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Section 1: Overview

The Dissertation Guide covers the dissertation process as well as the form of dissertation documents for the Graduate School of Computer and Information Sciences (GSCIS). This guide describes:

- what a dissertation is
- how to get started
- how to find a dissertation chair
- how to form the dissertation committee
- what to do if human subjects are involved in the study
- where to find additional dissertation resources

For matters regarding the dissertation that are not covered in the Dissertation Guide, you should follow the advice of your dissertation chair. Official versions of the Dissertation Guide will be posted to the school’s website (www.scis.nova.edu). The guide posted most recently to the website supersedes previous Web and printed versions.

Scholars Before Researchers: Pre-Dissertation Coursework

You are expected to have expertise in your selected area including a solid understanding of the literature in your field before you delve into solving a specific research problem within that field. The 700-level courses are designed for you to develop as a scholar in your chosen field. That is, you will develop knowledge in your domain and strengthen your research skills.

The Doctoral Research courses place more emphasis on your role as a researcher and are intended to help you develop your dissertation idea to the point where it can be supported by a committee. You are required to take at least two sections of Doctoral Research in sequence, not parallel, as part of attaining candidacy. We recommend that you take your Doctoral Research courses at the end of your coursework and with a professor with whom you have developed a good relationship and have mutual research interests. A recommended pre-requisite is that you complete the 700-level course with the requested professor with a grade of B+ or higher. While taking Doctoral Research, you will work closely with your professor to identify a specific research area and a specific research problem within that area. Further, you will develop your dissertation idea paper under the guidance of your professor, your potential dissertation chair.
Figure 1 illustrates the process from coursework to the final Dissertation Report. Although you will write your Dissertation Report and secure its preliminary committee approval prior to the Dissertation Defense, the final approval on the report is by your advisor after you have successfully defended your dissertation. More information about this process is in Section 2.

Figure 1. From coursework to dissertation.

The Dissertation

The dissertation is the most important culminating requirement for the Ph.D. degree. It represents a significant extrapolation of new knowledge from a base of solid experience and knowledge in your area of concentration. The dissertation must be of sufficient strength to be able to distill from it a paper worthy of publication in a journal or conference proceedings, or to use it as the basis for a textbook or monograph. Although publication is not a requirement for the Ph.D., you are strongly encouraged to submit your dissertation research work for publication. In the GSCIS, the dissertation accounts for a substantial portion of the credit hours of each Ph.D. program. You are encouraged to learn about the dissertation process as early as possible.
The Five-Chapter Model

The GSCIS uses the five-chapter model as its framework for documenting dissertation research. Any departure from this model must be approved in advance by your dissertation committee. The five chapters include:

• Chapter 1: Introduction
• Chapter 2: Review of the Literature
• Chapter 3: Methodology
• Chapter 4: Results
• Chapter 5: Conclusions, Implications, Recommendations, and Summary

Additional information regarding how these chapters need to be incorporated into each of the dissertation documents is presented in Section 4 of this guide.

Writing Skills

You are expected to demonstrate proficiency in the use of the English language in all work submitted during the dissertation process. Dissertation documents that contain grammatical and spelling errors are unacceptable. Your dissertation committee will not provide remedial help on writing skills. You are responsible for proofreading and editing your work, which, in both form and content, should be letter-perfect. Refer to Section 6 for a listing of books that contain general guidelines for form, style, and writing. You may use an editor or proofer; however, the editor must not assist in conducting the investigation or writing the report. Consult with the Program Office to help you identify one.
Section 2: The Dissertation Process

Overview

The dissertation process begins with identifying a suitable research topic and ends with publishing your final dissertation research (see Figure 2). Section 2 includes general guidelines on each phase in this process. Your dissertation chair will guide you through specific steps associated with each phase.

Figure 2. The dissertation process.

Initiating the Dissertation Process

Although some students may begin the program with an idea for a dissertation, it is through the course work and subsequent registrations for Doctoral Research where you develop a potential dissertation topic. Listen for the current research items mentioned by your professors in the 700-level courses. These are often starting points for your guided research effort, continued with Doctoral Research registrations.

Working with Your Potential Dissertation Chair

The following process describes what happens after your initial meeting with a professor regarding your proposed dissertation research problem. Note that the potential dissertation chair does not become your official dissertation chair until the Dissertation Idea Paper is approved.
1. **Potential Dissertation Chair contacts Program Office to open entry in DTS.** The dissertation relationship is considered established when you are linked with the potential chair in the school’s Dissertation Tracking System (DTS). The potential dissertation chair will contact the Program Office to open the entry in DTS. From that point on, all communication pertaining to your dissertation will be communicated via the DTS. Although DTS can be set up to forward notices to your email account when messages are posted, it is imperative that you log in to DTS at least weekly to ensure that you are receiving all communications. In addition, students should use DTS to log (as appropriate) office and telephone meetings. Notice that initially your relationship is with a potential dissertation chair. The professor becomes your official dissertation chair only after your Dissertation Idea Paper has been approved and your committee formed. Refer to [https://gscisweb.scis.nova.edu/studentdts/index.cfm](https://gscisweb.scis.nova.edu/studentdts/index.cfm) for more information about DTS.

2. **Student works with potential chair on dissertation idea.** Initially you will work directly with your potential chair to focus your problem area, develop the research problem and rough approach, and write an idea paper acceptable by your potential chair.

