Guidelines for Written Thesis Proposal

Title Page:

Function-Tells what the Study is about and who is doing it

Critical reading-Allows decision of whether the study is relavent to current science and is original research.

Points to look at-

- Is the subject clearly stated in the title?
- Is the name of the student and institution stated?
- Are committee members listed?

Introduction:

Function- Sets the framework of the Study and why it is important and interesting. States the question being addresses and the hypothesis

Critical reading-Puts into context the study.

Points to look at-

- Does the intro. put the study into context?
- Are all observations ideas and facts supported by citations of authoritative sources?

Specific Aims:

Function- States specific questions addressed by the study.

Critical reading- experimental design and techniques will be evaluated in terms of whether they will provide the information necessary to answer the question or problem.

Some points to look at

- Express the questions (specific aim) or hypothesis and of the study
- Are they clear and concise?

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.

Some points to look at

- Overall Design Study- organism ,cells or gene. How are you manipulating the specimen experimentally? Do you use of inhibitors or agonists and what they specifically do to the specimen?
- Preparatory techniques-How specimen are prepared for analysis?
- Analytical techniques- What is the nature of the information gathered by each techniques? How are the techniques carried out? (generalized description).
- Statistical methods are described if used , student T-test, significance level criteria, number of trials or sampling, Etc.

Preliminary Results and/or Projected Results:

Function- Gives the committee a idea of what you expect to achieve and how rapidly it can be accomplished.

Critical reading- evaluate whether the student can interpret results in terms of satisfying the scientific questions proposed or arise from the study.

Some points to look at

- Preliminary data should demonstrate a competence with the techniques used and the type of information needed to answer the questions.
- Projected results should demonstrate that the researcher has a clear picture of the type information needed from the techniques in order to completely answer the question.

Figures and Tables:

Function- to pictorially present data and results

Critical reading- Does the information and data presented backup what is said in the text?

Some points to look at

- figures are a good addition to Results section text
- Is it clear what the figure represents
- Does the figure legend describe the significance of each labeled item.

- From the legend is it clear what various parts of a figure are. For instance, are all gel lanes identified as to what they are.

Bibliography of References and Citations:

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

Critical reading-Important sources are found here

Some points to look at

- Format of citations and references listed in bibliography are proper for the specific journal to be submitted.
- All references are authoritative sources (peer reviewed)?
- Are references primary sources for that idea or information (first one to publish it or commonly accepted).
- 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.

<u>Things to do for completion of the Thesis Proposal Defense.</u>

1. Determine membership of your committee.
2. Make sure every member agrees to serve on the committee.
3. Schedule Proposal Defense.
4. Prepare an oral presentation of your proposal.
5. Have four Thesis Proposal Defense forms ready for completion at your defense. (see next page, I have copy on disk)
6. File the paper work.

THESIS PROPOSAL

Identification of the Sea Urchin Egg Myosin Binding Protein Gene

Laura R. Shea, B.S.

This thesis proposal is submitted to the Department of Biological Sciences, Youngstown State University in partial fulfillment of the Master of Science degree.

Signature:

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Student Date

Approvals:

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Thesis Advisor Date

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Committee Member Date

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Committee Member Date