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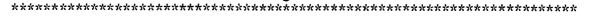   Student Research; Study Skills; Time Management;
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ABSTRACT
                This paper is intended to give graduate level special
education students (and others) a structure to facilitate completion
of a field study/thesis for a master's degree or a dissertation for
the doctorate. First, a format for a dissertation/thesis proposal is
suggested and guidelines are offered for development of the proposal.
The importance of a thorough review of the relevant research is
stressed in a discussion on types of sources, which also considers
use of computers for literature searches, word processing, and data
analysis. Criteria for evaluating a research study are listed. The
paper also provides suggestions for selecting the dissertation/thesis
topic, selecting an advisor and committee, setting up a budget,
surviving the oral defense, and writing a journal article based on
the dissertation or thesis. A list of additional tips and suggested
organizational strategies stresses the importance of beginning the
thesis work early and utilizing faculty and other students for
support. An outline of a "mini" proposal is included. (Contains 24
references.) (DB)

RESEARCH SURVIVAL SKILLS: PREPARING A MASTER'S THESIS,

FIELD PROJECT OR DOCTORAL DISSERTATION

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Session Description: Completion of the thesis/dissertation is the
big hurdle in obtaining an advanced degree. This session will
review topic selection, literature review, proposal writing,
research tools, writing style, organization strategies, etc.

Table of Contents

i

RESEARCH SURVIVAL SKILLS: PREPARING A MASTER'S THESIS, FIELD STUDY OR DOCTORAL DISSERTATION

Introduction

The student taking courses generally functions within a well structured system. Assignments are due at a specified time and examinations are regularly scheduled throughout the term. Term paper assignments are usually narrow in scope and must be completed within the framework of a 10 week quarter or a 16 week semester. The period of thesis/dissertation preparation is often the first time graduate students face a large unstructured project and usually nothing in their prior experience has prepared them for conducting such an investigation.

Completion of the thesis/dissertation is the big hurdle in obtaining an advanced degree. Some students think a thesis/ dissertation is just a "big paper" so they underestimate both the time and the resources required to complete the task. The first step in solving this problem is for the student to follow a systematic plan for thesis/dissertation completion.

The purpose of this session will be to present a structure for graduate level special education students to use in order to complete either a field study/thesis for the master's degree or a

dissertation for the doctorate.

The focus of this session will be on problem identification, framing a research question/hypothesis, reviewing the literature, and research writing. Additional information will be provided on the format of a typical thesis/dissertation and the function of each of the thesis/dissertation components.

Handouts will be provided on all topics covered during the session as well as additional resources for students and researchers to use as references when preparing the thesis/dissertation.

Dissertation/Thesis Proposal Format

The format for your proposal is similar to the one used for the final dissertation/thesis writing, but it covers much of the same information in a somewhat different organization. The following format is suggested for a research proposal.

<u>Format</u>

Title Page

Table of Contents

Introduction

Statement of the Problem

Theoretical Rationale

Operational Definition of Terms

Hypotheses/Research Questions

Methodology

    Brief Description of the Design and Variables

    Subjects

    Instrumentation

    Procedures

    Pilot

    Data Analysis

Limitations

Assumptions

Implications

References

The Dissertation/Thesis Proposal Guidelines

The dissertation/thesis proposal should succinctly describe the problem to be investigated, the methodology/design to be used, instrumentation, the proposed plan of data analysis, a rationale or theoretical framework, a plan for review of the literature, procedures for protection of human subjects when appropriate and the probable contribution the thesis would make to the field.

The proposal will be a plan of the thesis effort rather than a major component of the final product. All work submitted for

review at this stage should reflect not only your scholarship but also your concern for the technical details of format and style.

Guidelines:

1. The proposal should both motivate and explain the proposed study. The proposal should justify the study. It should make a persuasive case that the study should be done, and completed in the manner that you propose.

2. All parts of the proposal must be logically coherent. The research problem should flow from the review of the literature; the research questions must be congruent with the statement of the problem; the design and method must be appropriate to answer the research questions; and the sample or the data sources must be adequate to yield the required information.

