

## The Ed.S Research Project (Thesis) Guide

Ed.S theses are “masterpieces” in the sense of masterpieces used for entrance into the medieval guilds. You must show that you can make a mandolin, not reinvent it. An Ed.S thesis admits you to the profession. “Simple,” “elegant,” “useful,” “concise,” and “clear” are perhaps the adjectives which should best describe it. The Ed.S thesis need not be startlingly original. Many students find it useful to build on the research of faculty or on previous students’ work.

Developing a thesis is a multi-step process that will extend over months and, in many cases, more than a year. Those steps include (at least):

1. Selecting a topic
2. Refining the topic with a faculty mentor
3. Researching the topic
4. Developing a formal thesis proposal with a committee chairperson
5. Proposing the research to a thesis committee
6. Gaining permission to carry out the research
7. Carrying out the research
8. Defending the thesis document to the thesis committee
9. Submitting the thesis for dissemination

While step 1 can take place at anytime, steps 2-4 will usually take place in the context of PSYC 609 (Applied Research Methods) during students’ second year. Steps 5 and 6 may also take place that this time. Step 7 can take place during the summer between the second and internship year, and step 8 and 9 will take place prior to the end of the internship year. The rest of this document will discuss these nine steps.

### 1. Selecting a Topic

There are many ways of finding a topic. No way is inherently better than another. Here are five possibilities:

1. Opportunity. You may discover someone wants a program evaluated or a faculty member has money to study a problem. Alfred Binet developed the “IQ” test because a committee came to him and asked him to do it.

2. Personal Experience. Something in your life may suggest a research problem. Lewis Terman used Binet’s test to study giftedness, because he felt that as a boy growing up in a county without a high school, his true ability may never have been recognized. There are some cautions to using personal experience. If, for example, you are still working through an abusive situation, you may want to avoid tackling abuse as your thesis topic. You may not be able to be very objective, and you may find talking to other abuse victims troubling. If you are using personal experience as your entree into a research topic, you should be candid with your chairperson about it. He or she will

make recommendations to you about whether it is good for you to be doing this at this point in your personal and professional development.

3. Clinical experience. Your practica experiences may provide you with research questions. David Wechsler developed performance items and an adult IQ test because he was the chief psychologist at Bellevue Hospital and needed to test adults, many of whom could not be tested in English. Ask your supervisor what sorts of projects may be available for study in your school or district.

4. The Literature. You can browse through recent school psychology journals to find interesting topics. This will help you locate “hot” topics. You can also go to older issues to find a topic which has lapsed in popularity, but which may need to be updated. Journal articles often conclude with suggestions about potential avenues for further research.

5. Colleagues. Your fellow students may find topics which interest you. Your faculty colleagues will present their interests in courses or research discussion forums. It is perfectly acceptable to join in on someone else’s project.

## **2. Refining the Topic with a Faculty Mentor**

Once you have decided upon a topic (or a number of topics) it would be a good idea to discuss it (them) with a core member of the school psychology faculty. The faculty member can help you narrow your topic to a researchable problem. If your topic arises from a clinical experience, you may also discuss it with your site supervisor.

Faculty members may discourage you from a topic if they have reason to believe external factors may interfere with completing a study. For example, you might be interested in controversial topics where you are not likely to get cooperation (sexual harassment of students by teachers); topics which have legal liabilities (how many misdiagnoses do eligibility committees make each year); or topics which will be hard to study (learning disabilities among Basque-Americans).

## **3. Researching the Topic**

Students sometimes want guidelines about “how many references to include in the literature review.” The answer is “all of them.” This is not an undergraduate paper where we can say “15” or “35.” or even “all of them in the Carrier Library.” You will need to rely on interlibrary loan. You may have to read literature from the 1920s. Occasionally you may even have to have translated for you literature in a foreign language.

