Reading Skills and the Discourse of the Technical Research Article (RDRA)

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LECTURE 1: USING DISCOURSE ANALYSIS TO IMPROVE READING SKILL

What is discourse?
Discourse is created

Within a sentence:
Grammatical structure
Meanings of words

Beyond the sentence:
Co-text
Context
Comparison with other texts

Using co-text to understand communicative purpose

What is discourse?
Language as a means of carrying out communicative purposes

Co-text: Nearby sentences
“Several methods are currently used with this application.”
- This versatility provides the desired flexibility. (+)
- This lack of standard procedure tends to lead to confusion. (-)
- In addition, each method can be modified for the specific application. (+)
- In addition, each method requires modification for the specific applications. (-)
Co-text: Nearby sentences

“Several methods are currently used with this application.”
- This variety provides the desired flexibility. (+)
- In addition, each method can be modified for the specific application. (+)
- However, none of the methods provides the desired accuracy. (-)

Co-text: The larger organization

- Is a method discussed
  - In the discussion section?
    - It has important implications
    - and/or limitations that must be dealt with
  - In the conclusion?
    - Central to the research

Co-text: The larger organization

- Meaning may be affected by the section organization:
  - Is a method described/discussed
    - In the introduction?
      - It has some general significance
      - It is a/the main contribution
    - Only described/discussed in the methods section?
      - It is probably standard and applied in a straightforward manner

Using the context to understand communicative purpose

Co-text: The larger organization

- Is a method discussed
  - In the results section?
    - It is (a part of) the research contribution
    - And/or central to the results /understanding the results

Context: the general situation

- What goals and directions are considered relevant/important/highly important in the field:
  - currently
  - in the long run
Context: the general situation

- The assumptions in the field about what are excellent/good/acceptable/uninteresting:
  - problems for study
  - methods for studying those problems
  - novel results
  - results of significance

Response to audience

- To achieve their communicative purposes, writers adapt the description of the research to:
  - The background, needs, interests and assumptions of the intended readers

Response to context

- A primary communicative purpose in RAs is to show the research:
  - responds effectively to important goals and directions in the field
  - studies a problem of interest
  - applies/develops methods of value
  - achieves novel results of significance

Using context in reading

- To use your knowledge of the field to gain insight into:
  - how discourse is used to signal common purposes in your field
- Conversely, to analyze the discourse of your field to gain insight into:
  - what purposes are commonly emphasized in your field

Context: journal audience

- Different journal readers have different:
  - Background, needs and interests
  - Assumptions about
    - the goals and directions of the field
    - what is (is not) an interesting or significant problem, method or result

Using comparison with other texts to understand communicative purpose
Other texts: different types of texts

- Textbook
- Review article
- Research article
  - presenting novel outcomes:
    - experimental findings/field experimental findings?
    - a new/modified method or model?
    - a new analysis?
    - Brief communication

Reading "intertexts"

- To fully understand the meaning in an RA you need to note how language and information are used to:
  - respond to previously published RAs
  - avoid negative responses/elicit positive responses in future RAs
  - position the reported research within the field

Other texts: RAs are "intertexts"

- An RA is a response to other RAs:
  - Information and language are used to:
    - show how the reported research relates to previously published research (builds on/disagrees with finding in other RAs)
    - position the reported research (clarify the contribution of the reported research to certain areas of research in the field)

Evidence of the importance of the interactivity of RAs

- Highly common use of citation in RAs
- The common use of:
  - citation indexes (Web of Science, Scopus and Google Scholar)
  - Impact Factors and Journal Rating
  - to evaluate RAs/research and researchers

Other texts: RAs are "intertexts"

- RA writers hope for a (positive) response to their RAs (citation in later RAs)

Attention to context and interactivity of RAs in this course

- Lecture 2: Citation indexes and impact factors
- Workshop exercises to gain a sense of how the sample RA relates to the general context and to other texts.
**Context: Purpose and organization**

- Typical organization of many RAs, **IMRAD:**
  - Introduction
  - Materials and Methods
  - Results
  - Discussion

**Context: Purpose and organization**

**Section**

**Typical Purposes**

- Introduction
  - To announce the problem / situate it within the research area (Informative)
  - To indicate the need to study the problem (Persuasive)
  - To indicate how the reported research responds to the problem (Informative or Persuasive)

- Discussion
  - To comment on the significance and value of the findings (Informative and persuasive)
  - To claim significance for and show implications of the reported research (Persuasive)
  - To position the reported research within the field (Persuasive)

**Section**

- Materials and Methods
  - To describe the Methods used (Informative)
  - To show that the methods are viable / credible / novel (Persuasive)
  - Sometimes to allow for reproducibility (Informative)

- Results and Discussion
  - To announce findings and immediately discuss their significance and implications (Informative + Persuasive)
Context: Purpose and organization

- In some journals/areas topic-specific section headings are used after the introduction section
  - Sections with headings referring to the specific:
    - Methods (models, theories, approaches)
    - Type of results or validation of results
    - Issues of discussion

Context: Purpose and organization

- Topic-specific headings are usually in the same order as in IMRAD
- Subsections in IMRAD are topic-specific

RAs with topic-specific headings only: M&R

<table>
<thead>
<tr>
<th>Sections</th>
<th>PURPOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro (as above)</td>
<td>To present the new or modified model/design</td>
</tr>
<tr>
<td>Combined Methods and Results</td>
<td>(Informative)</td>
</tr>
<tr>
<td>(never IMRAD)</td>
<td>To present novel outcomes / usefulness in</td>
</tr>
<tr>
<td></td>
<td>specific applications</td>
</tr>
<tr>
<td></td>
<td>To support validity (Informative + Persuasive)</td>
</tr>
<tr>
<td>Discussion (as above)</td>
<td></td>
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Reading the Discourse of the Technical Research Article

Reading with an awareness of how writers use / do not use / adapt the discourse conventions of RAs to report on new research to specific audiences and for specific communicative purposes.