3. Use operational definitions. In the description of the design of the study, readers will check to see if the proposed operational steps are appropriate to answer the questions stated conceptually in the description of the problem to be investigated.

4. The methodology and statistical procedures should be stated with a degree of specificity that would allow the proposal to be replicated exactly.

5.   Strengths and weaknesses of the instruments and design should be discussed.

6.   The proposal should be thorough, assuming nothing on the part of the reader.

7.   Outline statistical approaches in detail.   Explain how the results will be interpreted and how they relate to the research questions.

8.   Use one standard citation and organization style.   APA is usually recommended.   It is your responsibility to learn and use a standard style; this responsibility should not be left to the typist.

Some Common Questions:

1.   How long should the proposal be?

   The proposal is more than an outline.   It must be detailed enough to provide a blueprint by which someone else could do the study.   For most studies, a proposal can accomplish these goals in ten to thirty pages.

2.   What should be in the review of the literature?

The literature review should include theoretical, empirical, and review articles, reports, dissertations which set the context for the proposed study. The narration connecting the references cited in the review should make clear to the reader why the sources are cited and how their strengths and weaknesses support the case for the proposal. The most recent and most pertinent literature should be discussed in greater depth than the historical material.

3. What types of studies are acceptable?

Empirical, descriptive, qualitative and historical studies are acceptable.

4. Is it acceptable to collect data before the proposal is approved?

It is extremely risky to collect data before the proposal has been approved by the thesis committee and the administration. During the approval process, changes may be required involving the sample, design or instruments.

Reviewing the Relevant Research

A student usually considers several possible topics prior to selecting a final topic and formulating a research question/hypothesis. Sometimes it's difficult to come up with a

specific idea for a research topic. For any possible research topic, there is normally a wealth of associated literature. The leap from researchable topic to research question normally requires an extended period of time spent reviewing the relevant research literature. It is likely that first attempts at formulating a research question might be revised given the findings of the literature you review.

While every step in the research process is important, an organized and thorough review of the literature is essential in determining the ultimate success or failure of the study. A complete review provides the foundation for the entire study. The literature search gives the researcher the perspective to see what's already been done, how it was done, and what was discovered.

Literature reviews report research findings, not textbook excerpts or articles of opinion. There are generally several types of sources that must be consulted to produce a well-documented report.

1. **General Sources:** these provide information on the location of references. Included in this category are the periodic volumes that abstract the research literature by author and subject area in a variety of fields (e.g., <u>Current Index on Journals in Education, Exceptional Child Abstracts, Psychological Abstracts, The Reader's Guide to Periodical Literature, etc.</u>). One useful source is <u>The</u>

<u>Statistical Abstract of the United States</u> which is the annual national demographic book.

2. **Secondary Sources**: these include scholarly summaries in the form of meta-analyses and syntheses of previous research. For example, the American Educational Research Association (AERA) publishes the <u>Review of Educational Research</u> which presents research summaries written by experts in their respective fields. Other excellent sources are: <u>The Handbook on Research on Teaching, The Encyclopedia of Educational Research, The National Society for the Study of Education Yearbook</u>.

3. **Primary Sources**: these are accounts of actual research studies as reported in professional journals or in compilations of abstracts of student research (e.g., Dissertation Abstracts). A good starting point is to look at the research of other graduate students. By the time students are at the thesis/dissertation stage, they should be familiar with the important journals in their own field. Journals are the most valuable source of information about the latest research published in a particular area. Some of the top publications in special education include: <u>Academic Therapy, American Annals of the Deaf, American Journal of Mental Deficiency, Education of the Visually Handicapped, Exceptional Children, Gifted Child Quarterly, Journal of the Association for the Severely Handicapped, Journal of Learning Disabilities, Journal of Special Education, Journal of Speech and Hearing Research</u>, etc.

If the library does not have the journal you need, ask the reference librarian for assistance with the **inter-library loan system**. Most dissertations and some theses are available on microfilm or in papercopy for a fee.

4. Other Resources: Sometimes in order to fully review the literature on your topic, you need to be a detective and investigate less accessible sources of information. These sources might include unpublished reports, conference papers, government monographs, personal communications with other researchers in the field, etc.

