, researchers might say, "This approach may not capture all variables," indicating a cautious stance regarding the comprehensiveness of their methods.

**-Boosting:** However, when describing procedures or instruments, authors often use boosting to convey confidence in their methods. Statements like "We employed a robust statistical analysis" reflect certainty about the reliability of their approach!\_5

### 3. Results

**-Hedging:** In reporting findings, hedging is frequently used to present results with caution, especially when discussing statistical significance. For instance, phrases such as "the results suggest that" or "there appears to be a correlation" allow for interpretation without overcommitting to definitive conclusions.

**-Boosting:** On the other hand, boosting is employed to highlight key findings that are particularly impactful or significant. Researchers might state, "These results clearly indicate a strong effect," which emphasizes the importance of specific outcomes!\_3

### 4. Discussion

**-Hedging:** The discussion section often contains more hedging as authors interpret their findings and relate them to existing literature. Phrases like "these findings could imply" or "it is possible that" reflect a careful consideration of alternative interpretations and implications.

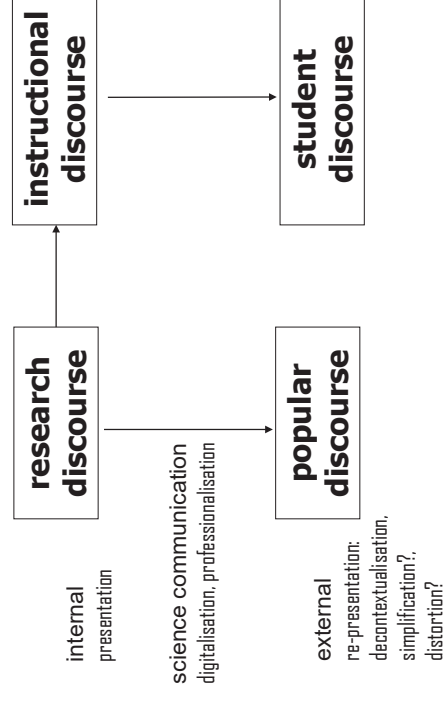
**-Boosting:** However, when drawing conclusions or suggesting implications for future research or policy, boosting becomes more prominent. Authors might assert, "These findings must be taken into account for future studies," which conveys a strong recommendation based on their results!\_4

## Research Question

<https://www.youtube.com/watch?v=IF2FQeP5wpl>

<https://www.monash.edu/libratv/help/assignments-research/developing-research-questions>

## Academic Discourses



## Genre Approach

- (1) Genres are recognizable **communicative events**, characterized by a set of **communicative purposes** identified and mutually understood by members of the professional or academic community in which they regularly occur.
- (2) Genres are **highly structured and conventionalised constructs**, with constraints on allowable contributions not only in terms of the intentions one would like to give expression to and the shape they often take, but also in terms of the lexico-grammatical resources one can employ to give discursive values to such formal features.
- (3) Established members of a **particular professional community** will have a much greater knowledge and understanding of the use and exploitation of genres than those who are apprentices, new members or outsiders.
- (4) Although genres are viewed as conventionalised constructs, expert members of the disciplinary and professional communities often exploit generic resources to express not only 'private' but also organizational intentions within the constructs of 'socially recognized communicative purposes'.
- (5) Genres are **reflections of disciplinary and organizational cultures**, and in that sense, they focus on social actions embedded within disciplinary, professional and other institutional practices.
- (6) All disciplinary and professional genres have integrity of their own, which is often identified with reference to a combination of textual, discursive and contextual factors. (Bhatia 2004: 23)

## Academic Discourse Genres (traditional)

"(staple) genres" as conventionalised practices (cf. Schmieid 2015)

**research "output"**

- research article (title, abstract, keywords)
- book reviews
- project proposals
- conference presentations (abstract)

**new genres**  
discipline-specific culture-specific

**science "journalism"**

- popular science articles
- popular blogs (David Crystal)
- popular science films (Horizon BBC 1964)
- popular science books
- science slam

**teacher genres**

- presentations
  - lectures (ppt)
  - seminar discussions
- textbooks
- Moodle/Wikis/www pages

**student genres ("literacy")**

- fieldwork notes / essays
- seminar presentations
- BA/MA thesis

"Novice Academic English"

author-specific culture-specific

## Academic Discourse Genres (new)

"new genres" as emerging practices

**internal research discourse:**  
(cf. Plo-Alastrué et al. Eds. 2023):

- 3-minute talks/pitches → 6
- open reviews → 5
- multimodal: video abstracts
- FameLab scientific talks
- science blogs
- research group videos

**teacher genres**

- ...

