



University of Northern Iowa School Psychology Program

Research Guidelines – MAE Paper & Ed.S. Thesis

Table of Contents

1. Purpose of the MAE Paper & Ed.S. Thesis	3
2. Getting Started: Selecting a Topic & Committee	4
3. Timeline Considerations	4
4. General Guidelines	5
➤ Defining Responsibilities	
➤ Working with Your Committee	
➤ The Writing Process	
➤ Editing	
➤ Research Ethics	
5. MAE Paper	8
➤ The Research Problem	
➤ The Literature Review	
➤ The Research Question	
➤ MAE Paper Format	
➤ Oral Defense	
6. Ed.S. Thesis	12
➤ Obtaining IRB Approval for Research	
➤ Data Gathering & Analysis	
➤ Ed.S. Thesis Format	
➤ Thesis Preview	
➤ Oral Defense	
➤ Submission Requirements	
7. Appendices	16
➤ A – Suggested Timeline for MAE Paper & Ed.S. Thesis	17
➤ B – Ensuring an Ethical, Legal, and Harmonious Research Study	18
➤ C – Questions to Ask When Evaluating a Research Study	20
➤ D – Recommendations for Reviewing Research Literature	22
➤ E – Literature Review Mistakes to Avoid	24
➤ F – Strategies for Efficient Composing	26
➤ G – The Essentials of Productive Writing	28
➤ H – Style Manual Tips – APA Publication Manual, 5 th Edition	30
➤ I – MAE Paper Approval Page	36
➤ J – Ed.S. Thesis – Oral Defense Announcement	38
➤ K – Ed.S. Thesis – Evaluation Rubric	40

University of Northern Iowa School Psychology Program Research Guidelines

A Master's research paper and Specialist thesis are required of all students who have not already completed a thesis at the Master's degree level. Students who completed a thesis as part of a Master's degree program may apply under the non-thesis option and request to have the Ed.S. thesis requirement waived. At the time of admission, the student requesting a waiver should submit a copy of the Master's thesis to the School Psychology Committee. The thesis will be reviewed by the School Psychology Committee to determine if the work meets Ed.S. program thesis standards. This determination will be based on the following: 1) relevance of the topic to the practice of school psychology, 2) whether the thesis is empirically based, 3) whether the thesis is of such quality that it would be accepted as an Ed.S. thesis in the program. A student who qualifies for the non-thesis option in the Ed.S. will complete a research paper on a topic related to school psychology. Depending on the extent of the research paper, the student may earn 1-3 semester hours of research credit toward the Ed.S. degree.

Students who are required to write both a MAE paper and an Ed.S. thesis should conceptualize these as two separate phases in one overarching research project. The MAE paper is the writing of the literature review and research proposal, while the Ed.S. thesis is the conducting of the research and writing of the results and discussion.

Purpose of the MAE Paper & Ed.S. Thesis

The MAE paper and Ed.S. thesis provide students an opportunity for intensive study and research in an area of personal and professional interest. Frequently, teachers and administrators from local school districts share with school psychology faculty questions they would like researched. In these cases, the thesis benefits not only the student as a learning experience but also a school, its faculty, and students. The paper and thesis are intended to develop in students a broader understanding of a specific area of school psychology, as well as provide experience with conducting research and disseminating its results. As topics of particular interest are pursued, students use and refine their ability to

- formulate questions and isolate problems within a logical framework;
- locate and use relevant library information sources;
- interpret data based on knowledge of a given area of study;
- analyze an area of study and understand its issues in relation to current literature;
- consider and evaluate divergent positions relative to one's area of study
- analyze, evaluate, synthesize, and communicate information
- support ideas and conclusions with available research.

Completion of their paper and thesis requires students to define clearly a meaningful question and method for research, and then logically present data and defensible conclusions from it. The thesis expands on existing literature to make a unique contribution to the field of school psychology.

Getting Started: Selecting a Topic & Committee

Students should begin considering possible research topics as soon as they enter the program. It is students' responsibility to schedule times to meet with their advisor to discuss possible research topics and the selection of a committee chair, with expertise in the topic area, to invite to be on the committee. These meetings should begin early in the first semester of the program.

Choosing a research topic can seem an overwhelming endeavor. Several suggestions can make the task feel more manageable. Think about personal experiences you have had and questions or interests that grew from these. Consider the material being covered in your class readings and discussions, skim through textbooks and current journals in the field. Use class projects, papers, annotated bibliographies, etc., as opportunities to begin exploring topics of potential interest to you. Look at past theses by school psychology graduate students (available in Rod Library), paying close attention to discussions of areas identified as in need of further research. Talk with faculty about their interests and the research projects with which they are currently involved. Go to www.grad.uni.edu/research/coe_research.asp for a list of faculty in the College of Education and their areas of study.

After a topic is decided on, a committee chair who has expertise in the area of interest should be invited. Because the research and writing process benefits from lively discussion and critical review, your chair should also be someone with whom you feel comfortable working. Ideally, the student-chair relationship provides an opportunity for respectful intellectual discourse, with both sides learning with and from each other.

You will work with your chair to identify two additional committee members. While the chair must be a member of the Department of Educational Psychology and Foundations, members are required only to be UNI Graduate Faculty. When you complete the Program Approval (GF1) form for the Ed.S. degree, you will need to record the names of your committee members.

Timeline Considerations

The importance of starting the MAE paper in the fall of the first year and being ready to begin data collection for the Ed.S. thesis in the fall of the second year, cannot be emphasized enough. Even with the best planning and organization, many researchers find that projects take longer than expected to complete. While the committee chair can help the student establish realistic goals towards completion of the research, it is ultimately the student's responsibility to remain motivated and on task. Appendix A provides a suggested timeline for completion of the MAE paper and Ed.S. thesis.

