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Common Research Assignments

Literature Reviews

- Focus on overlying themes rather than strict summaries of individual studies (like an annotated bibliography).
- Will often synthesize ideas from each of the pieces you are reviewing. Consider organizing by topic rather than by source.
- Won't contain your original research. Instead, you are reviewing others' research projects.
- Are a discussion of "background information," essentially. Think of it as creating a source that someone might use later on to write their introduction to a research paper.
- Use scholarly sources as much as possible. Usually a non-peer-reviewed or non-journal article should not be a primary source.

Research Proposals

- Often the first step of a larger research assignment.
- Justify prospective primary research by using existing research.
- Often include:
 - Problem statement: What is your motivation for researching this topic?
 - Purpose of the study: What are you wanting to find out?
 - Connection to the field: What has been done to already solve/look into this topic?
 - Research design or description of the study: What are you going to do in order to solve/look into this topic?
 - Statement of significance: How will this positively impact the field of which you're researching? Outside the field?
 - Reference page: What sources have you used?
- Remember that you are proposing a topic or study that will likely need to be approved—use the existing research to support your claim that this will be beneficial or valuable to your field or society.
- The emphasis should be on why your research should be done: why should people give you funding to study it?





Disquisitions (i.e. theses, dissertations, etc.)

- Highly focused documents that feature specific question(s) being addressed by the primary study.
- Often extremely thorough and much longer than other writing assignments.
- More than one primary study may be involved, and all should be addressed.
- Generally written for a specific school or advisor.
- Collaboration and dialogue with an advisor is essential to the writing process and final product.

Articles for publication

- Focus is on primary research, but will generally still need secondary research to support and explain certain points or topics as well as situate the article within the field.
- Secondary research will usually be included in the introduction, background, and methodology sections. If a literature review section is present, then it will have the majority of the secondary research.
- Keep in mind that your audience is composed of scholars and industry peers. This can affect how terminology is dealt with in the article. For example, terms or abbreviations that are common within the industry may not need an in-depth description while less common terms or methods may need to be very clearly defined. If you are unsure on a term/abbreviation, defining it at least once early on in the article can be useful to your audience.
- Many articles will utilize an IMRaD (Introduction, Methods, Results, and Discussion) format. If you are not sure about how to format your paper, this is a reliable format to use. See later section for more details.
- Always check the formatting guidelines of the journal you are publishing in. Each one has different expectations.

Presentations

- Presentations often contain more quotes and facts pulled from the data than actual written discussion.
- A presentation tends to include general information.
 - There will likely be some specifics, but you should discuss the detailed info yourself instead of putting it on the slide.
- Keep the visuals in mind.





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- Some specific information, if it is deemed necessary to put in the presentation itself, may be condensed so that it does not clutter the slide.
- Charts and graphs are common ways to show condensed information in a slide.
- Remember you're saying more than is on the screen, so be prepared with notes!

Case Studies

- Tend to focus on one main topic or scenario.
- More specific to the exact case being studied, rather than the topic as a whole.
- May be comparisons of other topics or scenarios to the primary one.
- Responding to a provided question or prompt.
 - Focus on the main topic of the case study and draw several comparisons to the secondary topics to fully answer all aspects of the provided question(s).

IMRaD: Introduction, Methods, Results, and Discussion

Gold standard for many advanced research studies: articles, disquisitions, etc.

- Abstract
 - The abstract is a summary of the study from beginning to end: motivation, methods, results, and significance.
 - Typically no more than 250 words, but check specific journal/professor expectations.
 - Think of it as a movie trailer with all the spoilers included.
 - Think of your audience searching for an article in a database—they'll read the abstract to determine if it's what they're looking for, so make sure it has all of the relevant information!
 - It's the first thing people read, so make sure it's sharp!
- Introduction
 - Lays out the motivation for the study and why the study is relevant. Explains the benefits of the study and why your audience should care.
 - May include a literature review, or a literature review may be its own section.
 - Literature review might be topical (by focus) or chronological (by year); if the latter, double check that this is truly the approach the professor/journal wants.
 - Emphasizes that despite all of the research already existing on the subject at hand, significant gaps remain that your study seeks to address.





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- Also establishes background information necessary to understand the rest of the paper, tailored to your specific audience.
 - For example, an audience of civil engineers don't need to have the concept of concrete explained to them.
- **Methods**
 - Lays out the very basics of the study: how, when, where. The “why” might need explanation if the methods are unique.
 - Covers methods involved in every step of the study, and possibly includes environmental elements at play (lab settings, temperature, etc.).
 - Think of this section as a recipe or guide on how to replicate your study. A reader may try to follow the instructions perfectly in order to get the same, or nearly identical, results.
 - Consider your audience (journal, advisor/professor) expectations. Some expect one long paragraph, others expect multiple shorter paragraphs, and still others expect bulleted/numbered lists.
 - Concise but full sentences are important.
- **Results**
 - Reports what objectively happened: “3 of the 5 participants received staph infections after wearing the Joe Miner costume...”
 - Features summary-focused prose that indicates what will be covered in the Discussion.
 - Can include graphs/tables to make information easier to process
 - Make sure this section only describes what happened in the study. Discussion about the relevance of the study or what the results mean should be included in a separate Discussion section.
- **Discussion**
 - Features a brief summary of the results with greater focus on the significance of the findings and what they mean for the field.
 - Includes how findings compare/contrast to the studies cited in the lit review section.
 - Acknowledges limitations of the study (location, sample size, etc.).
 - Points towards the future: what needs to be explored and how this study opens doors for exploration. Try to give some concrete examples.
- **Additional tips for writing an IMRaD**
 - The Methods and Results are typically straight-forward and dry. This may sometimes feel boring, but it is meant to be this way.
 - It can be difficult to handle the narrative and rhetorical elements at play in the Introduction and Discussion. For these sections, consider the following:
 - Why is the study relevant?
 - Why should others care?





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- Who will this impact?
- What is significant about the results?
- What else needs to be studied?
- If you have read other articles/dissertations for your prospective audience (professor/journal), try to think about what patterns you noticed, including formatting, phrasing, etc.
- Consider explaining terminology that might confuse a prospective audience. Keep in mind that committees feature outside readers, and journal editors come from wide or global backgrounds even in that specific discipline.

General Tips for Research Papers

- Sometimes it can be difficult to figure out what you actually need to do in an assignment. Write down a list of questions to ask your professor and/or writing consultant.
- Clarify deadlines: this can often depend on due dates, co-writers, etc. If you are worried about keeping these deadlines, speak to your advisor and/or co-writers, and set soft deadlines for different aspects of your writing process to keep on track.
- Try to read (or at least skim) sources first, then write the paper. This will be an ongoing process so feel free to read something, write something, and repeat. The biggest thing is that you don't want to try writing your paper and then retroactively try finding evidence to support your points.
- Try to make an outline, no matter how basic. This will help you organize your thoughts and identify what you actually want to look for in your sources.
- Double check your criteria/rubric. Making sure you understand expectations can save a lot of time later on.
- Try to identify the function of each section and what is supposed to be in a section. For example, a methodology section has instructions for replication purposes. A discussion section will be more focused on your thoughts about the research you did, but should not have new information.
- Library databases contain thousands of scholarly articles that can help you find information on the appropriate topic.

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