EdD in School Improvement Handbook

Professional Education Doctorate
School Improvement

2023-2024 Edition
The Dissertation Timeline

Orientation (Summer 0)
- Identify Problem of Practice
- Complete IRB Modules
- Begin Literature Review

Phase 1 (Year 1)

Spring 1
- Submit Problem of Practice
- Draft IRB
- Write Chapters 1 and 2

Summer 1
- Present Chapters 1 and 2 to faculty in Summer 1
- Committee Chair Assigned
- Committee formed
- IRB Approval (District and UT Tyler)
- Attend Summer Residency

Phase 2 (Year 2)

Fall – Spring 2
- Collect Data for Evaluation (Chapter 3)

Summer 2
- Complete Chapter 3 and present findings to faculty
- Committee Approval for Improvement Intervention
- Attend Summer Residency
- Submit Chapter 2 for Publication

Phase 3 (Year 3)

Fall – Spring 3
- Collect Data for Intervention (Chapter 4)
- Complete Chapter 4 and present findings to faculty prior to Summer Residency
- Apply for Defense
- Submit Chapter 3 for Publication

Summer 3
• Complete Chapter 5 and Ancillary Pages
• Defend Dissertation
• Attend Final Summer Residency/Policy Summit in Austin
• Complete Graduate School Requirements
• Graduate (Hooding and Graduation Ceremonies are in the Fall and Spring)
Purpose of the Manual

The purpose of this handbook is two-fold: to clarify the steps leading to the development of the dissertation of practice and the steps of the dissertation process. You are responsible for the preparation of the dissertation in accordance with the instructions in this manual and the most recent edition of the Publication Manual of the American Psychological Association (APA), (henceforth referred in this handbook as the APA Manual). You may wish to employ a professional editor in the final stages of the dissertation process, although the final product is your sole responsibility.

While the successful completion of a dissertation serves as the culminating experience for earning an Ed.D., it is only one of the requirements. It is your responsibility to understand and satisfy all the requirements of the doctoral program, of The University of Texas at Tyler University, and of the UT Tyler College of Education and Psychology. Ultimately, you are responsible for the caliber and integrity of your work.

General Information

The Dissertation in Practice (DiP) is a blend of professional and scholarly writing that creates a systemic response to a complex Problem of Practice (PoP). It blends existing and new knowledge to make a generative impact on a complex problem in an educational organization (ordinarily, schools or school districts). Given the focus of our program, the DiP entails addressing a problem related to PK-12 Education, including academic and non-academic factors. It may also be appropriate to examine these PoP’s through a particular lens, such as, equity, ethics, and social justice.

A complex PoP is a real-world issue in schools, districts, or other educational organizations that continues despite intentional, active efforts to remedy it. The PoP is high leverage; that is, were the problem to be addressed, there would be significant gains in academic or other developmental outcomes for students. While the PoP is often situated in one organization for your research, it should also serve as an opportunity for dissemination beyond the institution; that is, the PoP bears on an audience greater than the one organization under examination. In this way, the DiP can have a generative impact on the field.

The purpose of the DiP is to do more than advance knowledge in the field; it also advances practice. The DiP identifies and advances the current level of “best practices” through its exploration and response to a PoP. The term “best practices” refers to practices in the past tense – and because the PoP persists, these “best practices” can be improved upon. As such, the DiP seeks to identify “next best practices” to create better outcomes for students, families, and communities around PK-12 related issues. For more information on the Dissertation in Practice, as well as Problems of Practice, we recommend that you explore the Carnegie Project on the Education Doctorate’s website at www.cpedinitiative.org.

The signature framework for this work is Improvement Science. This manual will help you complete an Improvement Science Dissertation in Practice.
Improvement Science answers these questions:

- **What is the exact problem I am trying to address? (Chapter 1)**
  - The Problem of Practice

- **What does the research literature say about the PoP (Chapter 2)**
  - Literature Review

- **How can I operationally define the problem? (Chapter 3)**
  - Evaluation of Current Practice
  - Mixed Methods

- **What change might I introduce to address it and why? How will I know if the change is an improvement? Did the change result in improvement (Chapter 4)?**
  - Evaluation of Intervention
  - Mixed Methods

- **What do these results mean for practice and future research (Chapter 5)?**
Selecting a Problem of Practice

As an Ed.D. candidate, you may already have strong areas of interest that you can develop into a DiP. However, converting an area of interest into a researchable project is often the most daunting step in the process. It is imperative that you seek the advice of qualified individuals who share similar research interests to ensure that the research is manageable in scope and possible to complete within the period of the doctoral program. It is possible that the research idea emerges out of these discussions.