While the majority of the deadlines are provided as general guidelines, two deadlines are mandatory and no exceptions are allowable. First, the MAE paper must be completed and defended *by the end of July of the first year*. If the paper is not successfully defended by this time, the student will not be able to graduate from the MAE program nor apply to the Ed.S. program, potentially placing financial aid for the specialist year in jeopardy. Second, if the Ed.S. thesis is not completed *by the end of July of the internship year*, a student cannot be recommended for full licensure as a School Psychologist. Students are *strongly* encouraged to

defend the thesis before beginning internship because distance from faculty and library resources and time demands of the internship make completion increasingly difficult.

General Guidelines

➤ **Defining Responsibilities¹**

Student Responsibilities

The MAE paper and Ed.S. thesis are the primary responsibility of the graduate student, from the inception of the idea through to the preparation of the final document. The student is responsible for insuring that the submitted documents meet accepted standards of usage for scholarly writing, including grammar, spelling, and punctuation. Thorough proofreading of papers and theses, at any stage of the process, is the responsibility of the student. It is the student's responsibility to become familiar with all-relevant rules and requirements detailed in this manual. Although students seek guidance from their committee chairs for assistance with rules and requirements, students must recognize that they are primarily responsible for understanding rules and requirements and must assure they are not in violation.

Committee Chair Responsibilities

The committee chair assumes major responsibility for working directly with the student throughout all phases of the research project, challenging the student to anticipate theoretical, practical, and methodological complications that are likely to be encountered. All aspects of the research topic and research questions will be thoroughly discussed and debated with the student to determine ways of addressing theoretical and methodological problems. The student is expected to submit drafts of the MAE paper and Ed.S. thesis to the committee chair for editorial feedback. The quality of the thesis is a direct reflection of standards established by the discipline of school psychology and enforced by the committee chair.

It is the responsibility of the committee chair to conduct the MAE paper and Ed.S. thesis defense meetings. General expectations and procedures for a defense will be discussed with the student prior to the meeting. Typically, the student is asked to present the contents of the paper or thesis to the committee followed by questions from committee members. Oral defense meetings are to exemplify the highest level of professional and ethical conduct at all times.

Committee Members Responsibilities

Committee members are responsible for the thorough review of the MAE paper and Ed.S. thesis. Each member will be fully familiar with the contents of the paper or thesis prior to the defense meeting and be prepared to discuss the research and any related concerns during the defense. When being asked to be a member of a student's thesis committee, a faculty member should inquire into the student's, and the chair's, expectations. The committee member should be willing and able to provide the student with the necessary time and support.

¹ Adapted from Towson University – Guidelines for Preparing the Master's Degree Thesis.

➤ Working with Your Committee

Completion of the MAE paper and Ed.S. thesis is a collaborative process between you and your committee members, especially your committee chair. It is important for students to stay in touch with their committee chair and members, providing regular progress updates. Frequent consultation facilitates motivation, helps ensure deadlines are met, and ultimately, facilitates an oral defense. A well-organized committee results in all members helping the student with suggestions about research, writing, organization, and style.

Two suggestions will facilitate your work with your committee. First, remember that although for you, your MAE paper or Ed.S. thesis seems to be all consuming, professors typically advise multiple students and have numerous other demands on their time. Because of this, chairs and readers should be given a *minimum* of two weeks to read anything you give to them. Students should consider this turn around time as they set timetables. Committee members are often unable to respond to requests for immediate feedback due to prior time commitments. Also, please note that many faculty members set aside the summer to work on their own research and other projects and may have limited time available to work with you. It is important to plan accordingly.

Second, while you do not have to accept all suggestions about minor changes from your chair and committee members, you should listen carefully to major objections. If you disagree strongly with a suggestion, discuss this with your chair and seek a compromise. Remember that the chair and committee members make their suggestions to increase the quality of your work. Also, take detailed notes during all meetings with your committee chair and members as what seems obvious sitting in their offices may be clear as mud the next day when you attempt to resume writing.

➤ The Writing Process

There is benefit to beginning the writing process with an outline of what you want to learn and what you want to write. One way of beginning this outline is by asking, “What do I want to know about this topic?” Writing an outline before beginning to read any literature may seem backwards. Yet, starting to read with an idea of what you want to know will help you determine the literature you need to review. It will also help you decide when you have read widely and deeply enough and it is time to start writing. The initial outline should be considered a fluid one, able to change as you learn more about a topic and your thoughts and ideas become more focused.

As you begin writing, prepare yourself for a recursive process of writing and editing. Most students write numerous drafts of both the MAE paper and Ed.S. thesis. The average number of rewrites is 5-6, though as many as 10 is not uncommon. Many professors report that they write as many as 20 drafts of their own papers. It is rare that a student completes a paper in only 2 or 3 drafts.

Writing draft after draft of your paper can be frustrating. Some students blame their chairs and/or readers when numerous drafts are written, yet typically, no one is to blame. It is not a

matter of placing blame. Rather, these many rewrites are a sign that you are growing as a writer. As you read and learn more about a topic, you have new ideas about what direction you want to go in your research. Writing is the process that reflects the refinement of your knowledge base and understanding. It is your process, not your professors', and you will change your mind several times about what your research question is and what you really want to focus on in your writing. Each time you read and reflect on a draft, along with grammatical errors and typos, you will find different or better ways of stating ideas.

You will often find the process of writing to be a difficult one. You are not alone in this feeling, your classmates and even your professors often feel the same way. When feelings of burnout begin to overwhelm or motivation is lacking, take advantage of being part of a learning community and the support that this can provide. Consider forming a writing group with other students in your cohort and meeting on a regular basis to read each other's work and provide feedback. Remember that the UNI Writing Center provides free writing assistance to all UNI students, including help with research proposals. Information and resources are available at the Writing Center's website, <http://fp.uni.edu/writingcenter>, or an individual appointment can be scheduled by calling 273-2346. If it is the research process that is frustrating, schedule a research consultation with a reference librarian at Rod Library by calling 273-2838. Additional suggestions for efficient composing and productive writing are found in Appendices F and G.

