THE MASTER'S THESIS HANDBOOK

Master of Science in Exercise Science

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An Outline of the Master's Thesis Process*

1. Determine a topic of interest
2. Discuss idea(s) with faculty member(s)
3. Identify an interested faculty member to serve as the Chair of the Thesis Committee
4. Identify interested faculty members to serve as members of Thesis Committee (need a minimum of 3 faculty members on the committee, including the Chair)
5. Write thesis proposal in consultation with Chair of Thesis Committee (see format). Apply for approval of research involving human subjects (GSU Institutional Review Board - obtain information from GSU Research Office - Alumni Hall, G76).
6. When written proposal is approved by Thesis Committee Chair, disseminate copies to Thesis Committee members (minimum of 1 week before proposal meeting) and schedule thesis proposal meeting
7. Present thesis proposal to Thesis Committee. If accepted, project can begin as soon as approval is obtained from the GSU Institutional Review Board. Modifications or alterations in the proposal may be mandated by the Thesis Committee.
8. Collect and analyze data.
9. Write thesis draft in consultation with Chair of Thesis Committee
10. When written thesis draft is approved by Thesis Committee Chair, disseminate copies to Thesis Committee members (minimum of 1 week before proposal meeting) and schedule thesis defense meeting.
11. At thesis defense meeting, orally present thesis to Thesis Committee and invited guests, and entertain questions.
13. Upon approval, thesis is prepared in final format, signatures of Thesis Committee members are obtained, and final thesis draft is turned in to College of Education Office of Academic Assistance for binding. Submit abstract to Microform Publications of Human Movement Studies.

* Specific Department Guidelines for the Master's Thesis are found in Appendix A. All Master's theses in the Department of Kinesiology and Health must conform to these Guidelines (approved by the KH Graduate Faculty on October 27, 1997 to take effect beginning of Winter Quarter, 1998). It is the student's responsibility to understand and adhere to these guidelines.
The Thesis Proposal

The written thesis proposal and references must conform to the instructions and specifications of the Publication Manual of the American Psychological Association (4th ed.), i.e. APA format. The proposal must be written in the following format:

- Introduction
- Statement of the question
- Rationale
- Hypothesis(es)
- Delimitations and limitations
- Definitions
- Background/Review of the Literature
- Procedures
- References

A short explanation of each section is presented to assist the student in preparation of the proposal. This information has been adapted from Proposals That Work: A Guide for Planning Dissertations and Grant Proposals, by Lawrence F. Locke, Waneen Wyrick Spirduso, and Stephen J. Silverman (Sage Publications, Second Edition, 1987). Students are referred to this work for a more detailed explanation of proposal writing.

The Introduction

Proposals are best introduced by short, concise statements that establish the overall area of concern, arouse interest, and communicate information that is essential to the reader's comprehension of what follows. Avoid tedious length, overtly technical detail, or involved argument. A careful introduction is the precursor of the next three tasks (statement, rationale, and background), and may simply be written as the opening paragraph(s) of an initial section that includes all three. In general, the introduction should not exceed 2 or 3 paragraphs, or 1 page.

The most common error made in writing the introduction is failure to get to the point - usually because of making grand generalizations. Some indication of the importance of the study may be used to capture the reader's interest, but it is not necessary (or desirable) to completely explain all of the study's significance in the introduction. Present the basic facts and leave the detail of thorough discussion until a more appropriate point in the document. Other impediments for the reader are the use of unnecessary technical language, excessive quotations and references.

The Statement of the Question

Early in the proposal, often in the introductory paragraph(s), it is wise to make an explicit statement of the question to which the investigation will be directed. The statement doesn't need
to include all subtopics, or be written in the formal language of research hypotheses. It should, however, provide a specific and accurate synopsis of the primary purpose/target for the study. An early and specific announcement of this kind satisfies the reader's most pressing question: "What is this study about?"

**The Rationale**

Once the reader understands the topic of the question, the next logical question is: "Why bother with that question?" In this section, the author must explain why the proposed study is a worthwhile endeavor. The importance of the study may be in the application that might be made in a practical setting, or what might be contributed to the evolving structure of knowledge in the field, or both. Persuasive logic and documentation with factual evidence are what convince readers, but the rationale must be clearly written. It is often helpful to include diagrams or graphics in this section. In most cases, this section should be limited to the larger issues of clarifying and justifying major assumptions of the study. The detail of rationale for specific methodologies or analysis can be deferred to other parts of the proposal.