3. **Potential chair initiates formation of the dissertation committee.** When the potential dissertation chair is comfortable with idea paper, he or she will initiate the formation of the dissertation committee. Usually membership on the committee is decided mutually by you and your potential chair. Because the committee members work directly with the chair, he or she makes the final decision regarding the committee members. The approval of each committee member will be required for formal approval of the Dissertation Proposal and the Dissertation Defense.

Dissertation committees usually include the chair and two other members. A qualified person who is not a full-time GSCIS faculty member may be considered to serve as a committee member. Such appointments must be approved by the committee chair and the dean prior to committee formation. As a general rule, outside committee members cannot serve as committee chairs. Exceptions to this rule must be approved by the dean and will be granted only in extraordinary circumstances.
4. **Potential chair keeps committee informed.** The dissertation committee operates under the leadership of the committee chair. Your chair will be your point of contact for your dissertation work. The chair will keep the committee informed about your progress and will ensure that the committee, as a unit, provides the guidance, evaluation, and consultation necessary to mentor your study. You should avoid taking or assuming direction from a committee member or other resource unless coordinated and approved by your dissertation committee chair.

5. **Dissertation students and faculty complete end-of-term status reports.** Every term you are registered for dissertation, you will complete a status report on your dissertation progress. Twenty days prior to the end of the term, you will receive an auto-generated notice that the status report is open in the DTS for you to complete. You will have the next ten days to complete the status report.

   Your dissertation chair will also evaluate your progress at the end of the term. In addition to assigning a grade of PR (Progress) or NPR (Inadequate Progress), the chair will use a rubric (See Appendices L - Q) to summarize where you have made progress during the term. You are advised to check with your dissertation mentor/advisor regarding specific communication guidelines he or she might have during the term (e.g., updates weekly, monthly, bi-monthly).

6. **Faculty meet to review dissertation student progress.** After the close of each term, the faculty in each discipline will meet to discuss the progress of that discipline’s students. This meeting provides the venue for the faculty to discuss and propose a variety of student actions, most commonly resulting in a group-composed status letter to the student.

**Producing the Dissertation Documents**

There are three major deliverables that are part of the dissertation process including the Dissertation Idea Paper, the Dissertation Proposal, and the Dissertation Report (see Figure 4). Each time you submit one of the three dissertation documents in the DTS, you will receive a prompt to certify authorship of your dissertation work. The Certification of Authorship acknowledges the following three statements are true:

1. I am the author of the document submitted and any assistance received in its preparation is fully acknowledged and disclosed in the document;
2. I cited all sources from which data, ideas, or words that are copied directly or paraphrased in the document were obtained; and
3. I prepared the document for the stated purpose.

Following is a brief description of each document. Sections 4 and 5 include additional information about the contents and form and style of each document.
1. **Dissertation Idea Paper**: The Dissertation Idea Paper presents your proposed dissertation research. When this document is approved by your potential dissertation chair, and your committee is formed, you can progress to the Dissertation Proposal.

2. **Dissertation Proposal and IRB Approval**: The Dissertation Proposal builds on the information presented in the Dissertation Idea Paper and functions as a detailed blueprint for conducting the proposed research. The Dissertation Proposal must be successfully defended (i.e., receive full committee approval after you present the proposal elements to the committee during a live or video-conferenced meeting) before you begin your research and collect data. If your study entails the use of human participants in any fashion, you must obtain permission from the Institutional Review Board (IRB). When IRB approval is required, it must be obtained before the Dissertation Proposal can be approved. More information about IRB is available at: [http://www.scis.nova.edu/irb.html](http://www.scis.nova.edu/irb.html)

3. **Dissertation Report**: The Dissertation Report is a detailed, accurate, and cohesive account of a research effort accomplished to investigate a problem and reveal new knowledge. At the close of the Dissertation Defense (see next subsection), if the committee unanimously approves the dissertation, the Dissertation Report will be approved by the chair (possibly after minor changes) and forwarded to the dean for final approval. Without unanimous approval, the Dissertation Report is returned to the student with comments from the committee.

*Time Expectations for Dissertation Progress*

The three deliverables mark the major phases of your dissertation research. You should complete the first phase, idea paper approval, within 2 years of your first registration for Doctoral Research.

You should have a committee-approved proposal within 12 months of securing an approved idea paper and forming the committee.
Time required to complete the dissertation research will vary depending on the nature of your research. Thus the time needed to secure an approved dissertation report can vary tremendously. You will work with your dissertation chair to make sure that your progress is adequate.

Time spent on formal leave does not count toward these expectations. Of course, program time limits as stated in the Graduate Catalog still apply.

**Defending the Dissertation**

Prior to the final approval of your Dissertation Report, you will prepare and present a Dissertation Defense. You will be okayed to hold your defense only after the committee approves your readiness, based on its assessment of your Dissertation Report. The defense itself is an oral presentation of the results of your study and serves three purposes. First, it fulfills the institution’s responsibility of examining your dissertation work. Second, it provides you with a unique opportunity to present your dissertation, to discuss the work with thoughtful people who are familiar with it, and to address questions and issues for further thought and study. Last, it is the culminating experience for you as a doctoral candidate, providing closure to an intensive period of study.

For the defense, you should prepare a presentation that includes:

- Identification of the problem
- Explanation of the research methodology and its rationale
- Discussion of the findings and their interpretation, the contribution to knowledge and professional practice, and suggestions for future research

You should be prepared to address questions that arise during the defense. Typically, a defense runs about one hour; the first 30-35 minutes are devoted to your presentation, and the rest of the time is open to questions. Your committee chair will serve as moderator and will be prepared to raise questions and issues if the need arises.