➤ **Editing**

Editing is more complicated and involved than just re-reading what you have written. When you write, you are communicating with your readers, facilitating a conversation. When you edit you are analyzing how well your side of the conversation can be understood by someone other than yourself. This requires critical reading not only for the nitty-gritty, such as spelling, grammar, and punctuation but also for the big picture, such as organization, style, and completeness of thought. Any draft of a paper or thesis that is given to a committee member should first be edited, not just read, by at least one peer.

When writing the MAE paper or Ed.S. thesis, there must be editing between the body of the paper and its reference list, as well as within the body of the paper. This means you should proof the paper against the reference list and the reference list against the paper. Each reference in the body of the paper must be in the reference section and each entry on the reference list must be in the paper. As you complete this edit, make sure the spelling of names is accurate and dates and journal names are exact. It is your responsibility as an author to assure accuracy of referencing.

➤ **Research Ethics**

According to NASP's *Principles for Professional Ethics*,

School psychologists follow all legal procedures when conducting research, including following procedures related to informed consent, confidentiality, privacy, protection from

harm or risks, voluntary participation, and disclosure of results to participants. School psychologists demonstrate respect for the rights of and well-being of research participants.²

Conducting research is an immense responsibility; one that begins early in the process when literature is being read and a research design developed and that continues through the analysis and presentation of results. Because of this, it is expected that all students have read and are familiar with NASP and APA ethical standards as they apply to research.

A multitude of ethical dilemmas can arise through the course of a research project. Some of these can be predicted before hand and should be considered throughout the process, for example, researcher qualifications, conflicts of interest, dual relationships, informed consent, or plagiarism. Other dilemmas are more difficult to identify ahead of time, however; all must be considered, discussed, and addressed in a way that respects the research participants, while maximizing the possible benefits and minimizing possible harm.

A final ethics consideration . . . it is important to the school psychology faculty that any research conducted through the program is beneficial not only to the researcher, but also to research participants. Research is not something done *on* a teacher or student or school; it is something done *with*. As the study is designed and decisions are made about possible research participants, questions should be asked about what could be given back. While this may be a copy of the completed thesis, it could also be an in-service for school faculty based on the outcomes of the research. It could be a summary of effective interventions researched during the literature review. It could be an offer to assist a school principal with streamlining the collection of data on office infractions. The critical point is that what is given is determined in collaboration with the research participants, not based on what is easiest or most convenient for the researcher.

MAE Paper

➤ The Research Problem

After a research topic is identified, it must be narrowed down to a research problem. This is a descriptive statement of what you want to study. It provides a brief explanation of the topic and description of the problem of interest. A well-developed and well-written research problem is important because it provides the focus for your reading of the literature, proposal writing, and later research. Evaluate your research problem by considering the following questions: Is this problem important? Is there a lack of research in this area? Is this a manageable research area (i.e., time, money, etc.)? Often the research problem becomes better defined and better understood during the literature review.

➤ The Literature Review

The literature review provides a critical foundation and context for the research study you will propose and conduct. Yet it is often not given the time and attention it deserves. A thorough

² National Association of School Psychologists. (2000). *Principles for Professional Ethics*. National Association of School Psychologists: Washington, D.C.

review typically takes three to six months to complete and considering the work still ahead, it is a wise investment in time. A sound review of the literature on your topic will help you limit the scope of your research, identify areas where additional research is needed and areas where questions have been satisfactorily answered, and develop your research methods³.

Your search and analysis of the literature should be purposeful, not a random review of the most accessible articles you can find. Begin the search by identifying all possible indexes and sources of information. ERIC and PsycINFO are the most frequently used indexes in school psychology, yet depending on the topic, other indexes may be helpful. Government publications, references such as the *Review of Research in Education*, and internet resources also may offer useful information. Use secondary sources to gain an overview of the literature and to help identify important primary sources. Whenever possible, you should use primary sources to support your main propositions. If you are unsure of how to approach your search or if you are frustrated by what you are finding or not finding, meet with a reference librarian at Rod Library.

As you begin to read the literature, you must also evaluate it. How credible is this source? What is learned from this source? Does it contribute to understanding of the research topic? Evaluation of sources should consider the introduction, review of literature, research question or hypothesis, methodology (participants, instruments, and procedure), results, and discussion. After reading a new source, determine how it relates to what you have already read. The tendency in writing literature reviews is to put off beginning to write because of a fear that something important is still out there waiting to be read. There is a point where the reading must stop, or at least slow and writing begin. One guideline for determining familiarity with a literature is when reading no longer leads to new information, and you repeatedly find reference to the same names and studies.

After you have read, summarized, and analyzed the literature, it is time to start writing. The University of Wisconsin-Madison Writing Center⁴ offers the following suggestions for organizing the review:

In the introduction to the literature review:

- Define or identify the general topic, issue, or area of concern, thus providing an appropriate context for reviewing the literature.
- Point out overall trends in what has been published about the topic; or conflicts in theory, methodology, evidence, and conclusions; or gaps in research and scholarship; or a single problem or new perspective of immediate interest.
- Establish the writer's reason (point of view) for reviewing the literature; explain the criteria to be used in analyzing and comparing literature and the organization of the review (sequence); and, when necessary, state why certain literature is or is not included (scope).

³ Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational Research: An Introduction*. (7th Ed.). Allyn & Bacon: Boston.

⁴ University of Wisconsin-Madison Writing Center (www.wisc.edu/writing/Handbook/ReviewofLiterature.html)

In the body of the literature review:

- Group research studies and other types of literature (reviews, theoretical articles, case studies, etc.) according to common denominators such as qualitative versus quantitative approaches, conclusions of authors, specific purpose or objective, chronology, etc.
- Summarize individual studies or articles with as much or as little detail as each merits according to its comparative importance in the literature, remembering that space (length) denotes significance.
- Provide the reader with strong "umbrella" sentences at beginnings of paragraphs, "signposts" throughout, and brief "so what" summary sentences at intermediate points in the review to aid in understanding comparisons and analyses.