You do not, however, need to know everything about every variable you are studying. For example, a student recently was interested in the effect high stakes testing on self-esteem. When he put in the term “self-esteem” into the PsychInfo database, he

came up with over 12,000 references. He does not have to read all of them. When he continued the search by including “testing” and “self-esteem,” the number dropped to 700. When he then entered the term “children” because he was interested in 5th grade students, the number dropped to less than 80. Reviewing the abstracts, only about 30 were relevant to the topic. He then researched the ERIC database, and between PsychInfo and ERIC, he found about 45 relevant articles. That was one literature he needed to become acquainted with. The PsychInfo and the ERIC databases need to be searched thoroughly, using multiple potential key terms.

#### **4. Developing a formal thesis proposal with a Committee Chairperson**

The proposal is in many ways a more important document than the final thesis itself. In it, you must communicate to your committee what you want to do for your thesis and why you want to do it.

The proposal consists of three parts: an introduction, a proposed methodology, and a proposed data analysis plan. Each of the three parts (or chapters) is equally important, although the introduction may be substantially longer than the other two combined.

##### ***Introduction***

The *Introduction* consists of three parts: 1. A statement of the problem; 2. A review of the literature; and 3. A statement of the hypotheses. Again, each of these parts is of equal importance, although the review of the literature may be the longest of the parts.

***Statement of the Problem.*** The statement of the problem is often a page or less. It provides the context for the entire study. The particular problem you have chosen will likely be very narrow, but the statement of the problem gives the broader view of the general topic. You may be evaluating the effectiveness of a particular drop-out prevention program, but you may want to start off by discussing on a national basis the scope of the problem of drop-out: how many adolescents are affected and what are the major problems encountered by high school drop-outs.

***Review of the Literature.*** The literature review is an organized statement of what the literature tells us thus far on the topic you have chosen. It is a *critical* review, in that it is not merely a summary of past results, but an intelligent evaluation of where there are weaknesses in the literature.

The major mistake that students make is writing down on an index card basic information about each study they read and then putting *all* that information in some sort of order. (A worse mistake is not putting it into some sort of logical order.) That’s not a literature review. Some studies will require detailed descriptions because they are essential ones to your topic. Others will merit only a single sentence. For example, a

major study may have examined the prevalence of conduct referrals in grade six and then followed up those children at grade 10 to see which ones become identified as “conduct disordered” kids. This may be a very important study, but it was limited to one school district. Five other studies essentially repeated the first study in very different kinds of school districts. Four replicated the same findings. One did not. The four replications can be handled in one sentence:

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Four studies confirmed these findings in rural (Carpenter & Blass, 1989; Trusdale & Safer, 1988) and middle class suburban (Smith & Freeman, 1993; Weathers & Ming, 1992) school districts.

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The fifth study, which did not replicate the results of the primary study needs your *critical* attention. Was there a change in methodology or school composition that affected the findings?

Your literature review will certainly have more than one section. You should use headings and subheadings to organize your review. Your Chairperson should help you with the overall organization of the paper once you have a rough draft of it. Your Chairperson may also suggest that you go to one of the writing centers on campus to assist you with basic writing issues.

The literature review must be interesting *and* logical. It tells a story, a story which, of course, includes the most recent of the relevant research literature. It will require many drafts. Maybe 10 is a good estimate of how many. A good slogan to remember is that you should *have an affair with your thesis, not just a one-night stand*.

**Statement of the Hypotheses.** You should organize the Literature Review so that one or more research questions are obvious. In about a page, you should state clearly in terms of dependent and independent variables what relationships you are interested in. It is often helpful to state these hypotheses formally for the proposal:

\* I hypothesize that experienced teachers who have served on eligibility committees will have more positive views of special education services than experienced teachers who have not served on eligibility committees or first year teachers.  
or

\*I hypothesize that high school athletes who have had two or more concussions will show

a significant decrease in their grade point average from the previous year.