= "broader concept"  
like  
Illingworth & Allen  
(2024)

**external knowledge dissemination:**  
infodemic (cf. Metag et al. Eds. 2022)

- X/Twitter Tweets for projects
- Facebook for advertising
- Instagram/TikTok personal accounts
- Youtube channel

**student genres ("literacy")**

Which youtube channels should I follow to understand research in ML? I am currently a sophomore in college, so kinda overwhelmed. [D]

## Academic Writing Structures/paradigms non-native writers

### IMRAD

From Wikipedia, the free encyclopedia

In scientific writing, **IMRAD** or **IMRaD** (/ɪmˈræd/) (**I**ntroduction, **M**ethods, **R**esults, and **D**iscussion)<sup>[1]</sup> is a common organizational structure (a document format). IMRAD is the most prominent norm for the structure of a scientific journal article of the original research type.<sup>[2]</sup>

**Contents** [show]

**Overview** [edit]

Original research articles are typically structured in this basic order<sup>[3][4][5]</sup>

spreading from natural sciences into social sciences, humanities, arts ?

Introduction – Why was the study undertaken? What was the research question, the tested hypothesis or the purpose of the research?

- Methods – When, where, and how was the study done? What materials were used or who was included in the study groups (patients, etc.)?
- Results – What answer was found to the research question; what did the study find? Was the tested hypothesis true?
- Discussion – What might the answer imply and why does it matter? How does it fit in with what other researchers have found? What are the perspectives for future research?

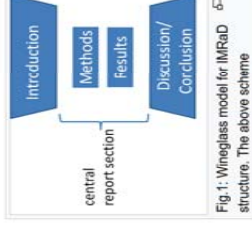


Fig. 1: Wineglass model for IMRAD structure. The above scheme



## AIMAC = revised IMRaD with (meta-)discourse indicators to indicate consistency of headlines and text

structure	substructure (functional/tactical alternative)	key lexemes/phrases (as indicators)
<b>A = abstract</b>	keywords in context	<i>focus, discuss, approach</i>
<b>I = issue</b>	new relevant	<i>not enough research yet</i>
<b>M = methodology</b>	focused	<i>important, academic discourse, practical application</i>
	previous research, i.e. lit. review incl. evaluation	<i>concentrate, emphasise, purpose</i>
	hypotheses possible?	<i>concept developed, review, refer to, proceed to, claim</i>
	data base	<i>research question</i>
	tests/procedure	<i>corpus, data collection</i>
<b>A = analysis</b>	examples as evidence	<i>calculate</i>
	statistical tables as summaries	<i>illustrate, show, prove</i>
	significance to generalise	<i>table, figure, diagram, graph, bar</i>
<b>C = conclusion</b>	summary	<i>significant, chi?</i>
	interpretation	<i>in conclusion, finally/at last, we have shown, discussed above</i>
	contextualisation	<i>this proves that</i>
	limitations	<i>in a wider perspective, apply</i>
	outlook	<i>more data, beyond the scope</i>
		<i>further research is necessary, predict, dissemination/application of results</i>

## BA thesis non-IMRaD → IMRaD

Polish Migration to the UK

### Contents

Abstract	1
1. Introduction	2
2. The Term Migration and Polish Migration Motivations	4
2.1. Types of Migration	5
2.2. Ravenstein's Migration Theory	8
2.3. Lee's Migration Theory: Push and Pull Factors	10
3. Polish Migration Behavior and Motivations	13
3.1. Gender-Relation	15
3.2. Age-Relation	16
3.3. Length of Stay	18
3.4. Labour Market	21
3.5. Social Networks	24
3.5.1. Polish Diaspora	28
4. Polish Migration in Historical Perspective	30
4.1. Polish Migration to the UK before 2004	30
4.2. Polish Migration to the UK after 2004	32
5. Conclusion	36

2. Theoretical background
- 2.1. Definition of the key concept migration
- 2.2. Types of migration
- 2.3. Theories explaining migration
- 2.3.1. Ravenstein's Migration theory
- 2.3.2. Lee's Migration Theory: Push and Pull Factors
3. Case study: Polish migration to the UK
- 3.1. Behaviour
- 3.2. Motivation etc.