Take care to adhere to the ethical issues inherent in conducting research in one’s own organization. For example, conducting research where one has any type of authority over the participants raises ethical questions. The program coordinators can help you address any ethical concerns related to your dissertation site.

While we encourage you to pursue dissertation topics that are of personal relevance and significance, your dissertation committee reserves the right to determine whether the proposed area of study is sufficiently rigorous and relevant to the vision and mission of the doctoral program. Select a topic that is workable and that makes an original contribution to the field of PK-12 educational practice.

At the end of Phase 1, you will submit a potential dissertation topic to the Program Director and Faculty during the summer. This will include your chapter 1 and 2. You will then be matched with an appropriate chair and committee members.

Dissertation Chair

The role of the Dissertation Chair is to guide you in the completion of a scholarly dissertation that adheres to the UT Tyler and SOE Guidelines for the preparation and submission of doctoral dissertations.

Specific duties include:

- Providing guidance on the approved dissertation structure and content and setting clear expectations for high-quality writing.
- Guiding you toward achieving a high level of quality in the dissertation research and final manuscript.
- Working with you in meeting the SOE timeframe and deadlines for completing each phase of the process.
- Informing the Program Coordinators of any concerns regarding your progress.
- Preparing you for Defense of the dissertation.
- Supporting you in the publishing of the manuscript sections of your dissertation. This can result in co-authorship with committee members depending on committee member contribution.
- Being accessible to you and providing prompt feedback.
• Guiding you so that you follow all SOE and University policies and procedures, although you ultimately bear responsibility for compliance.

• Ensuring that you follow the University’s Institutional Review Board (IRB) policies and your district’s IRB policy regarding the use of human subjects in research.

• Assuring that you maintain continuous enrollment throughout the dissertation process, including extended enrollment should the need arise.

**Dissertation Committee**

Your Dissertation Chair, along with your two other Committee members, guide you through the entire Dissertation process. Where possible, the Second Reader possesses expertise that complements the Chair and is a member of the SOE faculty. The final required member of the Committee, the Third Reader, is ordinarily another CEP/SOE Faculty Member. In some cases, it may be desirable to include a fourth member from outside of the SOE faculty, typically a practitioner or other expert with knowledge of the organization where the proposed research will take place.

Together, the Dissertation Committee guides you in the dissertation process through their collective content, methodological, and practical knowledge. The Dissertation Committee is primarily responsible for approval of the Dissertation. Final authority regarding the acceptability of the DiP rests with the Graduate School.

In the exceptional exigency of a change in Committee membership, such as the incapacitation of a member, you will meet with the Program Coordinator(s) and Committee Chair (unless the change is the Chair). The Program Coordinator(s) must approve any changes.

If a committee member must resign:

• The Committee member must inform you and the Committee Chair that a change is necessary.

• The Committee Chair must submit written notification of the change to the Program Coordinator; and

• You will meet with the Committee Chair and the Program Coordinator to discuss identifying a new Committee member and the process for replacement.

The Program Coordinator must approve removals and appointments. Upon approval of a change in Committee membership, the Program Coordinator will notify you and the Committee members. After the change of Committee membership, the new Committee must meet and review your progress.
Dissertation Seminars

The dissertation seminars are deigned to monitor your progress and guide you to successful completion of the Dissertation in Practice by the conclusion of the Phase 3 of the program (see Extended Enrollment, below, should you not complete the Dissertation in Practice in this time frame).

To stay on track for completion by the end of Phase 3 (Year 3), you must write the chapters of your Dissertation on the following timetable, although you will revise all chapters frequently throughout this journey:

Chapter 1 – Summer Year 1
Chapter 2 – Spring Year 2
Chapter 3 – Summer Year 2
Chapter 4 – Spring Year 3
Chapter 5 - Summer Year 3

You proceed through the chapters of the Dissertation when the Committee Chair (or full Committee, as appropriate) determines that your work meets the SOE standards for a DiP.

You should expect to do continuous revision of all chapters of the Dissertation throughout all the seminars. Dissertation writing is a recursive process. For example, you may have finished Chapter 1 at the end of Phase 1 but revise it many times as you write the additional chapters. The iterative nature of dissertation writing requires that you accept constant feedback and engage in frequent revision through all the seminars. This makes writing a dissertation different from almost all other forms of graduate schoolwork.