Using the Computer for Literature Searches

Most university libraries offer incredible resources for accessing information through the use of on-line computer reference searches (e.g., CD-ROM). There are obvious advantages to on-line searches. For instance, the CD-ROM disks containing ERIC documents can be scanned in seconds. Using descriptor terms associated with the topic being searched, citation and abstract information can be listed on the computer screen and/or printed out.

Another advantage is the thoroughness of the on-line system. The information is both current and very complete in providing access to tens of thousands of documents. Most university libraries provide access to a variety of CD-ROM databases fre_ of

charge to enrolled students and reference librarians can easily explain the fundamentals of the system in a few minutes.

The personal computer is also an invaluable tool for both word processing and data analysis. There is no other computer application that is used more frequently than the word processor. The primary use of word processors for graduate students will be the preparation of the research report. There are software packages for word processing programs specifically designed for people writing doctoral dissertation and journal articles that must conform to the stylistic rules contained in the APA Manual (e.g., **Manuscript Manager**, Pergamon Press, Inc.). There are also a variety of complete and easy to use data analysis programs (e.g., **Mystat, SPSSX, Epistat**, etc.).

Criteria for Evaluating a Research Study

The review of the literature

    1. Is the review recent?

    2. Is the literature reviewed relevant?

    3. Are there outstanding references you know of that were left out?

The problem and the purpose

    1. Is the statement of the problem clear?

    2. Is the purpose of the study clearly stated?

3. Is there a theoretical rationale to which the hypotheses/research questions are grounded?

4. Is there a rationale for why the study is an important one to do?

The hypothesis/research question

1. Are the hypotheses/research questions clearly stated?

2. Are the hypotheses testable?

3. Is the predicted relationship among the variables clear?

Method

1. Are both the independent and dependent variables clearly defined?

2. Is it clear how the study was conducted?

Sample

1. Was sample selected in such a way as to be representative of the population?

2. How was sample selected?

Results and discussion

1. Are findings related back to studies discussed in review of the literature?

2. Are results related to hypothesis/research question?

3. Is the discussion of the results consistent with the results?

General features of the report

    1. Is it clearly written and understandable?

    2. Is the language biased?

    3. What are the strengths and weaknesses of the report?

Research Survival Skills

Selecting the Dissertation/Thesis Topic

1.   Take the earliest opportunity to do some reading in several areas of interest. If you are having a difficult time selecting a researchable topic, consider some of these sources:

- recent journal articles are an excellent way to identify topics of current interest in your field e.g., prenatally exposed populations, school based co-ordination models, transition, etc.
- most dissertations/theses (and many journal articles) include recommendations for further research; many studies are built upon previous investigations e.g., extensions of the investigation, replication with a different population, improvement of a methodologically weak investigation, etc.
- research needs can also come from practitioners who are on the frontlines and most immediately in touch with classroom issues.

2.   There are several factors to keep in mind in the course of selecting a dissertation topic:

- is it do-able in the allotted time frame?
- are there funding possibilities?
- will a study on this topic advance your professional development and/or career goals?
- do you have access to an appropriate population and valid and reliable instruments?
- will a study on this topic fulfill the purposes of dissertation/thesis research: a) allow the student to demonstrate the ability to do independent research, and b) make a contribution to knowledge which can then be documented and disseminated.

Preparing the Proposal

The process of moving from an idea for a dissertation/thesis to a well defined, complete proposal is sometimes the most difficult task of the entire dissertation. It is not unusual for this process to take 6-10 months or more. What students find particularly frustrating is that writing a research proposal is an iterative and recursive process which requires as much rewriting as it does writing. There are some things students can do to expedite this process:

1. all students start with a project which is too large; narrow the scope

2. find other graduate students at the same point in the process and form a support group; in addition to getting moral support and encouragement, you can also ask them to look at your proposal during the developmental stages and give you feedback on content, format and writing style

3. good self discipline reduces the amount of time needed; if you are not an organized person who can work independently without supervision then you will have to alter your behavior at least temporarily - accurate and complete records need to be maintained, this includes a coding/filing system and log of materials read; in addition, plan your daily and weekly work in advance by establishing tasks for the week and setting aside times when you will work on the project