### *Proposed Methodology*

The proposed methodology should be very detailed. You will describe your proposed participants in detail: Who do you want to study? On what characteristics will you select them? How many would you like to have? The more details you can tell your committee about them, the better. Why 5th graders rather than 6th?

The *Procedure* subsection should read like a recipe in a cookbook. It should be step by step, with as much detail as possible. For example, if you are going to administer three scales, what is the order, and why? What are you going to say to the participants? Are you going to interview them individually or administer tests in large or small groups? Why?

In the *Instrumentation* section, you need to describe all tests you will use in terms of their format (number and types of items) and their reliability and validity data. You can rely on the test manual for some of these details, but you should also check out other research that has used these tests. (Consult the HAPI [Health and Psychosocial Index] database, which can be found under “health” on the JMU library’s webpage.)

If there are several tests of the same construct (for example, IQ or self-esteem), you need to justify why you have selected the one you have chosen. You can refer to reviews in the *Mental Measurement Yearbook*, review articles, etc. If you are going to use WISC-IIIs because that’s what the school district uses, that’s justification enough, but if you are going to measure self-concept, you need to tell your committee why you the Piers-Harris for your particular group.

If a test you are going to use is copyrighted, you need to get permission to use it in writing. (The permission letter should be one of your Appendices.) Many instruments are published in journals, and those journals *may* have a policy that anyone can use them for research purposes. APA journals typically do NOT have that policy. Many publishers (although not all) will allow graduate students to use their tests for free, but if you are doing a project that could be construed as a program for a school district, they may think that the school district should pay. You should consult with your committee members and the Test Librarian about getting these permissions.

### ***Proposed Data Analysis Plan***

Going back to your hypotheses, you need to write a statement about how you will analyze each one of them. For example:

To test hypothesis 4, that experienced teachers who have served on eligibility committees will have more positive views of special education services than experienced teachers who have not served on eligibility committees or first year teachers, I will divide the teachers into three groups (new teachers, experienced teachers reporting eligibility committee experience, and experience teachers reporting no eligibility committee experience) and compare their responses to the seven items on the SPAS (Special Education Attitude Survey) by item and total score, using Analysis of Variance. I will follow up each significant difference with a Tukey post hoc-test to see which groups are significantly different from each other.

To test hypothesis 3, that high school athletes who have had two or more concussions will show a significant decrease in their grade point averages from the previous year, I will use school file data to compare GPAs in the major subjects (English, social studies, science, and mathematics) between the first semester of this year and the first semester of last year, using a paired  $t$ -test.

These aren't beautiful prose, but they're clear and detailed.

### **5. Proposing the Research to a Thesis Committee**

At some point, your chairperson is going to tell you that your proposal document is in good enough shape to propose it to your committee. At this point you need to circulate *paper copies* of your proposal to your committee members and schedule a proposal defense meeting. Committee members must have a formal proposal document *at least one week in advance* of the meeting.

The proposal defense meeting has three parts. First, you tell the committee your rationale for the study. Then they will ask questions about your decision process and proposed methodology. The committee will give you feedback on your proposal and your performance during the meeting. It is not infrequent that the committee will simplify your proposal. Sometimes they will make suggestions, and sometimes they will make substantive changes. You will receive feedback from the committee about what you *might* do differently and what you *must* do differently from the proposal document.

Students who wish to get an earlier start by collecting data prior to the proposal meeting do so at their own risk. Rarely is the proposal accepted completely by a committee. Any preliminary data collections should be thought of as pilot which may or may not become part of the thesis.

### **6. Gaining Permission to Carry out the Research**

While this step is listed at #6, if there are any controversial aspects of the research, it may be better for this to take place earlier. Controversial areas include:

1. Asking questions which carry legal liability (questions about abuse and neglect; asking participants about illegal behavior, including such seemingly innocuous questions as asking junior high school children if they smoke cigarettes);
2. Asking children to report about their home situation;
3. Verifying whether IEP requirements are being met; and
4. Keeping information in personally identifiable form for periods of time.

