



Graduate School of Computer and Information Sciences

# The Dissertation Guide

*A Guide for GSCIS Doctoral Students*

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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
- how to prepare and submit each of the three dissertation documents: the Idea Paper, the Dissertation Proposal, and the Dissertation Report
- 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](http://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 directed research courses place more emphasis on your role as a researcher and are intended to continue to prepare you for dissertation work. We recommend that you take your directed research courses with professors with whom you have developed a good relationship and have mutual research interests. In these courses, you will work closely with your professor to identify a specific research area and engage in activities that will help you identify a specific research problem within that area.

Figure 1 illustrates the process from coursework to the final Dissertation Report. Although you will write your Dissertation Report prior the Dissertation Defense, the committee does not sign off on the report until after you have successfully defended your dissertation. More information about this process is in Section 2.

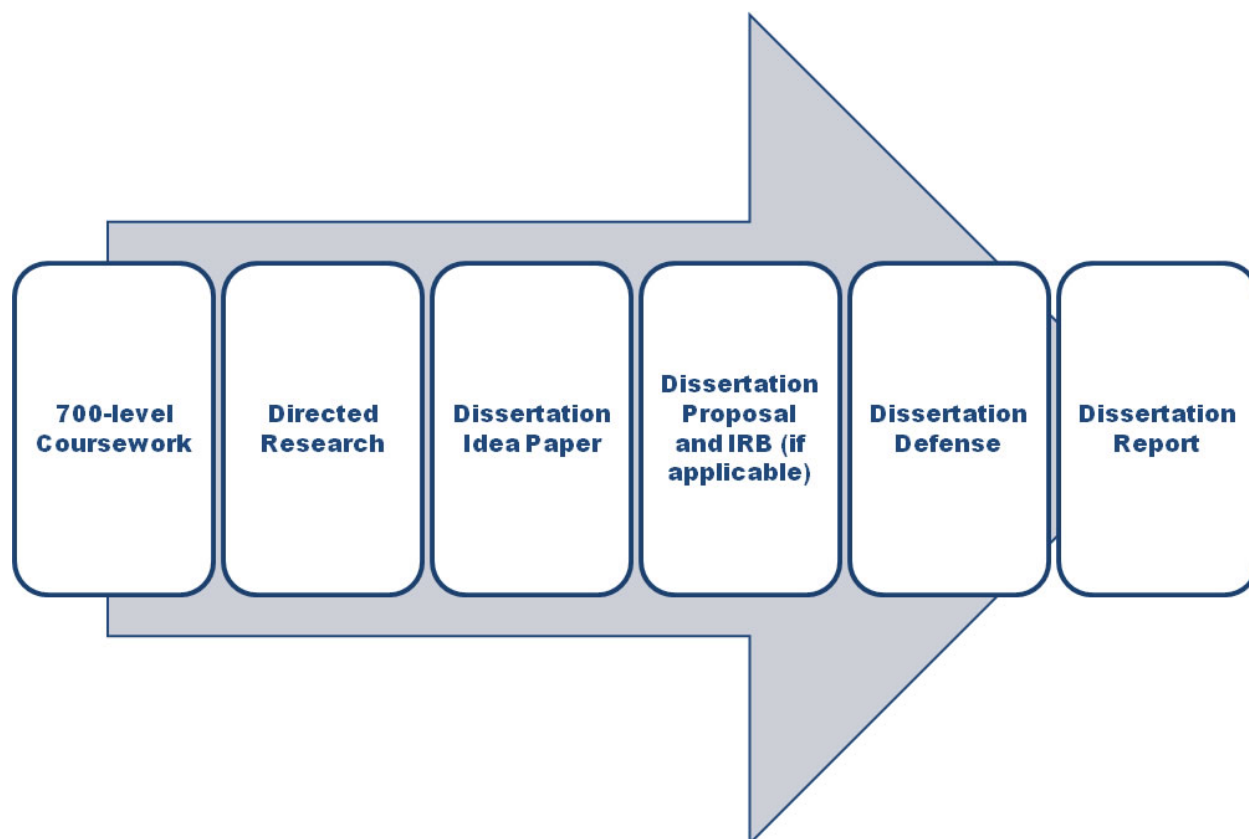


Figure 1. From coursework to dissertation.