4. set up a system to expedite advisor's response time; schedule regular appointments with your advisor; mail or drop off all work you have completed (and any prior drafts if you are rewriting) several days before the meeting with a note asking your advisor to return your work with comments at the meeting (if any of the writing/rewriting process is being done through the mail, include a stamped self-addressed envelope for the return of materials)

5. set up your own time line for completion of the different parts of the proposal; allot an amount of time for the initial literature review (you will continue to review the literature

throughout the dissertation/thesis process), instrument selection/ development, piloting the instrument and/or procedure, data collection, data analysis, writing up the results, and proofreading, rewriting and editing

6. remember that all graduate students get discouraged but don't let it interrupt your progress (writing a dissertation or thesis can be drudgery at times); schedule activities that are personally rewarding, use your support group and talk to your advisor who probably had her own down days doing research

Selecting an Advisor and Committee

1. The ideal advisor is both interested in your topic and competent to supervise the development of that topic into an acceptable proposal. It helps if you also feel that your advisor is interested in you as a person.

2. An advisor must be willing to read succeeding drafts of the proposal during the development stage and be willing to comment and return within a prompt time frame

3. An advisor must also be willing and able to protect the student from unreasonable demands made by other committee members

4. Ideally the advisor has had previous experience with both the topic and the research methodology

5. Select committee members who you feel are personally supportive of you and complement your advisor. It is sometimes difficult for students to discern these things but try to select

committee members who are on good terms with your advisor as well as with each other.

6. Ideally committee members are selected because of the potential benefits they can bring to your study e.g., statistical expertise, familiarity with the literature, editorial board membership of a journal you hope to someday publish your findings in, etc.

7. Before choosing an advisor and committee members, try to find out about upcoming sabbatical leaves or any other circumstances that might affect committee composition.

8. Should you have particular difficulty working with either your advisor or a committee member e.g., he or she does not read, comment on, or return drafts in a timely fashion, then a) send notice in advance that materials are being sent to be read, b) schedule regular appointments and ask at those meetings for a firm commitment as to a date materials will be read and returned to you, and c) keep working.

Setting Up a Budget

There are always hidden costs in completing a research project. Before you begin the study, cost out the components of the project e.g., word processing, copying, binding, postage, phone, envelopes, paper, printing costs (e.g., copies of the instrument, copies of materials for committee members, etc.); software (e.g., word processing program or statistical package); etc.

Surviving the Oral Defense

It is common to defend the dissertation orally before the entire committee on two occasions: at the proposal and for the final defense. There are some things a student can do to reduce the anxiety associated with confronting a panel of faculty face to face:

1. prepare an outline of the study including why the study is important, how you became interested in the topic, what other researchers have done, the proposed methodology and variables of interest (including how these variables will be measured) and at the final defense, the results and the contributions of these findings

2. the oral defense normally brings out various suggestions; respond positively to realistic, small suggestions but if these involve a great deal of work, ask for a fuller discussion of the recommendations before agreeing to anything; hopefully your advisor will be an advocate for you at times like this and has sufficient clout to have the last word

3. at the end of the defense, the student should summarize any additions/corrections the committee has agreed should be incorporated into either the proposal or the final document.

Writing the Journal Article

The results of most doctoral dissertations and some master's theses are written up and reported in a scholarly journal. It takes more than a pair of scissors and couple of hours to turn a dissertation into a publishable journal article.

* prepare a detailed outline of the article
* write edit, rewrite, re-edit and rewrite until the draft is ready
* select one or more appropriate journals and send for author's guidelines in order to find out such things as maximum length, style (e.g., APA), number of copies to be submitted, etc.
* sometimes your advisor will co-author the article with you since he or she probably contributed substantially to the quality and content of the final product; you should however retain first authorship

Suggestions, Tips and Organizational Strategies: Chronologically Arranged

In the beginning...

1. As you begin your program start an ongoing list of research topics: ideas that intrigue you, questions that are unanswered,

areas of need in the field, etc.

Keep the list in a file which also includes pertinent
references, lecture notes, contacts, and resources.