In the conclusion of literature review:

- Summarize major contributions of significant studies and articles to the body of knowledge under review, maintaining the focus established in the introduction.
- Evaluate the current "state of the art" for the body of knowledge reviewed, pointing out major methodological flaws or gaps in research, inconsistencies in theory and findings, and areas or issues pertinent to future study.
- Conclude by providing some insight into the relationship between the central topic of the literature review and a larger area of study such as a discipline, a scientific endeavor, or a profession.

➤ **The Research Question**

The research question is a specific statement about what variables you will study. Evaluate your research question by considering the following questions: Does the question interest me enough to spark my own thoughts and opinions? Is the question researchable for me? What type of information do I need to answer the research question? Is the question too broad, too narrow, or okay? Your research question should have a purpose; consider what the benefit of answering your research question will be and whom it will help.

➤ **MAE Paper Format**

The MAE paper should conform to the style and standards of the *Publication Manual of the American Psychological Association, Fifth Edition*. The format of the paper should be as follows:

1. Title Page
2. Abstract

3. Chapter 1 – “Introduction”
 - Brief review of most critical literature, focusing on need for the current study
 - Statement of the research problem and rationale for study, providing reader a clear understanding of what will be addressed in paper and why
 - Statement of research question, linked to needs identified in literature
 - Description of theoretical framework for current study
 - Discussion of limitations of study
 - Definitions
 - Brief summary
4. Chapter 2 – “Review of the Literature”
 - Detailed discussion of relevant and important literature, following a logical framework that leads to research question
 - Critique of reviewed literature
 - Discussion of reasonable conclusions drawn from literature
 - Discussion of literature’s support for need for current study
5. Chapter 3 – “Methods”
 - Description of proposed research methodology, detailed enough to allow a person to duplicate your methods
 - Description of proposed data analysis
 - Subjects
 - Design
 - Procedure
6. References
7. Appendices (optional)

➤ **Oral Defense**

The oral defense of the MAE paper provides a final check on students’ foundation for their research, research design, data gathering procedures, and compliance with ethical guidelines. After the committee chair has given approval on a final copy of the paper, the defense date can be scheduled. Students should consult with their committee members to determine an acceptable meeting date and time, and then reserve a room. Members of the MAE paper committee must be given a final, complete copy of the paper for their review at least *two weeks* in advance of the scheduled oral defense.

Prior to this meeting, the committee chair will discuss general expectations and procedures with the student. It is the student’s responsibility to type and bring one copy of the MAE Paper Approval Page to the oral defense for all committee members to sign. The format for this page is in Appendix I. Typically, the chair will open the oral defense by asking the student to summarize the MAE paper and then invite questions, comments, and suggestions from committee members. Following their discussion, the committee may request changes to the

paper or approve the paper as it stands. In rare instances when the committee is not satisfied with the candidate's performance, they may establish a second defense date.

Following completion of the oral defense, the student will work with the committee chair to complete any necessary changes to the paper. Upon the chair's final approval, a copy of the paper, along with the signed MAE Paper Approval Page, must be given to the program assistant, Debra Jacobs. The paper will be placed on file in the department office and the signed approval page will be put in the student's permanent file.

Ed.S. Thesis

In addition to the School Psychology Program – Research Guidelines, the Ed.S. thesis is guided by the *Graduate College, University of Northern Iowa: Thesis & Dissertation Manual*, available on the Graduate College website at http://www.grad.uni.edu/thesis/thesis_manual.asp. This manual specifies the procedures and standards applicable to theses submitted to the Graduate College in partial fulfillment of a graduate degree. The rules in this manual take precedence over the School Psychology Program – Research Guidelines.

➤ **Obtaining IRB Approval for Research**

Federal regulations require that all research involving data collection with human participants must be reviewed and approved by the University of Northern Iowa Institutional Review Board (IRB) prior to the beginning of subject recruitment and data gathering. A study may be initiated only after the researcher has received notification of approval from the IRB. Even if it is expected that your research will be exempt from the federal regulations, only the IRB may make this determination upon review of your application.

UNI guidelines for research with human subjects and related materials (e.g., forms, FAQ's, policies, and procedures) are available at <http://www.grad.uni.edu/research/policy.asp>. The Human Participants Review Application is available in both Word and PDF formats at <http://www.grad.uni.edu/research/protocol.asp>. Before an application is submitted for review, UNI policy requires all principal investigators to complete an on-line tutorial, providing information and training in human participants protections. This training module, from the National Institutes of Health, is at <http://cme.cancer.gov/01>. After completing this module, be sure to print a copy of your Certificate of Completion, as the IRB requires a copy of this in its file before reviewing your application.

➤ **Data Gathering & Analysis**

The process of gathering and analyzing thesis data will vary greatly from student to student. The specifics of what you plan to do, when you will do it, and how you will analyze it should be presented in your MAE paper and agreed upon in your paper defense. If difficulties arise, you must communicate this to your committee chair as soon as possible so that potential changes in the methodology may be discussed and decisions made together with your chair.

The results chapter of the thesis presents the findings of your data gathering and analysis and it should be organized around answering your research questions. Consider using tables and/or charts to present data in a clear and accessible format. The discussion chapter presents your interpretation of important research results. Interpretation should be grounded in the literature you reviewed, placing your findings in the context of this larger area of study. Readers of your thesis will benefit from a concluding section in this final chapter that discusses the implications of your findings as well as questions for future research.

➤ **Ed.S. Thesis Format**

The format and style for the Ed.S. thesis follows the guidelines of the *Publication Manual of the American Psychological Association, Fifth Edition* except for where this is in conflict with the *University of Northern Iowa Thesis & Dissertation Manual*. The Graduate College will not accept for credit any manuscript that fails to meet these standards. Following is a suggested format for the text of the thesis. The Graduate College provides a specific format for the entire thesis, including abstract, table of contents, etc.