### 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.

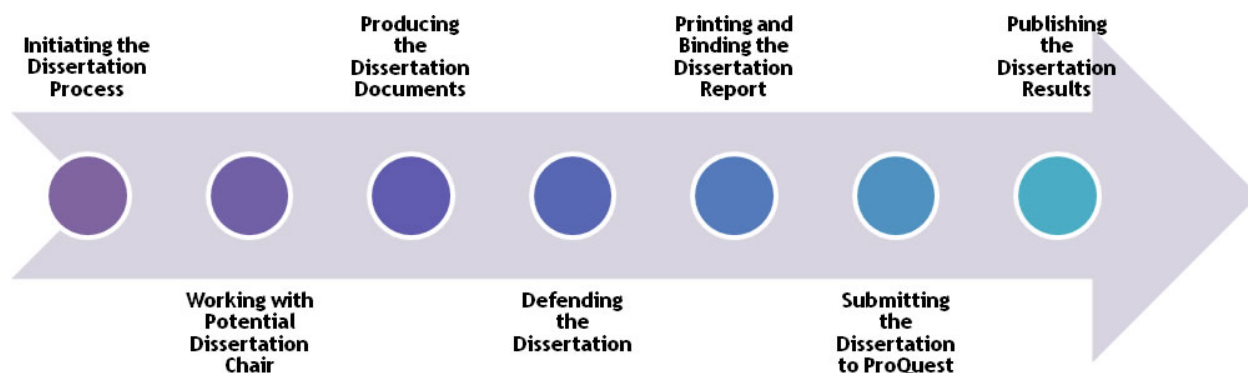


Figure 2. The dissertation process.

### Initiating the Dissertation Process

Although some students may begin the program with an idea for a dissertation, it is the two Directed Research courses you take where you must begin to develop a potential dissertation topic. Upon attainment of candidacy, you should have already established a relationship with a potential dissertation chair, presumably one of your instructors for Directed Research.

Dissertation candidates not on a leave of absence who do not have an established relationship with a potential dissertation chair must establish such a relationship. The Program Office will help connect you to a potential chair using information you provide about your intended research areas. Information is available on the Program Office website or by contacting your academic advisor.

## 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.

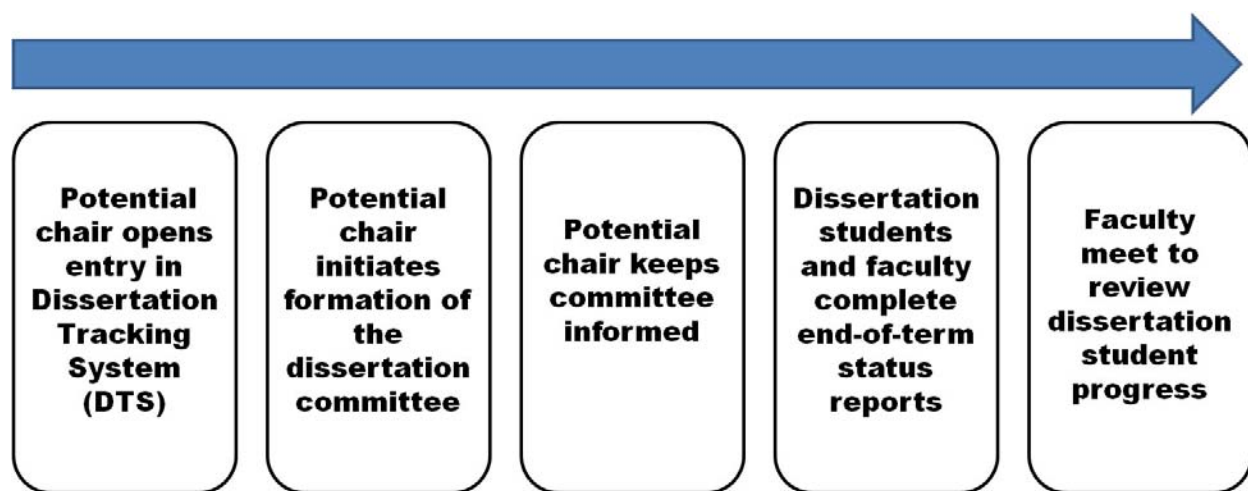


Figure 3. Working with your potential dissertation chair.

1. **Potential Dissertation Chair Opens 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). From that point on, all communication pertaining to your dissertation will be communicated via the DTS. 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 (by the dissertation committee). You may have only one dissertation chair, potential or otherwise, at a time. You should not pursue two ideas simultaneously, nor should you try to pursue the same idea with multiple professors (unless specifically constructed as a team-advised approach). Refer to <https://gscisweb.scis.nova.edu/studentdts/index.cfm> for more information about the DTS.
2. **Potential Dissertation Chair Initiates Formation of the Dissertation Committee:** When the potential dissertation chair is comfortable with the progress being made, he or she will form the dissertation committee. Usually membership on the committee is decided mutually by you and your potential chair. Because the committee works 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 three primary dissertation deliverables: the Dissertation Idea Paper, the Dissertation Proposal, and the Dissertation Report.