Extended Enrollment

If you do not complete the DiP and its Defense by the end of Phase 3, then you must enroll in a 1 credit of Dissertation until you have completed and pay a fee equal to one credit of tuition. You will enroll in this course every semester until the completion of the Dissertation. The Dissertation Chair will continue to advise you on an independent study basis during the Dissertation Extension course. You must complete the program within the timeline established at the university – as of 2023, this limit is seven years.

IRB Approval

The UT Tyler Institutional Review Board (IRB) must grant approval for all phases of your research. If the proposed study involves subjects from an external agency (e.g., public school, private school), you must also gain approval from the external agency. No researcher surveys, tests, or data collection of any type may be conducted before the IRB has granted approval. SOE expects that persons involved in research be committed to the highest standards of integrity and ethical behavior; SOE expects anyone involved in any phase of research to be knowledgeable of and abide by the University’s Human Subjects Policy, which can be found on the UT Tyler IRB website. You may need IRB
approval at several stages of the process and have to submit a modification. Candidates should work with their Dissertation Chair to ensure compliance with IRB regulations.

To conduct the intervention phase of your DiP, you must attain approval for this research from the IRB and from your Committee. Ordinarily, this occurs after you have completed a draft of chapters one through three.

**Proposal Presentation for Committee Assignment**

A successful Proposal Presentation in Summer 1 at the Summer Residency ensures that you will be able to implement your proposed research at the start of the next school year. The presentation may occur via video (Zoom) or in person. These sessions may also be recorded. This will be coordinated as part of the Summer Residency in Summer 1. You will make a 20-minute PowerPoint presentation explaining your proposed research (Chapters 1 and 2). Faculty will then have approximately 10 minutes for questions and discussion regarding your problem of practice. By the end of this session, the Committee will determine if your proposal is ready for implementation in the Fall.

**Dissertation Defense**

The Dissertation Defense is a presentation of your research to the Dissertation Committee and UT Tyler community for review, with the goal of Committee approval. It is also an opportunity for the greater University and PK-12 communities to hear the presentation of the study and discuss it with you.

The Dissertation Chair, with concurrence of the Committee members, decides that the manuscript is ready for the Defense. You are responsible for contacting all Committee members and securing a date and time for the Defense. Once you have done so, you contact the administrative assistant for the Ed.D. program, who will locate a room on campus or ZOOM for the date and time of the Defense.

Once a date, time, and location have been secured, your chair will submit a Request for Proposal Defense form to the graduate school. [https://www.uttyler.edu/graduate/thesis-dissertation/](https://www.uttyler.edu/graduate/thesis-dissertation/)

The Ed.D. Program Coordinator(s) will ensure that the Dissertation Defense is disseminated to all faculty members at UT Tyler, as well as others candidates in the Ed.D. program. You may invite other interested individuals, such as family members, professional colleagues, or others. The administrative assistant will assign a Zoom link for those who wish to attend the Defense but cannot do so in person. This information will be in the announcement.

The Chair of the Dissertation Committee leads the Defense. After the Chair introduces the Committee members, you present an overview of the study. The Dissertation Defense presentation is **no more** than 30-45 minutes. The presentation includes a description of the study’s purpose and significance, the research question(s), the
methods (research design and analysis), implications for practice, and recommendations for future research.

At the end of the presentation, Committee members address questions to you. After the Committee members, the Chair may invite others to do so, beginning with other faculty or administrators in attendance.

The Chair dismisses the room for the Committee to reach a decision regarding approval. The Committee has three decision options: a) approve with no revisions; b) approve with minor revisions, or c) not yet approve. Once a decision is reached, the Chair invites you to hear the decision before announcing it to the others in attendance.

A decision of “approve with no revisions” or “approve with minor revisions” means that you have successfully completed the Defense and now may be referred to as “Doctor.” A decision of “approve with minor revisions” means that the Committee entrusts the Chair to work with you to make the revisions necessary for final approval and to recommend degree conferral. If the decision is “not yet approved,” you and the Chair work together on a plan for completion, which requires another Defense.

Unanimous agreement of the Dissertation Committee is required for approval and to recommend that the university confer the Ed.D. Degree. The Chair communicates this decision to the Dean.
Structure of the Dissertation

Writing must conform to the standards published in the latest edition of the Manual of the American Psychological Association. Below are some specific points.