Defenses are ideally scheduled within six weeks of the completion of the Dissertation Report. They are scheduled at a mutually agreeable time for you and the committee. A schedule of dissertation defenses (along with abstracts) is available on the GSCIS Web site. Students and faculty are welcome to attend.

**Completing the Dissertation Report**

After the committee has approved your dissertation defense, your chair will work with you to ensure that the final Dissertation Report is acceptable. Once the chair accepts the report, you will receive specific instructions from the Program Office on how to submit your dissertation to ProQuest Dissertations and Theses (required for graduation) and complete your degree.
Publishing Dissertation Results

Publication of dissertation results is not required but is encouraged. Publication promotes professional recognition and is valuable to the new graduate’s professional career and also to GSCIS. Consider publishing with your dissertation chair. He or she is familiar with the publishing process and can recommend several appropriate professional or scholarly journals for submission of your work. Publication in a refereed journal is the best way to validate the value of your work.

For details about graduation and commencement, refer to the GSCIS Graduate Catalog.
Section 3: The Dissertation Relationship

The following information is provided to help you understand your role as a dissertation student and the roles of your chair and committee members.

The Doctoral Student

Throughout the dissertation process, you are expected to:

1. Be continuously registered in coursework, research, or dissertation credits (Fall, Winter, and Summer, unless on approved leave of absence) in order to receive advising and other dissertation services.
2. Abide by the GSCIS governing documents including the NSU Student Handbook and Graduate Catalog. You must follow the highest standards of scholarly and intellectual integrity and honesty throughout the dissertation process. To this end, you should submit only original, scholarly work that conforms to GSCIS policies on plagiarism and original work and to applicable laws and regulations (e.g., copyright laws).
3. Communicate and submit dissertation documents to your chair via the Dissertation Tracking System (DTS). You are also expected to document in the DTS a summary of face-to-face meetings and phone conversations if directed by your chair.
4. Submit work that conforms to the GSCIS guidelines for format and style as described in this guide.
5. Document and maintain a reasonable timeline for completing your research and provide updates on your progress in the DTS as required by your chair.
6. Be willing to receive constructive feedback from your chair and committee members and clearly document how you will incorporate the feedback in your dissertation.
7. Put forth your best work each and every time. Submit work that is free of typos and grammatical errors, reflects feedback provided on earlier iterations of the document, and represents clearly written, logical, and carefully edited work. Submitting work that contains grammatical errors, format errors, or that does not address previous suggestions from the committee, could severely slow down your progress and extend the review process.
8. Inform your dissertation chair about any changes in your position, address, and other contact information, as well as professional and personal changes that might affect your progress.
9. Follow the policies and procedures established by NSU’s Institutional Review Board (IRB) for research with human subjects and the regulations that your own agency or institution may have concerning the protection of human subjects in research.
10. Be current with the Collaborative Institutional Training Initiative’s (CITI) certification course in the protection of human subjects (See http://www.nova.edu/irb/training.html).
11. Take personal responsibility for your dissertation and getting the work done.
The Dissertation Chair

Throughout the dissertation process, the dissertation chair will encourage you and give you support. Specifically, the chair will:

1. Challenge your thinking and rationale for conducting the dissertation research both during verbal and written communications. The chair will critically challenge your ideas, analysis, logic, and arguments.
3. Provide timely feedback.
4. Maintain a professional and collaborative relationship with you.
5. Use the DTS for all dissertation-related correspondence.
7. Be your advocate.

The Committee Member

Dissertation committee members support the dissertation chair in reviewing dissertation documents, providing timely and constructive feedback, and ensuring dissertation quality. They do not interact directly with you unless directed by your chair. Your chair will coordinate communication from committee members and provide committee feedback to you.
Section 4: Guidelines for Dissertation Deliverables


Although these are three distinct documents, they are not unrelated. The Dissertation Idea Paper serves as the core upon which the Dissertation Proposal is built, and the Dissertation Proposal, with updates and adjustments, constitutes the first three chapters of the Dissertation Report. Check with your dissertation chair for guidance on how to migrate content from the Dissertation Idea Paper to the Dissertation Proposal and the Dissertation Proposal to the Dissertation Report.

The Dissertation Idea Paper

In the Dissertation Idea Paper you present an idea along with a preliminary plan for your research and convince the faculty that the proposed research is worthy of a dissertation. This document is not intended to be a one-time or static document. As your dissertation work proceeds, goals and approaches may evolve, and the original Dissertation Idea Paper may have to be updated in order for it to accurately track the dissertation study, independent of the state of the study. The Dissertation Idea paper is approximately 25-40 pages and is written in the future tense. It includes the following elements.

Abstract

The abstract for the idea paper is single-spaced and includes a summary of the proposed research and how it constitutes an original contribution in your respective field (i.e., computer science, information assurance, or information systems). An abstract is a stand-alone document, and therefore should not include citations because it would need references.

Background/Introduction

In this section, present enough information about the proposed work that the reader understands the general context or setting. It is also helpful to include a summary of how the rest of this document is organized.

Problem Statement

In this section, present a concise, literature-supported statement of a research-worthy problem to be addressed (i.e., why the work should be undertaken). Follow the statement of the problem with a well-supported discussion of its scope and nature. The discussion of the problem should include: what the problem is, why it is a problem, how the problem evolved or developed, and the issues and events leading to the problem.
Dissertation Goal

Next, include a concise definition of the goal of the work (i.e., what the work will accomplish). Aim to define a goal that is measurable.