**The Hypothesis(es)**

All proposals must arrive at a formal statement of questions or hypotheses. These differ from what was contained in the statement of the question in that (1) they normally state in formal terms appropriate to the design and analysis of data to be employed, and (2) they display, in logical order, all subparts of the research topic. The hypothesis form is employed when the state of existing knowledge and theory permits formulation of reasonable predictions about the relationship of variables. The question form is most appropriate when the research is exploratory.

The most common problem in formulating a research question is clarity. Questions for quantitative studies must meet three tests of clarity and inclusiveness:

1) Is the question free of ambiguity?
2) Is a relationship among variables expressed?
3) Does the question imply an empirical test?

Research hypotheses differ from research questions in that hypotheses both indicate the question in testable form and predict the nature of the answer. A clear question is readily transformed into a hypothesis by casting it in the form of a declarative statement that can be tested so as to show it to be either true or false. Several small, perfectly testable hypotheses are always preferable to one that is larger and amorphous.

**Delimitations and Limitations**

All studies have inherent delimitations and limitations.
Delimitations describe the populations to which the generalizations made be safely made. The generalizability of the study will be a function of the subject sample and the analysis employed. Delimit literally means to define the limits inherent in the use of a particular construct or population.

Limitations, as used in the context of a research proposal, refer to limiting conditions or restrictive weaknesses. There are times when all factors cannot be controlled as a part of study design, or when the optimal number of observations simply cannot be made because of problems involving ethics or feasibility. If the investigator has given careful thought to these problems, and has determined that the information to be gained from the study is nevertheless valid and useful, then the investigator proceeds, but notes the limitations.

Definitions

All proposals for research use systematic language that may be specific to that field or to that research proposal. If there is a reasonable doubt as to whether a word is in common usage, or would be widely understood by potential readers, provide a definition that will be used throughout the proposal.

Background

Any research problem must show its lineage from the background of existing knowledge, previous investigations, or, in the case of applied research, from contemporary practice. The author must answer three questions:

1) What do we already know or do? (The purpose here, in one or two sentences, is to support the legitimacy and importance of the question.)
2) How does this particular question relate to what we already know or do? (The purpose here is to explain and support the exact form of questions or hypotheses that serve as the focus for the study.)
3) Why select this particular method of investigation? (The purpose here is to explain and support the selections made from among alternative methods of investigation.)

In reviewing the research literature, the author's task is to indicate the main directions taken by workers in the area and the main issues of methodology and interpretation that have arisen. The author should select only those studies that provide a foundation for the proposed investigation, discuss these studies in sufficient detail to make their relevance entirely clear, note explicitly the ways in which they contribute to the proposed research, and give some indication of how the proposal is designed to move beyond earlier work. It is important for proposal writers to resist the impulse to display both the extent of their personal labors in achieving what they know and the volume of interesting but presently irrelevant information accumulated in the process. The
rule in selecting studies for review is exactly the same as that used throughout the proposal - limit discussion to what is essential to the main topic.

The author should present an organized, conceptual framework that encompasses both the reviewed studies and the proposed research. This organization make take the form of something as obvious and practical as grouping studies according to certain methodological features, or research findings or conclusions. An organized review of literature is essential for communicating clearly and identifying distinctive threads of thought about your research question.

**Methods/Procedures**

All proposals must include a plan for the careful and systematic observation of events. The methods selected for such observations determine the quality of data obtained. For this reason, this section is usually the most closely scrutinized. The presentation of methodology requires great attention to detail, and must include sources of data, the collection of data, and the analysis of data. In addition, the discussion must show that the specific techniques selected will not fall short of the claims established in previous sections of the proposal.

This section must be freely adapted to the purpose of the study, however, the proposal must provide a step-by-step set of instructions for conducting the investigation. Many studies require attention to the following items:

1) identification and description of the target population and sampling methods to be used
2) presentation of instruments and techniques for measurement
3) presentation of a design for the collection of data
4) presentation of procedures for collecting and recording data
5) explanation of data analysis procedures to be used
6) development of plans for contingencies such as subject mortality

Diagrams, particularly of the study design and of the relationship of numerous variables, can greatly aid in the clear and concise presentation of procedures. Many items of supplementary material may be placed in appendices and referenced in the main text. Examples include consent forms, instructions to subjects, equipment specifications, data collection sheets, questionnaires, etc.

