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Doctorate of Education

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Grand Canyon University

Phoenix, Arizona

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Michael R. Berger, Ed.D.

Dean, College of Doctoral Studies

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date

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I verify that my dissertation represents original research, is not falsified or plagiarized, and that I accurately reported, cited, and referenced all sources within this manuscript in strict compliance with APA and Grand Canyon University (GCU) guidelines. I also verify my dissertation complies with the approval(s) granted for this research investigation by GCU Institutional Review Board (IRB).

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[Type Doctoral Learner Name Beneath Signature] Date

Abstract

The abstract is required for the dissertation manuscript only. It is not a required page for the proposal. The abstract, typically read first by other researchers, is intended as an accurate, nonevaluative, concise summary, or synopsis of the research study. It is usually the last item completed when writing the dissertation. The purpose of the abstract is to assist future researchers in accessing the research material and other vital information contained in the dissertation. Although few people typically read the full dissertation after publication, the abstract will be read by many scholars and researchers. Consequently, great care must be taken in writing this page of the dissertation. The content of the abstract covers the purpose of the study, problem statement, theoretical foundation, research questions stated in narrative format, sample, location, methodology, design, data sources, data analysis, results, and a valid conclusion of the research. The most important finding(s) should be stated with actual data/numbers (quantitative) or themes (qualitative) to support the conclusion(s). The abstract does not appear in the table of contents and has no page number. The abstract is double-spaced, fully justified with no indentations or citations, and no longer than one page. Refer to the *APA Publication Manual*, 6th Edition, for additional guidelines for the development of the dissertation abstract. Make sure to add the keywords at the bottom of the abstract to assist future researchers.

*Keywords*: Abstract, assist future researchers, 150 to 250 words, vital information

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| **ABSTRACT** **(Dissertation Only—Not Required for the Proposal)**The abstract is typically read first by other researchers and is an accurate, non-evaluative, concise summary or synopsis of the research study. The abstract provides a succinct summary of the study and MUST include the purpose of the study, theoretical foundation, research questions (stated in narrative format), sample, location, methodology, design, data analysis, and results, as well as, a valid conclusion of the research. Abstracts must be double-spaced, fully justified with no indentions. (one page) |
| The abstract provides a succinct summary of the study and MUST include: the purpose of the study, theoretical foundation, research questions stated in narrative format, sample, location, methodology, design, data sources, data analysis, results, and a valid conclusion of the research. **Note:** *The most important finding(s) should be stated with actual data/numbers (quantitative) ~or~ themes (qualitative) to support the conclusion(s).* |  |  |  |  |
| The abstract is written in APA format, one paragraph fully justified with no indentations, double-spaced with no citations, and includes key search words. Keywords are on a new line and indented. |  |  |  |  |
| The abstract is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format.  |  |  |  |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

Dedication

An optional dedication may be included here. While a dissertation is an objective, scientific document, this is the place to use the first person and to be subjective. The dedication page is numbered with a Roman numeral, but the page number does not appear in the Table of Contents. It is only included in the final dissertation and is not part of the proposal. If this page is not to be included, delete the heading, the body text, and the page break below.

Acknowledgments

An optional acknowledgements page can be included here. This is another place to use the first person. If applicable, acknowledge and identify grants and other means of financial support. Also acknowledge supportive colleagues who rendered assistance. The acknowledgments page is numbered with a Roman numeral, but the page number does not appear in the table of contents. This page provides a formal opportunity to thank family, friends, and faculty members who have been helpful and supportive. The acknowledgements page is only included in the final dissertation and is not part of the proposal. If this page is not to be included, delete the heading, the body text, and the page break below.

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# Chapter 1: Introduction to the Study

## Introduction

This section describes what the researcher will investigate, including the research questions, hypotheses, and basic research design. The introduction develops the significance of the study by describing how the study is new or different from other studies, how it addresses something that is not already known or has not been studied before, or how it extends prior research on the topic in some way. This section should also briefly describe the basic nature of the study and provide an overview of the contents of Chapter 1.

The GCU Dissertation Template provides the structure for the GCU dissertation. The template provides important narrative, instructions, and requirements in each chapter and section. Learners must read the narrative in each section to fully understand what is required and also review the section criteria table which provides exact details on how the section will be scored. As the learner writes each section, s/he should delete the narrative and “Help” comments, but leave the criterion table, after each section, as this is how the committee members will evaluate the learners work. Additionally, when inserting their own narrative into the template, leaners should never remove the **headings**, as these are already formatted, or “styled.” Removing the headings will cause the text to have to be reformatted, that is, you will need to reapply the style. “Styles” are a feature in Word that defines what the text looks like on the page. For example, the style “Heading 1, used for Chapter headings and the List of Tables title, the List of Figures title, the References title, and the Appendices title, has set up to conform to APA: bold, double spaced, “keep with next,” Times New Roman 12. In addition, the automatic TOC “reads” these styles so that the headings show up in the TOC and exactly match those in the text.

The navigation pane in Word shows the first and second level headings that will appear in the Table of Contents. To access the navigation pane, click on Home in a Word document>View Pane. Learners should consult their course e-books for additional guidance on constructing the various sections of the template (e.g., Grand Canyon University, 2015, 2016, 2017a, 2017b).

Learners should keep in mind that they will write Chapters 1 through 3 as the dissertation proposal. However, there are changes that typically need to be made in these chapters to enrich the content or to improve the readability as the final dissertation manuscript is written. Often, after data analysis is complete, the first three chapters will need revisions to reflect a more in-depth understanding of the topic and to ensure consistency. Engaging in scholarly writing, understanding the criterion rubrics, and focusing on continuous improvement will help facilitate timely progression.

To ensure the quality of both the proposal and final dissertation and reduce the time for AQR reviews, writing needs to reflect doctoral level, scholarly-writing standards **from the very first draft**. Each section within the proposal or dissertation should be well organized and easy for the reader to follow. Each paragraph should be short, clear, and focused. A paragraph should (1) be three to eight sentences in length, (2) focus on one point, topic, or argument, (3) include a topic sentence the defines the focus for the paragraph, and (4) include a transition sentence to the next paragraph. Include one space after each period. There should be no grammatical, punctuation, sentence structure, or APA formatting errors. Verb tense is an important consideration for Chapters 1 through 3. For the proposal, the researcher uses future tense (e.g., “The purpose of this proposed study is to…”), whereas in the dissertation, the chapters are revised to reflect past tense (e.g., “The purpose of this study was to…”). Taking the time to ensure high-quality, scholarly writing for each draft will save learners time in all the steps of the development and review phases of the dissertation process.

As a doctoral researcher, it is the learner’s responsibility to ensure the clarity, quality, and correctness of their writing and APA formatting. The DC Network provides various resources to help learners improve their writing. Grand Canyon University also offers writing tutoring services through the Center for Learning Advancement on writing basics; however, the writing tutors do not provide any level of dissertation editing. The chair and committee members are not obligated to edit documents. Additionally, the AQR reviewers will not edit the proposal or dissertation. If learners do not have outstanding writing skills, they may need to identify a writing coach, editor, and/or other resource to help with writing and editing. Poorly-written proposals and dissertations will be immediately suspended in the various levels of review if submitted with grammatical, structural, and/or form-and-formatting errors.

The quality of a dissertation is evaluated on the quality of writing and based on the criteria that GCU has established for each section of the dissertation. The criteria describe what must be addressed in each section within each chapter. As learners develop a section, first read the section description. Then, review each criterion contained in the table below the description. Learners use both the overall description and criteria as they write each section. Address each listed criterion in a way that it is clear to the chair and committee members. Learners should be able to point out where each criterion is met in each section.

Prior to submitting a draft of the proposal or dissertation or a single chapter to the chair or committee members, learners should assess the degree to which each criterion has been met. Use the criteria table at the end of each section to complete this self-assessment. The following scores reflect the readiness of the document:

* 0 = Item Not Present or Unacceptable. Substantial Revisions Are Required.
* 1 = Item is Present. Does Not Meet Expectations. Revisions are Required.
* 2 = Item is Acceptable. Meets Expectations.
* 3 = Item is Exemplary. No Revisions Required.

Sometimes the chair and committee members will score the work “between” numbers, such as a 1.5 or 2.5. The important thing to remember is that a minimum score of 2 is required on each criterion on the prospectus, proposal and dissertation before one can move to the next step. A good guideline to remember is that *learners are not finished with the dissertation until the dean signs the cover page.*

 Learners need to continuously and objectively self-evaluate the quality of writing and content for each section within the proposal or dissertation. Learners will score their work using the learner column in the criteria tables as evidence that they have critically evaluated their own work. When learners have completed a realistic, comprehensive self-evaluation of their work, then they may submit the document to the chair for review. Rating work as all 3’s will indicate that the learner has not done this. The chair will also review and score each section of the proposal and dissertation and will determine when it is ready for full committee review. Keep in mind the committee review process will likely require several editorial/revisions rounds, so plan for multiple revision cycles as learners develop their dissertation completion plan and project timeline. Notice the tables that certain columns have an X in the scoring box. As mentioned above, the chair will score all five chapters, the abstract and the reference list; the methodologist is only required to score Chapters 1, 3, and 4 and the abstract; the content expert is only required to score Chapters 1, 2, and 5 and the abstract. The chair and committee members will assess each criterion in their required chapters when they return the document with feedback.

Once the document has been fully scored and approved by the chair and committee, and is approved for Level 2 or 5 review, the chair will submit one copy of the proposal or dissertation document with the fully scored assessment tables and one copy of the document with the assessment tables removed for AQR review. Refer to the Dissertation Milestone Guide for descriptions of levels of review and submission process.

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score**  | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **Introduction**This section provides a brief overview of the research focus or problem, explains why this study is worth conducting, and discusses how this study will be completed. (Minimum three to four paragraphs or approximately one page) |
| Dissertation topic is introduced and value of conducting the study is discussed. |  |  |  |  |
| Discussion provides an overview of what is contained in the chapter. |  |  |  |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Background of the Study

The background section of Chapter 1 describes the recent history of the problem under study. It provides a summary of results from the prior empirical research on the topic. First, the learner identifies the need for the study, referred to as a gap, which the dissertation study will address. Strategies learners can use to identify a need or gap include:

* Using results from prior studies.
* Using recommendations for further study.
* Using societal problems documented in the literature.
* Using broad areas of research in current empirical articles.
* Using needs identified in three to five research studies (primarily from the last three years.

 Next, the learner builds an argument or justification for the current study by presenting a series of logical arguments, each supported with citations from the literature. This need, called a gap, developed from the literature, is the basis for creating the problem statement. A local need is appropriate for a study. However, the learner needs to situate the “need” or problem by discussing how it is applicable beyond the local setting and contributes to societal and/or professional needs. The problem statement is developed based on the need or gap defined in the Background to the Study section.

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **Background of the Study** Minimum two to three paragraphs or approximately one page |
| The background section of Chapter 1 provides a brief history of the problem. Provides a summary of results from the prior empirical research on the topic. Using results, societal needs, recommendations for further study, or needs identified in three to five research studies (primarily from the last three years), the learner identifies the stated need, called a gap. Builds a justification for the current study, using a logical set of arguments supported by citations.The problem is discussed as applicable beyond the local setting and contributes to societal and/or professional needs. |  |  |  |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Problem Statement

Research problems are socially constructed, meaning that a problem may not be considered one until society recognizes it as a problem. For example, spousal abuse was recognized as a problem after women earned more rights. Research problems are not determined only by how much one knows about it, but by the need to investigate phenomena that affect people in order to improve their lives (Krysik & Flynn, 2013).

The Problem Statement section begins with a declarative statement of the problem under study, such as “It is not known if and to what degree/extent...” or “It is not known how/why…”

* Other examples are:
* It is not known \_\_\_\_\_.
* Absent from the literature is\_\_\_\_\_\_.
* While the literature indicates \_\_\_\_\_\_\_\_\_\_\_\_, it is not known in (school/district/organization/community) if \_\_\_\_\_\_\_\_\_\_.

This section then describes general population affected by the problem along with the importance, scope or opportunity for the problem and the importance of addressing the problem. Questions to consider when writing the problem include:

1. What is the need in the world or gap in the literature that this problem statement addresses?
2. What is the real issue that is affecting society, students, organizations?
3. At what frequency is the problem occurring?
4. What is the extent of human suffering that the problem produces?
5. Why has the problem received lack of attention in the past?
6. What does the literature and research say about the problem that can and should be addressed at this time?
7. What are the negative outcomes that this issue is addressing?

This section ends with a description of the unit of analysis, which is the phenomenon, individuals, group or organization under study. Specifically, at the conceptual level, the unit of analysis is the entity/thing (social organization, community, group, individual, social artifacts, policies/principles, or phenomenon) that the researcher wants to be able to say something about. It is the main focus of the study. The unit of analysis is that which the researcher is studying. At the implementation level, the unit of analysis gets determined and defined by the research question/problem statement.

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **Problem Statement**Minimum three or four paragraphs or approximately one page |
| States the specific problem proposed for research with a clear declarative statement. Discusses the problem statement in relation to the gap or need in the world, considering such issues as: real issues affecting society, students, or organizations; the frequency that the problem occurs; the extent of human suffering the problem produces, the perceived lack of attention in the past; the discussion of the problem in the literature and research about what should be addressed vis à vis the problem; the negative outcomes the issue addresses. |  |  |  |  |
| Describes the general population affected by the problem. The general population refers to all individuals that could be affected by the study problem. Example: All older adults in the US who are 65 yrs or older. The target population is a more specific sub-population of interest from the general population, such as low income older adults (≥ 65 yrs) in AZ. Thus, the sample is derived from the target population, not from the general one. |  |  |  |  |
| Describes the unit of analysis, which is the phenomenon, individuals, group or organization under study. |  |  |  |  |
| Discusses the importance, scope, or opportunity for the problem and the importance of addressing the problem. |  |  |  |  |
| The problem statement is developed based on the need or gap defined in the Background to the Study section.  |  |  |  |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format.  |  |  |  |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Purpose of the Study

The Purpose of the Study section of Chapter 1 provides a reflection of the problem statement and identifies how the study will be accomplished. It explains how the proposed study will contribute to the field. The section begins with a declarative statement, “The purpose of this study is….” Included in this statement are also the research design, target population, variables (quantitative) or phenomena (qualitative) to be studied, and the geographic location. Further, the section clearly defines the variables, relationship of variables, or comparison of groups for quantitative studies. For qualitative studies, this section describes the nature of the phenomenon/a to be explored. Keep in mind that the purpose of the study is restated in other chapters of the dissertation and should be worded exactly as presented in this section of Chapter 1.