Chapter 1 – “Introduction”

- Brief review of most critical literature, focusing on need for the current study
- Statement of the research problem and rationale for study, providing reader a clear understanding of what will be addressed in paper and why
- Statement of research question, linked to needs identified in literature
- Description of theoretical framework for current study
- Discussion of limitations of study
- Definitions
- Brief summary

Chapter 2 – “Review of the Literature”

- Detailed discussion of relevant and important literature, following a logical framework that leads to research question
- Critique of reviewed literature
- Discussion of reasonable conclusions drawn from literature
- Discussion of literature’s support for need for current study

Chapter 3 – “Methods”

- Description of proposed research methodology, detailed enough to allow a person to duplicate your methods
- Description of proposed data analysis
- Subjects
- Design
- Procedure

Chapter 4 – “Results”

- Description of results of data analysis, either quantitative or qualitative
- Use tables, charts, graphs, etc. where appropriate to summarize results

Chapter 5 – “Discussion”

- Discussion of support or rejection of hypotheses or discussion of answers to research question(s) (depends on methodology used)
- Discuss conclusions and generalizations that are supported by research data
- Integrate conclusions with literature reviewed
- Describe implications for field of school psychology
- Describe implications for future research

➤ Thesis Preview

To help insure that the thesis submitted to the Graduate College for approval is properly formatted; all students must schedule a “thesis preview” with the Graduate College Office. This meeting must take place sometime during the semester in which the student intends to graduate and no later than eight weeks before the last day of that semester. The purpose of the preview is not to review the content of the thesis, but rather the format.

The thesis brought to the preview should be near final draft form. The preview copy will not be subject to paper or printer specifications, but must be readable and follow all formatting guidelines. At the preview meeting, the student is given pertinent information and necessary forms for the final submission process. No thesis will be accepted for approval by the Graduate College without the completion of a preview. Important thesis preview and submission deadlines are available at http://www.grad.uni.edu/calendar/thesis_dates.asp. Several times each semester the Graduate College hosts APA format workshops where the APA *Publication Manual* is discussed, along with Graduate College thesis guidelines. Information about dates and times for these workshops can be found at <http://www.grad.uni.edu/thesis/>.

➤ Oral Defense

The oral defense of the Ed.S. thesis is similar to that of the MAE paper, with the exception that this defense is open to the university community. College of Education faculty and graduate students are invited to listen to the summary of the research study and to ask questions or make comments about the work. Remember that you are the expert on your research! Your committee and any visitors are at the defense because they want to hear more about what you learned through your work. Only the student’s committee is responsible for assessment of the student’s performance.

At the time that the oral defense is scheduled and a final copy of the thesis given to committee members, at least two weeks prior to the defense date, the Oral Defense Announcement must be completed and emailed to the program assistant at debra.jacobs@uni.edu. See Appendix J for the announcement format. It is also the student’s responsibility to type and bring one copy of the Ed.S. Thesis Approval Page to the oral defense for all committee members to sign. The format for this page is found in the Graduate College’s *Thesis & Dissertation Manual*.

The committee chair runs the Ed.S. oral defense. Typically, it begins with the student stating the research question, describing the most important results, describing possible limitations, and discussing implications. The committee chair, committee members, and any guests are then

invited to ask questions, seek clarification, challenge conclusions, and recommend changes to be considered for the final draft of the paper. The student and guests will leave the room when the chair determines the defense has ended and the committee will consider the adequacy of the defense. Upon coming to a decision, the committee asks the student to return and the decision is shared. The rubric that guides evaluation of the thesis is found in Appendix K.

➤ **Submission Requirements**

Upon the successful oral defense and completion of any final edits to the thesis, it should be given to the program assistant, Debra Jacobs, for binding. This final copy of the thesis must be on white bond paper, 8 1/2 x 11 inch, acid free 25% or 100% cotton, 24 pound and produced by a black-on-white process. It is important to pay attention to legibility of print, readability of format, and uniformity of contrast between paper and print. Copies of the manuscript must produce a permanent, sharp, high-contrast, black image suitable for microfilming. Caution should be used in selecting the duplicating process to be certain that the copy produced is completely free of spots, lines, smudges, or other blemishes. The student is responsible for the quality of paper on which the copies are made. Any document that is submitted with missing pages or submission forms will not be read until all pages and/or forms have been submitted. The Graduate College reserves the right to refuse any paper that does not meet the paper quality requirements, the standards of form established, or which is not suitable for binding and microfilming. Any copy submitted without all the required submission forms will not be read until all forms have been completed and presented. See the Graduate College's *Thesis & Dissertation Manual* for specific submission requirements.

Appendix A

Suggested Timeline for MAE Paper & Ed.S. Thesis

Suggested Timeline for MAE Paper & Ed.S. Thesis

MAE Paper

- | | |
|-----------------------------------|--|
| September – November | <ul style="list-style-type: none">▪ Begin considering possible research topics▪ Meet with academic advisor to discuss areas of interest, possible committee chair and members |
| December | <ul style="list-style-type: none">▪ Decide on topic and confirm committee chair and members |
| January – February | <ul style="list-style-type: none">▪ Begin working on Chapter 2 – Literature Review |
| March | <ul style="list-style-type: none">▪ Provide draft of Chapter 2 to committee chair▪ Meet with committee chair to discuss methods |
| April | <ul style="list-style-type: none">▪ Provide draft of Chapter 3 to committee chair▪ Provide draft of Chapter 1 to committee chair |
| May | <ul style="list-style-type: none">▪ Provide committee members final draft of paper▪ Schedule MAE paper defense |
| July 30 th of MAE Year | <ul style="list-style-type: none">▪ Paper must be defended & accepted for student to graduate ** |

Ed.S. Thesis

- | | |
|--|--|
| September | <ul style="list-style-type: none">▪ Submit IRB proposal |
| October – February | <ul style="list-style-type: none">▪ Data gathering & analysis▪ Update chapters 1-3 to include any new & pertinent research literature, accurately reflect study methods |
| March | <ul style="list-style-type: none">▪ Provide draft of Chapter 4 to committee chair▪ Provide draft of Chapter 5 to committee chair |
| April | <ul style="list-style-type: none">▪ Submit draft thesis to committee chair |
| May | <ul style="list-style-type: none">▪ Complete final thesis edits▪ Provide committee members final draft of paper▪ Schedule Ed.S. thesis defense |
| July 30 th of Ed.S. Year | <ul style="list-style-type: none">▪ Final thesis to Graduate College |
| July 30 th of Internship Year | <ul style="list-style-type: none">▪ Thesis must be defended & accepted for student to graduate ** |