## RA paradigms non-native writers

English MA Theses at a German University before and after the Bologna reform: Comparing global rhetorical structures...

1. Introduction
  2. Pre- and Post-Bologna Systems at German Universities: Conventions
  3. Review of Central Concepts
    - 3.1 Global Rhetorical Structures: Moves
    - 3.2 Stance
    - 3.3 Stance in that Complement Clauses
  4. Corpus and Method
    - 4.1 The ChemCorpus as Data
    - 4.2 Corpuslinguistic Methodologies
  5. Results and Discussion
    - 5.1 Global Rhetorical Structures
    - 5.2 Stance Through that Clauses
  6. Conclusions
- References  
Appendix  
Tables  
Figures

## RA paradigms non-native writers: exercises\* mark each sentence according to extended IMRaD/IMAC structures

Original Paper | Open Access | Published: 25 October 2021

### A semantically annotated corpus of tombstone inscriptions

Johann Bog

International Journal of Digital Humanities (2021) | Cite this article

90 Accesses | 6 Altmetrics | Metrics

#### Abstract

The digital preservation of funerary material is of interest to many different scientific disciplines. Textual information found on tombstones often goes far beyond the expected (name of the deceased, dates of birth and death), and may include information about commemorators, family roles, occupations, references to biblical or other texts, places of birth and death, cause of death, epitaphs and poems. Gravestones are multi-modal media, and besides text are often decorated with artistic symbols. To capture this information in a systematic way and make it available on a large scale for research purposes, a meaning representation based on linking entities by relations has been designed that will extend search capabilities beyond simple-string matches. Concepts are represented as WordNet synsets, and a vocabulary of 32 relations make connections between concepts. This formalisation has been developed and evaluated based on a dataset of more than 1,000 Dutch tombstones.

\*all from (open) student accessible journals! receptive & productive!

Download PDF

Sections

Figures

References

Abstract

Introduction

Collecting and interpreting tombstone data information on stones: a formal characterisation

A formal description of tombstone phenomena

Automatic reading of tombstones

Conclusion and future work

Data Availability

Notes

References

Acknowledgements

Author information

Additional Information

Appendices

Rights and permissions

About this article

## RA paradigms non-native writers: exercises

discuss also the choice of keywords and title!

**Title:** Attitude and graduation as resources of masculinity construction in YouTube vlogs

**Author:** ŠIKHOVÁ, MARJA

**Source document:** Brno studies in English, 2021, vol. 47, iss. 1, pp. 93-127

**Extent:** 93-127

**ISSN:** 0524-6681 (print); 1805-0867 (online)

**DOI:** 10.5817/BSE2021-1-6

**Type:** Article (English)

**Stable URL:** <http://hdl.handle.net/11222.digilib/144296>

**License:** CC BY-NC-ND 4.0 International

[PDF \(0.43 MB\)](#) | [Feedback](#)

### Abstract(s):

The present study examines stance-taking resources engaged in the performance of branded masculine YouTube identities. It aims at determining the role of Attitude and Graduation, two aspects of Martin and White's (2005) Appraisal framework, in the construction of branded masculinity on popular American YouTube vlog channels. The paper also presents adjustments to Appraisal system, which enable its applicability to gender identity analysis in terms of Anderson's Inclusive masculinity theory (2009), namely a developed Affect/Dis/inclination subcategory and a new category of Ironic heterosexual recuperation, which prove to be of considerable importance for determining the resources for the construction of blended masculinities in YouTube vlogs. The quantitative and qualitative analyses of the Appraisal resources employed in the speech of male vloggers has shown that branded masculine identities predominantly rely on the hybridization of orthodox and inclusive masculinities construed by means of evaluative stances targeted at a range of activities, people, objects, concepts indirectly indexing the either of the two types of masculinities.