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
|  **PURPOSE OF THE STUDY**Minimum two to three paragraphs |
| Begins with one sentence that identifies the research methodology and design, target population, variables (quantitative) or phenomena (qualitative) to be studied and geographic location.This can be presesnted as a declarative statement: "The purpose of this study is...." that identifies the research methodology and design, population, variables (quantitative) or phenomena (qualitative) to be studied and geographic location. |  |  |  |  |
| Describes the target population and geographic location. |  |  |  |  |
| **Quantitative Studies**: Defines the variables and relationship of variables.**Qualitative Studies:** Describes the nature of the phenomena to be explored. |  |  |  |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Research Questions and/or Hypotheses

This section narrows the focus of the study and specifies the research questions to address the problem statement. Based on the research questions, it describes the variables or groups and their hypothesized relationship for a quantitative study or the phenomena under investigation for a qualitative study. The research questions and hypotheses should be derived from, and are directly aligned with, the problem statement and theoretical foundation (theory(s) or model(s). The Research Questions and/or Hypotheses section of Chapter 1 will be presented again in Chapter 3 to provide clear continuity for the reader and to help frame data analysis in Chapter 4.

If the study is qualitative, state the research questions the study will answer, and describe the phenomenon to be studied. Qualitative studies will typically have one overarching research question with three or more subquestions. If the study is quantitative or mixed methods, state the research questions the study will answer, identify the variables, and state the hypotheses (predictive statements) using the format appropriate for the specific design. For quantitative studies, the research questions align with the purpose statement. Quantitative studies will typically have three or four research questions and associated hypotheses; mixed method studies can use both, depending on the design.

In a paragraph **prior to** listing the research questions or hypotheses, include a discussion of the research questions, relating them to the problem statement. Then, include a leading phrase to introduce the questions such as: The following research questions guide this qualitative study:

RQ1: This is an example of how a qualitative research question should align within the text of the manuscript. Indent .25 inches from the left margin. Text that wraps around to the next line is indented using the Hanging Indent feature at .5.”

RQ2: Add a research question here following the format above. Additional research questions should follow the same format.

Or, for a quantitative study the research questions are formatted as below. The following research question and hypotheses guide this quantitative study:

RQ1: This is an example of how a quantitative research questions and hypotheses should align within the text of the manuscript. Indent .25 inches from the left margin. Text that wraps around to the next line is indented using the Hanging Indent feature at .5.”

H01: The null hypothesis that aligns to the research question is listed here.

H1a: The alternative hypothesis that aligns to the research question and null hypothesis is listed here. Repeat this pattern for each quantitative research question and associated hypotheses.

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **Research Question(s) and/or Hypotheses** Minimum two to three paragraphs or approximately one page |
| **Qualitative Studies:** States the research question(s) the study will answer and describes the phenomenon to be studied. Note: The research questions provide guidance for the data which will be collected to answer the research questions; they do not identify the instruments.**Quantitative Studies**: States the research questions the study will answer, identifies and describes the variables, and states the hypotheses (predictive statements) using the format appropriate for the specific design and statistical analysis.  |  |  |  |  |
| This section includes a discussion of the research questions, relating them to the problem statement. The research questions need to be connected to the theory(s) or model(s) from the theoretical foundation section, as well.  |  |  |  |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Advancing Scientific Knowledge and Significance of the Study

The Advancing Scientific Knowledge and Significance of the Study section identifies the “gap” or “need” in the literature that was used to define the problem statement and develop the research questions. Further, it describes how the study will address the “gap” or “identified need.” The section describes how the **research** fits with and will contribute to or advance the current literature or body of research. Although this advancement may be a small step forward in a line of current research, it must add to the current body of knowledge and align to the learner’s program of study. The section also discusses the implications of the potential results based on the research questions and problem statement, hypotheses, or the investigated phenomena. Further, it describes the potential practical applications from the research. The section identifies the theory(ies) or model(s) that provide the theoretical foundations or conceptual frameworks for the study. Finally, it connects the study directly to the theory and describes how the study will add or extend the theory or model.

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score**  | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **ADVANCING SCIENTIFIC KNOWLEDGE and SIGNIFICANCE OF THE STUDY** (Minimum one to two pages) |
| Clearly identifies the “gap” or “need” in the literature that was used to define the problem statement and develop the research questions. |  |  |  |  |
| Describes how the study will address the “gap” or “identified need” defined in the literature and contribute to the body of literature. |  |  |  |  |
| Describes how the research fits with and will contribute to or advance the current literature or body of research |  |  |  |  |
| Describes the potential practical applications from the research. |  |  |  |  |
| Identifies the theory(ies) or model(s) that provide the theoretical foundations or conceptual frameworks for the study. |  |  |  |  |
| Connects the study directly to the theory and describes how the study will add or extend the theory or model. |  |  |  |  |
| Describes how addressing the problem will add value to the population, community, or society. |  |  |  |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Rationale for Methodology

The Rationale for Methodology section of Chapter 1 clearly justifies the methodology the researcher plans to use for conducting the study. It argues how the methodological choice (quantitative, qualitative, or mixed methods) is the best approach to answer the research questions and address the problem statement. Finally, it contains citations from textbooks and articles on research methodology and/or articles on related studies to provide evidence to support the argument for the selected methodology.

For qualitative designs, this section states the research question(s) the study will answer and describes the phenomenon to be studied. For quantitative designs, this section describes the research questions the study will answer, identifies and describes the variables, and states the hypotheses (predictive statements) using the format appropriate for the specific design. Finally, this section includes a discussion of the research questions, relating them to the problem statement. This section should illustrate how the selected methodology is aligned with the problem statement, providing additional context for the study.

| **Criterion\*****(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **Rationale for Methodology** (Minimum two to three paragraphs) |
| Identifies the specific research methodology for the study. |  |  |  |  |
| Justifies the methodology to be used for the study by discussing why it is an appropriate approach for answering the research question(s) and addressing the problem statement.**Quantitative Studies:** Justify in terms of problem statement and the variables for which data will be collected.**Qualitative Studies:** Justify in terms of problem statement and phenomenon. |  |  |  |  |
| Uses citations from seminal (authoritative) sources (textbooks and/or empirical research literature) to justify the selected methodology. **Note:** *Introductory or survey research textbooks (such as Creswell) are not considered seminal sources*. |  |  |  |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Nature of the Research Design for the Study

This section describes the specific research design to answer the research questions and why this approach was selected. Here, the learner discusses why the selected design is the best design to address the problem statement and research questions as compared to other designs. This section contains a description of the research sample being studied, as well as, the process that will be used to collect the data on the sample. The design section succinctly conveys the research approach to answer the research questions and/or test the hypotheses. This entails the learner describing the unit(s) of observation, which may be individuals, groups, documents, artifacts, databases, based on the data collection plan and instruments/sources. At the conceptual level, the unit of observation is the entity or thing (organization, individual, condition) the researcher will observe, measure and/or collect data on. The unit of observation is that which the researcher will collect data on. At the implementation level, the unit(s) of observation is/are determined and defined by the data collection approach(es).

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **Nature of the Research Design for the Study**Minimum three to four paragraphs or approximately one page) |
| Identifies and describes the selected design for the study. |  |  |  |  |
| Justifies why the selected design addresses the problem statement and research questions.**Quantitative Studies:** Justifies the selected design based on the appropriateness of the design to address the research questions and data for each variable. **Qualitative Studies:** Justifies the selected design based on appropriateness of design to address research questions and study the phenomenon.  |  |  |  |  |
| Briefly describes the target population and sample for the study.  |  |  |  |  |
| Identifies the sources and instruments that will be used to collect data needed to answer the research questions.  |  |  |  |  |
| Briefly describes data collection procedures to collect data on the sample.  |  |  |  |  |
| Describes the unit(s) of observation, which may be individuals, groups, documents, artifacts, databases, based on the data collection plan and instruments/sources. For example, units of observation may be individuals or documents. |  |  |  |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Definition of Terms

The Definition of Terms section of Chapter 1 defines the study constructs and provides a common understanding of the technical terms, exclusive jargon, variables, phenomena, concepts, and technical terminology used within the scope of the study. Terms are defined in lay terms and in the context in which they are used within the study. Each definition may be a few sentences to a paragraph in length. This section includes any words that may be unknown to a lay person (words with unusual or ambiguous meanings or technical terms).

Definitions must be supported with citations from scholarly sources. Do not use *Wikipedia* to define terms. This popular “open source” online encyclopedia can be helpful and interesting for the layperson, but it is not appropriate for formal academic research and writing. Additionally, do not use dictionaries to define terms. A paragraph introducing this section prior to listing the definition of terms can be inserted. However, a lead-in phrase is needed to introduce the terms such as: “The following terms were used operationally in this study.” This is also a good place to “operationally define” unique phrases specific to this research. See below for the correct format:

Abbreviations. Do not use periods with abbreviated measurements, (e.g., cd, ft, lb, mi, and min). The exception to this rule is to use a period when abbreviated inch (in.) to avoid confusion with the word “in.” Units of measurement and statistical abbreviations should only be abbreviated when accompanied by numerical values, e.g., 7 mg, 12 mi, *M* = 7.5 measured in milligrams, several miles after the exit, the means were determined [4.27].

Spaces. Do not use periods or spaces in abbreviations of all capital letters unless the abbreviation is a proper name or refers to participants using identity-concealing labels. The exception to this rule is that a period is used when abbreviating the United States as an adjective. Use a period if the abbreviation is a Latin abbreviation or a reference abbreviation [4.02]. Use standard newspaper practice when presenting AM and PM times, as in 7:30 PM or 6:00 AM.

Term.Write the definition of the word. This is considered a Level 4 heading., Make sure the definition is properly cited (Author, 2010, p.123). Terms often use abbreviations. According to the American Psychological Association [APA] (*Publication Manual of the American Psychological Association*, 2010), abbreviations are best used only when they allow for clear communication with the audience. Standard abbreviations, such as units of measurement and names of states, do not need to be written out. APA also allows abbreviations that appear as words in *Merriam-Webster’s Collegiate Dictionary* (2005) to be used without explanation [4.22-4.30].

Time units*.* Only certain units of time should be abbreviated. Do abbreviate hr, min, ms, ns, s. However, do not abbreviate day, week, month, and year [4.27]. To form the plural of abbreviations, add “s” alone without apostrophe or italicization (e.g., vols, IQs, Eds). The exception to this rule is not to add “s” to pluralize units of measurement (12 m not 12 ms) [4.29].

| **Criterion\*****(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **Definitions of Terms** (Each definition may be a few sentences to a paragraph.) |
| Defines any words that may be unknown to a lay person (words with unusual or ambiguous meanings or technical terms) from the research or literature. |  |  |  |  |
| Defines the variables for a quantitative study or the phenomena for a qualitative study from the research or literature. |  |  |  |  |
| Definitions are supported with citations from scholarly sources. |  |  |  |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format.  |  |  |  |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Assumptions, Limitations, Delimitations

This section identifies the assumptions and specifies the limitations, as well as the delimitations, of the study. Define the terms and then list the limitations, delimitations and assumptions. Provide a rationale for all statements.

Assumptions. An assumption is a self-evident truth. This section lists what is assumed to be true about the information gathered in the study. State the assumptions being accepted for the study which may be methodological, theoretical, or topic-specific. Provide a rationale for each assumption. Additionally, identify any potential negative consequences of the assumptions for the study. For example, the following assumptions were present in this study:

1. It is assumed that survey participants in this study were not deceptive with their answers, and that the participants answered questions honestly and to the best of their ability. Provide an explanation to support this assumption.
2. It is assumed that this study is an accurate representation of the current situation in rural southern Arizona. Provide an explanation to support this assumption.

Limitations and delimitations. Limitations are things that the researcher has no control over, such as bias. In contrast, delimitations are things over which the researcher has control, such as location of the study. Identify the limitations and delimitations of the research design. Provide a rationale for each limitation and delimitation, discuss associated consequences for the generalizability and applicability of the findings based on the limitations and delimitations. Address study limitations inherent in the method, study design, sampling strategy, data collection approach or instruments, and data analysis. For example: The following limitations/delimitations were present in this study:

1. Lack of funding limited the scope of this study. Provide an explanation to support this limitation. Discuss associated consequences for the generalizability and applicability of the findings.
2. The survey of high school students was delimited to only rural schools in one county within southern Arizona, limiting the demographic sample. Provide an explanation to support this delimitation. Discuss associated consequences for the generalizability and applicability of the findings.

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **Assumptions, Limitations, and Delimitations** (Minimum three to four paragraphs) |
| Provides a definition of the terms: assumptions, limitations, assumption, limitation and delimitations at the beginning of each section.  |  |  |  |  |
| States the assumptions being accepted for the study (methodological, theoretical, and topic-specific). Provides a rationale for each assumption.  |  |  |  |  |
| Identifies limitations of the research method, design sampling strategy, data collection approach, instruments and data analysis. Provides a rationale for each limitation.Discusses associated consequences for the generalizability and applicability of the findings.  |  |  |  |  |
| Identifies delimitations of the research design and associated consequences for the generalizability and applicability of the findings.Provides a rationale for each delimitation. |  |  |  |  |
| The section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Summary and Organization of the Remainder of the Study

This section summarizes the key points of Chapter 1 and provides supporting citations for those key points. It then provides a transition discussion to Chapter 2 followed by a description of the remaining chapters. For example, Chapter 2 will present a review of current research on the centrality of the dissertation literature review in research preparation. Chapter 3 will describe the methodology, research design, and procedures for this investigation. Chapter 4 details how the data was analyzed and provides both a written and graphic summary of the results. Chapter 5 is an interpretation and discussion of the results, as it relates to the existing body of research related to the dissertation topic. For the proposal, this section should also provide a timeline for completing the research and writing up the dissertation. When the dissertation is complete, this section should be revised to eliminate the timeline information.

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **Chapter 1 Summary and Organization of the remainder of the study** (Minimum one to two pages) |
| Summarizes key points presented in Chapter 1. |  |  |  |  |
| Provides citations from scholarly sources to support key points. |  |  |  |  |
| Describes the remaining Chapters and provides a transition discussion to Chapter 2. For proposal only, a timeline for completing the research and dissertation is provided. |  |  |  |  |
| The chapter is correctly formatted to dissertation template using the *Word Style Tool* and APA standards. Writing is free of mechanical errors. |  |  |  |  |
| All research presented in the chapter is scholarly, topic-related, and obtained from highly respected academic, professional, original sources. In-text citations are accurate, correctly cited, and included in the reference page according to APA standards. |  |  |  |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

# Chapter 2: Literature Review

## Introduction to the Chapter and Background to the Problem

This chapter presents the theoretical framework for the study and develops the topic, specific research problem, question(s), and design elements. In order to perform significant dissertation research, the learner must first understand the literature related to the research focus. A well-articulated, thorough literature review provides the foundation for a substantial, contributory dissertation. The purpose of Chapter 2 is to develop a well-documented argument for the selection of the research topic, to formulate the research questions, and to justify the choice of research methodology. A literature review is a **synthesis** of what has been published on a topic by accredited scholars and researchers. It is not an expanded annotated bibliography or a summary of research articles related to thru topic.