Research Questions

Research questions are developed to help guide you through the literature for a given problem area. Three to five open-ended questions are usually adequate. As your research evolves, it is likely your research questions will too. Depending on the design of your study, you may also develop a hypothesis(es).

Relevance and Significance

This section provides further support for both the problem statement and goal of your dissertation study. Consider the following questions and support your discussion by citing the research literature:

- Why is there a problem? What groups or individuals are affected?
- How far-ranging is the problem and how great is its impact? What’s the benefit of solving the problem?
- What has been tried without success to correct the situation? Why weren’t those attempts successful? What are the consequences of not solving the problem?
- How does the goal of your study address the research problem and how will your proposed study offer promise as a resolution to the problem?
- How will your research add to the knowledge base?
- What is the potential for generalization of your results?
- What is the potential for original work?

Barriers and Issues

In this section, identify how the problem is inherently difficult to solve. You should also show how the solution you propose on effecting is likewise difficult. You should show the study you propose is of adequate difficulty to warrant dissertation-level work and reward.

Brief Review of the Literature

In this section, it is important to clearly identify the major areas on which you will need to focus your research in order to build a solid foundation for your study in the existing body of knowledge. The literature review is the presentation of quality literature in a particular field that serves as the foundation and justification for the research problem, research questions or hypothesis, and methodology. You will develop a more comprehensive review of the literature as part of your Dissertation Proposal.
Approach

Describe how you plan to address your research problem and accomplish your stated goal. List the major steps that must be taken to accomplish the goal and include a preliminary discussion of the methodology and specific research methods you plan to implement. Although specific details are not required at this point, you must provide adequate discussion of the general process you will follow to implement your research methodology.

Milestones

Identify the major steps for your dissertation development. In the Approach section you discuss only the steps you will follow in implementing your research methodology. In this section, you discuss the steps necessary to complete the dissertation and the timeframe.

Resources

Include all resources you will need, such as hardware, software, networks, data communications, access to participants, access to experts in the field, access to peers, and standardized tests, surveys, or other forms of instrumentation. Indicate whether you have the resources and if not, how you plan to obtain them.

References

Follow the most current version of APA to format your references. However, each reference should be single-spaced with a double space in between each entry. Make sure that every citation is referenced and every reference is cited.

The Dissertation Proposal

The Dissertation Proposal provides the framework within which your research will be conducted and presents evidence of your qualifications to pursue the research. You must articulate the concepts and theories underlying the study, clearly state the problem, specify goals that are measurable, present a thorough review of the literature, delineate the methods for conducting the research, and present a strategy to achieve the goals. The Dissertation Proposal is written in the future tense and includes the following elements.

Front Matter

The front matter includes the following:

- Title Page
- Abstract
- Table of Contents
Chapter 1: Introduction

This chapter is an expansion of the Dissertation Idea Paper and generally includes the following sections:

- Background
- Problem Statement
- Dissertation Goal
- Research Questions and/or Hypotheses
  - Note: Some studies have research questions and hypotheses while others have one or the other.
- Relevance and Significance
- Barriers and Issues
- Assumptions, Limitations and Delimitations: Assumptions are the unprovable factors that are accepted as true within the context of the study. Limitations are factors that are beyond your control and potentially impact the internal validity of the study. Delimitations are factors that you intentionally impose to constrain the scope of the study to make it manageable. Delimitations impact the generalizability of the results of the study.
- Definition of Terms
- List of Acronyms (if needed)
- Summary

Chapter 2: Review of the Literature

In Chapter 2, you will expand and develop the review you presented in your Dissertation Idea Paper. The review can include:

- Overview of the topics included in the review.
- Justification of the criteria for what is included and excluded as part of the review.
- Identification of what has been done before including the strengths and weaknesses of existing studies.
- Identification of the gaps in the literature.
- Analysis of research methods that are used in similar studies and determine whether these methods were valid and reliable.
- Synthesis of the literature and present it in a way that helps the reader gain a new perspective on the literature.
- Summary of the chapter.
Chapter 3: Methodology

In Chapter 3, you will delineate, in detail, how the investigation will be conducted. This chapter requires significant enhancement over the scope described for the Approach section in the Idea Paper. Enough detail should be provided to enable replication of your work by other researchers. The following topics are intended to serve as a guide:

- Overview of research methodology/design: Explain exactly what type of research study you will do and outline briefly how the study will be conducted.
- Specific research method(s) to be employed: Describe in detail the specific research methods you will use to answer the research questions and/or test the hypothesis(es). Explain how these methods will be carried out both conceptually and operationally.
- Instrument development and validation: If applicable, identify the instrument(s) that will be used and how each construct will be measured. Discuss the threats to validity and reliability and how these threats will be addressed. Address internal validity, external validity, instrument validity, and construct validity.
- Proposed sample: Describe the sample population, how many participants will be part of the study, and anticipated response rate.
- Data analysis: Explain how data will be analyzed in order to answer the research questions and/or test hypothesis(es). Use the research literature to support your decisions.
- Formats for presenting results
- Resource requirements
- Summary

Back Matter

The back matter includes the following:

- Appendices
- References

The IRB Application (Research Involving Human Subjects)

If you plan to conduct surveys (email, telephone, regular mail), interviews, testing, or any other type of assessment involving human subjects as part of your dissertation, the instruments and protocols must be reviewed and approved by the university’s Human Research Oversight Board (Institutional Review Board or IRB) prior to beginning the research. The mission of the IRB is to protect human subjects involved in research and ensure appropriate practices are being carried out at NSU. It is recommended that you initiate the IRB review process after you have received approval of your Dissertation Idea Paper and you are instructed by your chair.