** Mandatory deadlines. No exceptions are allowable.

Appendix B

Ensuring an Ethical, Legal, and Harmonious Research Study

Ensuring an Ethical, Legal, and Harmonious Research Study⁵

1. Follow proper channels in setting up a study in a field setting.
2. Prepare answers for questions likely to be asked by site administrators about the research project.
3. Avoid compromising the integrity of the research design by making changes for the administrative convenience of the institution from which subjects are to be drawn.
4. Follow correct procedures for obtaining informed consent from research participants or their caretakers.
5. Carry out effective debriefing of research participants following deception.
6. Develop adequate safeguards to ensure confidentiality of research data.
7. Use data-collection procedures and experimental treatments that can be readily defended to possible critics of the research study.
8. Establish good rapport by maintaining ongoing communication with groups that have a stake in the research project.

⁵ Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational Research: An Introduction*. (7th Ed.). Allyn & Bacon: Boston.

Appendix C

Questions to Ask When Evaluating a Research Study

Questions to Ask When Evaluating a Research Study⁶

Introduction

1. Are the research problem, procedures, or findings unduly influenced by the researchers' institutional affiliation, beliefs, values, or theoretical orientation?
2. Did the researchers express a positive or negative bias in describing the subject of the study (an instructional method, program, curriculum, person, etc.)?
3. Is the literature review section of the report sufficiently comprehensive? And does it include studies that you know are relevant to the problem?
4. Are hypotheses, questions, or objectives explicitly stated, and if so, are they clear?
5. Did the researchers make a convincing case that a research hypothesis, question, or objective was important to study?
6. (Quantitative Studies) Is each variable in the study clearly defined?
7. (Quantitative Studies) Is the measure of each variable consistent with how the variable was defined?

Research Procedures

8. (Quantitative Studies) Did the sampling procedures produce a sample that is representative of an identifiable population or of your local population?
9. (Quantitative Studies) Did the researchers form subgroups that would increase understanding of the phenomena being studied?
10. (Qualitative Studies) Did the sampling procedure result in a case or cases that were particularly interesting and from whom much could be learned about the phenomena of interest?
11. Is each measure in the study sufficiently valid for its intended purpose?
12. Is each measure in the study sufficiently reliable for its intended purpose?
13. Is each measure appropriate for the sample?
14. Were the research procedures appropriate and clearly described so that others could replicate them if they wished?

Research Results

15. Were appropriate statistical techniques used, and were they used correctly?
16. (Qualitative Studies) Did the report include a "thick" description that brought to life how the individuals responded to interview questions or how they behaved?
17. (Qualitative Studies) Did each variable in the study emerge in a meaningful way from the data?
18. (Qualitative Studies) Did clearly stated hypotheses or questions emerge from the data that were collected?

Discussion of Results

19. Do the results of the data analyses support what the researchers conclude are the findings of the study?
20. Did the researchers provide reasonable explanations of the findings?
21. Did the researcher draw reasonable implications for practice from the findings?

⁶ Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational Research: An Introduction*. (7th Ed.). Allyn & Bacon: Boston.

Appendix D

Recommendations for Reviewing Research Literature

Recommendations for Reviewing Research Literature⁷

1. Take sufficient time to identify the best descriptors and best preliminary, secondary, and primary sources in reviewing literature related to the research problem or topic.
2. Obtain and read at least the most important primary sources for your literature review rather than relying on abstracts in preliminary sources or summaries in secondary sources.
3. Examine critically all aspects of a study's research methodology before accepting a researcher's findings and interpretations as valid.
4. When appropriate, synthesize the statistical results of quantitative studies by meta-analytic or chi-square methods.
5. Consider contrary findings and alternative interpretations in synthesizing qualitative and quantitative literature.
6. Maintain a record or audit trail of the search procedures that were used in the literature review, and report them.
7. In writing the literature review, make explicit connections between the findings of your literature review and your research questions, hypotheses, or objectives.

⁷ Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational Research: An Introduction*. (7th Ed.). Allyn & Bacon: Boston.

Appendix E

Literature Review Mistakes to Avoid

Literature Review Mistakes to Avoid⁸

1. The literature review stands alone from the other parts of the dissertation or article. In other words, the reader is not shown how the work of other researchers and theorists relates to the study being reported.
2. The review focuses on research findings without considering the soundness of the methodology used to generate the findings. Thus, the reader has no sense of how much confidence to place in your conclusions.
3. The review does not include a description of the search procedures used to identify relevant literature. It is important to mention which preliminary and secondary sources you consulted, the descriptors you used, and the time period covered.
4. The reviewer writes a literature review that consists of a set of isolated findings, opinions, and ideas. This flaw is most often manifested as a disconnected series of paragraphs – one paragraph for each document included in the review. You need to make a concerted effort to fit the findings, opinions, and ideas into a conceptual or theoretical framework developed by you or by other researchers. We think that this is what Richard Elmore had in mind when he stated:

The most common defect of the literature reviews I have read is that they are pedestrian and mechanical in their judgment, even when they are comprehensive and rigorous in their method. They summarize the evidence, but they contribute nothing to the reader's understanding of it.

⁸ Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational Research: An Introduction*. (7th Ed.). Allyn & Bacon: Boston.