The literature review will place the research focus into context by analyzing and discussing the existing body of knowledge and effectively telling the reader everything that is known, or everything that has been discovered in research about that focus, and where the gaps and tensions in the research exist. As a piece of writing, the literature review must convey to the reader what knowledge and ideas have been established on a topic, and build an argument in support of the research problem.

This section describes the overall topic to be investigated, outlines the approach taken for the literature review, and the evolution of the problem based on the “gap” or “need” defined in the literature from its origination to its current form. Make sure the Introduction and Background section of the literature review addresses all required criterion listed in the table below. Learners may want to create a subsection title for the Introduction section and for the Background to the Problem section to provide clarity to the reader.

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score**  | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **CHAPTER 2 INTRODUCTION (TO THE CHAPTER) AND BACKGROUND (TO THE PROBLEM)** (Minimum two to three pages) |
| **Introduction**: Provides an orienting paragraph so the reader knows what the literature review will address. |  |  | X |  |
| **Introduction**: Describes how the chapter will be organized (including the specific sections and subsections). |  |  | X |  |
| **Introduction:** Describes how the literature was surveyed so the reader can evaluate thoroughness of the review. This includes search terms and databases used. |  |  | X |  |
| **Background:** Discusses how the problem has evolved historically into its current form. |  |  | X |  |
| **Background**: Describes the “gap” or “need” defined in the current literature and how it leads to the creation of the topic and problem statement for the study. Note: This section should be a significant expansion on the Background to the Problem section in Chapter 1.  |  |  | X |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  | X |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Identification of the Gap

All learners must identify a gap or stated need for their authentic dissertation research. The gap, or stated need, for the dissertation is the difference between what is known in a field of research and what is not yet known. The *gap* is created by synthesizing the literature related to a societal need and/or broad topic. The *stated need* is defined from the literature from recent years, usually within the last five years. Lack of research on a topic is not a reason to do a dissertation. Just because something has not been researched does not mean it should be. Therefore, the learner must be “well read” on their topic to identify ways their study will add to the existing body of knowledge on the topic.

There are a variety of ways to synthesize the literature to define the gap. Below is a set of steps that may be used:

* First, explore original literature on this “societal” or big problem to determine has been discovered and what still needs to be discovered. Then, summarize and compare and contrast, the original literature on this problem.
* Second, while exploring the original literature identify the broad topics and problems *researched*. Explore the evolution of the *research* on the problem. How did the focus change? What findings emerged from these studies?
* Third, describe the research from the past 2 to 3 years to discover what has been discovered, and elaborate to discuss what still needs to be researched or discovered. Discuss the trends and themes that emerged. What has been discovered? What do researchers say still needs to be researched or discovered?
* Fourth, define the proposed topic and problem statement, by synthesizing the recent studies, including trends, limitations, and defined future research needs.

While the the verbiage in this section highlights a set of steps designed to help GCU doctoral learners identify the gap or need for their study, there are other methods that can be used. These include replication studies, recommendations for future research from from prior studies and literature reviews, adding to a broadly researched area, reframing problems and synthesizing areas of research to define a new or innovative area of research. This section must clearly identify the specific sources that form the basis for the gap. Learners can access further information on these strategies in the Doctoral Community, dc.gcu.edu, under the Residency tab, and GCU e-Book (Grand Canyon University, 2017b).

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score**  | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **CHAPTER 2: IDENTIFICATION OF THE GAP** (Minimum two pages) |
| Summarizes the “societal” or big problem. Highlights what has been discovered and what still needs to be discovered related to the topic from literature or research dated within the last five years. |  |  |  |  |
| Discusses and synthesizes the evolution of the research on the problem. Specifically:* Identifies the key sources used as the basis for the gap
* Identifies trends in research and literature.
* Identifies how the research focus has changed over the recent past (five years).
* Discusses key findings that emerged from recent studies.
* Discusses limitations or prior research and defined future research needs.
 |  |  |  |  |
| From the findings of research studies and evolution of recent literature on the topic, defines the problem statement for the study. |  |  |  |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Theoretical Foundations and/or Conceptual Framework

This section identifies and discusses the theory(ies) or model(s) that provide the foundation for the research study. It also contains an explanation of how the problem under investigation relates to the theory or model. The seminal source for each theory or model presented in this section should be identified and described.

For a quantitative study, the theory(ies) or models(s) guide the research question(s), justify what is being measured (variables), and describe how those variables are related. In a qualitative study, the theory(ies) or model(s) guide the research question(s) and help describe the phenomena being investigated (qualitative). This section also includes a discussion of how the research question(s) align with the respective theory(ies) or model(s) and illustrates how the study fits within the prior research based on the theory(ies) or model(s).

The learner should cite references reflective of the foundational, historical, and current literature in the field. Seminal works are usually more than five years old; it is important to include those, as well as relevant, more recent literature on the theory. Overall, the presentation in this section should reflect that the learner understands the theory or model and its relevance to the proposed study. The discussion should also reflect knowledge and familiarity with the historical development of the theory.

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **theoretical foundations and/or conceptual framework** (Minimum two to three pages) |
| Identifies a model(s) or theory(ies) from seminal source(s) that provide a reasonable conceptual framework or theoretical foundation to use in developing the research questions, identifying variables/phenomena, and selecting data collection instruments. |  |  | X |  |
| Cites the appropriate seminal source(s) for each theory or model. |  |  | X |  |
| Includes a cogent discussion/synthesis of the theory or model and justifies the theoretical foundation/framework as relevant to the study. Connects the study directly to the theory and describes how the study will add or extend the theory or model.**Quantitative Studies:** Have one theory for each variable. For example, use the model the survey is based on. Use the theory or model upon which the instrument is based.Distinguishes between the model/theories being used for research questions and data collection versus the background models and theories generically relevant to the study.  |  |  | X |  |
| Builds a logical argument of how the research questions are developed based on the theoretical foundation for the study. |  |  | X |  |
| Reflects understanding of the foundational, historical, research relevant to the theoretical foundation/framework. |  |  | X |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  | X |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Review of the Literature

This section provides a broad, balanced overview of the existing literature related to the proposed research topic. The Review of Literature identifies themes, trends, and conflicts in research methodology, design, and findings. It provides a synthesis of the existing literature, examines the contributions of the literature related to the topic, and justifies the methodological approaches used for the research based on related empirical studies. Through this synthesis, the researcher applies this information to define the research gaps as well as to the creation of the plan and approach for their proposed study.

Citations are provided for all ideas, concepts, and perspectives. The researcher’s personal opinions or perspectives are not included. Chapter 2 must be a minimum of 30 pages in length. However, it is important to note that a well-written comprehensive literature review will likely exceed this minimum requirement. The literature review must be continuously updated throughout the dissertation research and writing process. Chapter 2 needs to include a minimum of 50 peer-reviewed, empirical research articles, and 75% of all references within this chapter (and in proposal/dissertation) must be within the past five years. Seventy five percent (75%) of the sources must be dated within fiveyears of the proposal defense date and five years of the dissertation defense date, and updated as appropriate at the time of the dissertation defense. Other requirements for the literature review include:

* Quantitative study: Describes each research variable in the study discussing the prior empirical research that has been done on the variable(s) and the relationship between variables.
* Qualitative study: Describes the phenomena being explored in the study discussing the prior research that has been done on the phenomena.
* Discusses the various methodologies and designs that have been used to research topics related to the study. Uses this information to justify the proposed design.
* Argues the appropriateness of the dissertation’s instruments, measures, and/or approaches used to collect data.
* Discusses and synthesizes studies related to the proposed dissertation topic. This may include (1) studies describing and/or relating the variables (quantitative) or exploring related phenomena (qualitative), (2) studies on related research such as factors associated with the themes, (3) studies on the instruments used to collect data, (4) studies on the broad population for the study, and/or (5) studies similar to the proposed study. The themes presented and research studies discussed and synthesized in the Review of Literature demonstrates a deep understanding of all aspects of the research topic. The set of topics discussed in the Review of Literature must demonstrate a comprehensive understanding of the broad area in which the research topic exists.
* Discusses and synthesizes the various methodologies and designs that have been used in prior empirical research related to the study. Must use authoritative sources information to justify the proposed design. Provides discussion and justification for the instrumentation selected for the study. This section must argue the appropriateness of the dissertation’s instruments, measures, and/or approaches used to collect data. Empirical research must be used to justify the selection of instrument(s).
* Each major section in the Review of Literature includes an introductory paragraph that explains why the particular topic was explored relative to the dissertation topic.
* Each major section in the Literature Review includes a summary paragraph(s) that (1) compares and contrasts alternative perspectives on the topic, (2) provides a synthesis of the themes relative to the research topic discussed that emerged from the literature, (3) discusses data from the various studies, and (4) identifies how themes are relevant to the proposed dissertation topic.
* The types of references that may be used in the literature review include empirical articles, a limited number of dissertations (no more than 5), peer-reviewed or scholarly journal articles, and books (no more than 5-10) that present cutting-edge views on a topic, are research based, or are seminal works.
* Provides additional arguments for the need for the study that was defined in the Background to the Problem section.

The body of a literature review can be organized in a variety of ways depending on the nature of the research. However, clearly explain the approach taken to the organization and flow of the topics for the Review of Literature section, explaining the organization in an introductory section for the Review of Literature. Learners will work with the chair and committee to determine the best way to organize this section of Chapter 2 as it pertains to the research design. Make sure to include a section for methodology and instrumentation (see the rubrics, below).

Chapter 2 can be particularly challenging with regard to APA format for citations and quotations. Refer to the APA manual frequently to make sure citations are formatted properly. It is critical that each in-text citation is appropriately listed in the Reference section. Incorrectly citing and referencing sources is a serious scholarly and ethical violation, particularly at the doctoral level when writing the dissertation. As an emerging scholar, learners must demonstrate the capability and responsibility to properly cite and reference every single source referenced in the literature review and in throughout the dissertation! Note that all in-text citations within parentheses must be listed in alphabetical order with semicolons between each citation (e.g., Barzun & Graff, 1992; Calabrese, 2006; Hacker, Somers, Jehn, & Rosenzweig, 2008; Mason, 2010; Nock, 1943; Squires & Kranyik, 1995; Strunk & White, 1979).

As a rule, if a direct quote comprises fewer than 40 words, incorporate it into the narrative and enclose it with double quotation marks. The in-text citation is included after the final punctuation mark [6.03]. The final punctuation mark in quoted text should be placed inside the quotation mark.

For a quote within a quote, use a set of single quotation marks. Here is an example of a direct quote within a quote integrated into the narrative. In the classic introspective autobiography, *The Memoirs of a Superfluous Man,* one reads that, “one never knows when or where the spirit’s breathe will rest, or what will come of its touch. ‘The spirit breathes where it will,’ said the *Santissimo Salvatore*, ‘and thou hearest the sound thereof, but cannot tell whence it cometh or whither it goeth.’” (Nock, 1943, p.187) [4.08].

As a rule, if a quote comprises 40 or more words, display this material as a freestanding block quote. Start formal block quotes on a new line. They are indented one inch in from the left margin. The entire block quote is double-spaced. Quotation marks are *not* used with formal block quotes. The in-text citation is included after the final punctuation mark. [6.03]. Below is an example of a block quote: In an important biography, *The First American: The Life and Times of Benjamin Franklin*, historian H. W. Brands writes:

In February 1731, Franklin became a Freemason. Shortly thereafter, he volunteered to draft the bylaws for the embryonic local chapter, named for St. John the Baptist; upon acceptance of the bylaws, he was elected Warden and subsequently Master of the Lodge. Within three years, he became Grandmaster of all of Pennsylvania's Masons. Not unforeseeable he—indeed, this was much of the purpose of membership for everyone involved—his fellow Masons sent business Franklin’s way. In 1734 he printed *The* *Constitutions*, the first formerly sponsored Masonic book in America; he derived additional [printing] work from his brethren on an unsponsored basis. (Brands, 2000, p. 113)

Methodology and instrumentation/data sources/research materials. The final section of Chapter 2 focuses on the methodologies and instrumentation in the empirical studies reviewed in Chapter 2. Unlike the methodology and instrumentation sections in Chapters 1 and 3, this section provides a clear overview of how the empirical studies in the literature review were conducted. This provides evidence for the methodology and instrumentation the learner selects for the study. For example, the key studies may show which instruments were used for studies on particular forms of leadership, and the discussion would point out how such instruments were used and why. That may support an argument by the learner about his or her choice of instrument for the study.