The school has a faculty representative to the IRB who can help you with the review process. There are three levels of review: center-level, expedited, and full review. The GSCIS representative can guide you regarding the level of review required and can assist with any paperwork and procedures.
that might be required. Most research at GSCIS falls into the center-level review category, which requires a simple process, but it must be logged appropriately. More information is available online at: http://www.scis.nova.edu/irb.html. Students may obtain additional information from the IRB’s home page: http://www.nova.edu/irb/index.html. You should check the websites frequently in order to ensure that you use the most current version of the required IRB documents. A signed, approved IRB form must be filed with the IRB and the program office before the Dissertation Proposal is approved.

The Dissertation Report

The Dissertation Report should be a complete but concise document that establishes your credentials as an expert in the domain of your study. Although the Dissertation Proposal serves as the core of the first three chapters of the Dissertation Report, you must do more than just change the verb tense of the proposal (where appropriate) to migrate it to the report. In almost all cases, a lengthy period of time has elapsed between the literature review developed for the proposal and the completion of the dissertation study; it is vital that you continue to stay current in the literature germane to the study you are conducting and update your Review of the Literature chapter accordingly. It is also a very rare study that is executed exactly as planned; frequently changes to the research questions and the methods proposed to derive answers to them must be made as the study progresses. These changes must be discussed with your dissertation chair before being implemented and, if approved, must be reflected in the applicable sections of Introduction and Methodology chapters. Following is the general structure of the Dissertation Report. Sample pages and templates are in Section 5.

Front Matter

- The front matter includes the following:
  - Title Page
  - Approval/Signature Page
  - Abstract
  - Acknowledgements
  - Table of Contents
  - List of Tables
  - List of Figures

Chapters

Primarily written in the past tense, the Dissertation Report includes the first three chapters as described in the Dissertation Proposal. These chapters must be updated to accurately reflect your actual dissertation work activities. In addition, following is a brief description of elements that should be included in Chapters 4 and 5 of the Dissertation Report.
Chapter 4: Results

Chapter 4 includes an objective description and analysis of the findings, results or outcomes of the research. Limit the use of charts, tables, figures to those that are needed to support the narrative. Most of these illustrations can be included as part of the appendices.

The following topics are intended to serve as a guide:

- Data analysis
- Findings
- Summary of results - If the research has been guided by hypotheses, make a statement as to whether the data supported or rejected these hypotheses.

Chapter 5: Conclusions, Implications, Recommendations, and Summary

In this chapter, interpret, examine, and qualify the results of the investigation and draw inferences from them.

The following topics are intended to serve as a guide:

- Conclusions: Clearly state the conclusions of the study based on the analysis performed and results achieved. Indicate by the evidence or logical development the extent to which the specified objectives have been accomplished. Discuss alternative explanations for the findings, if appropriate. Delineate strengths, weaknesses, and limitations of the study.
- Implications: Discuss the impact of the work on the field of study and its contributions to knowledge and professional practice. Discuss implications for future research.
- Recommendations: Present recommendations for future research or for changes in research methods or theoretical concepts. As appropriate, present recommendations for changes in academic practice, professional practice, or organizational procedures, practices, and behavior.
- Summary: Present a summary of the entire paper, written so that it could serve as a stand-alone document. It should be about four or five pages in length.

Back Matter

The back matter includes the following:

- Appendices
- References
Section 5: Document Preparation – Form and Style

Form and style guidelines for a dissertation serve a number of purposes: to ease adaptation of the document for publication in whole or part, to ensure a level of professional appearance, and ease the burden on the readers of the document by presenting material in a logical, consistent fashion. Nevertheless, form and style guidelines should not be burdensome for either the student or the dissertation committee. The bulk of the effort in developing and mentoring a dissertation should certainly be directed toward the quality of the thoughts being presented, not the appearance of that presentation.

The current edition of the Publication Manual of the American Psychological Association serves as the primary guide for format and style. Since that manual focuses primarily on publication in journals, some exceptions are necessary for a dissertation report. The following sections detail those exceptions to the form and style guidelines applicable to the three major dissertation products: the Dissertation Idea Paper, Dissertation Proposal, and Dissertation Report. These guidelines are amplified with examples of:

- Sample Dissertation Title Page (Appendix A)
- Dissertation Approval Page (Appendix B)
- Sample First Page of Abstract (Appendix C)
- Sample Second Page of Abstract (Appendix D)
- Sample Acknowledgement Page (Appendix E)
- Sample Table of Contents (Appendix F)
- Sample List of Tables (Appendix G)
- Sample List of Figures (Appendix H)
- Sample of the Format for Headings in the Chapters (Appendix I)
- Sample of Appendix Cover Page (Appendix J)
- Sample of Appendix Without Separate Cover Page (Appendix K)

References and Citations

One of the most important tasks in writing a dissertation is to reference other works and sources in the text body. You must provide a formal reference citation for each idea or statement taken from the work of an individual or organization (see the section Crediting the Words or Ideas of Others in the GSCIS Graduate Catalog). Failure to provide a reference citation, when one is appropriate, is plagiarism, which is a violation of the university’s Code of Student Conduct and Academic Responsibility. An act of plagiarism will subject the student to disciplinary action including suspension or expulsion from the university (see the section Standards of Academic Integrity in the GSCIS Graduate Catalog). Always err on the side of caution when writing any formal paper. As you conduct your work, keep accurate records that indicate which portions of your dissertation are not your own words and ideas. If you attempt to do this as an afterthought, you run the risk of losing the source of the information and committing plagiarism.
Reference citations in the text should use the author-date citation system specified in the current edition of the Publication Manual of the American Psychological Association. All reference citations must be listed alphabetically in the References section at the end of the document, again following the format specified in the current edition of the Publication Manual of the American Psychological Association. However, each reference should be single-spaced with a double space in between each entry. Make sure that every citation is referenced and every reference is cited.