Tenses

At the proposal stage (Chapters 1-2), write about your evaluation in the future tense, as you are proposing a course of action. Once the research concludes, re-write these sections in past tense.

When writing about others’ research, use the past tense to note the author’s findings. However, write ongoing recommendations from a study in the present tense.

Example 1: “Jones (2009) found that one-on-one tutoring resulted in statistically significant gains in student achievement.”

Example 2: “Jones (2009) recommends that one-on-one tutoring take place at least for one hour four times per week to impact student learning.”

Figures and Tables

Figures and tables are effective ways to present complex results in a condensed format. Present simple results in the text; they do not require a figure or table. Refer to the APA Style Manual for examples.

Before displaying a figure or table, explain its purpose and what information it contains. Explain the figure’s or table’s organization (column headings, rows, diagrams) so that the reader can comprehend the information displayed. Do not discuss the substance of the figure or table. Consult with the APA Style Manual for the proper use of table notes which may be included but are not required.

Tables and figures should be in numerical sequence (Table 1 and Figure 1) from the beginning to the end of the manuscript. In the text that follows the figure or table, draw the reader’s attention to the most important information, including the key trends or data points. Do not assume the reader will draw the same conclusions from the table as you do. Direct the reader’s attention to the importance of the information.

Transitions

End each chapter with a paragraph that summarizes the key points and transitions the reader to what is coming in the next chapter.

Headings

Introductions do not use a heading; they begin immediately after the Chapter title. All headings should appear in the Table of Contents. Sub-headings do not.
Chapter 1: The Problem of Practice

This chapter focuses on the first stage of the Improvement Science process: identifying a complex Problem of Practice, providing evidence and data demonstrating its importance, and conducting a systems and root cause analysis.

Suggested headings for Chapter 1 are below. Through the dissertation, headings may differ from the ones below based on your Committee’s recommendations, and subheadings are often necessary. Before the first heading:

Write introductory paragraphs letting the reader know that this is an Improvement Science Dissertation in Practice. Introduce the PDSA cycle and the two-phase nature of this dissertation.

➢ Background of the Problem

Begin with an issue you seek to address. Some general information (not site-specific) is acceptable to frame the issue in a larger context, but much of the research about this problem generally will go in Chapter 2. This chapter focuses mainly on the problem in its context.

This is also a good place to introduce the reader to the setting, with some basic information about the school, district demographics, size, location (using a pseudonym if necessary).

➢ Statement and Definition of the Problem

This is where you make a clear statement of the problem. Begin with the student lens: how the Problem of Practice, if not mitigated, will continue to have a serious negative impact on students. Bring in evidence, quantitative and qualitative, that proves that this is a serious problem. Qualitative information may come from documents or from empathy interviews. This is the most detailed section of the chapter. You may bring in data related to adults, and their impact on the Problem of Practice, but only after you have exhausted the student lens.

➢ Purpose and Significance of the Study

This is a good place to situate the problem as part of the organization’s overall improvement goals (if any), as well as previous attempts to address the problem. Explain how your work will fit into broader organizational goals and long-term objectives, as well as build on previous and continuing efforts to address the problem.

This is where you can describe how, if successful, this study will have an impact not just on one school/district, but other schools within a district, other schools, or other districts.

This is where you make the case that this issue is high stakes: if left unaddressed, it will seriously hinder the ability of the organization to accomplish its stated goals.
This is where you can describe what the benefits are of addressing this problem, and what data and evidence would indicate improvement. In other words, what would success look like?

➢ The System

Include a systems map. Explain the systemic forces at work that influence the problem, starting with those within the site and then moving outward. This is a place to address the culture of the organization and its community as it relates to your problem.

➢ Root Cause Analysis

Introduce what Improvement Science means by this term, then explain your Fishbone diagram. Identify three to five root causes, and explain each one, using information from published data, document review and empathy interviews.

After that section, describe the meaning of a Driver Diagram. Display the first part of your Driver Diagram, using primary drivers only (omit secondary drivers and change ideas for now; you will add them later).

➢ Your final section of this chapter lays out your proposed evaluation and possible intervention that you plan to carry out as part of this dissertation keeping in mind your actual intervention will be determined after you complete the evaluation.

➢ Positionality

Positionality describes the relationship between the researcher and the Problem of Practice. It serves to admit that no research can be 100 percent objective, that the positionality of the researcher influences it.

It includes three elements: 1) one’s identity (race, class, gender, sexuality, for example), lived experiences, values, beliefs as they related to the Problem; 2) professional experiences related to the Problem; and 3) one’s formal or informal position within the organization that may influence the research.