Appendix F

Strategies for Efficient Composing

Strategies for Efficient Composing

- Free write. Dictate your thoughts on tape. Brainstorm, create a mindmap or cluster diagram.
- Create a rough outline.
- Begin a rough draft. Start with any section. You do not need to write in what will be the final order of the paper.
- Do rough drafts for two or three drafts.
- Get the organization of the paper right. Reorganize large sections. Work with small sections, even paragraphs.
- Begin serious revising. Have a peer read and edit the paper.
- Read for completeness and clarity. Try to read the paper as a “stranger” who has not seen it before.
- Continue to rewrite and revise.
- Read the paper into a tape recorder. Edit aloud and question as you go.
- Play back the tape and make recorded editorial changes as well as others that may occur to you.
- Print out a copy of the paper and do a rewrite by hand.
- Let the paper sit for four to six weeks, then reread and revise it.
- Send it to supportive friends for feedback and incorporate helpful suggestions.
- Reread and revise.
- Edit. . . Edit. . . Edit. . .

Suggested Allocation of Time:

- Free writing 10%
- Writing rough drafts 20%
- Drafting and shaping 35%
- Revising 20%
- Editing 15%

Appendix G

The Essentials of Productive Writing

The Essentials of Productive Writing

To Get You Started ~

- Write in small, regular amounts.
- Avoid writing in binges. Abandon the notion that writing is best done in large, uninterrupted blocks of time.
- Write while you are fresh. Schedule less mentally demanding tasks for times of the day when you are less alert and energetic.
- Make a recurrent and pleasant activity contingent on first writing for a minimum length of time.
- Resist the temptation to do other things before writing, such as cleaning up one's writing site.
- Do not stop writing when you feel blocked.
- End your writing session at a place where it will be easy to pick up the next time.
- Share your writing with supportive, constructive friends as well as seasoned critics before you give it to a committee member.

To Keep You Going ~

- Establish one or more regular places where you do nothing but serious writing. If possible, find a place where you can leave your work spread out.
- Make regular writing sites sacred in the sense that no other temptations such as magazines, newspapers, or novels can be on site.
- Make your writing site comfortable and minimize distractions.
- Plan your writing beyond daily goals. Schedule the stages of the paper in terms of weeks, with specifiable and measurable goals.
- Schedule writing tasks so that you plan to work on units of writing that can be finished each session.
- Keep a daily writing log – a card taped above your desk will do. For example, record each day's: date, time in, time out, pages drafted, and pages edited.
- Reward yourself for progress.

Appendix H

Style Manual Tips – APA Publication Manual, 5th Edition

APA Publication Manual, 5th Edition

Summary of Most Used-Format

Please note where the guidelines differ between the APA Manual and those specified in the UNI Graduate College Thesis and Dissertation Manual, the Graduate College Manual takes precedence.

Grammar	40-60
Subject/verb agreement	44
Racial and ethnic identity.....	67
Punctuation	78
Usage of comma with three or more items in a series	78
Format for dash.....	81 & 291
Hyphens, dashes, and minus signs.....	291
Quotation marks.....	82
Parentheses, back-to-back.....	85
Brackets.....	86
Hyphenation.....	89
Capitalization	95
(Read carefully the first paragraph of this section as it covers several important points)	
Book title in text.....	95
Nouns followed by numerals	98
Italics	100
Introduction of a new, technical, or key term.....	100
Abbreviations	103
Explanation of abbreviations (acronyms and use of in reference list and citations)	104 & 210
Latin abbreviations and punctuation with.....	106
Scientific abbreviations.....	106
Use of periods with abbreviations and plurals of abbreviations.....	110
Headings (do not follow format in APA)	111
Heading format--UNI Graduate College Thesis/Dissertation Manual	11
Seriation/Enumeration	115 to 117 & 292
(Do not follow example on page 117 for separating paragraphs in a series. The APA Manual has an error. The correct format is on page 292 of the APA Manual.)	
Quotations	117
UNI Graduate College Thesis/Dissertation Manual regarding lengthy quote	6
Ethics of Scientific Publication, plagiarism,	348
Quotation marks (regarding placement of period and comma)	119 & 293
Ellipsis points (format for showing omitted material).....	119 & 293

Citation of sources including electronic sources	120
Permission to quote from copyrighted work.....	121
Numbers	122-130
Decimal fractions	128
Plurals of numbers	130
Metric abbreviations and style for metric units	130-136
Statistical and Mathematical	136
Selecting effective presentation using statistical and mathematical copy	137 & 348
Statistics in text.....	138
<i>N</i> vs <i>n</i> symbol for number of subjects	139
Symbol for percent.....	140
Standard, boldface, and italic type for statistical symbols and mathematical copy.....	140
Mathematical copy, spacing, alignment, and punctuation	145 & 294
Tables	147-176 & 301
Examples of table format.....	149-154
Discussing tables in text and citing tables in text	154 & 155
Table numbers and table titles	155
Body of a table (decimal values, empty cells, conciseness)	159-160
Presenting data in specific types of tables (ANOVA, LISREL, regression, word).....	160-169
Notes to a table.....	170
Ruling of tables.....	173
UNI Graduate College Dissertation and Thesis Manual (tables, figures, and other illustrations)...	9
Figures	176
Types of figures	177-179
Examples of figures	180-198
Identifying and citing figures.....	198
Figure legends and captions.....	199 & 302
Footnotes in text	202
Appendixes (identifying and citing)	205 & 299
UNI Graduate College Thesis and Dissertation Manual.....	12
Reference Citations in Text	207-214
One work by one author.....	207
One work by multiple authors (Note: correct usage of et al.)	208
When a work has six or more authors.....	209 & 240
Groups as authors (acronyms in citations and reference list)	209
Use of “and” versus “&” in a multiple author citation	209
Works with no authors (including legal materials).....	210 & 397-410
Authors with the same surname.....	211 & 221
Two or more works within the same parentheses.....	212