Margins

The left-hand margin must be 1.5 inches (4 cm.). Margins at the right, top, and bottom of the page should be 1.0 inch. (See exception for chapter title pages below.) The dissertation text may be left-aligned (leaving a ragged right edge) or may be both left- and right-aligned (justified).

Line Spacing

Double-spacing is required for most of the text in documents submitted during the dissertation process. Pages for the abstract, acknowledgments, and parts of the table of contents, however, must be single-spaced in the Dissertation Proposal and the Dissertation Report. Single-spacing also can be used for table titles and headings, figure captions, references (but double-spacing is required between references in the list), footnotes, and long quotations. Long quotations may be indented five spaces. Judicial triple- or quadruple-spacing can improve appearance and readability and is appropriate after chapter titles, before major subheadings, before footnotes, and before and after tables in the text; however, avoid open white spaces.

Paragraph Spacing

The text of the document is double-spaced. There should be no extra spaces between paragraphs in sections; however, indent the first line of paragraphs five spaces. Chapters must begin on new pages.

Page Numbering

Page numbers for the front matter, starting with the Table of Contents, should be lowercase roman numerals, centered at the bottom of the page. All pages following the front matter should have page numbers in Arabic numerals in the upper right-hand corner. The page order and numbering for the front matter is:

1. Title page is page i, but the page number is not printed.
2. Approval Signature page (Dissertation Report only) is page ii, but the page number is not printed.
3. Abstract is page ii (Dissertation Proposal) or iii (Dissertation Report), but the page number is not printed.
4. Acknowledgements (Dissertation Report only) is page iv (it could be page v, when the Abstract extends beyond a single page), but the page number is not printed.
5. Table of Contents (Dissertation Proposal and Dissertation Report) is page v (or vi), and the page number is printed, bottom center.
6. List of Tables (Dissertation Proposal and Dissertation Report) (only present if the document contains tables) is given the next number in sequence, printed bottom center.
7. List of Figures (Dissertation Proposal and Dissertation Report) (only present if the document contains figures) is given the next number in sequence, printed bottom center.

Type Style

For body text, you should use 12-point Times New Roman. Text for the cover page may be larger but should not exceed 14-point size. Text for the chapter title text should be 14-point size. Be consistent in your use of typefaces throughout the document. Do not use a compressed typeface or any settings on your word processor that would decrease the spacing between letters or words. Sans serif typefaces such as Helvetica or Arial may be used for relatively short blocks of text such as chapter headings and captions but should be avoided in long passages of text.

Title Page

Every document that is submitted, from the Dissertation Idea Paper through the Dissertation Report, must have a title page. The title page includes the exact title of the dissertation, date of submission, your name, and name of your Ph.D. program. Use the format of the Sample Dissertation Title Page provided in Appendix A.

Approval Page

The approval page should be included only as a placeholder within the Dissertation Report (See Appendix B). This page will be generated by the Program Office.

The Abstract

The abstract (see Appendices C and D) is single-spaced. The second page of the abstract, if needed, carries your name as a top right side heading. An abstract is a stand-alone document and therefore should not include citations because it would then need references. Note that the abstract must meet the length standard of UMI Dissertation Abstracts International, which requires abstracts to be shorter than 350 words. Abstracts are published in Dissertation Abstracts International, which is published by University Microfilm Incorporated (UMI).

Chapter Title Heading, Subheadings, and Sub-Subheadings

It is preferred that dissertations use no more than three levels of headings in the body text. All headings should have only the first letter of each word capitalized except that non-major words shorter than four letters have no capital letters. See Appendix I for a sample page for a first page of a chapter. Instructions for heading levels follow:
Level 1: Chapter Title Heading

This heading starts two inches from the top of the page, is centered on the page, and is set in 14-point type. The first line contains the chapter number (e.g., Chapter 4). The second line is blank. The third line displays the chapter title, is centered on the page, and is set in 14-point type.

Level 2: Subheading

Start the subheading at the left margin of the page, four spaces (i.e., two returns when your document is set for double-spacing) down from the title, set in bold 12-point type. Double-space (one return) to the subheading body text. Indent the first line of the body text five spaces.

Level 3: Sub-Subheading

Start the sub-subheading at the left margin of the page, double-spaced (i.e., one return when your document is set up for double-spacing) from the subheading, set in 12-point italics. Double-space (one return) to the sub-subheading body text. Indent the first line of the body text five spaces.

Tables and Figures in the Text Body

Charts, graphs, diagrams, figures, and summary tables that significantly enhance reading of the dissertation should be placed in the text body. Tables and figures must be properly cited and you must also obtain permission to reproduce copyrighted materials. Only include material in the text body that is needed by the reader to understand the point(s) you are trying to make. Other material should be placed in appendices. Tables that summarize large amounts of data are best placed at the end of the dissertation. If you have included data in your text related to some point, then the full table containing such data belongs in an appendix. When using tables and figures in the body of the paper, remember that the horizontal center of the body is not at the center of the paper. It is 0.25" to the right of center due to the 1.5" left binding margin. All tables and figures that are less than body width must be centered properly. Additional guidelines are provided in the current edition of the Publication Manual of the American Psychological Association.