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score**  | **Chair Score**  | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **REVIEW OF THE LITERATURE** (Minimum 30 pages) |
| This section must be a minimum of 30 pages. The purpose of the minimum number of pages is to ensure that the overall literature review reflects a foundational understanding of the theory or theories, literature and research studies related to the topic. A well-written comprehensive literature review that reflects the current state of research and literature on the topic is expected and will likely exceed 30 pages. Literature reviews should be updated continuously. This is an ongoing process to dissertation completion. |  |  | X |  |
| **Quantitative Studies:** Describes each research variable in the study discussing the prior empirical research that has been done on the variables and the relationship between the variables.**Qualitative Studies:** Describes the phenomena being explored in the study discussing the prior research that has been done on the phenomena. |  |  | X |  |
| **Themes or Topics (Required):** Discusses and synthesizes studies related to the proposed dissertation topic. May include (1) studies focused on the problem from a societal perspective, (2) studies describing and/or relating the variables (quantitative) or exploring related phenomena (qualitative), (3) studies on related research such as factors associated with the themes, (4) studies on the instruments used to collect data, (5) studies on the broad population for the study, and/or (6) studies similar to the proposed study. The themes presented and research studies discussed and synthesized in the Review of Literature demonstrates understanding of all aspects of the research topic and the research methodology. |  |  | X |  |
| **Methodologies used in prior research on the topic (required):** Section is built on prior research studies and does not include references to methodology books and articles. **What other methods have been done in similar studies on the topic?** Discusses and synthesizes the various methods that have been used in prior empirical research related to the study to present the best methodology for the proposed study. This section demonstrates broad understanding of methodologies used in research area. |  |  | X |  |
| **Instruments/data sources/research materials used in prior studies on the topic (required):** Provides discussion of instruments, sources of data or research materials used in **closely-related** empirical studies on the topic (dated within last 3 to 5 years). Demonstrates understanding of the instruments used in prior studies on the topic. Synthesizes the information to recommend the instruments to be used for the study.  |  |  | X |  |
| Structures literature review in a logical order, including actual data and accurate synthesis of results from reviewed studies as related to the learners own topic. Provides synthesis of the information not just a summary of the findings. |  |  | X |  |
| Includes in each major section (theme or topic) within the Review of Literature an introductory paragraph that explains why the particular topic or theme was explored relative to the overall dissertation topic. |  |  | X |  |
| Includes in each section within the Review of Literature a summary paragraph(s) that (1) compares and contrasts alternative perspectives on the topic and (2) provides a synthesis of the themes relative to the research topic discussed that emerged from the literature, and (3) identifies how themes are relevant to the proposed dissertation topic and research methodology. |  |  | X |  |
| Provides additional arguments for the need for the study that was defined in the Background to the Problem section.  |  |  | X |  |
| Ensures that for every in-text citation a reference entry exists. Conversely, for every reference list entry there is a corresponding in-text citation. Note: The accuracy of citations and quality of sources must be verified by learner, chair and committee members. |  |  | X |  |
| Uses a range of references including founding theorists, peer-reviewed empirical research studies from scholarly journals, and government/foundation research reports. **Note:** **A minimum of 50 peer-reviewed, empirical research articles are required for the literature review.** |  |  | X |  |
| Verifies that 75% of all references are scholarly sources within the past 5 years for the proposal and 5 years for the dissertation. The 5-year time frame is referenced at the time of the proposal defense date and at the time of the dissertation defense date. **Note:** Websites, dictionaries, publications without dates (n.d.), are not considered scholarly sources and should not be cited or present in reference list.  |  |  | X |  |
| Avoids overuse of books and dissertations. **Books:** Maximum of 10 scholarly books that present cutting edge views on a topic, are research based, or are seminal works. **Dissertations:** Maximum of 5 published dissertations. |  |  | X |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  | X |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Summary

This section succinctly restates what was written in Chapter 2 and provides supporting citations for key points. The summary section reflects that the learner has done his/her "due diligence" to become well-read on the topic and can conduct a study that will add to the existing body of research and knowledge on the topic. It synthesizes the information from the chapter to define the "gaps" in or "identified research needs" arising from the literature, the theory(is) or model(s) to provide the foundation for the study, the problem statement, the primary research question, the methodology, the design, the variables or phenomena, the data collection instruments or sources, and the population to be studied. Overall, this section should help the reader clearly see and understand the relevance and importance of the research to be conducted. The criteria listed in the table below are required for this section. The Summary section transitions to Chapter 3 by building a case for the study, in terms of research design and rigor, and it formulates the research questions based on the gaps and tensions in the literature.

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score**  | **Chair Score**  | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **Chapter 2 Summary** (Minimum one to two pages) |
| Synthesizes the information from all prior sections in the Literature Review using it to define the key strategic points for the research.  |  |  | X |  |
| Summarizes the gaps and needs in the background and introduction describing how it informs the problem statement. |  |  | X |  |
| Identifies the theory(ies) or model(s) describing how they inform the research questions. |  |  | X |  |
| Justifies the methodology, design, variables or phenomena, data collection instruments or sources, and population to be studied. |  |  | X |  |
| Builds a case (argument) for the study in terms of the value of the research and how the research questions emerged from the review of literature. |  |  | X |  |
| Reflects that the learner has done his or her “due diligence” to synthesize the existing empirical research and write a comprehensive literature review on the research topic. |  |  | X |  |
| Summarizes key points in Chapter 2 and transitions into Chapter 3. |  |  | X |  |
| The chapter is correctly formatted to dissertation template using *the Word Style Tool* and APA standards. Writing is free of mechanical errors. |  |  | X |  |
| All research presented in the chapter is scholarly, topic-related, and obtained from highly respected, academic, professional, original sources. In-text citations are accurate, correctly cited and included in the reference page according to APA standards. |  |  | X |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  | X |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

# Chapter 3: Methodology

## Introduction

Chapter 3 documents how the study is conducted in enough detail so that replication by others is possible. The introduction begins with a summary of the research focus and purpose statement to reintroduce the reader to the study. This can be summarized in three to four sentences from Chapter 1. This section also outlines the expectations for this chapter.

Remember, throughout this chapter, that verb tense must be changed from present or future tense (proposal) to past tense (dissertation manuscript). At the dissertation stage, all comments regarding “the proposed research” or “the proposal” must be removed and edited to reflect the fact that the research has been conducted. Furthermore, consider what happened during data collection and analysis. Sometimes, the research protocol ends up being modified based on committee, AQR review, or Institutional Review Board (IRB) recommendations. After the research study is complete, make sure this chapter reflects how the study was actually conducted.

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **CHAPTER 3 INTRODUCTION** (Minimum two to three paragraphs) |
| The introduction restates the purpose statement to the study. This section also outlines the expectations for this chapter. |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Statement of the Problem

This section restates the research problem for the convenience of the reader. Then, edit, blend, and integrate the problem statement into a narrative discussion that addresses how the problem statement addresses the gap in the literature, as described in the Problem Statement section in Chapter 1. Change future tense in proposals to past tense for dissertation manuscripts.

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score**  | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **STATEMENT OF THE PROBLEM** (Minimum one to two paragraphs) |
| The research problem (Problem Statement) is restated for the convenience of the reader from Chapter 1.  |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Research Questions and/or Hypotheses

This section restates the research question(s) (qualiative and quantitative) and the hypotheses (quantiative) for the study from Chapter 1. For a quantitative study, it then presents the matching hypotheses and explains the variables. For a qualitative study, it then describes the phenomena to be understood as a result of the study. The section also briefly discusses the approaches to collecting the data to answer the research questions. For a quantitative study, it describes the instrument(s) or data source(s) to collect the data for each and every variable. The variables are described at the conceptual, operational and measurement levels. For example, a conceptual level of a variable in a school setting may be student achievement. The operational level of the variable may be student performance in social studies. The measurement level for the variable may be individual student scores on the high stakes test, or percentage of overall students passing the test (at the school level).

For a qualitative study, this describes the instrument(s) or data source(s) to collect the data to answer each research question. It also discusses why the design was selected to be the best approach to answer the research questions, test the hypotheses (quantitative), or understand the phenomena (qualitative). Remember to change future tense to past tense for dissertation manuscripts.

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **RESEARCH QUESTIONS AND/OR HYPOTHESES**  (Minimum one to two pages) |
| **Qualitative Studies:** Restates the research questions and the phenomena for the study from Chapter 1. **Quantitative Studies:** Describes the variables, at the conceptual, operational and measurement levels, then restates the research questions from Chapter 1, and presents the matching hypotheses. |  |  |  | X |
| Describes the nature and sources of necessary data to answer the research questions (primary versus secondary data, specific people, institutional archives, Internet open sources, etc.).**Quantitative Studies:** Describes the data collection methods, instrument(s) or data source(s) to collect the data for each variable. **Qualitative Studies**: Describes the data collection methods, instruments, and/or data sources to collect the data to answer each research question. |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Research Methodology

This section describes the research methodology for the study (quantitative, qualitative, or mixed) and explains the rationale for selecting this particular methodology. It also describes why this methodology was selected as opposed to the alternative methodologies. This section should elaborate on the Methodology section (from Chapter 1) providing the rationale for the selected research method (quantitative, qualitative, or mixed). This section may bring in additional arguments based on the empirical studies used in the Methodology section in Chapter 2. This section justifies why the selected methodology is better than the alternative methodologies. Arguments are supported by citations from articles and books on research methodology and/or design. It is also appropriate in this section to outline the predicted results in relation to the research questions and hypotheses based on the existing literature. Learners should refer to their course e-books, specifically the RES-866 e-book (Grand Canyon University, 2016), for more information on developing this chapter.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score**  | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| **RESEARCH METHODOLOGY** (Minimum one to two pages) |
| Provides a rationale for the research methodology for the study (quantitative, qualitative, or mixed) based on research books and articles.  |  |  |  | X |
| Provides a rationale for the selected the methodology based on **empirical studies** on the topic. |  |  |  |  |
| Justifies why the methodology was selected as opposed to alternative methodologies. |  |  |  |  |
| Uses authoritative source(s) to justify the selected methodology. ***Note:*** *Do not use introductory research textbooks (such as Creswell) to justify the research design and data analysis approach.*  |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Research Design

This section elaborates on the nature of the Research Design for the Study section from Chapter 1. It includes a detailed description of, and a rationale for, the specific design for the study and describes how it aligns to the selected methodology indicated in the previous section. GCU core designs for quantitative studies include descriptive/survey, correlational, causal-comparative, quasi-experimental, and experimental. GCU core designs for qualitative designs include case study, narrative, grounded theory, and phenomenological. Additionally, this section must describe why the selected design is the best option to collect the data to answer the research questions and test the hypotheses. Learners should refer to their course e-books (Grand Canyon University, 2015, 2016, 2017b), for more information on developing this section.

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score**  | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **RESEARCH DESIGN** (Minimum one to two pages)  |
| Elaborates on the research design from Chapter 1. Provides the rationale for selecting the research design supported by empirical references. Justifies why the design was selected as the best approach to collect the needed data, as opposed to alternative designs. |  |  |  | X |
| **Quantitative Studies:** Provides the variable structure and states the unit of analysis. and unit of observation. If multiple data sources have different units of observation, specify the key variable for matching cases. **Qualitative Studies:** Provides the unit of analysis and the unit of observation. If multiple data sources have different units of observation, specify the matching cases.In qualitative study designs the units of analysis (or observation) are each sample participant. In case study design (single or multiple), the unit of analysis is a “bounded system” in its own right. This could include one individual, one family, one group, one community, one school, one policy, one region, one state, one country, etc. The sample may include several participants, but these must be members of a homogeneous unit representing the “bounded system” that is the case study unit. |  |  |  |  |
| Uses authoritative source(s) to justify the design. ***Note:*** *Do not use introductory research textbooks (such as Creswell) to justify the research design and data analysis approach.*  |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Population and Sample Selection

This section discusses the setting, the population of interest, target population, and study sample. Researchers should identify each of these explicitly within the section. The discussion of the sample includes the research terminology specific to the type of sampling for the study. This section should include the components listed in the criterion table.

Quantitative sample size. The purpose of computing the sample size for a proposed study is to state the target sample size. The sample size needs to be computed for the unit of analysis. In quantitative studies, it is important to distinguish between the computed minimum sample size (*a priori* sample size) and the target sample size. The target sample size should be 15-20% larger than the computed minimum sample size. The following steps will be useful:

1. State the computed minimum sample size, and
2. Provide the evidence, which would be one of the following:
	1. G\*Power output(s) of the sample size computation(s) for the statistical procedure(s) needed to answer the research questions;
	2. In case G\*Power does not include a planned procedure, the computation can be done using an alternative software. G\*Power software, which can be downloaded from this link: <http://www.gpower.hhu.de/en.html> (Faul, Erdfelder, Lang, & Buchner, 2007; Faul, Erdfelder, Buchner, & Lang, 2009). GCU recommends using an alpha error of 0.05, a medium effect size, and statistical power of 0.80, for calculating the sample size. In rare instances, the learner can justify why their sample may not be that suggested by G-Power and as such it becomes a study limitation. Include a graphic image of the G\*Power in an Appendix, with a screen shot.
	3. For a nonparametric procedure, the computation for the corresponding parametric procedure + 15% (state this generic rule of thumb with appropriate reference), or
	4. Authoritative reference(s) from statistics sources regarding range of sample size for which a specific procedure is appropriate.
	5. For repeated measures (using primary data) and longitudinal studies (using secondary data), discuss attrition rate and compute the target sample size (number of complete cases in the final dataset) considering that rate.

Planning ahead. It is important to anticipate that attaining sufficient sample size may not go according to plan. The following steps help researchers develop a plan to handle problems that may (and often do) emerge. For studies with planned parametric statistical procedures, provide the minimum sample for the parametric analysis as well as for the alternative nonparametric analysis, in case the data show major violations in the test(s) of assumption that cannot be resolved. In such a case, retain the largest number as the computed minimum sample size. To be on the safe side, consider the need to discard from the raw data file incomplete cases and outliers—to be able to do that, the target sample size should be 15-20% larger than the computed minimum sample size.

Qualitative sample size. Sample sizes in qualitative research are smaller than those in quantitative research. The criterion table below specifies sample size and adequacy of data for several qualitative research designs. GCU has provided guidelines regarding sample size for each of the core designs, which are based on the traditions of design and analysis in qualitative research (Grand Canyon University, 2015, 2016, 2017a, 2017b). See Guest, Bunce, and Johnson (2006), and Mason (2010) for two examples that discuss the sufficiency of sample size in qualitative research.