**References**

References cited in the proposal should be listed in APA format, and should be limited to works actually referred to in the written proposal.
The Written Master’s Thesis

Format

The written thesis must conform to the Master’s Thesis Guidelines, Department of Kinesiology and Health (Appendix A). The thesis format will be decided by the student and the Thesis Committee, and may be either a five chapter thesis using APA or Turabian style manuals, or a manuscript format using a journal style selected by the student and the Thesis Committee. The preliminary pages will follow the Guide for Preparing Dissertations, College of Education (Summer 1995 Revision, or most recent) with appropriate wording changes for theses.

The writing process: Working with the Chair and the Thesis Committee

It is preferable that a majority of the writing of the Introduction, Review of Literature, and Methods sections be completed before collection and analysis of data. Drafts of these sections and Results should be submitted to your Thesis Committee Chair, allotting adequate time for editing and return. After the initial draft of the Discussion/Conclusions, it is appropriate to submit drafts of the entire document to the Thesis Committee Chair for editing, to allow for comprehension of the document in its entirety rather than as isolated sections. It is expected that drafts of the thesis will be reviewed with the Thesis Committee Chair until approval is given by the Chair to distribute copies to Thesis Committee Members. This process will make the most efficient use of the Thesis Committee Members’ time, and will avoid conflicting editing opinions during the writing process.

Issues of Authorship and Ownership

It is the goal of every research project to have the results disseminated. This usually takes the form of a presentation at a professional conference and/or an article published in an appropriate journal.

Ownership of information - The product of the research (data, publications, new methods or procedures, inventions, etc) is considered the intellectual property of the institution where the research originated, principally Georgia State University. Original consent forms, data collection forms, data files, etc. must remain at the institution.

Authorship issues - inclusion and order of potential authors should be determined by the student and the Thesis Committee early in the process, preferably during the proposal stage. The inclusion of authors and their order in publication should be based upon their direct contribution to the research study. Their contribution may take the form of:

- Intellectual contribution of research ideas and/or literature reviews
- Participation in proposal writing for IRB approval or grant funding
Methodological expertise and/or data collection and analysis
Participation in the writing/editing process

Except for extraordinary circumstances, it is expected that the thesis student would be the first author on the primary abstract and/or manuscript. Exceptions may include:

- Presentation of research at a professional meeting that the student is not able to attend (that requires first author to present)
- Student begins, but does not satisfactorily complete thesis
- Student does not present a manuscript suitable for submission for publication within 6 months of thesis defense
- Student has not made a significant contribution to the research study other than data collection

Affirmation of issues of ownership, publication, and authorship must be made by signature of the Student and Thesis Committee at the successful conclusion of the Thesis Proposal.

The Master Thesis Defense

Scheduling your Thesis Defense

The Thesis defense is scheduled only with approval of the Thesis Committee Chair. This typically occurs when the Chair is satisfied that the written thesis has met the highest academic standards, both in content and in format. The student may find it valuable to hold a pre-defense meeting to update the Thesis Committee and discuss the project in order to benefit from the Committee’s guidance and prevent significant problems during the writing process and defense. Once the Thesis Committee Chair’s approval is obtained, it is the student’s responsibility to schedule a meeting that all members of the Thesis Committee can attend, and to schedule a meeting room. The Thesis defense must be scheduled on the main Georgia State campus during the academic term, not including final exam week. Under the Semester system (beginning Fall Semester, 1998) the Thesis Defense may not be scheduled during the last week of classes.

Preparing for your Thesis defense

Once the Thesis Defense is scheduled, the following must occur (by the time indicated):

1) A final draft of the written Thesis must be distributed to each member of the Thesis Committee a minimum of one (1) week before the scheduled defense
2) A final draft of the written Thesis must be made available for review in the Office of the Department of Kinesiology and Health a minimum of one (1) week before the scheduled defense
3) An announcement of the Thesis Defense must be posted in the Office of the Department of Kinesiology and Health a **minimum of one (1) week** before the scheduled defense, and will include the date, time and place of the defense, the student’s name, Thesis title, and the abstract of the Thesis.

Under the direction of the Thesis Committee Chair, the student should prepare a verbal presentation of the Thesis, including an introduction, methods, subject characteristics, results, and conclusions. The student may also find it valuable to contact each member of the Thesis Committee to ensure that significant problems do not arise during the Defense.