2.   Evaluate professors you encounter with an eye to possible
committee members:

- those who have expertise and interest in an area you are
  considering for research
- those with an organizational style compatible with yours or
  one you wish to model
- those you communicate well with

3.   Form relationships with fellow students, looking forward to
study/support partners or groups. Again, evaluate compatibility,
mutual interest and complementary skills.

4.   Gain access to a computer. It is essential to begin to use
the word processor early on so that this task will not be an
additional burden when beginning your theses writing.

5.   As you are able to focus in on a topic of interest use that
topic, whenever possible, for class assignments. In this way
you can begin to build your reference file, explore the
literature, and formulate your thoughts.

6.   For writing assignments in your classes, practice your theses
writing style - which is:

- written in the third person
- clear
- concise
- non-biased (avoiding soap box stands)
- straight forward

Check out dissertations/theses from the library. Study the
writing style and pattern your writing from that.

Use one or more writing reference guides (reference list
attached).

From the guides and dissertation/theses models, make up a
simple check list of rules to follow.

Exchange papers with your study buddy. Use the check list to
proof each others papers.

Learning to write in this style is critical and can be
frustrating as you are struggling with other phases of the
research. <u>Practice this early on</u>.

7.   Become familiar with your campus library. The library usually

provides a reference guide. Read it. Make an appointment with the reference librarian so that you can locate materials. Or convince one of your professors to organize a group visit.

Moving toward the research proposal...

8.   Keep your growing list of resources and references in an organized system. Using file cards works well. Use two different colors. For each reference use one card for factual information, quotes and summary. Use the other for comments, notes on possible use, questions, etc.

   As you focus more narrowly on your topic, organize these cards into broad categories, keeping your system flexible, since you will probably reorganize frequently.

9.   Choosing your topic, narrowing your focus to a workable problem and posing the research questions are often difficult tasks.

   These suggestions may help:

• try to enlist, as one of your study buddies, a fellow student who is one or two phases ahead of you in the writing process. Discuss with them their decision making process, pitfalls and successes.

- form a small group of students who are in the same phase, meeting regularly to share, critique and support each other's work

- borrow and use, as models, samples of completed proposal with clearly stated research problems/questions

- choose an area in which you have a sustained and strong interest...a passion, personal investment, or determined commitment. If the outcome is important to you, it will be easier during some of the difficulty phases

10. Selection of your committee is an important decision. Balancing issues of compatibility, expertise and organizational style will be crucial.

Frequent and open communication will help to alleviate misunderstandings and confusion.

Call upon your committee for help throughout the process, so that you become familiar with each other and so that you can use their expertise to the fullest.

11. Feel confident about calling or writing experts in your area of research outside your college or university. You will be pleasantly surprised at how willing most of them are to assist you.

12. Research of the literature should be intriguing and will undoubtedly be most time consuming. Set aside large segments of time for library work, so that you will not be frustrated by missing journals, dead end searches and long lines at the copy machines.

One of the richest sources are the reference lists at the end of significant periodical articles. They are usually current and will be logically related to your topic.

Remember to take your file cards with you, so you do not need to recopy information.

If you feel a source is a useful one, make a copy. It is particularly frustrating to find you don't have the details you need when writing.

13. The time invested in preparing a thorough and explicit research proposal will pay huge dividends in terms of a smooth execution of the study and the dissertation/thesis document.

14. In the proposal and dissertation/thesis writing phases, expect to repeatedly revise, retype and resubmit to your readers/ committee. Countless corrections and editing suggestions will be made...this is the norm.

Writing the dissertation/thesis...

15. Making a timeline and adhering to it is crucial. Make a long range general timeline and a specific, detailed weekly timeline. When approaching the final weeks before submission of the document a daily schedule may be helpful.

Setting contact times with your study buddies to check on progress points may help to keep you all on task.

16. The final stages of typing can be harried. Many find that doing their own word processing is more efficient and reliable than using a typist. If you do use a typist, make sure he/she is available and flexible.

The style manual (e.g., APA) will be your bible. Follow the guidelines and models exactly.

17. Remember that you will need to write an abstract, after the dissertation/thesis is completed.

18. Reserve some energy and time for the final corrections, copying and binding of the document and obtaining the signatures.