Positionality explains how the above may bias your view of the research through “blind spots” or limitations. Later, you will explain how you may have attempted to mitigate these biases.
Chapter 2: Review of Scholarly and Professional Knowledge

This chapter consists of a review of scholarly, peer-reviewed research related to your Problem of Practice. It also includes a review of professional practice in other similar educational organizations. It is important to point out where the research and practice have convergent or divergent results.

The chapter concludes with a context-specific Working Theory of Improvement: it applies to this one organization based on its current state, not a general theory to apply to all organizations. The Theory of Improvement demonstrates that you understand the complexity of the Problem of Practice and have identified high-leverage change actions to address it. Not all promising practices would apply; you demonstrate how promising practices from the literature and professional practice apply to your organization.

Suggested headings for Chapter 2 are below.

➢ Review of the Scholarly Knowledge – Student Lens

Begin this section with a review of the research related to your Problem of Practice as it impacts students. Organize this section by themes. Within each theme, summarize the peer-reviewed research first, then bring in the review of practice from the field. Finally, synthesize the two sections, noting convergence and divergence between the scholarly research and practitioner experiences.

➢ Review of the Scholarly Knowledge – Adult Lens

Organize this section similarly to the previous section, with the emphasis on adult actions that influence the problem (negatively or positively). This is the place to discuss the impact of the Problem of Practice on adults, if appropriate. Emphasize potential solutions found in the research as a transition to the next section.

➢ Working Theory of Improvement

Based on your research, display a finalized Driver Diagram that illustrates your Theory of Improvement. There should be a clear link between the change ideas and the Root Cause Analysis from Chapter 1. Explain the purpose of the Driver Diagram in Improvement Science and how it applies to your Problem of Practice.

After the Driver Diagram, describe three to five potentially impactful change efforts that you believe would address your Problem. Except for the one you are choosing for your intervention, describe these change ideas is one or two paragraphs per change idea. Taken together, these change ideas represent a multi-faceted improvement strategy, although your study cannot implement all of them.
Go into some depth explaining why you believe this change idea is appropriate to your context. Explain why it is a high leverage change effort: it has the potential to impact the root causes for a reasonable amount of effort. Similarly, it may be that this change idea is the first of several changes necessary to address the issue (it is a necessary precursor to other changes to come). Explain how your change idea is feasible given the time limitations of your study.
Chapter 3: Evaluation of the Problem of Practice

Chapter 3 is the evaluation the current state of the POP in your context. Your goal is to evaluate the current situation by proposing and conducting data collection and analysis on the impact of current practice with a focus on adult actions on the Problem of Practice.

The purpose of the chapter is to present the procedures, research design, and analysis as an evaluation study. Descriptions in this chapter should be comprehensive enough to permit the replication of the study. The conclusion section should include a theory of change and recommendations for intervention to be carried out and studied the following school year and described in Chapter 4.

*This chapter will be formatted as a manuscript.* Begin this chapter with an introduction, situating this chapter within the Improvement Science framework. For Chapter 3 you are studying and analyzing the Problem of Practice.

**ABSTRACT**

**Introduction**

**Lit Review**

**Research Questions**

The purpose of this study is to answer evaluation research questions. *If appropriate*, write two hypotheses for a question (one is the null hypothesis). Research questions may require quantitative, qualitative or a mix of each. Only questions with quantitative data require hypotheses. Your committee will work with you to formulate appropriate research questions.

**Target Population and Participants**

Describe the essential attributes of your target population. If you are not involving your entire target population, explain how you chose your sample and why. Explain how your sampling procedures align with research-based practices for doing so. If sampling, show how the attributes of your sample align with the attributes of your target population. Tables are fine. Keep in mind, you will study adults. That said you can look at the impact on student outcomes.

**Current Intervention Being Evaluated**

Describe the essential attributes of the current intervention and a timeline for completion. This section should have enough detail to enable replication.

**Research Methodology**

Within the Improvement Science framework, describe and explain your choice of methodology (for example, participatory action research, case study). All studies will utilize mixed-methods. Justify your mixed-methods approach by citing the essential attributes of your method and demonstrating how these attributes are appropriate in
your study. Reference seminal scholars in the field to identify the key elements of your methodology to show that your chosen methodology is appropriate to your research questions.