**The Thesis Defense**

The Thesis Defense is a verbal presentation of the Master’s Thesis research project. It is attended by the Thesis Committee, and is open to all faculty, staff, students, and invited guests. The Defense typically begins with a brief introduction by the Chair, followed by the student presentation, which should not exceed 20 minutes. The presentation is followed by questions from non-Committee members which should be addressed by the student. Guests are then excused, and the student responds to questions from the Thesis Committee. Once the Committee questions are satisfied, the student is excused and the Thesis Committee votes on acceptance of the Thesis. The student is allowed no more than one (1) dissenting vote for successful completion of the Thesis. Acceptance of the Thesis will be documented by signature of the Thesis Acceptance page by each member of the Committee.

**Final Things**

**The Final Copy**

Final editing changes suggested or mandated by the Thesis Committee must be made promptly, and are incorporated into the final copy of the Thesis. A final grade for KH 7990, Master’s Thesis, will not be submitted until the final copy has been approved by the Thesis Committee Chair and submitted to the College of Education Office of Academic Assistance.

Preliminary pages of thesis should follow the Guide for Preparing Dissertations, College of Education (Summer 1995 Revision, or most current), with the appropriate wording changes for theses. The following copies should be submitted to the College of Education Office of Academic Assistance for binding:

1. Original - Thesis Committee and Author signatures
2. 1st and 2nd copies - 1 to Library, 1 to Department
3. 1 copy for each Thesis Committee Member (minimum of 3)
4. 1 copy for student if desired
5. Additional copies if desired

The student must submit to the Thesis Committee Chair a final copy of the Thesis on a computer disk in a common word processing format. The student must submit the abstract of the Thesis to Microform Publications of Human Movement Studies. Complete the Permission to Publish form and submit two (2) copies of the abstract to:

Microform Publications
International Institute for Sport and Human Performance
1243 University of Oregon
Eugene, OR 97403-1243
Phone: (541)346-4114
Fax: (541)-346-0935

Once the Thesis has been bound, the student should distribute a copy to each member of the Thesis Committee.
Appendix A

Master’s Thesis Guidelines
Department of Kinesiology and Health

1. Thesis Proposal
   1. A written proposal must be submitted in the following format, including headings:
      1. Introduction
      2. Statement of the question
      3. Rationale
      4. Hypothesis(es)
      5. Delimitations and limitations
      6. Definitions
      7. Background/Review of the Literature
      8. Procedures
      9. References
   2. The written proposal and references must conform to the instructions and specifications of the Publication Manual of the American Psychological Association (4th ed.) - APA format.
   3. The written proposal must be approved by the Thesis Committee Chair, and a copy must be distributed to each Thesis Committee member a minimum of one (1) week before the Thesis Proposal Presentation/Meeting.

2. Thesis Committee
   1. The Thesis Committee Chair must hold Graduate Faculty status (or Provisional Graduate Faculty status) in the Department of Kinesiology and Health.
   2. The Thesis Committee must consist of a minimum of three (3) members, including the Chair. For Committee members other than the Chair:
      1. Graduate Faculty status is preferred, but not required
      2. One (1) member may be selected from outside the Department (and may be from another institution) as appropriate for the research topic.
      3. The Thesis Committee must consist of at least three (3) members, however, a student may elect to have more than three (3) members.

3. Thesis Proposal Presentation
   1. The Thesis proposal must be presented orally to Thesis Committee.
   2. The presentation is open to other faculty, staff, students, and invited guests.
   3. Written announcement of presentation must be posted in the Department of Kinesiology and Health Office a minimum of one (1) week before the presentation meeting.
4. Approval of thesis proposal is by vote of Thesis Committee. For approval, there must not be more than one (1) dissenting vote.