You must gain permission from the JMU Institutional Review Board (IRB) *and* the authorizing person or group in a school district or agency to undertake research. Each school district has its own policy about research. Most school districts are reluctant to authorize research which will take place on school time which takes away substantially from instructional time, unless there is a pay-off for the schools.

There are three instances when JMU IRB permission is not needed: when the proposal involves research involved in evaluating the school psychology program at JMU; when you are doing research with a faculty member who has already received IRB permission; and when you are examining an archival data set. Otherwise, you *must* gain permission to undertake research for a thesis from the JMU IRB. (See sample, Appendix A.)

### **JMU IRB**

The form for proposing a research study can be found on the JMU website at <http://www.jmu.edu/JMUpolicy/1104.shtml>. The form that you find here is straightforward and can be submitted via email. It should take between two and four weeks to get a response from the IRB, although the process slows during University holidays.

You are the proposer of your thesis, not your chairperson (unless he or she already has gotten permission to carry out the research you are doing). The IRB is interested in three things:

1. Is participation voluntary? *Is consent given?*
2. Are subjects (or their parents) aware of any risks or benefits? *Is consent informed?*
3. Will data be maintained to preserve participant confidentiality?

- A. **PURPOSE OR OBJECTIVES.** The first part of the IRB proposal asks for the purpose or objectives of the research. This should be very short and to the point, perhaps one half-page paragraph (even though the form says “limited to one page”). Remember that the IRB is made up entirely of people who are unfamiliar with school psychology, so you should stay clear of jargon. For example, if you write that the purpose of your study is “to examine the correlation between co-morbid factors associated with ADHD and family structure” you *should* have your proposal returned. Say it in English: “I am examining whether other behavior problems which frequently accompany Attention Deficiency/Hyperactivity Disorder are related to whether children come from one- or two-parent families” is better.
- B. **PROCEDURES.** There are five sub headings here which need to be addressed, probably each in a sentence or two. In general, you should be brief and to the point; tell the Committee what they need to know and no more: **Research Design and Sampling** can be very simple. Are you doing an experiment or a correlational study? Will you be using random assignment? *Who* will you be studying? This does not need to be long: “I will be doing a correlational study of 5<sup>th</sup> grade students in one school in Augusta County.” **Method of Collecting data (emphasizing possible risks and the protection of subjects).** We are not drawing blood or making elderly people jog ten miles. What are the risks of filling out a self-esteem inventory? None. If there are no risks, say so. 90% of the time, there won’t be any risks. Modest discomfort in answering the question “I am not a very good writer” does not constitute a risk. However, if you ask students a question like, “From whom do you buy your drugs,” that might constitute a risk. **Consent forms.** You need both a “consent form” for the parents and an “assent form” from the children, if you are using subjects under 18. If you are doing a mail survey, the consent form should be page one of the survey. **Time frame.** Just give beginning date and ending date. Don’t be optimistic about the ending date. **You do not need the approval of faculty supervisor form.**
- C. **ATTACHMENTS Letters of permission.** This is a Catch-22. Maybe the IRB will want to know whether you already have permission to do this study in