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score**  | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **POPULATION AND SAMPLE SELECTION** (Minimum one to two pages) |
| Describes:The population of interest (The group to which the results of the study will be generalized or applicable) (such as police officers in AZ), The target population from which the sample is selected (such as police officers in AZ who belong to the police fraternal association). The study sample (individuals drawn from target population who provide final source of data) (final number from whom complete data were collected). |  |  |  | X |
| 1. **Site Authorization and Recruitment**
2. Describes the process for obtaining site authorization to access the target population.
3. Describes the site authorization process (what needs to be included in request) confidentiality measures, study participation requirements, and geographic specifics.
4. If public data sources or social media are used to collect data, although site permission is not required, provide arguments and evidence as to why these sources can be used without site permission.
5. Describes the sampling strategy and process for recruiting individuals to comprise the sample.
 |  |  |  |  |
| **Quantitative Sample Size Requirements**Describes the expected study sample and the proposed and rationale:An *a priori* or equivalent analysis and/or *post hoc* Power Analysis is required to justify the study sample size based on the anticipated effect size and selected design**.** Certain procedures are applicable for small samples. Those situations must be justified through computation or literature. Justification is based on the selected design and statistical procedures.**G\*Power or equivalent computation is required.** G\*Power software can be downloaded from the link presented below <http://www.gpower.hhu.de/en.html> using an alpha error of 0.05, a medium effect size and statistical power of 0.80 for each statistical analysis that is proposed.” |  |  |  | X |
|  For proposals, this section discusses *a priori* computation and for dissertation, this section discusses both *a priori* and *post hoc* computation of statistical power based on actual sample size obtained through data collection. Screenshots of the computation for each statistical test (proposals – *a priori* and dissertation – *a priori* and *post hoc*) should be included in the Appendix When calculating the expected return rate for questionnaires and surveys, assume the return rate is 5-10% when no incentives are provided and 15-20% when incentives are provided. **Attrition:** When doing repeated measures studies in an experiment, learners should consider probable loss to attrition. **Qualitative Sample Size Requirements:** The sample size should be stated for each form of data collection including interviews, observations, questionnaires, documents, artifacts, visual data such as drawings and photographs, etc.**Case Study:** Guideline: A minimum of 10 participants or cases in the final sample for interviews. Learners should pursue a minimum 20 individuals to recruit to account for attrition; minimum of three sources of data; must demonstrate triangulation of the data across two sources for each RQ. Case study interviews may include closed-ended questions with a dominance of open-ended questions; should be no less than 30 minutes; no less than five pages of participant responses/speech in the transcribed data per interview, single spaced, 12 pt. Times New Roman. A minimum of 50 questionnaires if the questionnaires will be used for thematic analysis. The size for other sources (e.g., number of documents or artifacts, observations, etc. should also be identified.**Phenomenology**: Guideline: Minimum of 8 interviews. Learners should pursue 12 individuals to interview to account for attrition. Interviews should be 60-90 minutes. There should be no less than 12 pages of transcribed data, single spaced, 12 pt. Times New Roman, per interview. Interview questions must be open-ended.**Descriptive:** Guideline: A minimum of 10 participants in the final sample. Learners should pursue a minimum 20 individuals to recruit; 2 sources of data; no less than 5 pages of transcribed data, single spaced, 12 pt. Times New Roman, per interview. **Narrative:** Purpose is a collection of stories around a phenomenon. Protocol offers questions that get the participant to tell their personal story regarding a phenomenon including the roles of stakeholders. Guideline: Minimum of 8 interviews. Learners should pursue 12 participants to account for attrition. Interviews should be 60-90 minutes. There should be no less than 12 pages of transcribed data, single spaced, 12 pt. Times New Roman, per interview. Interview questions must be open-ended. **Note:** A key criterion for selecting a sample size for a narrative study is to elicit long, in-depth of stories about the phenomenon which may be hours long. **Grounded Theory:** Grounded theory studies yield a theory or model. Usually two rounds of data collection with interim analysis. Minimum of 50 pages of transcribed data from interviews, open-ended questionnaires, or other data sources. Transcripts are 12point font and single spaced. Studies typically have a minimum of 10-30 interviews (45-60 minutes in length) and/or 40-60 open-ended questionnaires. Interview questions must be open-ended.**Questionnaires or Surveys:** If used in the study the minimum number should be 40. This data collection method can be used in different qualitative designs.  |  |  |  |  |
| **Strategies to account for attrition:** Students should consider the anticipated sample size will not be reached, so must provide a justification or alternative plan for the study (expanding time frame, expanding target population, changing design to bring down sample size needed, or adding an additional data collection approach, adjust an analysis). |  |  |  |  |
| Defines and describes the sampling procedures (such as convenience, purposive, snowball, random, etc.) supported by scholarly research sources. Includes discussion of sample selection, and assignment to groups (if applicable), and strategies to account for participant attrition. For a purposive sample identify the screening criteria and device for screening the participants (egg: demographic questionnaire, expert knowledge of topic, screening questions such as years of experience in a position). |  |  |  | X |
| Describes the study sample size. Provides evidence (based on the empirical research) literature that sample size is adequate for the research design and meets GCU required sample size requirements (listed in criteria below). |  |  |  |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Research Materials, Instrumentation OR Sources of Data

This section fully identifies and describes the types of data that will be collected, as well as the specific research materials, instruments, and sources used to collect those data (tests, questionnaires, interviews, data bases, media, etc.). Discuss the specific research materials, instrument, or source to collect data for each variable or group for a quantitative study. Discuss the specific research materials, instrument(s), or source(s) to collect information to describe the phenomena being studied for a qualitative study. Use the “Instrumentation” heading for a quantitative study. Use the “Sources of Data” heading for qualitative research. Use the “Research Materials” heading is using materials for experiments other than instruments. Use appropriate APA level subheadings for each data collection instrument, sources, or research material and place a copy of all instruments and research materials in an appendix. For example, a subheading of “Sources of Data” might be “Interviews,” which should begin a new paragraph, and the term “Interviews” should be styled as Heading 3.

If you are using an existing instrument, make sure to discuss the characteristics of the instrument in detail. For example, on a preexisting survey tool describe: how the instrument was developed and constructed, the validity and reliability of the instrument, the number of items or questions included in the survey, the calculation of the scores, and the scale of measurement of data obtained from the instrument. Learners must also obtain all appropriate use permissions from instrument authors. Please note that GCU does not recommend developing or modifying instruments for quantitative studies and permission to do so must be obtained from the Assistant Dean.

For quantitative studies, distinguish between the validated instruments and the questions added by the researcher. The latter have to be justified as (1) data for one or more variables of interest in the study (included in the analysis), or (2) data needed for the sample profile (must be relevant to the topic), or (3) combination of both. Separate appendices required for each instrument; the validated instruments (or watermarked samples thereof) have to be accompanied by authors' or vendors' permission to use. Information required for quantitative validated instruments: (1) number and labels of scales (and subscales); (2) number or items per scale (and subscale); (3) type of scale/data (e.g., Likert scales produce technically ordinal data—ONLY SOME have a format that allows for APPROXIMATION to continuous data—required justification of approximation, with references); (4) method of data aggregation (e.g., for continuous scales: sum vs. mean vs. other mathematical formula).

For quantitative studies, describe the method of instrument administration. All instruments will be administered together, in a single session via online survey. If different instruments are administered separately to different participants, generate separate data files, establish the unit of analysis and create an identification for that as the key variable that will be used to merge the files—make sure to collect data for the key variable from all participants (include the key variable in all instruments).

If using research materials for an experiment for a quantitative study, discuss in detail not only the materials, but also the structure of the experiment or study. Describe all materials and how they will be used. Describe how the participant(s) interact with the materials during the experiment. In psychology and business, an experiment can be run to collect data for experimental, correlation and causal comparative designs. If using psychology data collection software tools such as e-Prime, learners should provide a copy of the software contract showing they are licensed to use the software. Validity and reliability of the experiment and materials must be argued using literature and similar studies.

For qualitative and quantitative studies, the learner often uses data sources other than instruments. These data sources may include databases, journals, participant drawings, photographs, documents, artifacts, and media. Additionally, learners will most likely develop their own interview or focus group guide, observation checklist, or other protocol when conducting a qualitative study. Therefore, learners must describe in detail the process used to develop the instrument, including the research, literature, theory or expert in the field used to develop and justify the questions. Additionally, learners must describe how the validity and reliability of the instrument was established, which often include expert panel review, member checking, field testing and/or pilot testing.

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **RESEARCH MATERIALS, INSTRUMENTATION, OR SOURCES OF DATA** (Minimum one to three pages) |
| **Data Collection Instruments/Materials**: Provides a detailed discussion of the instrumentation and/or materials for data collection which includes validity and reliability of the data. collection instrument or experiment. Includes citations from original publications by instrument developers (and subsequent users as appropriate) or related studies.  |  |  |  | X  |
| **Data Collection Instruments/Materials:** Describes the structure of each data collection instrument and data sources (tests, questionnaires, interviews, observations data bases, media, etc.). When using materials for an experiment, describes the structure of the experiment and the materials used for it. Specifies the type and level of data collected with each instrument.  |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Trustworthiness (for Qualitative Studies)

This section describes the four key elements that together serve to produce confidence in the research procedures and results of a qualitative study. These elements constitute the overarching concept of “trustworthiness.” The four elements are credibility, transferability, dependability, and confirmability. *Credibility and transferability are the qualitative version of validity, and dependability and confirmability are the qualitative version of reliability.*

Learners can start this discussion by (1) defining the concept (e.g., credibility), (2) identifying the “threats” (biases or weaknesses) inherent in their methodology (design, sampling, data collection procedures and sources of data/instruments, and data analysis), and (3) describing how they will minimize such threats (e.g., reflexivity for subjective bias in qualitative data analysis). The following are steps taken by a qualitative researcher to ensure the research is trustworthy, and are from Shenton (2004, p. 73), based on Guba’s (1981) four criteria for trustworthiness. The researcher should address as many as are applicable to the design selected.

Credibility. Credibility refers to how well the study’s findings accurately represent the experiences of participants for the sample under study. In other words, credibility describes the internal validity of the study. Some strategies qualitative researchers use to ensure credibility include:

* *Adoption* of a well-established data collection plan.
* *Fundamental knowledge of naturalistic inquiry*, which is the essence of naturalistic inquiry is that research is conducted in natural settings, that is, in settings where the participants live or engage in activities that are relevant to the phenomenon under study. (Armstrong, 2010; Lincoln & Guba, 1985)
* *Deep engagement*, which means sufficient time is given to listen, document, and achieve saturation of data.
* *Member checking*, which increases the authenticity of the final transcript.
* *Narrative truth*, which means the researcher represents the authenticity of participants’ reflections, comments, stories, and perspectives.
* *Negative cases and rival explanations*, which include evidence that does not fit the pattern that emerges during analysis, and provide explanation.
* *Researcher reflexivity*, which is how the researcher maintain awareness about how results unfold, documenting emerging patterns. The researcher’s positionality or “reflective commentary:” allows researcher to clearly state the lens through which the social world is interpreted and discuss how the researcher’s background influences data collection and analysis (Lincoln & Guba, 1985).
* *Thick description,* which isthe context(s) of the participants be described in a rich and detailed manner.
* *Triangulation* via use of different data collection methods, different informants, different locations
* *Researcher experience*, which includes a description of background, qualifications, and experience of the researcher (researcher positionality)

Transferability. Transferability refers to the degree to which findings are applicable to policy, practice, and future research, or the degree to which the results of a qualitative study apply to other people or contexts. Transferabilit**y** addresses the external validity and is the qualitative version of “generalizability” of the study’s results.

* *Thick description* that provides background data to establish context of study and detailed description of phenomenon in question to allow comparisons of the context can be made to other contexts. The greater the detailed description of the phenomena, the more meaningful the results may be when informing another context.to be made.
* *Sampling sufficiency*, which refers both to the sample size and to the appropriateness of the sample, so that the participants experience the phenomena so that the data collected from them provide insight into the phenomena.

Dependability. Dependability refers to the degree to which research procedures are documented and are reliable. Techniques used to demonstrate dependability include:

* *Audit trail*, which is documentation of the inquiry process.
* *Evidence,* which includes full transcripts, careful documentation of data gathering sessions, media (audiotapes, videotapes, documents, photographs) Employment of “overlapping methods.”
* *An in-depth methodological description* that provides a comprehensible record of how data were collected and analyzed. Meticulous description increases soundness of study that can be useful for future studies.
* *Records of the data analysis process*, which includes codebooks, how coding schemes were developed, documentation of initial codes secondary codes, categories, with multiple examples from the dataset (interview transcripts, observational records, focus group transcripts, for example).
* *Clear alignment* of gap, problem statement, research questions, methodology, research design.
* *Peer debriefing*, which includes consulting with mentors or experienced qualitative researchers to discuss and receive feedback on the study, prior to, during, and after the completion of the study.
* *Test the strength of the analysis and interpretation*, which includes checking analysis and interpretation against documents, records, recordings (the dataset).

 Confirmability. Confirmability refers to the objectivity or the ability of others to confirm or corroborate findings (Chess, 2017, section 3, para. 3). Qualitative researchers develop confirmability through:

* *Coding,* which is clear and well defined; the naming of patterns identified in the data; patterns can include stories, ideas, specific participant-offered terms, and phrases.
* *Providing ample evidence* to support claims.
* *Intercoder reliability*. The extent to which two researchers, coding data based on the same codebook (an inductively developed list of codes and their definitions) code the data in the same way.
* *Rival explanations and negative cases*. Identify examples that do not fit a pattern that is emerging. These might indicate an alternative organizing scheme, or may be the exception that proves the rule (Creswell & Miller, 2000; Patton, 1999)
* *Researcher reflexivity*, which is how the researcher maintain awareness about how results unfold, documenting emerging patterns. The researcher’s positionality or “reflective commentary:” allows researcher to clearly state the lens through which the social world is interpreted and discuss how the researcher’s background influences data collection and analysis (Lincoln & Guba, 1985).
* *In-depth methodological description* to allow integrity of research results to be scrutinized.
* *Admission or statement of researcher’s beliefs and assumptions*.\*
* *Recognition of shortcomings in study’s methods and their potential effects.\**

\**These are covered in the assumptions and limitations sections of the dissertation.*

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score**  | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **TRUSTWORTHINESS (for Qualitative Studies)**Trustworthiness is the term used to describe the elements that establish the credibility, transferability, dependability, and confirmability of the study. (Minimum two to four paragraphs or approximately one page) |
| **Qualitative “validity” is composed of credibility and transferability.**Strategies generally include rigorous techniques and methods, thick description, audit trails, evident methodological processes and procedures, well-defined coding, ample examples of quotes, and findings that clearly emerge from the data. |
| Defines the concepts of credibility, transferabilityCredibility: discusses how the study represents the participants’ experiencesTransferability: discusses how the study’s findings may be applicable to policy, practice, future research |  |  |  | X |
| Describes the threats to the credibility and transferability of the study inherent in the study design, sampling strategy, data collection method/instruments, and data analysisAddresses how these threats will be minimized |  |  |  | X |
| **Qualitative “reliability” is composed of dependability and confirmability**.Establishes consistency and repeatability of data collection through in-depth documented methodology; detailed interview/observation/data collection protocols and guides; creation of research data-base; and/or use of triangulation. |
| Defines concepts of dependability and confirmability |  |  |  | X |
| * Dependability: discusses how the study documents research procedures
 |  |  |  | X |
| * Confirmability: discusses how the study could be confirmed or findings corroborated by others
 |  |  |  | X |
| Describes the threats to dependability and confirmability of the study inherent in the study design, sampling strategy, data collection method/instruments, and data analysisAddresses how these threats will be minimized |  |  |  | X |
| Appendices must include copies of instruments, materials, qualitative data collection protocols, codebook(s), and permission letters from instrument authors (for validated instruments, surveys, interview guides, etc.) |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Validity (for Quantitative Studies)

This section describes and defends the procedures used to determine the validity of the data collected. Validity refers to the degree to which a study accurately reflects or assesses the specific concept that the researcher is attempting to measure. Ask if what is being measured is what was set out to be measured. Researchers must be concerned with both external and internal validity. External validity refers to the extent to which the results of the study are generalizable (quantitative) or transferable (qualitative) to the population. Internal validity refers to the rigor with which the study was conducted (study design, theory instrumentation, measurements, etc.). For this section, provide specific validity statistics for quantitative instruments, identifying how they were developed. Explain specific approaches on how validity will be addressed for qualitative data collection approaches.