Dissertation committees usually include the chair and two other members. At least one of the committee members must be a full-time GSCIS faculty member. 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.

3. **Potential Dissertation 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.
4. **Dissertation Students and Faculty Complete End-of-Term Status Reports:** If you are registered for a dissertation section, you will complete a status report on your dissertation progress. Ten 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 those ten days to complete the status report. Students who do not complete the status report will receive a grade of I (Incomplete) for the dissertation registration.

Your potential or actual dissertation chair will also evaluate your progress at the end of the term. In addition to assigning a grade of PR (Progress) or NPR (No Progress), the chair will use a rubric to summarize where you have made progress during the term.

5. **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 that 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.

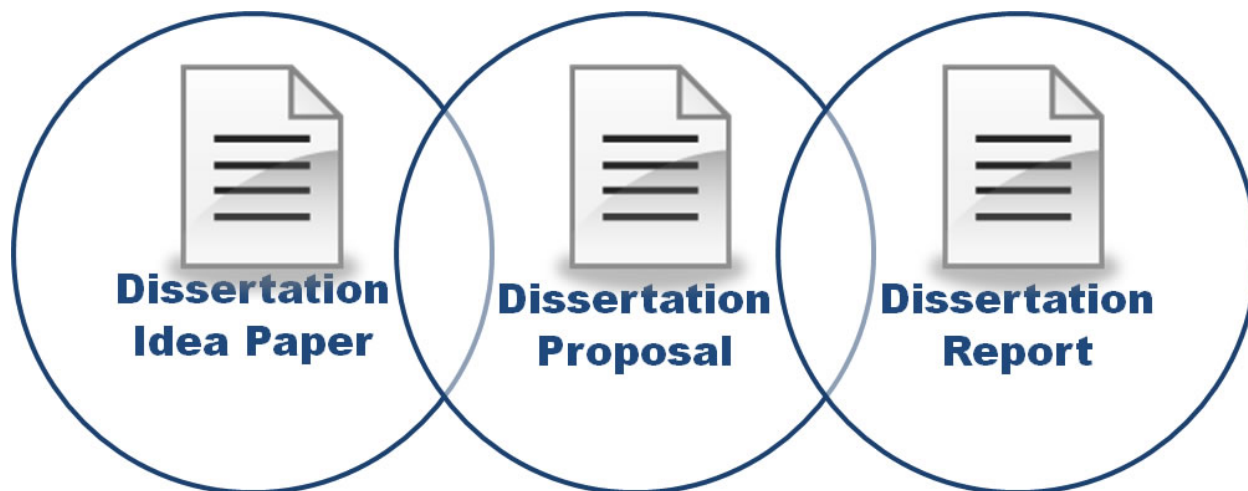


Figure 4. The dissertation documents.

1. **Dissertation Idea Paper:** The Dissertation Idea Paper presents your proposed dissertation research. This document must have full committee approval before 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 receive full committee approval 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/program/irb.html>
3. **Dissertation Report:** The Dissertation Report is a detailed, accurate, and cohesive account of an investigation 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 Report, it will be forwarded to the program director and 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 18 months of attaining candidacy.

You should have a committee-approved proposal within 12 months of securing an approved idea paper.

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 committee approving your Dissertation Report, you will prepare and present a Dissertation Defense. The defense 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 preferentially scheduled on the third Monday of the month, although the committee retains the flexibility to schedule at a different time out of necessity or convenience. A schedule of dissertation defenses (along with abstracts) is available on the GSCIS Web site. Students and faculty are invited to attend and asked to RSVP.

### **Printing and Binding the Dissertation Report**

After the committee, program director, and dean have approved your Dissertation Report, you will receive specific instructions from the Program Office on how to prepare, print, and submit it for binding. Do not print or submit the final copies until you are instructed to do so by the Program Office.

### **Submitting Dissertation to ProQuest Dissertations and Theses**

You must submit your Dissertation Report to ProQuest Dissertations and Theses (PQDT) in order to graduate. Once your Dissertation Report has been approved by your committee, the program director, and the dean, you will receive an email from the program office on the submission process.

### **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.

## 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, Dissertation I, II, or Continuing Dissertation 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 the GSCIS Dissertation 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.
2. Evaluate and provide constructive written feedback as you move forward in completing the Dissertation Idea Paper, Dissertation Proposal, and Final Dissertation Report.
3. Provide timely feedback.
4. Maintain a professional and collaborative relationship with you.
5. Use the DTS for all dissertation-related correspondence.
6. Monitor your progress toward completion of the dissertation.
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

Following are general guidelines for each of the three dissertation documents: the Dissertation Idea Paper, Dissertation Proposal, and Dissertation Report. **Always consult with your dissertation chair regarding specific requirements.**

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 original contribution in your respective field (i.e., computer science, computer information systems, computing technology in education, computer science, and 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 the necessary 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?