Classical works	213
Electronic sources	120, 213, 231, & 271
Personal Communication	214
Reference List Construction	215-232
Agreement of text and reference list (Must read Section 4.01)	215
Locations that do not require a state or country for publishers' location	217
Abbreviations for states and territories for publishers' location	218
Order of references in the reference list	219
Alphabetizing names	219
Order of several works by the same first author	219
Order of several works by different first authors with the same surname	221
Order of works with group authors or with no authors	221
When a work has 6 or more authors	209 & 240
Main Elements of Most Common Types of References (Sections 4.07-4.15)	222-232
Periodicals	223
Nonperiodicals	223
Online periodicals	223
Online documents	223
Authors	224
Periodicals	224
Nonperiodicals	224
Publication Date	225
Title of Article or Chapter	226
Periodicals	226
Nonperiodicals	226
Title of Work and Publication Information	227-230
Journals	227
Magazine	227
Nonperiodicals	228
Chapters in an edited book	229
Book with no editor	229
Book title with parenthetical information	229
Books	230
Retrieval Information Electronic Sources	231
Examples of References	232-281
What to do if you cannot find a reference example in APA	232
Periodicals (journals, newsletters, newspapers, monographs, abstracts)	240-245
Non-English journal article, title translated into English	246

Periodical published annually	246
Citation of a work discussed in a secondary source	247
Book, Jr. in name, and group author	248
Book, no author or editor	249
Examples of References	232-281
Reference to an article in an edited book	252
Technical and research reports	255
Proceedings of meetings and symposia	259
Doctoral dissertations and master's theses	260
Motion picture, television, broadcast, and music recording	266
Electronic media	213, 231, and 268-281
Internet articles	271
Nonperiodical documents	273
Technical and research reports	274
Proceedings of meetings and symposia	276
Newsgroups, online forums and discussion groups, and electronic mailing lists	276
Aggregated databases	278
Computer programs, software, and programming languages	280
Format and Style	
Sample Paper	306-320
Note: The Graduate College does not allow the use of a running head.	
Author's copyright on an unpublished manuscript	355
For information regarding publishing your master's thesis contact the Graduate College.	
Consult www.apastyle.org for the latest information regarding APA Style	89 & 334
Explanation of the reason for both Graduate College Thesis and Dissertation guidelines and APA publication guidelines	321 (section 6.01) and 324 (section 6.03)
Graduate College Thesis and Dissertation Manual Format and Style	5-12
Explanation of Preview	12
Typeface and font size	5
Partially filled pages	5
Widows and orphans (single initial line and single terminal line of a paragraph)	5
Paper	6
Margins (do not follow margins as outlined in APA Manual)	6
Spacing	6
Page numbers	7
Abstract	7
Table of Contents	9
Tables, Figures, and other illustrations	9-10
Special Materials	10
Headings and Subheadings	11
References	12
Appendices	12

Sample thesis and abstract title page	20 & 21
Sample thesis approval page.....	24
Sample Table of Contents.....	25
Sample List of Tables	26
Sample List of Figures	26

Appendix I

MAE Paper Approval Page

This Research Paper by:

Entitled:

Has been approved as meeting the
research paper requirement for the degree of

Master of Arts in Education
Educational Psychology: Context and Techniques of Assessment Emphasis

Committee Chair

Committee Member

Committee Member

Graduate Faculty Advisor

Head, Department of Educational
Psychology & Foundations

Date Approved

Appendix J

Ed.S. Thesis – Oral Defense Announcement

Ed.S. Thesis – Oral Defense Announcement

At the time that the defense is scheduled, the Ed.S. Thesis – Oral Defense Announcement (see below for format) must be emailed to the program assistant, Debra Jacobs at debra.jacobs@uni.edu. The announcement will then be distributed to Teacher Education Faculty and School Psychology graduate students.

(STUDENT NAME), candidate for the Degree **Specialist in Education: School Psychology**, will defend the thesis entitled: (*THESIS TITLE*) on (DATE), at (TIME), in (LOCATION).

(BRIEF DESCRIPTION OF THESIS)

Thesis Committee Members

(NAME) – Committee Chair

(NAME) – Committee Member

(NAME) – Committee Member

Appendix K

Ed.S. Thesis – Evaluation Rubric

Ed.S. Thesis – Evaluation Rubric⁹

Introduction:

Provides background information and summarizes major works. Compelling statement of the problem established. Research questions are clearly stated and they emerge logically from problem statement. The research problem is significant and it will contribute practical or theoretical knowledge. Important terms used in the study adequately defined. Assumptions and limitations of the study clearly stated.

Review of the Literature:

Primary sources are used. Key people and ideas in area selected are identified. Literature review addresses problem area and research questions.

Method:

Sample fully described. Methodology is sound and research design and procedure clearly stated. Instrumentation and materials fully described. Data analysis is appropriate for research problem.

Results:

Results of the statistical analysis presented in a clear and understandable form. Tables, charts, etc. used to summarize data.

Discussion:

Provides clear statement of whether the hypotheses were supported or rejected or how questions are answered. Conclusions integrate previous literature and major alternative points of view. Warranted and judicious conclusions are drawn that are substantiated by the evidence. Conclusions clearly explain results. Generalizations confined to the population from which the sample was selected. Implications for the field of school psychology described. Implications for future research described.

Other Sections:

Abstract is concise and descriptive. Reference list is complete and all references are cited in body. Instrument is included in appendix. Informed consent form and IRB approval included in appendix.

Style:

Adheres to APA Style and follows Graduate School format. Logically organized and clearly written. The tone is impartial and scientific.

⁹ Adapted from East Carolina University, Department of Psychology Thesis Scoring Rubric.

Ed.S. Thesis – Evaluation Rubric
Summary

Student: _____ Date of Defense: _____

Semester/Year: _____ Committee: _____

1 = Inconsistent or absent evidence that section meets standards

5 = Clear evidence that section meets standards

10 = Clear and consistent evidence that section meets standards

Introduction:

1 2 3 4 5 6 7 8 9 10

Review of the Literature:

1 2 3 4 5 6 7 8 9 10

Method:

1 2 3 4 5 6 7 8 9 10

Results:

1 2 3 4 5 6 7 8 9 10

Discussion:

1 2 3 4 5 6 7 8 9 10

Other Sections:

1 2 3 4 5 6 7 8 9 10

Style:

1 2 3 4 5 6 7 8 9 10

Overall Rating: (0-4 below standard, 5-7 at standard, 8-10 above standard)

1 2 3 4 5 6 7 8 9 10