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score**  | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **VALIDITY (for Quantitative Studies)** (Minimum two to four paragraphs or approximately one page) |
| **Quantitative Studies**: Provides specific validity statistics for quantitative instruments, identifying how they were developed. Validated surveys cannot be used in part or adapted. Validated instruments borrowed by the learner must be included in the proposal/dissertation appendices as a pdf or jpeg document along with the learner’s word file of his/her version of the instrument (whose content should be identical with that of the original pdf). **NOTE:** *Learners should not modify or develop quantitative instruments without permission from the Assistant Dean.* |  |  |  | X |
| Appendices must include copies of instruments, materials, and permission letters from instrument authors (for validated instruments, surveys, etc.) |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Reliability (for Quantitative Studies)

This section describes and defends the procedures used to determine the reliability of the data collected. Reliability is the extent to which an experiment, test, or any measuring procedure is replicable and yields the same result with repeated trials. For this section, provide specific reliability statistics for quantitative instruments, identifying how the statistics were developed. Explain specific approaches on how reliability will be addressed for qualitative data collection approaches.

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score**  | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **RELIABILITY** (Minimum two to four paragraphs or approximately one page) |
| **Quantitative Studies:** Provides specific reliability statistics for quantitative instruments, identifying how the statistics were developed. Explains specific approaches on how reliability will be addressed for qualitative data collection approaches. |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Data Collection and Management

This section details the entirety of the process used to collect the data. Describe the step-by-step procedures used to carry out all the major steps for data collection for the study in a way that would allow another researcher to replicate the study. Think of this section of Chapter 3 as a recipe, that needs to be carefully followed to produce the best possible study results (or “entrée”). Review the Criteria Table below for the exact requirements in this section. It is critical this section is clear, comprehensive, and details the exact steps used in the data collection process

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **DATA COLLECTION AND MANAGEMENT** (Minimum one to three pages) |
| **Quantitative Studies:** Describes the procedures for the actual data collection that would allow replication of the study by another researcher, including how each instrument or data source was used, how and where data were collected, and recorded. Includes a linear sequence of actions or step-by-step of procedures used to carry out all the major steps for data collection. Includes a workflow and corresponding timeline, presenting a logical, sequential, and transparent protocol for data collection that would allow another researcher to replicate the study.Data from different sources may have to be collected in parallel (e.g., paper-and-pen surveys for teachers, corresponding students, and their parents AND retrieval of archival data from the school district). A flow chart is ok—"linear" may not apply to all situations**Qualitative Studies:** Provides detailed description of data collection process, including all sources of data and methods used, such as interviews, member checking, observations, surveys, and expert panel review. Note: The collected data must be sufficient in breadth and depth to answer the research question(s) and interpreted and presented correctly, by theme, research question and/or instrument.  |  |  |  | X |
| Describes the procedures for obtaining participant informed consent and for protecting the rights and well-being of the study sample participants.Include site authorization letter(s) and participants' informed consent (parents' consent and children's consent, as needed) in appendices. |  |  |  | X |
| Describes how raw data are prepared for analysis (i.e., transcribing interviews, conducting member checking, downloading from SPSS and checking for missing data).Describes (for both paper-based and electronic data) the data management procedures adopted to maintain data securely, including the length of time data will be kept, where it will be kept, and how it will be destroyed |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Data Analysis Procedures

This section provides a step-by-step description of the procedures to be used to conduct the data analysis. The key elements of this section include the process by which raw data were prepared for analysis and then subsequently analyzed. Overall, be sure that the language used to describe the data analysis procedure is consistently used in Chapters 4 and 5.

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **DATA ANALYSIS PROCEDURES** (Minimum one to three pages) |
| Lists the problem statement or purpose statement, along with the research question(s). Also includes the null and alternative hypotheses for quantitative studies. |  |  |  | X |
| Describes in detail the relevant data collected for each stated research question and/or each variable within each hypothesis (if applicable).**Quantitative Studies:** "In detail" means scales (and subscales) of specified instruments AND type of data for each variable of interest. IMPORTANT: For (quasi) experimental studies, provide detailed description of all treatment materials per treatment condition, as part of the description of the independent variable corresponding to the experimental manipulation. |  |  |  | X |
| Describes, in detail, the data management practice including how the raw data were organized and prepared for analysis, i.e., ID matching of respondents who may respond to more than one survey/instrument, coding/recoding of variables, treatment of missing values, scoring, calculations, etc.**Qualitative Studies:** (1) describes transcription process for interviews, focus groups, descriptive statistics (mean scores, percentages) calculated for surveys, observation checklists, etc.  |  |  |  | X |
| **What:** Describes, in detail, statistical and non-statistical analysis to be used and procedures used to conduct the data analysis.**Quantitative Studies:** (1) describe data file preparation (descriptive statistics used to check completeness and accuracy; *for files from different sources*, possibly aggregating data to obtain a common unit of analysis in all files, necessarily merging files (using the key variable defining the unit of analysis); (2) computation of statistics for the sample profile; (3) computation of (subscales and) scales; (4) reliability analysis for all scales and subscales; (5) computation of descriptive statistics for all variables of interest in the study (except those already presented in the sample profile); (6) state and justify all statistical procedures ("tests") needed to generate the information to answer all research questions; and (7) state assumptions checks for all those statistical procedures (including the tests and / or charts to be computed).**Qualitative Studies:** This section begins by identifying and discussing the specific analysis approach or strategy, followed by a discussion of coding procedures used. Note: coding procedures may be different for Thematic Analysis, Narrative Analysis, Phenomenological Analysis, or Grounded Theory Analysis. |  |  |  | X |
| **Why:** Provides the justification for each of the (statistical and non-statistical) data analysis procedures used in the study. If a change in analysis was made, explains what was actually done versus what was planned and why.  |  |  |  | X |
| **How:** Demonstrates how the statistical and non-statistical data analysis techniques align with the research questions/design. |  |  |  | X |
| **Quantitative Analysis** - states the level of statistical significance for each test as appropriate, and describes tests of assumptions for each statistical test.**Qualitative Analysis** - evidence of qualitative analysis approach, such as coding and theming process, must be completely described and included the analysis /interpretation process. Clear evidence from how codes moved to themes must be presented.  |  |  |  | X |
| Provides evidence that quantity and quality of data is sufficient to answer the research questions. This must be present in this section or in an appendix including data samples. |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Ethical Considerations

This section should demonstrate adherence to the key principles of the Belmont Report (respect, justice and beneficence) in the study design, sampling procedures, and within the theoretical framework, research problem, and questions. Learners should clearly discuss how data will be stored, safeguarded, and destroyed, as well as how the results of the study will be published. This section should also reference IRB approval to conduct the research, which includes subject recruiting, informed consent processes, and the voluntary nature of study. Please see the Figure 2 below regarding IRB approval requirements. Additionally, the learner should identify the potential risks for harm that are inherent in the study, in lieu of just listing what they are doing to ensure confidentiality. Finally, the IRB approval letter with the protocol number, informed consent/subject assent documents, site authorization letter(s), or any other measures required to protect the participants or institutions, must be included in the appendices.

**IRB Alert**

**Please be aware that GCU doctoral learners may not screen, recruit, or collect any data until they receive Institutional Review Board (IRB) approval and obtain a signed D-50 form. IRB review occurs after the proposal is approved by AQR and the proposal defense is completed. Learners are responsible for knowing, understanding, and following the IRB submission and review processes. Screening, recruiting participants, and collecting data in advance of IRB approval is a serious research ethical violation, with legal and federal regulatory implications to the University. If a learner chooses to screen or recruit study participants, or collects data in advance of obtaining IRB approval (IRB approval letter and D-50 form), s/he will be subject to serious academic disciplinary action by the Institutional Review Board and Code of Conduct committee. This may include collecting new data or requiring the learner to start over with a new research study. In addition, the Code of Conduct committee will issue a disciplinary action that may include warning, suspension, or dismissal from the program.**

**Note: Learners should NEVER proceed with any aspect of participant screening, recruiting, interacting with participants, or collecting data in advance of receiving the IRB approval letter and the signed D-50 form. The chairs and committee members are trained on these requirements; however, the learner is ultimately responsible for understanding and adhering to all IRB requirements as outlined in the University Policy Handbook and Dissertation Milestone Guide.**

*Figure 1*. IRB alert.

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score**  | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **ETHICAL CONSIDERATIONS** (Minimum three to four paragraphs or approximately one page) |
| Provides a discussion of ethical issues, per Belmont Report and IRB guidelines, related to the study and the study population of interest. Explains which principles / issues are relevant to the study. Identifies the potential risks for harm that are inherent in the study. |  |  |  | X |
| Describes the procedures for obtaining informed consent and for protecting the rights and well-being of the study sample participants. |  |  |  | X |
| Addresses key ethical criteria of anonymity, confidentiality, privacy, strategies to prevent coercion, and any potential conflict of interest. |  |  |  | X |
| Describes the data management procedures adopted to store and maintain paper and electronic data securely, including the length of time data will be kept, where it will be kept, and how it will be destroyed. Explains what he/she planned to do / did to implement each of the principles / issues that are relevant the study data management, data analysis, and publication of findings.**Note:** Learners are required to securely maintain and have access to raw data/records for a minimum of three years. If asked by AQR reviewer or CDS representative, learner must provide all evidence of data including source data, Excel files, interview transcripts, evidence of coding or data analysis, or survey results, etc. No dissertation will be allowed to move forward in the review process if data are not produced upon request.  |  |  |  | X |
| Includes copy of IRB Informed Consent (Proposal) and IRB Approval letter (Dissertation) in an Appendix.All approvals, consent forms, recruitment, and data collection materials are mentioned in the Data Collection section and included in separate appendixes (with appropriate in-text references). |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Limitations and Delimitations

While Chapter 1 addresses the broad, overall limitations and delimitations of the study, this section discusses, in detail, the limitations and delimitations related to the research methodology and design and potential impacts on the results. The section also describes any limitations and delimitations related to the methods, sample, instrumentation, data collection process and analysis. Other methodological limitations and delimitations of the study may include issues regarding the study design, sample in terms of size, population and procedure, instrumentation, data collection processes, and data analysis. This section also contains an explanation of why the existing limitations are unavoidable and are not expected to affect the results negatively.

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score**  | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **LIMITATIONS AND DELIMITATIONS** (Minimum two to three paragraphs) |
| Reiterates those limitations listed in Ch. 1 and explains why the existing limitations are unavoidable. Describes any delimitations related to the methodology, sample, instrumentation, data collection process and analysis. Note: This section must be updated as limitations emerge in the data collection/analysis, and then incorporated in Chapter 5 the limitations overall and how the study results were affected. |  |  |  | X |
| States consequences of each limitation and delimitation in terms of data quantity, quality, and validity / generalizability of the findings.Discusses strategies to minimize and/or mitigate the negative consequences of limitations and delimitations. |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Summary

This section restates what was written in Chapter 3 and provides supporting citations for key points. The summary should demonstrate an in-depth understanding of the overall research design and analysis techniques. The Chapter 3 summary ends with a discussion that transitions the reader to Chapter 4.

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **CHAPTER 3 SUMMARY** (Minimum one to two pages) |
| Summarizes key points presented in Chapter 3 using authoritative, empirical sources/citations. |  |  |  | X |
| Document shows alignment of title, problem statement, purpose statement, RQs and hypotheses, methodology, design, data collection and instruments, and analysis. |  |  |  | X |
| Ends Chapter 3 with a transition discussion to focus for Chapter 4. |  |  |  | X |
| The Chapter is correctly formatted to dissertation template using the Word Style Tool and APA standards. Writing is free of mechanical errors. |  |  |  | X |
| All research presented in the Chapter is scholarly, topic-related, and obtained from highly respected academic, professional, original sources. In-text citations are accurate, correctly cited and included in the reference page according to APA standards. |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format.  |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

# Chapter 4: Data Analysis and Results

## Introduction

The purpose of this chapter is to summarize the collected data, how it was analyzed and then to present the results. This section of Chapter 4 briefly restates the problem statement, the methodology, the research question(s), hypothesis(es) or phenomena, and then offers a statement about what will be covered in this chapter. Chapter 4 should present the results of the study as clearly as possible, leaving the interpretation of the results for Chapter 5. Make sure this chapter is written in past tense and reflects how the study was *actually conducted*.

This chapter typically contains the analyzed data, often presented in both text and tabular, or figure format. To ensure readability and clarity of findings, structure is of the utmost importance in this chapter. Sufficient guidance in the narrative should be provided to highlight the findings of greatest importance for the reader. Most researchers begin with a description of the sample and the relevant demographic characteristics presented in text or tabular format. Ask the following general questions before starting this chapter:

1. Is there sufficient data to answer each of the research question(s)/hypothesis(es) asked in the study?
2. Is there sufficient data to support the conclusions made in Chapter 5?
3. Is the study written in the third person? Never use the first person.
4. Are the data clearly explained using a table, graph, chart, or text?

 Visual organizers, including tables and figures, must always be introduced, presented and discussed within the text first. Never insert them without these three steps. It is often best to develop all the tables, graphs, charts, etc. before writing any text to further clarify how to proceed. Point out the salient results and present those results by table, graph, chart, or other form of collected data.

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **INTRODUCTION (TO THE CHAPTER)** (Minimum two to four paragraphs or approximately one page) |
| Reintroduces the purpose of the research study. |  |  |  | X |
| Briefly describes the research methodology and/or research questions/hypotheses tested. |  |  |  | X |
| Provides an orienting statement about what will be covered in the chapter. |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Descriptive Findings

This section of Chapter 4 provides a narrative summary of the population or sample characteristics and demographics of the participants in the study. It establishes the number of subjects, gender, age, education level or employee classification, (if appropriate), organization, or setting (if appropriate), and other appropriate sample characteristics (e.g., education level, program of study, employee classification, etc.). The use of graphic organizers, such as tables, charts, histograms and graphs to provide further clarification and promote readability, is encouraged to organize and present coded data. Ensure this data cannot lead to anyone identifying individual participants in this section or identifying the data for individual participants in the data summary and data analysis that follows.

For numbers, equations, and statistics, spell out any number that begins a sentence, title, or heading – or reword the sentence to place the number later in the narrative. In general, use Arabic numerals (10, 11, 12) when referring to whole numbers 10 and above, and spell out whole numbers below 10. There are some exceptions to this rule:

* If small numbers are grouped with large numbers in a comparison, use numerals (e.g., 7, 8, 10, and 13 trials); but, do not do this when numbers are used for different purposes (e.g., 10 items on each of four surveys).
* Numbers in a measurement with units (e.g., 6 cm, 5-mg dose, 2%).
* Numbers that represent time, dates, ages, sample or population size, scores, or exact sums of money.
* Numbers that represent a specific item in a numbered series (e.g., Table 1).

A sample table in APA style is presented in Table 1. Be mindful that all tables fit within the required margins, and are clean, easy to read, and formatted properly using the guidelines found in Chapter 5 (Displaying Results) of the APA *Publication Manual* 6.0 (2010).

Table 1.