### *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.

### *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.

### *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 students, 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
- List of Tables
- List of Figures

## *Chapters*

### 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
- 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 coverage of:

- Justify the criteria for what is included and excluded as part of the review.
- Identify what has been done before including the strengths and weaknesses of existing studies.
- Find and discuss gaps in the literature.
- Place your research problem within the broader context of the field and scholarly literature.
- Analyze research methods that are used in similar studies and determine whether these methods were valid and reliable.
- Synthesize the literature and present it in a way that helps the reader gain a new perspective on the literature.

### 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
- Specific research method(s) to be employed
- Instrument development and validation
- 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/program/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 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*

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 tables) 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 as they impede readability.

### **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.

### **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 fewer 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. 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.

## **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 permission 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

American Psychological Association (2010). *Publication manual of the American Psychological Association*. (6<sup>th</sup> ed.). Washington, D.C.: Author.

Booth, W., Colomb, G., & Williams (2004). *The craft of research* (2nd ed.). Chicago, IL: The University of Chicago Press.

Bryant, M. T. (2004). *The portable dissertation advisor*. Thousand Oaks, CA: Corwin Press.

Cresswell, J.W. (2007). *Qualitative inquiry & research design: Choosing among five approaches*. (2<sup>nd</sup> ed.). Thousand Oaks, CA: Sage.

Davis, G. B., & Parker, C. A. (1997). *Writing the doctoral dissertation: A systematic approach*. (2<sup>nd</sup> ed.). Hauppauge, NY: Barrons Educational Series.

Fowler, F.J. Jr. (2009). *Survey research methods*. (4<sup>th</sup> ed.). Thousand Oaks, CA: Sage.

Gay, L. R., Mills, G. E., & Airasian, P. (2009). *Educational research: Competencies for analysis and applications*. (9th ed.). Upper Saddle, NJ: Pearson Education, Inc.

Hart, C. (2005). *Doing a literature review: Releasing the social science research imagination*. Thousand Oaks, CA: Sage Publications.

Kamler, B., & Thomson, P. (2006). *Helping doctoral students write: Pedagogies for supervision*. New York, NY: Routledge.

Krathwohl, D., & Smith, N. (2005). *How to prepare a dissertation proposal: Suggestions for students in education and the social and behavioral sciences*. Syracuse, NY: Syracuse University Press.

Locke, L., Spirduso, W. W., & Silverman, S. (Eds.). (2007). *Proposals that work: A guide for planning dissertations and grant proposals*. (5th ed.). Thousand Oaks, CA: Sage Publications.

Lovitts, B. (2001). *Leaving the ivory tower: The causes and consequences of departure from doctoral study*. Lanham, UK: Rowman & Littlefield Publishers, Inc.

Lovitts, B. (2007). *Making the implicit explicit: Creating performance expectations for the dissertation*. Sterling, VA: Stylus Publishing, LLC.

- Mittelbach, F., Goossens, M., Braams, J., Carlisle, D., & Rowley, C. (2004). *The LaTeX companion: Tools and techniques for computer typesetting*. (2<sup>nd</sup> ed.). Reading, MA: Addison-Wesley.
- Newman, I. Benz, C., Weis, D., & McNeil, K. (1997). *Theses and dissertations: A guide to writing in the social sciences*. University Press of America.
- Punch, K. F. (2006). *Developing effective research proposals* (2<sup>nd</sup> ed.). Thousand Oaks, CA: Sage Publications.
- Roberts, C. M. (2004). *The dissertation journey: A practical and comprehensive guide to planning, writing and defending your dissertation*. Thousand Oaks, CA: Corwin Press.
- Rocco, T., & Hatcher, T. (Eds.). (2011). *The handbook of scholarly writing and publishing*. San Francisco, CA: Jossey-Bass.
- Truss, L. (2003). *Eats, shots & leaves: The zero tolerance approach to punctuation*. New York: NY: Penguin Group (USA) Inc.
- Tufte, E.R. (2001). *The visual display of quantitative information*. (2<sup>nd</sup> ed.). Cheshire, CT: Graphics Press.
- Walker, M., & Thomson (Eds.). (2010). *The Routledge doctoral student's companion: Supporting effective research in education and the social sciences*. New York, NY: Routledge.
- Wong, D. (2010). *The Wall Street Journal guide to information graphics: The dos and don'ts of presenting data, facts, and figures*. New York, NY: W.W. Norton & Company.
- Yin, R. (Ed.). (2004). *The case study anthology*. Thousand Oaks, CA: Sage.
- Yin, R. (2009). *Case study research: Design and methods*. (4<sup>th</sup> ed.). Thousand Oaks, CA: Sage.
- Zinsser, W. (2006). *On writing well: The classic guide to writing nonfiction*. (7<sup>th</sup> ed.). New York, NY: Harper-Collins Publishers, Inc.

