General Comments

A thesis is a publication, perhaps your first "real" scholarly publication. It is to explore the area in which your scientific work has been done. You are making scientific assertions and defending them by argument , facts (already established) and research (your) data. Make use of all your education when preparing this publication. It should demonstrate your ability to think and communicate scientifically.

Thesis is "a proposition, as one advance by a candidate for an academic degree, that is supported by argument." (The American Heritage Dictionary)

Thesis should consists of the following sections-Title Page, Signature Page, Abstract, Acknowledgments, Table of Contents, List of Figures and Tables, Introduction, Materials and Methods , Discussion, Bibliography.

General Points to look for-

- All relavent sections
- Margins are spaced properly [1.5 inch left, 1 inch on right, top and bottom.
- Page numbers (center bottom)
- Double spacing text
- Citations-(author, year) if more than two authors (first author et al., year)
- Consistent font style and size. (12 pt)

Title Page

Function- Title which tells what the paper is about, Student's Name, partial fulfillment of degree statement, department, university, month and year.

Critical reading- Does it clearly convey the subject discussed?
Title which tells what the paper is about, Student's Name, Thesis Statement (indicating it is a masters thesis) and where/when thesis was done

- Does it clearly convey the subject discussed?

Signature Page

Function- signature indicating approval by committee.

Points to look at-

- restate title
- restate name
- release statement

- signature line for student
- signature line for advisor
- signature lines for committee members
- signature line for graduate studies dean.

Abstract

Function-Summarizes the results presented in the paper and sometimes interpretation

Critical reading-This is important most salient facts and ideas in one place.

Points to look at-

- Re-state Title and Author
- Briefly state the problem or question addressed.
- Briefly summarize results and conclusions of study

Acknowledgments

Who would you like to thank for assistance and support

Table of Contents

lists pages where each section starts

List of figures

Every figure and table listed with page where they occur

Introduction

Function- Sets the framework of the paper and why it is important and interesting

Critical reading-Puts into context, one of the most important parts of the paper.

Points to look at-

- Does the intro. put into context the questions (hypotheses) being answered by the paper.?
- Does it adequately provide background information for understanding the problem and its relationship to biology at large.
- Are all observations ideas and facts supported by citations of authoritative sources?
- Does the conclusion of intro. firmly express the questions or hypothesis and specific aim of the study described by the paper

- Citation format should be consistent and conform to journal specifications.

Materials and Methods

Function- Gives details of materials and methods used and experimental design
Critical reading-Pay attention for details of how experiments were carried out when not familiar with the methods or not clear from results.

Points to look at-

- "past tense"
- Does it give a good impression on how the study was conducted overall, which techniques were preparative and which techniques were analytical
- Experimental manipulations.
- What controls and experimental groups are defined as.
- Statistic used if any.

Results

Function-Reports what the researchers actually found and describes data presented in figures and tables.

Critical reading- The most important part of the paper, the purpose of the paper. Evaluate whether the results answer (support) the question (hypothesis) of the paper. .

Points to look at-

- Cite figure you are talking about. Make sure figures are accurately cross-checked.
- While writing have figure in front of you.
- Describe the results presented in figure, do not take it for granted that the read knows what they are looking at.
  {example. " SDS-PAGE gel showing the relationship between good and evil.....(Figure 1A)..."}
- Significance and context of the data shown in figure.
  {example. "Patients with laugh-a-lot disease show elevated levels of goodness protein (Figure 1A, lane 3)....."}
- Stress key or important definitive data.
  {example. "More importantly patient afflicted with grumpy grouch disease have no apparent goodness protein which correlates with badness (Figure 1B, lane 2)" }
- Comparisons between groups, etc.
- Cite data describe but not shown in a figure as "(data not shown)". This data can be minor or ancillary data.

- A single observations should not be replicated , express as a mean. Mention measures of variability, like standard error of the mean. Example

Discussion

Function- Discusses two issues 1.) the adequacy of the results and experiments 2.) the relationship of the results to the work in the field in general.

Critical reading-reveal level of confidence authors have in conclusions. Reader already should be able to evaluate data in terms of context. The discussion re-enforces this relationship especially for readers outside the field.

Points to look at-

- Does the work support current theories and observations in the field?
- Does it discuss the relevance of your work and why they are valid to the current understanding of the area.
- Has the results advanced our understanding of the area.

Figures and Tables

Function- to pictorially present data and results in addition to text (Results)
Critical reading- Well labeled and clear (un-ambiguous)

Points to look at-

- Everything referred to in the text is clear and/or labeled in the figure.
- Every figure has a legend summarizing the figure and identifying parts of the figure (specific samples in gel lanes, etc.)
- Any figure photocopied from publication must have the permission of the publisher in order to be used in "your publication"

Bibliography of References and citations

Function- : Lists sources relavent to the work , the experiments and the conclusions drawn by the paper.

Critical reading-Important sources are found here.

Points to look at-

- Format of citations and references listed in bibliography are proper. Citation format, as described above in intro. { (author, year) }. Bibliography format is for each reference , hanging indent, double spaced, and information appears as follows

1. author {last name, initials - in order of appearance}
2. Year in parentheses
3. Title with period at end
4. Journal
5. volume number
6. issue number (if there is one) in parenthesis
7. page number range ending in a period

- All references are authoritative sources (peer reviewed)?
- No WEB site addresses (These are used only to aid you in acquiring authoritative sources) WEB sites are not Peer Reviewed!!!!!!. Any body can say anything.

Thesis Defense

The student schedules a defense of Committee members. A **public presentation** of the thesis is expected followed by a **committee only question and answer period** (the public will be asked to leave). Then the committee will ask the **student to leave the room**. The **committee then votes** for or against acceptance of the thesis. The **student is then re-admitted** to the room and informed of the committee's the decision. I unanimous acceptance was agreed to then the committee members sign and date at least three copies of the **Signature Page** that are on bonded paper (these are included in the bound versions: one for department, one for the YSU Library and one for the Graduate Studies Office). After revisions are made (as suggested by committee) then the three signature pages and a working copy (on regular paper) of the final thesis are taken to the Graduate Studies Office for Dean's approval. You will be informed when to print the three complete thesis copies on bond paper to be bound.

Suggestion for Presentation: Try a "power point" presentation. Use lots of textual slides to help you and the listener through the subject. If you can's answer a questions don't try and fake it, simply say "I don't know".