Mapping Your Thesis: From Research Idea to Manageable Thesis Project

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Workshop Description

- This clinic aims to help graduate students understand the pre-writing (brainstorming, planning and research) and writing (drafting, revising and editing) stages involved in preparing a successful master’s thesis.
- It provides guidelines to help graduate students from all disciplines plan, outline, structure and draft their thesis manuscripts, while helping them build confidence as academic writers.

Road Map

- Thesis Purpose
- Institutional Requirements (format, IRB and DRNA certifications, deadlines, academic integrity, etc.)
- Basic Structure: Theses in Engineering, Natural Sciences and Social Sciences
  - Abstract
  - Introduction
  - Literature Review
  - Methodology/Research Questions/Objectives
  - Results/Discussion
  - Conclusions/Significance/Recommendations
- Strategies and Tips on Writing Long-Term Projects
- Small Group Discussion by Discipline

Purpose

- A thesis is the result of your independent work as a graduate student.
- It presents original research and critical analysis that answer new questions in your field.
- It allows you to plan, complete, interpret, and report original research to peers in your field.
What If I Don’t Have a Proposal Yet?

- You can use the guidelines presented in this workshop to format your proposal as well!

- The proposal usually ranges from 15-25 pages, including the title page, table of contents and references.

- Most students build upon their proposal document to complete their thesis.

Institutional Requirements

Format Recommendations from OGS

http://grad.uprm.edu/oeg/EstudiantesActivos/Normas/guia.php

- Main text: Arial or Times New Roman, 11 or 12 pt; line spacing: 1.5 or double; use *italics* for scientific names and foreign languages.

- Titles and subtitles: 1-2 pt bigger, bold.

- Footnotes, tables, figure captions: 8 or 9 pt, single spaced.

- Margins: 1”, tables and figures must fit in margins.

- Page numbers: roman numerals for preliminary pages; title page is not numbered.


Institutional Requirements

Protection of Human and Animal Subjects in Research

Formularios IRB

- If your research involves human subjects, federal law requires that your project proposal be reviewed and approved by the Institutional Review Board (IRB) before you begin your project.

- You must complete the CITI Course in the Protection of Human Subjects and include evidence of your approval in your IRB proposal.

- If your research involves the use of natural resources in PR, federal law requires that you acquire permits from the Departamento de Recursos Naturales y Ambientales prior to your research.
Institutional Requirements

- Academic Integrity: Incorporating sources, paraphrasing, and plagiarism (Turnitin).
  - Workshop: Who said What: Citing in Academic Writing (GWF Writing Clinic), April 9, 2019 @ GRIC  Time: 10:30 AM
- Deadlines: Check every week for changes!

Thesis Writing Process

- **Purpose, Hypothesis/Research Question(s)/Research Objectives/Design Problem & Goals, Definitions, Limitations and Assumptions**
- **LITERATURE REVIEW**
  - Show thorough understanding of your research topic
- **METHODOLOGY/MATERIALS & METHODS**
  - Subjects, Instrumentation, Procedures, Statistical or Data Analysis
- **RESULTS**
  - Order, Description Data, Results of Statistical Testing or Data Analysis, Interpretations of Results
- **CONCLUSION/DISCUSSION**
  - Summary of Findings, Conclusions Drawn by Results, Further Research

Basic Thesis Structure

Theses in Engineering, Natural Sciences and Social Sciences: General Chapter Distribution

- **Preliminaries**: Title page, Table of Contents, List of Figures, List of Tables, Glossary of Terms, Abstract, Acknowledgments
- **Chapter 1**: Intro/Background/Purpose/Justification
- **Chapter 2**: Literature Review
- **Chapter 3**: Methodology/Hypotheses, Research Questions or Research Objectives
- **Chapter 4**: Results/Discussion
- **Chapter 5**: Conclusions/Recommendations
Abstract

- **Accurate**: Reads as one well-developed, coherent paragraph covering all the elements of your thesis: introduction, purpose, methods, results, conclusions.
- **Brief**: Contains concise and precise language and stands alone as a unit of information. Does not include: superfluous adjectives, verbosity or redundancy, personal narrative, opinion or commentary, figures, tables or graphs.
- **Clear**: Generally uses the third person and active voice. Does not contain: jargon, colloquialisms, literature citations, contractions, acronyms or abbreviations.

*Introduction and Purpose are written in present tense. Methods, Results, and Conclusions are written in the past tense.*

Introduction

- **Purpose**: Clearly state the purpose of your research project. Justify why it is significant to your field and why it should be conducted.
- **Hypothesis/Research Question(s)/Research Objectives/Design Problem & Goals**: Provide a clear statement about the scope of your project in the context of the literature that informs it.
- **Definitions (Acronyms)**: A list of definitions of terms that pertain to your research or that might be unclear to the reader.
- **Delimitations, Limitations, and Assumptions**: Factors that were either controlled by you as the researcher, that were not under your control, or that you assumed during the course of your investigation.

*Written in the present tense*

Literature Review

- Show **thorough understanding** of your research topic.
- Provide a **coherent account** of the most relevant work that informs your research.
- Give a **historical description** of the topic’s development.
- Provide an account of available **techniques** and/or materials being used in your line of research.
- Show **knowledge gaps** of previous works and/or techniques that your project addresses.
- Demonstrate that your work will make an **original** contribution.

