ALEC 604: Writing for Professional Publication

Week 3: Research Processes-Writing

Activities

- Examine core values in scientific writing
- Discuss typical structures for research manuscripts
- Explore strategies for successful research writing

Three Core Values in Scientific Writing

- **Precision**: Ambiguities in writing cause confusion and may prevent a reader from understanding the research or concepts being discussed.
- **Clarity**: Concepts and methods in the sciences can often be complex; writing that is difficult to follow greatly increases any confusion on the part of the reader.
- **Objectivity**: All claims need to be based on facts, not intuition or emotion.

UWC: Scientific Writing, available at http://writingcenter.tamu.edu/content/view/653/76/

Typical Research Manuscript Structures

- **Title** – descriptive, concise, accurate
- **Keywords** – increase searchable ease
- **Abstract** – concise overview of study
- **Introduction** – significance of your work
- **Methods** – detailed to be repeatable
- **Results** – factual findings
- **Discussion** – relates findings to others’ works
- **References** – creates veracity/connectedness

Research Writing

- **What is research?**
  - Originates with a question or problem
  - Requires a clear articulation of a goal
  - Follows a specific plan or procedure
  - Usually divides the principal problem into manageable sub-problems
  - Is guided by the specific research problem, question, or hypothesis


Research Writing

- **What is research?**
  - Accepts certain critical assumptions
  - Requires the collection and interpretation of data in attempting to resolve the problem that initiated the research
  - Is, by its nature, cyclical
  - Requires publishing to become scholarship

### How does writing differ?

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<th>Audience</th>
<th>Business</th>
<th>Personal</th>
<th>Assessment</th>
<th>Research</th>
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<td>CEO, instructor, employee</td>
<td>Friend, teacher, relative</td>
<td>Student, professor, other students</td>
<td>Research professional, Public</td>
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<tr>
<th>Purpose</th>
<th>Share information, offer a product</th>
<th>Share information, express feelings, share a feeling, educate</th>
<th>Summarize material, respond to opinion, demonstrate learning</th>
<th>Share information, answer a question</th>
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<th>Manual, MLA, APA, Chicago</th>
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<th>Action</th>
<th>Appreciation</th>
<th>Gratitude</th>
<th>Publication, additional research</th>
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### Research Writing

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<th>Approval to Proceed</th>
<th>Graduation</th>
<th>Publication</th>
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<th>Tense</th>
<th>Future</th>
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### Before the Literature Review

- Discuss research interests with your professors, peers, others
- Scan literature for ideas about your topic of interest
- Attempt to write a Statement of the Problem
- Identify Objectives, if possible

### Statement of the Problem

- Clearly indicates what will be investigated
  - Indicates the variables of interest
  - Identifies relationships between variables being studied
- Based upon knowledge gained from literature review

### The Problem

The problem or question is the axis around which the whole research effort revolves. The statement of the problem must first be expressed with the utmost precision; it should then be divided into more manageable subproblems. Such an approach clarifies the goals and directions of the entire research effort. (Leedy & Ormrod, 2005, p. 43)

### Evaluating the Problem

- Does it make a contribution to the body of organized knowledge in your topic of study?
- Will it lead to new problems and further research?
- Is it researchable?
- Is it suitable for your interests and goals?
- Is it ethically appropriate?
Unacceptable problems

- Self-enlightenment
  - This research will learn more about ____.
- Comparing two sets of data
  - The purpose of this research is to compare the increase in the number and types of ATV safety programs available to youth between 1990 and 2003.
- Performance of a statistical operation
- Simple yes or no answers

Sub-problems

- Completely researchable unit
- Clearly tied to the interpretation of the data (analyze, discover, compare)
- Add up to the totality of the problem
- Few in number

Research Writing Strategies

- Introduce your manuscript well
  - Hard to make a second impression on the reader
  - Helps state your specific research focus
- Remain focused
  - Use a well-structured outline, if necessary
  - Avoid following divergent lines of inquiry
- Describe before you Analyze

Research Writing Strategies

- Maintain logical thought processes
  - Don’t make readers “jump” from one idea to another
  - Avoid quantum leaps of logic for the reader
- Use specific and explicit narrative
  - Readers may not know everything you do about the topic of study
  - Write clearly, with enough detail so that readers have no doubts about your repeating your study

Research Writing Strategies

- Avoid flawed arguments (more next week)
  - Insufficient past research
  - Insufficient evidence in your current study
- Know when to quote
  - Paraphrasing versus quoting
  - Basic rules (APA Manual) for citing sources
- Form strong conclusions
  - Focus on the main point of your study
  - Avoid emotive and/or baseless (data) statements

Summary

- Core values in scientific writing include precision, clarity, and objectivity
- Typical research manuscripts include the title, keywords, abstract, introduction, methods, results, discussion and reference sections
- Research writing differs from all other writing
- Many strategies exist for successful research writing; explore your resources to acquire those strategies