Appendices

Place in appendices all analytical tables, evaluation instruments, and other material important in the determination, evaluation, analysis, and description of your research that is not contained in the text body (see section above). Use an appendix to present material that supplements the text or may be of interest to readers but is too detailed or distracting for inclusion in the main body of the text. Surveys, evaluation instruments, original data, complicated mathematical tables, new computer programs, computer printouts, and data collection forms are examples of materials that are most appropriately appended. Do not exclude material that would be necessary for another researcher to replicate your work and that is not available elsewhere. Include copies of IRB approval letters from the sponsoring organization and from the study site. Present copies of all letters and e-mails that allow you to use and modify materials belonging to others. If appropriate,
you may use a titled cover sheet for an appendix. Samples of appendices appear in Appendices J and K.
Section 6: Additional Resources

Following are additional resources that might be helpful in formulating and writing your dissertation.

Books


Journal Articles


Additional Links - Web Sites


MISQ’s ‘living document’ of information systems constructs and classical information systems studies - http://people.ucalgary.ca/~newsted/constructs.htm

PhinishED (www.phinished.org). An international discussion forum for students who are working on their dissertation or thesis as well as those who have already "been there."

Purdue University Online Writing Lab (OWL) http://owl.english.purdue.edu/. Free resources on writing, grammar, research, ESL, job searches, and professional writing.

University of Indiana Writing Center - http://www.ius.edu/writingcenter/index.cfm

York University's wiki on list of theories used in information systems research - http://www.fsc.yorku.ca/york/istheory/wiki/index.php/Main_Page
Appendices
Appendix A: Sample Dissertation Title Page

Reducing Cognitive Load using Uncertainty Visualization

by

Gregory Block

A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
in
Computer Information Systems

Graduate School of Computer and Information Sciences
Nova Southeastern University

2013

Note: This is page i but the number should not be printed.
Appendix B: Approval Page

Do not provide this page. It will be generated by the Program Office.

Note: This is page ii but the number should not be printed.
Appendix C: Sample First Page of Abstract

An Abstract of a Dissertation Submitted to Nova Southeastern University
in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

Dissertation Title

by
Kelly A. Doe
June 2013


The abstract must be single-spaced, fewer than 350 words
and should not exceed two pages in length. Abstracts do not include citations.

Note: This is page iii but the number should not be printed.
Appendix D: Sample Second Page of Abstract (if needed)

Kelly A. Doe

Vivamus nec erat nec purus consectetur mollis. Nam nibh pede, bibendum adipiscing, egestas nec, porta at, lorem. Sed vitae felis. Vivamus ullamcorper tellus consequat magna.

On the second page of the Abstract, the author’s name should be spaced in from the right hand margin as a right-aligned side header

Note: If needed, this will be page iv but the number should not be printed.
Appendix E: Sample Acknowledgements Page

Acknowledgments


Acknowledgments should be in good taste and should not exceed one page in length.

Note: Count as the next Roman numeral, but do not print the number.
Appendix F: Sample Table of Contents

Table of Contents

Abstract iii
List of Tables (if necessary) viii (your actual page number may be different)
List of Figures (if necessary) ix (your actual page number may be different)

Chapters

1. Introduction 1
   Background 1
   Problem Statement 4
   etc.

2. Review of the Literature 16
   Context 16
   The theory and research literature specific to the topic 18
   etc.

3. Methodology 33
   Overview 33
   Research Methods Employed 35
   etc.

4. Results 60
   Data Analysis 60
   Findings 78
   etc.

5. Conclusions, Implications, Recommendations, and Summary 108
   Conclusions 108
   Implications 123
   etc.

Appendices
A. xxxxxxxxxxxxxxxxxxx 140
B. xxxxxxxxxxxxxxxxxxxxxx 148
   etc.

References 198

Note: Count and print the number of this page centered here in lowercase Roman.
Appendix G: Sample List of Tables

List of Tables

Tables

1. MPC 2.0 Standard for a Multimedia PC  20
2. Summary of Experimental Designs Used for XYZ  21
3. Results of Alpha Evaluation  96
4. Results of Beta Evaluation  101

etc.

Note: Count and print the number of this page centered here in lowercase Roman.
Appendix H: Sample List of Figures

List of Figures

Figures

1. XYZ Conceptual Framework  52
2. OLC Design Model    76
3. Confirmatory Factor Analysis  100
4. Organization Flowchart  121
   etc.

Note: Count and print the number of this page centered here in lowercase Roman.
Appendix I: Sample of the Format for Headings in the Chapters

Chapter 3

Methodology

Research Methods Employed


Donec scelerisque, dolor et dictum fringilla, nulla mi feugiat purus, vitae interdum odio enim quis massa. Nam vel sem. Ut nisi lectus, bibendum non, porta quis, semper ac, neque. Fusce quis leo in lacus egestas sagittis. Ut dignissim ligula dapibus ipsum. Donec euismod ligula quis enim. Ut id ante.

