

Graduate Student Expectations

Graduate school is not a 9am-5pm job. If you want to graduate in 2-3 years, figure on nights and weekends.

When you finish the first draft of your thesis, don't assume everybody will drop what they are doing to make reading the thesis their first priority. Remember, there are other students with the same demands/expectations, and, of course, there are faculty responsibilities to teaching, committees, and research. Therefore, your expected or desired schedule may not be realistic. In addition, the thesis may undergo several revisions, each of which will take some time to edit and revise.

Consider this, you will probably have **at least two drafts** before your committee receives the thesis. It is my role to be sure that the committee focuses on the scientific issues and minimize distraction due to errors in references, spelling, organization and so on. They are to examine the science. If the committee accepts the scientific product, they will still make a number of important suggestions for clarification and perhaps analysis. Therefore, you will receive comments back from 3-4 people and you will edit a **third** draft. Assuming the committee likes it, I review the third draft to be sure that the committee's suggestions are followed. This often requires small changes, but changes none the less, and precipitates a **fourth** draft.

Expectation: Under normal circumstances expect to defend your thesis 1.5 quarters after you submit your first draft. For example, if you submit your draft in mid-fall quarter, you will probably have your defense near the end of winter quarter. This expectation varies not only according to schedules, but also to the quality of the thesis including writing style and scientific content.

Do not forget! After you pass your thesis defense and the final document is handed in to the graduate school, you're exhausted and probably won't want to look at your thesis again for the rest of your life. But we have one more job to do. Don't forget that we need to write a journal article based on your thesis. This is where we take the 100-page document and distill it down to its essence of 20 pages or so. This is a crucial last step because it disseminates your work to the largest possible audience rather than locked away in a bound thesis in a university library. The journal article is one important reason why we are in science, to share our discoveries and advance the field.

Fountain's Famous Thesis Outline (~~GRADUATE THE EASY WAY!~~)

Writing a thesis is not as easy as one thinks. In addition to the challenge of synthesizing and organizing lots of data, analyses, and thoughts into a coherent document, the writing needs to be clear and concise as possible. Furthermore, the writing style has to be the scientific style. Students embarking on a thesis, particularly a master's thesis have almost no experience with the skills listed. Even experienced writers typically have little experience with the scientific format. Therefore, the experience can be lonesome and frustrating. What seems like personal torture or a desire to say things "my way" is actually an effort to get you to write clearly and concisely.

Many students expect to write something up, go through a review, then submit the thesis to the committee, then graduate. Please be aware of what Norman Mailer once said, "I don't know what I think until I write it down". This is true. As you construct arguments based on your data, new thoughts will appear or weaknesses in the arguments will become obvious. Therefore, be prepared for a long time to write.

In the review process, typically the first draft is pretty poor, compared to the desired final product because of the reasons given above. Be prepared to have several cycles of reviews and rewriting, BEFORE the thesis gets to the committee. Then once the document is given to the committee a few more, rewrites may be necessary. I am not sure how to shorten the process other than to recommend writing well, present clear arguments, and analyze the data fully. You should give your advisor a outline of the thesis as early on as possible so direction and suggestions can be provided early so little has to be redone later. But don't be surprised if another analysis is requested. This request happens at all levels in science including articles submitted to journals. It is just part of the scientific process.

I Introduction

Introduces the reader to the general problem and sets your work in a broader scientific context. The introduction links your rather narrow study to broader questions and the international literature on the subject. You need to delve into the literature outside the confines of your specific topic or geographic area of study.

- A. Outline the problem of general concern both nationally and internationally (if possible).
- B. Briefly mention prior work that is relevant to this problem highlighting some of the important results. It is in this section that you demonstrate your comprehensive knowledge of what relevant work came before yours. Mention at the end what is lacking to advance our understanding.
- C. What your report will do to help fill in the important gaps and to advance our understanding.

II. Study Site

Where was the study done, who preceded you, what were their results as it pertains to your work, and specifically what you are going to add.

- A. General Description (topography/climate)
- B. Why is this site a good place to address the concerns raised in I.B. and the goals of the thesis identified in I.C.
- C. Previous work, specific to the methods you are using and to the area you are studying. Again, you must demonstrate your comprehensive knowledge of what important/relevant work preceded yours. What were their results specific to your interests? End with what you are going to specifically add to the data/understanding.

This can be a tricky section to write. It is not a history of who has done what nor is it a summary of each scientists' contribution. It is a synthesis of the relevant knowledge about the subject. You are trying to synthesize for the reader a conception of how the process(es) work based on prior knowledge.

III. Research Methods

Now that you have the study site, what was your field plan? This section is a separate chapter if you are applying methods that need lots of explanation, and particularly if it is a new or unusual method. Otherwise, it can be combined with the next chapter.

IV. Field (or Modeling) Results

Here is where you list your measurements, describe any difficulties, errors and so on. From this section, the reader should know what worked, what didn't and what data you plan to use for the remainder of the thesis.

V. Analysis

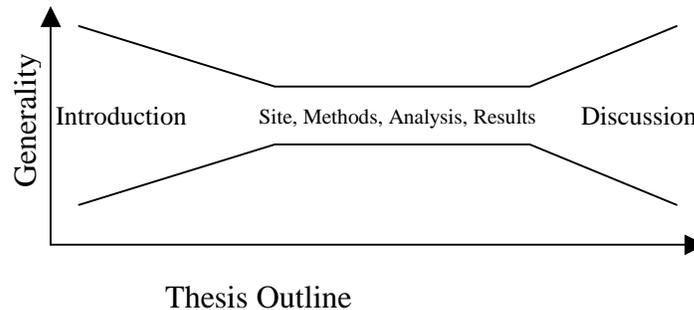
Based on the data in IV, how did you examine the data and what did you gain from the analysis?

VI. Discussion

The discussion section acts to tie together the disparate parts of the thesis. What do the results and analysis mean relative to the goal of your project? In the analysis section you may have subsections that concentrate on different analysis techniques. They might provide different results and the discussion section provides the means to

compare and contrast the methods. Also, the section is used to link your results, specific to one area, to other findings globally. How do they compare to previous work at your site or to other comparable sites? Are yours new and different, odd in a way that needs explaining or are they within the range of expected values based on other work. Can your results help explain other situations? Are there global/international implications of your results?

Think of it this way. In the “introduction”, you describe a general problem/concern, review the global literature on the subject, and identify a question that has not been adequately addressed. What follows in the “study site”, through the “analysis” is the examination of your specific question. Now in the discussion link your specific findings back to the general problem and to studies elsewhere around the globe. Compare and contrast. Are they similar, why or why not? Do your findings have any bearing on other studies around the globe? Does your work help interpret previous findings made by others?



VII. Conclusions

Highlight the major findings of your work.

Figures: Figures do not have titles, they have captions. Pay close attention to figures in a scientific journal article to see how they are laid out. Follow that format.