### Keywords:

gender identity; branded identity; hegemonic masculinity; inclusive masculinity; Appraisal analysis; YouTube vlogs

### References:

[1] Anderson, Eric (2009) *Inclusive Masculinity: The Changing Nature of Masculinities*. London: Routledge.

## Youtube: Scientific Writing

<https://www.youtube.com/watch?v=Twc2S88zuGo>

## Developments: Technological affordances & societal demands

- technical: rapid expansion of digital means of communication (cf. Plo-Alastrué & Pérez-Llantada Eds. 2015, Luzón & Pérez-Llantada Eds. 2019)
- global expansion of participation and collaboration
- societal: Public Science, Open Science (cf. e.g. Bondi 2023) accessibility, transparency
  - open data → repositories (EU CLARIN, github)
  - peer review → prepublication servers

→ “tectonic shifts”: reform/reframe research and science communication

## Developments: factors/driving forces?

2 missing factors: MONEY (neoliberal global context, cf. Pérez-Llantada 2012)  
TIME

new genres in line with SciCom models: deficit → dialogic → participatory  
bigger research communities → conferences → 3MT  
more urgency → TIME → publication process → open review

new genres – old templates (like IMRAD)?

mind cultural differences between STEM and SSH disciplines and traditions!

## Cohesion to help finding coherence?

### Explicit cohesive devices in non-native writing

formal:

conjunctions: *but, while*

adverbs: *first, then, finally*

functional:

sentence adverbials, e.g. clause-initial adverb *\*ly*,

function

additive

adversative/contrastive

sequential/temporal

causal

elaborate

*in addition*

*"unfortunately"*

*subsequently*

*since*

prototype

*and*

*but*

*then*

*because*

## Adjuncts in the Nordic Journal of English Studies

ClauseLink	KE01h	KE02h	TZ01h	TZ02h	CMail16	UK01h	mean22
<i>adjuncts</i>							
<i>firstly</i>				4		1	1.5
<i>secondly</i>	4			4	3	1	1.3
<i>on the one hand</i>							1.0
<i>on the other hand</i>					1		1.5
<i>finally</i>	6				1		2.4
<i>lastly</i>					1		4.0
<i>also</i>	60	38	10	16	14	7	27.0
<i>furthermore</i>				2	2	2	2.0
<i>however</i>	68	22	14	10	7	9	11.8
<i>moreover</i>					3		4.0
<i>similarly</i>					2		2.0
<i>nevertheless</i>	4	2	2		1	1	2.0
<i>though</i>		2	8		4		4.7
<i>yet</i>	4		2		2		3.0
<i>anyway</i>							2.0
<i>otherwise</i>	2		2	2	1	1	5.8
<i>accordingly</i>					2		2.6
<i>consequently</i>					3		2.4
<i>therefore</i>	2	22	2	8	6	1	12.9
<i>thus</i>	38	4		8	4	1	6.6
<b>sum adjuncts</b>	<b>188</b>	<b>90</b>	<b>40</b>	<b>54</b>	<b>41</b>	<b>21</b>	<b>66.7</b>
<b>sum conjuncts+adjuncts</b>	<b>314</b>	<b>148</b>	<b>198</b>	<b>112</b>	<b>84</b>	<b>57</b>	<b>134.5</b>

## Conclusion: conventions and issues

Academic English is an accessible and useful topic for research novices

**global metadiscourse conventions** can be learnt easily and inductively

- junior writers, MA/PhD students become aware of reader - writer interaction – and can use this in their own thesis writing ...
- through explorative investigation of model texts they find their own stance between personal identity and disciplinary conventions

issues:

- Can a global, analysis-based perspective help non-native-speakers?
    - objective – subjective?
    - frequency + attitudes?!
  - Are conventions becoming more and more similar because of Anglo-American dominance (gate keepers and guidebook publications)?
  - Can we establish an academic *lingua franca* norm on a functional basis? – even against Anglo-American traditions?
  - How much culture-specific divergence do we accept in research English?
  - Which features do we want to reduce (redundancy) or increase (explicitness)?
- Remember there are no native speakers/writers of Academic English!

## Conclusion: research perspectives

research data for new genres are easily available on the internet

- including metadata (transparency) for
- cognitive (e.g. attention span) and
- metadiscourse analyses (e.g. engagement features)

integration and effect of LLMs?