*Correct Formatting for a Multiple Line Table Title is Single Spacing and Should Look Like this Example*

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | Column A*M (SD)* | Column B *M (SD*) | Column C *M (SD*) |
| Row 1 | 10.1 (1.11) | 20.2 (2.22) | 30.3 (3.33) |
| Row 2 | 20.2 (2.22) | 30.3 (3.33) | 20.2 (2.22) |
| Row 3 | 30.3 (3.33) | 10.1 (1.11) | 10.1 (1.11) |
| *Note.* Adapted from “Sampling and Recruitment in Studies of Doctoral Students,” by I.M. Researcher, 2010, *Journal of Perspicuity*, 25, p. 100. Reprinted with permission. |

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score**  | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **DESCRIPTIVE FINDINGS** (Number of pages as needed) |
| Provides a narrative summary of the population or sample characteristics and demographics.**Quantitative Studies:** Presents the "Sample (or Population) profile," using statistics for the demographics collected from or retrieved for the actual sample or population. If the actual sample is smaller than the *a priori* sample, the learner must discuss consequences (e.g., limitations, change of statistical analysis procedures, possibly even change of design). The second section of Descriptive Data should be "Descriptive statistics for the variables of interest" (analyzed to answer the RQs). For composite continuous variables, reliability coefficients computed on the study data precede the descriptive statistics and have to be compared with coefficients reported by instrument authors and prior users. Low reliability (< 0.7) may require changes in design and analysis (dropping variables with unreliable data). In case of changes of statistical analysis that became necessary during the computation of descriptive statistics, the learner will present and justify the new statistical procedures.**Qualitative Studies:** Presents the "Sample (or Population) profile," using statistics for the demographics collected from or retrieved for the actual sample or population.  |  |  |  | X |
| Includes a narrative summary of data collected (e.g., for qualitative studies, samples of collected data should be included in an Appendix.) |  |  |  | X |
| Uses visual graphic organizers, such as tables, histograms, graphs, and/or bar charts, to effectively organize and display coded data and descriptive data. For example:**Quantitative Studies:** sample-level frequencies and descriptive or graphic comparisons of study-relevant groups. If the intended analysis involves parametric procedures, tests of assumptions are required to evaluate sample distribution (skewness and kurtosis data and charts) normality and homogeneity of variance. If nonparametric procedures are used, justification must be provided.**Qualitative Studies:** Discuss and provide a table showing number of interviews conducted, duration of interviews, #pages transcript; # observations conducted, duration, #pages of typed-up field notes, # of occurrences of a code, network diagrams, model created, etc. |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Data Analysis Procedures

This section presents a description of the process that was used to analyze the data. If hypotheses or research question(s) guided the study, data analysis procedures can be framed relative to each research question or hypothesis. Data can also be organized by chronology of phenomena, by themes and patterns, or by other approaches as deemed appropriate according for a qualitative study.

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **DATA ANALYSIS PROCEDURES**This section presents a description of the process that was used to analyze the data. If hypotheses or research question(s) guided the study, data analysis procedures can be framed relative to each research question or hypothesis. For a qualitative study, data can also be organized by chronology of phenomena, by themes and patterns, or by other approaches as deemed appropriate. (Number of pages as needed) |
| Describes in detail the data analysis procedures. **Qualitative Studies:** Coding procedures must be tailored to the specific analytical approach; they are not generic. Start discussion of data analysis procedures by identifying and describing the analytical approach (e.g., thematic analysis, Phenomenological analysis). Describes coding process, description of how codes were developed, how categoris were developed, how these are related to themes. Provide examples of codes and themes with corresponding quotations, demonstrating how codes were developed into themes. Provides evidence of initial and final codes and themes in text or an Appendix. **Quantitative Studies:** The preparation of the data file ought to be presented BEFORE the Descriptive Findings. If the analysis is run as planned, the learner will present the results of the statistical procedures per RQ. If the analysis had to be changed, the learner will present the results of the new procedure(s) per RQ. No analyses unrelated to the RQs are allowed. Results tables have to be included in text. For each question, the learner will comment on the relevant statistics and will draw a conclusion in terms of accepting the null or the alternative hypothesis stated for that question. It is possible that a single statistical procedure may generate the statistics needed to answer multiple RQs—in that case, the learner will present the analysis results, with appropriate table(s), and then state and answer the RQs in due order.  |  |  |  | X |
| Explains and justifies any differences in why data analysis section does not match what was approved in Chapter 3 (if appropriate).**Quantitative Studies:** Changes in the analysis have to be justified earlier (as recommended above). In a rubric, the order of evaluation criteria is not important, BUT in the TEMPLATE, it is very important (changes may have to be made at different points in data processing for different reasons). |  |  |  | X |
| Provides validity and reliability of the data in statistical terms for quantitative research OR describes approaches used to ensure validity and reliability for qualitative data including expert panel review of questions, practice interviews, member checking, and triangulation of data, as appropriate. |  |  |  | X |
| Identifies sources of error, missing data, or outliers and potential effects on the data. Discuss the limitations this places on the study results. |  |  |  | X |
| Describe Power Analysis and Test(s) of Assumptions (as appropriate) for statistical tests. |  |  |  | X |
| **Quantitative Studies:** Justifies how the analysis aligns with the research question(s) and hypothesis(es) and is appropriate for the research design. **Qualitative Studies**: Justifies how the analysis aligns with the research question(s), and how data and findings were organized by chronology of phenomena, by themes and patterns, or by other approaches as deemed appropriate. |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Results

This section, which is the primary section of this chapter, presents a summary and analysis of the data in a nonevaluative, unbiased, organized manner that relates to the research question(s) and/or hypothesis(es). List the research question(s) as they are discussed to ensure that the readers see that the question has been addressed. Answer the research question(s) in the order that they are listed for quantitative studies. Learners can organize data in several different ways for qualitative studies including: by research question, by themes and patterns, or by other approaches deemed appropriate for the study.

The results must be presented without implication, speculation, assessment, evaluation, or interpretation. Discussion of results and conclusions are left for Chapter 5. Refer to the APA Style Manual for additional lists and examples. In quantitative dissertations, it is not required for all data analyzed to be presented; however, it is important to provide descriptive statistics and the results of the applicable statistical tests used in conducting the analysis of the data. It is also important that there are descriptive statistics provided on all variables. Nevertheless, it is also acceptable to put most of this in the appendix if the chapter becomes too lengthy.

Required components include descriptive and inferential statistics. Descriptive statistics describe or summarize data sets using frequency distributions (e.g., to describe the distribution for the test scores in a class of 30 pupils) or graphical displays such as bar graphs (e.g., to display increases in a school district's budget each year for the past five years), as well as histograms (e.g., to show spending per child in school and display mean, median, modes, and frequencies), line graphs (e.g., to display peak scores for the classroom group), and scatterplots (e.g., to display the relationship between two variables). Descriptive statistics also include numerical indexes such as averages, percentile ranks, measures of central tendency, correlations, measures of variability and standard deviation, and measures of relative standing.

Inferential statistics describe the numerical characteristics of data and then go beyond the data to make inferences about the population based on the sample data. Inferential statistics also estimate the characteristics of populations and test hypotheses about population parameters using sampling distributions, estimation, or hypothesis testing. Table 2 presents example results of an independent *t* test comparing Emotional Intelligence (EI) mean scores by gender.

Table 2.

*Equality of Emotional Intelligence Mean Scores by Gender*

|  |
| --- |
| *t* test for Equality of Means |
|  | *t* | *df* | *p* |
| EI | 1.908 | 34 | .065 |

For qualitative studies, it is important to provide a complete picture of the constant comparative analysis conducted or of the coding pursued to arrive at a set of themes or conclusions about the subject. In qualitative studies, if thematic analysis is used, the questions to ask include the following:

1. What themes occur in interviews and field notes?
2. Does the study provide samples that the themes exist by using interviews or field notes?
3. What topics were mentioned most often?
4. What issues were most important to the people in the study?
5. How do the participants view the topic of research?
6. What kinds of relationships are apparent? (e.g., strict inclusion, cause-effect, function, sequence)?
7. How can the categories identified in the data be ordered into meaningful, grounded theories?

After completing the first draft of Chapter 4, ask these general questions:

1. Are the findings clearly presented, so any reader could understand them?
2. Are all the tables, graphics or visual displays well-organized and easy to read?
3. Are the important data described in the text?
4. Is factual data information separate from analysis and evaluation?
5. Are the data organized by research questions?

Chapter 4 can be challenging regarding mathematical equations and statistical symbols or variables. When including an equation in the narrative, space the equation as one would words in a sentence: *x* + 5 = *a*. Punctuate equations that are in the paragraph, as one would a sentence. Remember to italicize statistical and mathematical variables, except Greek letters, and if the equation is long or complicated, set it off on its own line.

Refer to the APA manual for specific details on representation of statistical information.

Basic guidelines include:

* Statistical symbols are italicized (*t, F, N, n*)
* Greek letters, abbreviations that are not variables and subscripts that function as identifiers use standard typeface, no bolding or italicization
* Use parentheses to enclose statistical values (*p* = .026) and degrees of freedom *t* (36) = 3.85 or *F*(2, 52) = 3.85
* Use brackets to enclose limits of confidence intervals 95% *CIs* [- 5.25, 4.95]

Make sure to include appropriate graphics to present the results. Always *introduce*, *present*, and *discuss* the visual organizers in narrative form. Never insert a visual organizer without these three steps.

A figure is a graph, chart, map, drawing, or photograph. Below is an example of a figure labeled per APA style. Do not include a figure unless it adds substantively to the understanding of the results or it duplicates other elements in the narrative. If a figure is used, a label must be placed under the figure. As with tables, refer to the figure by number in the narrative preceding the placement of the figure. Make sure a table or figure is not split between pages. Below is another example of a table that the characteristics of a servant leader.

Table 3.

*The Servant Leader*

| **Trait** | **Descriptors** |
| --- | --- |
| Values People | By believing in peopleBy serving other’s needs before his or her ownBy receptive, non-judgmental listening |
| Develops People | By providing opportunities for learning and growthBy modeling appropriate behaviorBy building up others through encouragement and affirmation |
| Builds Community | By building strong personal relationshipsBy working collaboratively with othersBy valuing the differences of others |
| Displays Authenticity | By being open and accountable to othersBy a willingness to learn from othersBy maintaining integrity and trust |
| Provides Leadership | By envisioning the futureBy taking initiativeBy clarifying goals |
| Shares Leadership | By facilitating a shared visionBy sharing power and releasing controlBy sharing status and promoting others |
| Note. Derived from Laub, J. (1999). *Assessing the servant organization: Development of the servant organizational leadership assessment (SOLA) instrument* (Doctoral Dissertation). Available from ProQuest Dissertation and Theses Database. (UMI No. 9921922) |



*Figure 2.* Correlation for SAT composite score and time spent on Facebook.

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **RESULTS**This section, which is the primary section of this chapter, presents an analysis of the data in a non-evaluative, unbiased, organized manner that relates to the research question(s) and/or hypotheses. List the research question(s) as you are discussing them in order to ensure that the readers see that the question has been addressed. Answer the research question(s) in the order that they are listed. (Number of pages as needed) |
| **Data and the analysis of that data are presented in a narrative, non-evaluative, unbiased, organized manner.****Quantitative** **data** are organized by research question and/or hypothesis. Findings are presented by hypothesis using section titles. They are presented in order of significance if appropriate.**Qualitative data** may be organized by theme, participant and/or research question. **Qualitative Studies:** Results of analysis are presented in appropriate narrative, tabular, graphical and/or visual format. If using thematic analysis, coding and theming process must be completely described in the results presentation. Integration of quotes in the results presentation to substantiate the stated findings and build a narrative picture is required. Data analysis should include narrative story for narrative analysis; case study summary for case study; model or theory for grounded theory.Learner describes thematic findings mostly in own words in narrative form as if they are telling their story or summarizing their experiences, and then use selected quotes (ideally one or few sentences, no longer than one paragraph) to illustrate. |  |  |  | X |
| **Includes appropriate graphic organizers such as tables, charts, graphs, and figures.** **Quantitative Studies:** Results of each statistical test are presented in appropriate statistical format with tables, graphs, and charts.* Tables and/or figures are included for descriptive findings.
* Tables and/or figures are included for assumption checks.
* Tables and/or figures are included for and results.

**Qualitative Studies:** As appropriate, tables are presented for initial codes, themes and theme meanings, along with sample quotes.  |  |  |  | X |
| Sufficient quantity and quality of the data or information appropriate to the research design is presented in the analyses to answer the research question(s) and or hypotheses. Evidence for this must be clearly presented in this section and in an appendix as appropriate. **Quantitative Studies:** * Discuss quantity in relation to the actual sample (or population) size,
* Discuss quality in relation to sampling method, data collection process, and data completion/accuracy.

Note: AQR reviewer may request to review raw data at any time during the AQR process. Additional data collection may be required if sufficient data is not present. |  |  |  | X |
| **Quantitative Studies:** * Inferential statistics, require tests of normality, tests of assumptions, test statistics and *p*-value reported for each hypothesis.
* Control variables (if part of the design) are reported and discussed.
* Secondary data treatment of missing values is fully described.
* Outlier responses are explained as appropriate.

**Qualitative Studies:*** Qualitative data analysis is fully described and displayed using techniques specific to the design and analytic method used.
* Data sets are summarized including counts AND examples of participant’s responses for thematic analysis. For other approaches to qualitative analysis, results may be summarized in matrices or visual formats appropriate to the form of analysis.
* Outlier responses are explained as appropriate.
* Findings may be presented as themes using section titles for thematic analysis, as stories for narrative designs, as models or theories for grounded theory, and as visual models or narrative stories for case studies.
 |  |  |  | X |
| Appendices must include qualitative or quantitative data analysis that supports results in Chapter 4 as appropriate (i.e. source tables for t test/ANOVA; or coding and theming process or codebook, if not included directly in Chapter 4). |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Summary

This section provides a concise summary of what was found in the study. It briefly restates essential data and data analysis presented in this chapter, and it helps the reader see and understand the relevance of the data and analysis to the research question(s) or hypothesis(es). Finally, it provides a lead or transition into Chapter 5, where the implications of the data and data analysis relative to the research question(s) and/or hypothesis(es) will be discussed. The summary of the data must be logically and clearly presented, with the information separated from interpretation. For qualitative studies, summarize the data and data analysis results in relation to the research question(s). For quantitative studies, summarize the statistical data and results of statistical tests in relation to the research question(s)/hypothesis(es). Finally, provide a concluding section and transition to Chapter 5.