Procedure for Pawn Tern Dare Worsted Ladle Gull

Appendix J: Sample of Appendix Cover Page (when used)

Appendix N

Questionnaires
Appendix K: Sample of Appendix Without Separate Cover Page

Appendix Q

Officials Granting Permission to Use Facilities

Appendix L: Dissertation Pre-Idea Paper Rubric

<table>
<thead>
<tr>
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<td>Student has communicated regularly with advisor</td>
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<tr>
<td>2</td>
<td>Selection of topic area</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Initial literature review</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Discussion of topic review with faculty member</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Identification and discussion of viable research problem with faculty member</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Detailed literature review of problem domain</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Problem statement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Identification and discussion of potential solution with faculty member</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Annotated bibliography</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Formulation of research questions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Comment:</td>
<td></td>
<td></td>
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Appendix M: Dissertation Idea Paper Rubric

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<th>Scale Description</th>
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<td>0 = Does not meet doctoral level performance for this item.</td>
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<tr>
<td></td>
<td></td>
<td>1 = Partially meets doctoral level performance for the item.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = Fully meets doctoral level work performance for this item.</td>
</tr>
<tr>
<td>1</td>
<td>Student has communicated regularly with advisor</td>
<td><img src="https://example.com/score.png" alt="Score" /></td>
</tr>
<tr>
<td>2</td>
<td>The problem statement section clearly defines a valid research problem</td>
<td><img src="https://example.com/score.png" alt="Score" /></td>
</tr>
<tr>
<td>3</td>
<td>The main goal and secondary objectives are well defined and</td>
<td><img src="https://example.com/score.png" alt="Score" /></td>
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<tr>
<td></td>
<td>measurable</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>The literature review identifies relevant literature and uses it to</td>
<td><img src="https://example.com/score.png" alt="Score" /></td>
</tr>
<tr>
<td></td>
<td>provide context for the proposed research</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>The approach section describes a reasonable methodology for</td>
<td><img src="https://example.com/score.png" alt="Score" /></td>
</tr>
<tr>
<td></td>
<td>achieving the stated goals and objectives</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>The reference list contains relevant entries</td>
<td><img src="https://example.com/score.png" alt="Score" /></td>
</tr>
<tr>
<td>7</td>
<td>The document is well organized, communicates its ideas clearly, and</td>
<td><img src="https://example.com/score.png" alt="Score" /></td>
</tr>
<tr>
<td></td>
<td>complies with all prescribed formatting requirements</td>
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</tr>
<tr>
<td>8</td>
<td>The student has modified the document in response to comments and</td>
<td><img src="https://example.com/score.png" alt="Score" /></td>
</tr>
<tr>
<td></td>
<td>suggestions from advisor and reviewers</td>
<td></td>
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<tr>
<td>9</td>
<td>Comment:</td>
<td><img src="https://example.com/space.png" alt="Space" /></td>
</tr>
</tbody>
</table>
### Rubric Scale Description

0 = Does not meet doctoral level performance for this item.
1 = Partially meets doctoral level performance for the item.
2 = Fully meets doctoral level work performance for this item.

<table>
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<tbody>
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<td>Student has communicated regularly with advisor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Student conducts preliminary research that provides basis for proposal</td>
<td></td>
<td></td>
<td>I/A</td>
</tr>
<tr>
<td>3</td>
<td>Student publishes research paper(s) related to proposed research</td>
<td></td>
<td></td>
<td>I/A</td>
</tr>
<tr>
<td>4</td>
<td>Student obtains IRB approval for research</td>
<td></td>
<td></td>
<td>I/A</td>
</tr>
<tr>
<td>5</td>
<td>The problem statement section clearly defines a valid research problem</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>The proposal extends the idea paper with content and detail.</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>The main goal and secondary objectives are well defined and measureable</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>The literature review identifies relevant literature and uses it to provide context for the proposed research</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>The approach section describes a reasonable methodology for achieving the stated goals and objectives</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>The reference list contains relevant entries</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>The document is well organized, communicates its ideas clearly, and complies with all prescribed formatting requirements</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>The student has modified the document in response to comments and suggestions from advisor and committee members</td>
<td></td>
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<td>1</td>
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<tr>
<td>13</td>
<td>Comment:</td>
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Appendix O: Dissertation Research Rubric

**Rubric Scale Description**

0 = Does not meet doctoral level performance for this item.  
1 = Partially meets doctoral level performance for the item.  
2 = Fully meets doctoral level work performance for this item.

<table>
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<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Student has communicated regularly with advisor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Student conducts research in logical and disciplined manner consistent with plan approved in proposal</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Comment:</td>
<td></td>
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</table>

*Unfilled circle indicates a blank score.*
## Appendix P: Dissertation Final Report Rubric

### Rubric Scale Description
- 0 = Does not meet doctoral level performance for this item.
- 1 = Partially meets doctoral level performance for the item.
- 2 = Fully meets doctoral level work performance for this item.

<table>
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<th>Items</th>
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<th>Y</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Student has communicated regularly with advisor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>The problem statement section clearly defines a valid research problem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>The main goal and secondary objectives are well defined and measurable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>The literature review identifies relevant literature and uses it to provide context for the proposed research</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>The approach section describes a reproducible and reasonable methodology that was used for achieving the stated goals and objectives</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>The reference list contains relevant entries</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>The report is well organized, communicates its ideas clearly, and complies with all prescribed formatting requirements</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>The results section logically describes the outcome of the research</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>The future work section recommends viable extensions to the research</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>The report describes its contribution to understanding and practice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>The student modifies the document in response to comments and suggestions from advisor and committee members</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Comment:</td>
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