## Journal Articles

- Boote, D., & Beile, P. (2005). Scholars before researchers: On the centrality of the dissertation literature review in research preparation. *Educational Researcher*, 34(6), 3-15.
- Ellis, T. J., & Levy, Y. (2008). Framework of problem-based research: A guide for novice researchers on the development of a research-worthy problem. *Informing Science Journal*, 11, 17-33.
- Ellis, T. J., & Levy, Y. (2009). Towards a guide for novice researchers on research methodology: Review and proposed method. *Journal of Issues in Informing Science and Information Technology*, 6, 323-337.
- Kennedy, M. M. (2007). Defining a literature. *Educational Researcher*, 36(3), 139-147.
- Levy, Y., & Ellis, T. J. (2006). A systems approach to conduct an effective literature review in support of information systems research. *Informing Science Journal*, 9, 181-212.
- Lovitts, B. (2005). Being a good course-taker is not enough: A theoretical perspective on the transition to independent research. *Studies in Higher Education*, 30(2), 137-154.

## Additional Links - Web Sites

APA Style Guide - <http://writing.wisc.edu/Handbook/DocAPA.html>

International Journal of Doctoral Studies - <http://www.ijds.org/>

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

PhinishED ([www.phinished.org](http://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>

University of Wisconsin-Madison writing center writer's handbook - <http://writing.wisc.edu/index.html>

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](http://www.fsc.yorku.ca/york/istheory/wiki/index.php/Main_Page)

## Appendices

Appendix A: Sample Dissertation Title Page

Complex Randomized Cutting Plane Algorithms  
for Propositional Satisfiability

by

Stephen Lee Hansen

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

Graduate School of Computer and Information Sciences  
Nova Southeastern University

2000

**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 2011

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

**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. Donec mattis adipiscing libero. Fusce tortor. Integer eu arcu. Maecenas bibendum. Nulla dolor. Nullam porta, quam non congue vehicula, lacus neque congue tortor, ac ultrices ante eros quis ligula. Fusce eleifend, elit ut porta volutpat, risus tortor sodales mi, vitae tempus arcu dolor sed est. Nam accumsan commodo magna. Phasellus ac dolor non tellus porttitor fringilla. Sed leo ipsum, auctor in, luctus egestas, vestibulum id, sapien. Pellentesque ornare erat non libero. Vestibulum porta libero ut ante. Sed nec 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

Suspendisse sollicitudin velit. Nam nunc. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Nam sed turpis non erat auctor cursus. Sed scelerisque auctor pede. Nulla ac tellus non nibh adipiscing rhoncus. Proin aliquam vulputate justo. Quisque lobortis. Proin lobortis, nibh in egestas bibendum, arcu magna cursus diam, sit amet rutrum ante elit sit amet enim. Aenean pulvinar lacus non leo. Nam porta enim ut nibh. Proin auctor adipiscing tellus. Curabitur sagittis. Nulla aliquet leo at velit. Phasellus non mi. Maecenas eleifend viverra tellus.

Nam laoreet diam. Fusce lobortis felis quis enim. Quisque at est eget est blandit volutpat. Vestibulum blandit, arcu eu tincidunt porta, sapien eros interdum tellus, cursus dapibus nisi justo sit amet nulla. Etiam augue. Aliquam vestibulum dignissim magna. Aliquam erat volutpat. Nulla venenatis metus sit amet erat. Vivamus elit. Curabitur nunc. Nulla ac metus sit amet purus porttitor fringilla.

**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. xxxxxxxxxxxxxxxxxxxx 140

B. xxxxxxxxxxxxxxxxxxxx 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.

## 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

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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

Suspendisse sollicitudin velit. Nam nunc. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Nam sed turpis non erat auctor cursus. Sed scelerisque auctor pede. Nulla ac tellus non nibh adipiscing rhoncus. Proin aliquam vulputate justo. Quisque lobortis. Proin lobortis, nibh in egestas bibendum, arcu magna cursus diam, sit amet rutrum ante elit sit amet enim. Aenean pulvinar lacus non leo. Nam porta enim ut nibh. Proin auctor adipiscing tellus.