- the school; maybe the school wants to have the JMU IRB permission before giving theirs. If you have a letter from someone in the schools or agency where you will be doing your research, include it. If not, don't make a big deal about it. **Cover letter.** If you are sending a permission form home or doing a mail survey, you will need a cover letter. Cover letters address several things: that participation is voluntary; that participants may withdraw at any time without any negative consequences; what the risks and benefits are; and how the research will be used. This should be co-signed by a supervisor, administrator or faculty member. **Questionnaires and tests.** Include each item you use as a separate attachment (just in case the IRB decides NOT to approve part of your project); if you are using a demographic questionnaire, you must include this, too.
- D. DATA ANALYSIS. This is a misleading title. Here you need to discuss "confidentiality" and "storage" of data. The JMU IRB takes very seriously the issue of confidentiality. Even if you ask a questions like "have you ever played the game of horseshoes?" you need to ensure that student's responses are confidential – which does not mean "anonymous." Often your primary data never has the participants' names associated with it. For example, if students fill out a questionnaire and your analyze that. Then you say: "Data will be collected anonymously," and that's that. But if you are doing a longitudinal study where you have to be able to match up responses at two different times, you will need to detail a procedure for coding data so that they are stored in a way that will keep participants' names from being associated with their responses. There's even more of a problem if you have sensitive data, such as self-reports of delinquent behavior.
- E. REPORT PROCEDURES. There are two issues here. **Identified audience and presentation methods.** Here's a suggestion: write "This research is being collected for an Ed.S thesis at James Madison University and for possible presentation at conventions of school psychologists and in journals aimed toward professional school psychologists." **How feedback will be provided subjects.** Normally, you will have a check off portion of the parent consent form, asking whether they want to receive information about the study. Here's an idea: "On the parental consent form, parents may request information about the results of the study; as data will be collected confidentially, information about individual student performance cannot be given."
- F. EXPERIENCE OF THE RESERCHER. Well, you've probably had little, so here's when you bring out your faculty mentors. "This research is being supervised by Dr. Thaddeus B. Taylor who has 15 year of research experience, including 44 publications in refereed journals and two grants

from the US Department of Education.” Something simple like that.

### **7. Carrying out the research**

If your proposal is detailed and if permissions have been granted, this should be the easiest, although not the least time-consuming, aspect of the process.

One issue needs to be mentioned: making adjustments to the proposal. You may have proposed to evaluate a stress reduction program for teachers involving 35 participants. If only 33 show up, that’s not a big deal. If only 12 do, you should consult your chairperson. Don’t wait for the defense meeting to drop this bombshell. Likewise, if your superintendent decides that you cannot use one of your primary questionnaires, you need to consult your chairperson

### **8. Defending the thesis document to the Thesis Committee**

Having completed the research, you should work with your chairperson to modify the introduction and method section of your proposal and to write the results and discussion sections.

In order to facilitate professional communication and professional growth, the school psychology faculty are strongly suggesting that the final EdS thesis be in the form of a journal article, rather than in the extended thesis format. You may want to look at your references and see which journal you have cited the most frequently (that means that this journal’s editors are interested in this topic) and use this journal for basic guidelines-- how long is the typical article? [The rule of thumb here is that one journal page equals two thesis pages.] How many tables and figures are usually included? How long is the typical introduction? How many references are usual in this journal? (Once you decide which direction you want to pursue, you should not deviate from this plan without the approval of your committee.)

**Introduction.** You will probably do some trimming to the literature review. Your committee has already seen your full review and they do not need to read it again. Your proposal review may be 20 pages, while your final review may be six to eight pages. You need to keep the essence of the “story” you told in your proposal, but you may need to eliminate some of the detail.

**Method.** The method section may remain largely intact from your proposal, with the exception that you need to include actual rather than proposed descriptions of participants. You may need to reduce your rationale for including the instruments you included.

**Results.** The results section presents the data analyses. In a quantitative study, this may be only 3-4 pages, addressing the hypotheses. Qualitative analyses will be considerable longer.

**Discussion.** The discussion section usually revisits all the issues raised in the introduction and then 1) acknowledges the limitations of the study and 2) suggests further research than needs to be done.

### *The Defense*

The defense of the thesis follows the same format as the proposal defense: you will make a 10 minute presentation of the rationale, methods, results, and interpretation of findings, and then be asked questions by the committee. This is a more formal meeting where visual aids may be used. Typically, some modifications of the thesis document are required.

## **The Thesis Document**

### *Style*

The thesis should follow the guidelines of the 2001 *Publication Manual of the American Psychological Association (5th Ed.)*. There are changes in this manual from previous editions, so students should not exclusively follow an old thesis as a guideline. Exceptions to the publication manual are noted below in bold.