The "Mini" Dissertation/Thesis Proposal
from: A guide to preparing a thesis or dissertation proposal in
education, by Gall and Borg (with permission from the authors)

Introduction

Preparing a dissertation/thesis proposal is one of the most
difficult tasks to confront a graduate student. One way to help
students succeed is to have them become familiar with the
dissertation/thesis process early in their academic program. This
can be done by having the student develop a "mini" proposal in
preparation for the formal dissertation/thesis proposal. Students
find this exercise helpful because it demystifies the process of
writing a proposal and reduces the anxiety that many students
experience.

The basic task is for the student to write a "mini" proposal,
typically 7-10 pages in length. The purpose of this task is to
practice writing a doctoral/master's proposal. This is not just an
academic exercise. This process can represent an important step in
actual educational research. Follow the attached outline using the
headings and subheadings provided. Be sure to respond to each part
of the outline.

<u>Dissertation/Thesis Proposal Outline</u>

1. Purpose of the study

   A. (one sentence only) The purpose of this study is

   _____

   _____

   _____

   _____

   B. What studies (or literature review) is your study based on?
   (give citations) _____

   _____

   _____

   _____

   _____

   C. How does your study build on previous research?
   (no more than three sentences) _____

   _____

   _____

   _____

   _____

   _____

   _____

2. Research Objectives

    A. In what form are you stating your research objectives?

    (check one or more)

    _____ Objectives

    _____ Research questions

    _____ Hypotheses

    B. My research questions/hypotheses/objectives are:

       1. _____

          _____

       2. _____

          _____

       3. _____

          _____

       4. _____

          _____

3. Literature Search

    A. I will use these descriptors in my literature search:

       1. _____

       2. _____

       3. _____

       4. _____

B. I will consult these bibliographic references in my

literature review:

1. _____

2. _____

3. _____

4. _____

4. Variables

What are the variables in this study?   Are they independent

(I),   dependent (D)   or neither (N)?

a. I D N _____

b. I D N _____

c. I D N _____

d. I D N _____

5. Instrumentation

For each variable identified in question 4., indicate how you

intend to measure it (e.g., test, questionnaire, observation,

etc.), what type of scale it is (quantitative, qualitative,

ranking - e.g., a likert scale is quantitative or continuous

data), whether it will be developed or selected, information

on reliability (e.g., internal consistency), and relevant

types of validity (e.g., construct, content, etc.).

a. Variable _____

   Measure _____

   Scale type _____

   To be developed _____ to be selected _____

   Reliability _____

   Validity _____

b. Variable _____

   Measure _____

   Scale type _____

   To be developed _____ to be selected _____

   Reliability _____

   Validity _____

c. Variable _____

   Measure _____

   Scale type _____

   To be developed _____ to be selected _____

   Reliability _____

   Validity _____

d. Variable _____

   Measure _____

   Scale type _____

   To be developed _____ to be selected _____

   Reliability _____

   Validity _____

6. Sample

    A. My sample will consist of (check one):

    people _____   things _____   events _____

    that have these characteristics:

    _____

    _____

    _____

    _____

    B. My sampling procedure will be (e.g., random, stratified, intact groups, etc.):

    _____

    _____

    _____

    _____

    C. My sample size will be _____

    D. My sample will include subgroups:

        Yes _____   No _____

        If yes, the subgroups are:

        1. _____

        2. _____

        3. _____

        4. _____

    E. The unit of analysis will be:

        groups _____   individuals _____

7. Research Design

    A. My research design is:

        Descriptive _____   Experimental _____

        Ex post facto _____   Correlational _____

        Other (specify) _____

    B. How will you analyze your data if your methodology is descriptive (e.g., frequency distribution, statistical tests, etc.)?

_____

_____

_____

    C. If your design is correlational, what variable(s) will be correlated with what other variable(s)?

_____

_____

    D. If your design is experimental, what is (are) the independent variable(s) and the dependent variable(s)?

_____

_____

    E. What type of experimental design will be employed?

_____

_____

_____

    F. What statistical tests will you use to analyze the data?

_____

_____

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