4. The Written Thesis
   1. Preliminary pages of thesis should follow the Guide for Preparing Dissertations, College of Education (Summer 1995 Revision, or most current), with the appropriate wording changes for theses.
   2. The Thesis format will be decided by Student and Thesis Committee, and may consist of one of the two following types:
      1. Five Chapter format (APA or Turabian style manual):
         1. Chapter 1: Introduction
         2. Chapter 2: Review of Literature
         3. Chapter 3: Methods
         4. Chapter 4: Results
         5. Chapter 5: Discussion
         6. References
         7. Appendices
      2. Manuscript format (journal style to be selected by Student and Thesis Committee):
         1. Chapter 1: Journal Article Manuscript with References
         2. Chapter 2: Review Article Manuscript with References
         3. Appendices
   3. Appendices required:
      1. Consent form
      2. Raw data
      3. Other appendices as needed or specified by Thesis Committee:
         5. IRB proposal, approval letter
         6. Pilot data
         7. Methodological information: in-depth explanation of specialized methods, development of procedures, instruments used (e.g. surveys), etc. Information should be provided in sufficient detail for replication of the study.
         8. Data collection forms
         9. Statistical results (e.g. ANOVA tables)

5. The Thesis Defense
   1. The Thesis Defense must be scheduled on the main campus during the academic session (Quarter System: from the first day to the last day of classes; Semester System beginning Fall 1998: no thesis defense will be scheduled during the last week of classes) excluding holidays (no thesis defense will be scheduled during final exams).
2. Final draft of the written thesis must be approved by the Thesis Committee Chair and distributed to each member of the Thesis Committee a minimum of one (1) week before the defense.

3. A copy of the final draft will be made available in the KH Department office for review a minimum of one (1) week before the defense.

4. An announcement of the Thesis Defense will be posted in the KH Department a minimum of one (1) week before the defense, and will include the date, time, and place of the defense, the student's name, thesis title, and abstract.

5. The Thesis Defense is attended by the Thesis Committee, and is open to all faculty, staff, students, and invited guests. The Thesis Defense must be attended by no less than three (3) members of the Thesis Committee.

6. Acceptance of the Thesis is by vote of the Thesis Committee, and will be documented by signature of the Acceptance page. For approval, there must not be more than one (1) dissenting vote.

6. Final Thesis Copy

1. Final editing changes will be made based upon Thesis Committee recommendations, and will be made as soon as practicable. The Thesis Committee Chair is responsible for ensuring that editing changes made for the final document adhere to the recommendations of the Thesis Committee.

2. A final grade for KH 7990, Master’s Thesis, will not be submitted until the final copy has been received and approved by the Thesis Committee Chair.

3. The final copy must follow the Production Guidelines (pp 21-24) of the Guide For Preparing Dissertations, College of Education (Summer 1995 Revision, or most recent).

4. The following copies should be submitted to the College of Education Office of Academic Assistance for binding:
   1. Original - Thesis Committee and Author's signatures
   2. 1st and 2nd copies - 1 to Library, 1 to Department
   3. 1 copy for each Thesis Committee Member (minimum of 3)
   4. 1 copy for student if desired
   5. Additional copies if desired

5. The student must submit to the Thesis Committee Chair a final copy of the Thesis on a computer disk in a common word processing format.

6. The student must submit the abstract of the Thesis to Microform Publications of Human Movement Studies. See the Permission to Publish form and instructions for submission in the Master’s Thesis Handbook.

7. Issues of Ownership, Publication, and Authorship

1. Ownership of information - The product of the research (data, publications, new methods/procedures, inventions, etc.) is considered the intellectual property of the institution where the research originated, principally Georgia State University.
Original consent forms, data collection forms, data files, etc. must remain at the institution.

2. Authorship issues - inclusion and order of potential authors should be determined by the student and the Thesis Committee early in the process, preferably during the proposal stage. The inclusion of authors and their order in publication should be based upon their direct contribution to the research study. Their contribution may take the form of:

1. Intellectual contribution of research ideas and/or literature reviews
2. Participation in proposal writing for IRB approval or grant funding
3. Methodological expertise and/or data collection and analysis
4. Participation in the writing/editing process

C. Except for extraordinary circumstances, it is expected that the thesis student would be the first author on the primary abstract and/or manuscript. Exceptions may include:

5. Presentation of research at a professional meeting (that requires first author to present) that the student is not able to attend
6. Student begins, but does not satisfactorily complete, the Thesis
7. Student does not present a manuscript suitable for submission for publication within 6 months of Thesis Defense
8. Student has not made a significant contribution to the research study other than data collection

3. Affirmation of issues of ownership, publication, and authorship must be made by signature of the Student and Thesis Committee at the successful conclusion of the Thesis Proposal.

Approved by the Graduate Faculty October 27, 1997 for implementation beginning Winter Quarter, 1998.