The thesis should be written in Times New Roman or Times 12-point font throughout the document, including all front matter (Approval Page, Title Page, Acknowledgements, Table of Contents, and Abstract) and end matter (Appendices and References, **in that order**). The left margin should be 1 1/2 inches and the top, bottom, and right margins should be 1 inch.

Everything in the thesis should be double-spaced, **with the exception of references and tables, which are single-spaced.**

### *Paper and Reproduction*

The paper must be pure white, identical in weight, texture, and shade throughout. The paper must be acid-free. Three copies of the thesis, separated by a colored sheet of paper must be **hand** delivered to the CGOP office by the deadlines noted in the *Graduate Catalog*. (<http://www.jmu.edu/gradschool/catalog/>). These copies must be delivered in a box. The copies must be reproduced by a laser printer. The student should retain a copy of the final thesis for herself/himself and have one copy bound for her/his advisor. (See Appendix B, Graduate School Thesis and Dissertation Instructions and Checklists.)

### *Typing and Pagination*

For security and convenience, you should create the front matter, each of the four chapters of the body of the thesis, and the end matter as separate files. When you go to print the final version of the thesis, you can merge the four chapters and the end matter

and paginate them with Arabic numerals in the top right corner in a header beginning with page 1.

**The front matter is numbered with small Roman numerals at the bottom. The Approval page and the Title page are unnumbered, and the Acknowledgements begin as page ii.** It is probably easier to type the page numbers at the bottom of each page in the text, rather than trying to use a footer command.

### *Table and Figures*

**Tables and figures are integrated into the text on separate pages immediately after their first reference.** The style of citing a table or figure is the same as in the *APA Manual*:

Each table or figure is on a separate, numbered page. Tables and figures are included in the Table of Contents. If you include photographs, they must be scanned into the document.

### *Approval Page*

The specific format is available from the graduate school. (Appendix B, but check with the Graduate school about recent changes.)

### *Title Page*

The specific format is available from the graduate school.

### *Acknowledgements*

Usually one thanks all those who helped in the thesis, including committee members, consultants, undergraduate assistants, school district personnel, and significant others who put up with them while writing the paper. The thesis can be dedicated at this point, as well.

### *Table of Contents*

The items in the Table of Contents include Title Page, Acknowledgements, Table of Contents, Abstract (with page numbers in small Roman numerals), Introduction (and any subheadings), Method (and all subheadings and tables and figures), Results (and all tables and figures), Discussion (and all tables and figures), Appendices (listed by name), and References.

### *Abstract*

The abstract should be 350 words long and include summaries of the introduction, method, results, and discussion sections.

### *Body*

Begin this section with a heading, Introduction, and continue to the end of the paper. All figures and tables are on separate pages integrated after their first reference.

### *Appendices*

This section includes copies of all tests, interview protocols, questionnaires, letters of permission. Each test, etc. is in a separate Appendix.

### *References*

Use APA style, but single-space everything.

## **9. Submitting the Thesis for Dissemination**

At the time of your defense, your committee will recommend to you the most viable way of further dissemination. This may include a presentation at a state, regional, or national convention, or submission of the thesis to a school psychology journal. The 1,500 word abstract should be easily edited for a submission to VASP or NASP or even submitted to a school psychology newsletter, and the body of the thesis should be able to be turned into a journal submission with very modest efforts. If journal submission is recommended, the student can expect considerable guidance and effort from her or his chairperson.

### *Authorship*

Typically, a professional presentation of the thesis is jointly authored by the student (first author) and his or her Chairperson (second author). If the Chairperson feels that the thesis is mostly his or her own work, the authorship is reversed, but this should be understood by both parties prior to undertaking the research. This would be the case only when the student is largely carrying out a part of a faculty member's research program.

In the normal case, when the student is the first author, he or she may decide that other member of the committee, consultants, student assistants, or school/agency personnel deserve authorship. Generosity is not a bad professional quality.