*Tense: Depends on the timeline of sources.*
Literature Review

Steps to conduct a successful literature review:
1. Consult a librarian about searching techniques.
2. Use bibliographic data management software.
3. Search for tertiary, secondary, and primary sources.
4. Select the information you need from sources.
5. Choose preliminary topic headings.
6. Sort information into the subtopic headings (Synthesis Matrix).
7. Re-read papers to reassess your understanding of the topic.
8. Write up the literature review as a final stage.

Methodology/Materials and Methods

Should clearly describe the methodology and/or procedure you followed to conduct your original research:

- **Subjects**: Describe the process for selection of the subject pool used.
- **Instrumentation**: Identify the tool(s) used for collection of data. How the instrument was acquired, as well as its reliability and validity.
- **Procedures**: Describe the entire process conducted in detail, so that other scholars can replicate your experiments or study in different contexts.
- **Statistical or Data Analysis**: Provide description of the statistical process or methods used for data analysis. Statistical tests and/or methods should reflect the research hypothesis, question(s) or objectives.

Written in the past tense. What tense should you use for a proposal?

Results

Summarize the results of your research, and/or provide actual data (to the extent necessary) in graphic or tabular form. Keep in mind:

- **Order**: Offer your results in the same order in which you presented your hypothesis, research questions or research objectives.
- **Descriptive Data**: Provide all the descriptive data used, as well as their sources.
- **Results of Statistical Testing or Data Analysis**: Give the results of the statistical processes or data analysis conducted for your study. Provide only the results and avoid offering conclusions or interpretations of the results.
- **Interpretations of Results**: Offer a brief summary of the results with foundational interpretations of what the statistics or data analysis provide.

Written in the past tense. Can include “Anticipated outcomes” in Proposal.
Conclusion/Discussion

Summarize the conclusions and implications of the research you conducted. Provide recommendations for further research in your field. Keep in mind:

- **Summary of Findings**: Provide inferences and implications that the results of your study provide. Offer insight into what your study does or does not contribute to your field of research.
- **Conclusions Drawn by Results**: Identify specific conclusions resulting from your study. Offer insight into what your findings reveal within the current knowledge in your area of study.
- **Further Research**: Provide recommendations for further research on this topic or how parts of your study could be improved upon.

*Written in the past tense.*

Useful Links

- Guidelines for the Preparation of your Master's Thesis: [https://goo.gl/gkCCZL](https://goo.gl/gkCCZL)
- Thesis Format Tips: [https://graduate.rice.edu/thesisformat](https://graduate.rice.edu/thesisformat)

Manuals of Style

- APA Citation Guide - University Libraries - The Ohio State University [http://www.lib.ohio-state.edu/sites/guides/apagd.html](http://www.lib.ohio-state.edu/sites/guides/apagd.html)

Strategies and Tips on Writing Long-Term Projects

*JUST LIKE YOUR THESIS OR PAPERS FOR PUBLICATION*
Understand Yourself As a Writer

- Set up a writing schedule
  - Mastering the art of organizing yourself with timetables is key to your success as a writer.
- Find your ideal writing space
  - Do you write best on your own or with peers?
  - Is your writing space too distracting or uninspiring?
- Understand how you write and what motivates you to write productively

A, B, C Productivity Time

- A Time
  - Your highest productivity time: concentrate on all the major writing of your paper/thesis.
- B Time
  - Second productivity time: focus on secondary tasks that will help you keep going with your writing (e.g., read pertinent bibliography, analyze data).
- C Time
  - Lowest productivity time: handle details relevant to your project (e.g., edit citation style of paper, proofread work, format tables and data).

Time Matters

- There are different ways to reach your writing goal, but some are more efficient than others:
  - Use shortcuts to save time.
  - Search for shortcut keys on your computer.
  - Work in them 3x3: add as you progress.
  - Feel free to continue to discover more shortcuts (ctrl enter = page break, keep chapter at the beginning of the page). Ctrl T = search engine opens the last tab you close.
  - Learn to work with format.

Always Save Your Progress

- Avoid setbacks by setting up a PLAN to make sure you don’t lose your work:
  - Google Drive
  - Dropbox
  - Box.com
  - Pen drives and laptops can be lost or damaged, saving your data and work on a cloud is recommended
- Create a gmail account specifically for research:
  - juan.perez1200_thesis@gmail.com
Outlining and Pre-writing

- “Writers who complain about ‘writer’s block’ are writers who don’t have an outline” (Silva, 2007, p. 79).
- Common Outline questions:
  - How long do you need your paper to be?
    - Full report, research article, chapter of thesis, etc.
  - How much attention do you want/need to give to previous research?
  - Who are you writing for? (Audience)

Outlining and Pre-writing

- Complete your outline for the project in question (thesis chapter, research report, proposal, etc.).
- Consult it as you proceed with your writing.
- Revise it, as needed, during the drafting process.
- Understand and accept that the drafting process is also a learning and analysis process:
  - We don’t know everything in advance and then commit it to a page.
  - We revise our ideas, analyses, insights as we write.

References

Guidelines for the Preparation of Your Master’s Thesis, University of Nebraska at Kearney.