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **SUMMARY**This section provides a concise summary of what was found in the study. It briefly restates essential data and the data analysis presented in this chapter, and it helps the reader see and understand the relevance of the data and analysis to the research questions or hypotheses. Finally, it provides a lead or transition into Chapter 5 where the implications of the data and data analysis relative to the research questions and/or hypotheses will be discussed. (Minimum one to two pages) |
| Presents a clear and logical summary of data. |  |  |  | X |
| **Quantitative Studies:** Summarizes the statistical data and results of statistical tests in relation to the research questions/hypotheses.**Qualitative Studies:** Summarizes the data and data analysis results in relation to the research questions. Summarizes data across research questions for case studies, narratives, and grounded theory. |  |  |  | X |
| Discusses limitations that emerged based on data analysis and how the interpretation of results may be effected by the limitations. Data limitations are added to Chapters 1, 3, 5 and discussed as appropriate. |  |  |  | X |
| Provides a concluding section and transition to Chapter 5. |  |  |  | X |
| The Chapter is correctly formatted to dissertation template using the Word Style Tool and APA standards. Writing is free of mechanical errors. |  |  |  | X |
| All research presented in the Chapter is scholarly, topic-related, and obtained from highly respected academic, professional, original sources. In-text citations are accurate, correctly cited and included in the reference page according to APA standards. |  |  |  | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  |  | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

# Chapter 5: Summary, Conclusions, and Recommendations

## Introduction and Summary of Study

This section introduces Chapter 5 as a comprehensive summary of the study framework including a recap of the essential 10 strategic points of Chapters 1-3. It reminds the reader of the importance of the topic and briefly explains how the study intended to contribute to the body of knowledge on the topic. It further reminds the reader of the research question(s) and illustrates how the **data analysis** approach (not findings) reported in Chapter 4 aligns to answering the research questions. It informs the reader that conclusions, implications, and recommendations will be presented.

Chapter 5 is perhaps the most important chapter in the dissertation manuscript because it presents the researcher’s contribution to the body of knowledge. For many who read research literature, this may be the only chapter they will read. Chapter 5 typically begins with a summary of the essential points made in Chapters 1 and 3 of the original research proposal and includes why this topic is important and how this study was designed to contribute to the understanding of the topic. The remainder of the chapter contains a summary of the overall study, a summary of the findings and conclusions, recommendations for future research and practice, and a final section on implications derived from the study.

No new data should be introduced in Chapter 5; however, references should be made to findings or citations presented in earlier chapters. The researcher can articulate new frameworks and new insights. The concluding words of Chapter 5 should emphasize both the most important points of the study, study strengths and weaknesses, and directions for future research. This should be presented in the simplest possible form, making sure to preserve the conditional nature of the insights.

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **INTRODUCTION and SUMMARY OF STUDY**This section introduces Chapter 5 as a comprehensive summary of the entire study. It reminds the reader of the importance of the topic and briefly explains how the study intended to contribute to the body of knowledge on the topic. It informs the reader that conclusions, implications, and recommendations will be presented. (Minimum two to four paragraphs or approximately one page) |
| Provides a comprehensive summary of the study framework including a recap of the 10 strategic points. |  |  |  |  |
| Reminds the reader of the research questions and how the reported data analysis *(not findings)* align to answering the research questions. |  |  | X |  |
| Provides an overview of why the study is important and how the study was designed to contribute to our understanding of the topic. |  |  | X |  |
| Provides a transition, explains what will be covered in the chapter and reminds the reader of how the study was conducted. |  |  | X |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  | X |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Summary of Findings and Conclusion

This section of Chapter 5 is organized by research question(s)/hypothesis(es), and it conveys the specific findings of the study. The section presents conclusions made based on the data analysis and findings of the study and relates the findings back to the literature, significance of the study in Chapter 1, Advancing Scientific Knowledge in Chapter 1. Significant themes/ findings are compared and contrasted, evaluated, and discussed in light of the existing body of knowledge. The significance of every finding is analyzed and related to the significance section and advancing scientific knowledge section of Chapter 1. Additionally, the significance of the findings is analyzed and related back to Chapter 2 and ties the study together. The findings are bounded by the research study parameters described in Chapters 1 and 3, are supported by the data and theory, and directly relate to the research question(s). No unrelated or speculative information is presented in this section. This section of Chapter 5 should be organized by research question(s), hypothesis(es), theme, or any manner that allows summarizing the specific findings supported by the data and the literature. Conclusions represent the contribution to knowledge and fill in the gap in the knowledge. They should also relate directly to the significance of the study. The conclusions are major generalizations, and an answer to the research problem developed in Chapters 1 and 2. This is where the study binds together. In this section, personal opinion is permitted, as long as it is backed with the data, grounded in the research methods and supported in the literature.

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score**  | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **SUMMARY OF FINDINGS AND CONCLUSIONS**This section is organized by research question/hypothesis, and it conveys the specific findings of the study. It presents all conclusions made based on the data analysis and findings of the study. It relates the findings back to the literature, referring to the literature discussed in the Advancing Scientific Knowledge section and the Significance of the Study section in Chapter 1. It also discusses the significant themes and findings relative to the body of knowledge covered throughout Chapter 2. (Minimum three to five pages) |
| Organizes Chapter 5 using the same section titles as Chapter 4, by research question(s)/hypothesis(es) or by themes. Significant themes/ findings are compared and contrasted, synthesized and discussed in light of the existing body of knowledge covered in Chapter 2 |  |  | X |  |
| Summarizes study findings. Compares, contrasts and synthesizes study findings in context to prior research on the topic (Chapter 2). Provides a cogent discussion on how the study is aligned to and/or advances the research on the topic. |  |  | X |  |
| Illustrates that findings are bounded by the research study design described in Chapters 1, 2 and 3. |  |  | X |  |
| Illustrates how findings are supported by the data and theory, and how the findings directly align to and answer the research question(s). |  |  | X |  |
| Discusses significance (or nonsignificance) of findings and relates each of the findings directly to the Significance of the Study section and Advancing Scientific Knowledge section of Chapter 1. |  |  | X |  |
| Refrains from including unrelated or speculative information in this section. |  |  | X |  |
| Provides a conclusion to summarize the findings, referring back to Chapter 1, and tying the study together. |  |  | X |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  | X |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Implications

This section should describe what could happen because of this research. It also tells the reader what the research implies theoretically, practically, and for the future.

Additionally, it provides a retrospective examination of the theoretical framework presented in Chapter 2 considering the dissertation’s findings. A critical evaluation of the strengths and weaknesses of the study and the degree to which the conclusions are credible given the methodology, research design, and data, should also be presented. The section delineates applications of new insights derived from the dissertation to solve real and significant problems. Implications can be grouped into those related to theory or generalization, those related to practice, and those related to future research. Separate sections with corresponding headings provide proper organization.

Theoretical implications. Theoretical implications involve interpretation of the dissertation findings in terms of the research question(s) and hypothesis(es) that guided the study. It is appropriate to evaluate the strengths and weaknesses of the study critically and include the degree to which the conclusions are credible given the method and data. It should also include a critical, retrospective examination of the framework presented in the Chapter 2 Literature Review section considering the dissertation’s new findings.

Practical implications. Practical implications should delineate applications of new insights derived from the dissertation to solve real and significant problems. These implications refer to how the results of the study can be applied in professional practice.

Future implications. Two kinds of implications for future research are possible: one based on what the study did find or do, and the other based on what the study did *not* find or do. Generally, future research could look at different kinds of subjects in different kinds of settings, interventions with new kinds of protocols or dependent measures, or new theoretical issues that emerge from the study. Recommendations should be included on which of these possibilities are likely to be most fruitful and why.

Strengths and weaknesses of the study. This section discusses all limitations of the study. Additionally, it critically evaluates the strengths and weaknesses of the study. Finally, it discusses the degree to which the conclusions are credible given the methodology, research design, and data analysis and results.

| **Criterion****\*(Score = 0, 1, 2, or 3)** | **Learner Score**  | **Chair Score**  | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **IMPLICATIONS**This section should describe what could happen because of this research. It also tells the reader what the research implies theoretically, practically, and for the future. (Minimum one to four pages) |
| **Theoretical implications.** Provides a retrospective examination of the theoretical framework presented in Chapter 2 in light of the dissertation’s findings. |  |  | X |  |
| **Theoretical implications.** Connects the findings of the study back to the theoretical framework/conceptual framework and the study results are discussed in context to how the results advance a practitioner’s knowledge of that theory, model or concept. |  |  | X |  |
| **Practical Implications and Future Implications.** Connects the study findings to the prior research discussed in Chapter 2, and develops practical and future implications for research based on new insights derived from the research and how the results advance practitioners knowledge of the topic and how the results may influence future research or practice. |  |  | X |  |
| **Strengths and Weaknesses.** Indicates all limitations of the study, critically evaluates the strengths and weaknesses of the study, and the degree to which the conclusions are credible given the methodology, research design, and data analysis and results. |  |  | X |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  | X |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

## Recommendations

This section allows the learner to add recommendations for future study based on the results of their authentic dissertation research. In this section, summarize the recommendations that result from the study. Each recommendation should be directly linked to a conclusion.

Recommendations for future research. This section should present recommendations for future research, as well as give a full explanation for why each recommendation is being made. Additionally, this section discusses the areas of research that need further examination, or addresses gaps or new research needs the study found. The section ends with a discussion of “next steps” in forwarding this line of research. Recommendations relate back to the study significance and advancing scientific knowledge sections in Chapter 1.

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **RECOMMENDATIONS FOR FUTURE RESEARCH**This section should contain a minimum of four to six recommendations for future research as well as a full explanation for why each recommendation is being made. The recommended research methodology/design should also be provided. (Minimum one to two pages) |
| Lists a minimum of four to six recommendations for practitioners and for future research. |  |  | X |  |
| Identifies and discusses the areas that need further examination, or that will address gaps or needs the study found. |  |  | X |  |
| Provides recommendations that relate back to the study significance and advancing scientific knowledge sections in Chapter 1 and theoretical foundation section in Chapter 2 |  |  | X |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  | X |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

Recommendations for future practice. This section outlines recommendations for future practice based on the results and findings of the study, as well as, a full explanation for why each recommendation is being made. It provides a discussion of who will benefit from reading and implementing the results of the study and presents ideas based on the results that practitioners can implement in the work or educational setting. Unrelated or speculative information that is unsupported by data is clearly identified as such. Recommendations should relate back to the study significance section in Chapter 1.

| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score** | **Chair Score** | **Methodologist Score** | **Content Expert Score** |
| --- | --- | --- | --- | --- |
| **RECOMMENDATIONS FOR FUTURE PRACTICE**This section should contain 2-5 recommendations for future practice based on the results and findings of the study as well as a full explanation for why each recommendation is being made. (Minimum three to four paragraphs or approximately one page) |
| Lists two to five recommendations for future practice. |  |  | X |  |
| Discusses who will benefit from reading and implementing the results of the study. |  |  | X |  |
| Discusses ideas based on the results that practitioners can implement in the work or educational setting. |  |  | X |  |
| Omits unrelated or speculative information that is not unsupported by data. |  |  | X |  |
| Provides recommendations that relate back to the study significance section in Chapter 1. |  |  | X |  |
| The Chapter is correctly formatted to dissertation template using the *Word Style Tool* and APA standards. Writing is free of mechanical errors. |  |  | X |  |
| All research presented in the Chapter is scholarly, topic-related, and obtained from highly respected academic, professional, original sources. In-text citations are accurate, correctly cited and included in the reference page according to APA standards. |  |  | X |  |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  | X |  |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

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| **Criterion**\***(Score = 0, 1, 2, or 3)** | **Learner Score**  | **Chair Score**  | **Methodologist Score** | **Content Expert Score** |
| **QUALITY OF SOURCES & REFERENCE LIST**For every in-text citation a reference entry exists; conversely, for every reference list entry there is an in-text citation. Uses a range of references including founding theorists, peer-reviewed empirical research studies from scholarly journals, and government/foundation research reports. The majority of all references must be scholarly, topic-related sources published within the last 5 years. Websites, dictionaries, and publications without dates (n.d.) are not considered scholarly sources and should not be cited or present in the reference list. In-text citations and reference list must comply with APA 6th Ed. |
| Ensures that for every in-text citation a reference entry exists. Conversely, for every reference list entry there is a corresponding in-text citation. Note: The accuracy of citations and quality of sources must be verified by learner, chair and committee members. |  |  | X | X |
| Uses a range of references including founding theorists, peer-reviewed empirical research studies from scholarly journals, and government /foundation research reports. **Note:** **A minimum of 50 peer-reviewed, empirical research articles are required for the literature review.** |  |  | X | X |
| Verifies that 75% of all references are scholarly sources within the last 5 years. The 5-year time frame is referenced at the time of the proposal defense date and at the time of the dissertation defense date. **Note:** Websites, dictionaries, publications without dates (n.d.), are not considered scholarly sources and should not be cited or present in reference list.  |  |  | X | X |
| Avoids overuse of books and dissertations. **Books:** Maximum of 10 scholarly books that present cutting edge views on a topic, are research based, or are seminal works. **Dissertations:** Maximum of 5 published dissertations. |  |  | X | X |
| Section is written in a way that is well structured, has a logical flow, uses correct paragraph structure, uses correct sentence structure, uses correct punctuation, and uses correct APA format. |  |  | X | X |
| **\*Score each requirement listed in the criteria table using the following scale:**0 = Item Not Present or Unacceptable. Substantial Revisions are Required.1 = Item is Present. Does Not Meet Expectations. Revisions are Required.2 = Item is Acceptable. Meets Expectations. Some Revisions May be Suggested or Required. 3 = Item Exceeds Expectations. No Revisions are Required. |
| **Reviewer Comments:** |

# Appendix A.Site Authorization Letter(s)

This is a required Appendix for Level 2 and Level 5 Reviews.

For purposes of confidentiality, this will be removed prior to Dean’s signature and the following text will be inserted:

Site authorization(s) on file at Grand Canyon University.

# Appendix B.IRB Approval Letter

This is not the D-form! Use the approval letter that you received upon IRB approval.

This Appendix is required in the full dissertation only.

# Appendix C.Informed Consent

This is a required Appendix. The text to the informed conset that will be provided to learners after IRB approval (at proposal stage), or the text of informed consent that was provided (without signatures) at dissertaiton stage, should be attached here.

# Appendix D.Copy of Instruments and Permissions Letters to Use the Instruments

This is a required Appendix.

# Appendix E.Power Analyses for Sample Size Calculation (Quantitative Only)

Required for both proposal and dissertation:

* Proposal must include the *a priori* computation of the sample size;
* The dissertation must include the *a priori* computation of sample size, and, if the recruited sample size is smaller than the *a priori* sample size, it must also include a *post hoc* computation of the effect size at power level 0.80.
* Include a screen shot (graphic image) of the G\*Power output.

# Appendix F.Additional Appendices

Additional appendices may include statistical results, interview transcripts, raw data (as appropriate), or other critical information pertinent to the dissertation. Consult with the chair on additional appendices appropriate for the dissertation.