Research Design

After your Methodology section, describe your research design (for example, convergent mixed methods). As with Methodology, cite the essential attributes of your design, and explain how it is appropriate to your research. Reference seminal scholars in the field to identify the key elements of your Research Design to show that it is appropriate to your research questions. In almost all cases you will be using a mixed-methods approach.

➢ Data Collection: Quantitative

This includes the measures you intend to use as well as the way that you are collecting the data. Explain how you are protecting participant identities. Use the appendices for full versions of data collection instruments. Describe any validity or reliability studies on these instruments. Any instruments or forms – e.g., instructions to participants, informed consent forms, surveys, etc. – proposed for the study should be included in an appendix, and referred to in this chapter, unless the instrument or form is not available for reprinting.

Explain why you believe these measures and data collection will help you answer your research questions.

➢ Data Collection: Qualitative

This is the same format as the previous section.

➢ Data Analysis Plan

Explain your anticipated ways that you will analyze the data.

Explain the improvement measures (process, driver, balancing, or outcome) used to study the change and how these measures will guide understanding of change in the system.

➢ Results

➢ Discussion of Results

➢ Recommendations for your Intervention

Explain how your Working Theory of Improvement fits into the PDSA cycle of Improvement Science to be implemented in your proposed intervention.

➢ Limitations

All studies have limitations to their validity, generalizability, and applicability. You have a responsibility to forewarn readers of the limitations and the reasons for them. Some
limitations arise from boundaries to make the study manageable, such as studying only one subpopulation of interest, addressing only parts of a problem, or perhaps examining only short-term effects. Some limitations arise from accommodating ethical concerns. Others come from shortcomings in methodology. As Improvement Science emphasizes the change effort in the context of a bounded organization, generalizability is not a limitation of this research. However, questions of transferability may be addressed in this section, as well as in Chapter 5. Explain in this section how you intend to mitigate any limitations of the methods or research design.
Chapter 4: Evaluation of the Intervention

The purpose of this chapter is to evaluate your intervention to address the POP. This chapter is also presented in a manuscript format.

An introductory section reminds the reader about the Problem of Practice, the intervention, and the research questions. Generally, this chapter includes the results for each research question (in the order written in Chapter 3) and an overall summary of the findings. However, depending on the research questions, your Committee may ask you to write your findings in a different order.

Suggested headings for this chapter:

- ABSTRACT
- Introduction
- Literature Review
- Research Questions

This is a restatement from Chapter 3. Research questions should be modified to reflect the intervention.

- Target Population and Participants

Describe the essential attributes of your target population. If you are not involving your entire target population, explain how you chose your sample and why. Explain how your sampling procedures align with research-based practices for doing so. If sampling, show how the attributes of your sample align with the attributes of your target population. Tables are fine.

- The Intervention

Describe the essential attributes of the current intervention and a timeline for completion. This section should have enough detail to enable replication.

- Research Methodology

Within the Improvement Science framework, describe and explain your choice of methodology (for example, participatory action research, case study). Justify your choice of methodology by citing the essential attributes of your method and demonstrating how these attributes are appropriate in your study. Reference seminal scholars in the field to identify the key elements of your methodology to show that your chosen methodology is appropriate to your research questions.

- Results

Before the results, if there were any differences in the composition of the sample or target population, note them here. Organize the results by Research Question, unless your committee advises a different way. Each Research Question should have its own sub-heading. Generally, present the quantitative data first followed by the qualitative
data. A synthesis of both types of data follows. Follow the guidelines for presentation of figures and tables and use APA style.

- **Summary of Results**

After you have addressed each research question, summarize the results across all questions.

- **Research Design**

After your Methodology section, describe your research design (for example, convergent mixed methods). As with Methodology, cite the essential attributes of your design, and explain how it is appropriate to your research. Reference seminal scholars in the field to identify the key elements of your Research Design to show that it is appropriate to your research questions.

➢ **Data Collection: Quantitative**

This includes the measures you intend to use as well as the way that you are collecting the data. Explain how you are protecting participant identities. Use the appendices for full versions of data collection instruments. Describe any validity or reliability studies on these instruments. Any instruments or forms – e.g., instructions to participants, informed consent forms, surveys, etc. – proposed for the study should be included in an appendix, and referred to in this chapter, unless the instrument or form is not available for reprinting.

Explain why you believe these measures and data collection will help you answer your research questions.

- **Data Collection: Qualitative**

This is the same format as the previous section.

- **Data Analysis Plan**

Explain your anticipated ways that you will analyze the data.

Explain the improvement measures (process, driver, balancing, or outcome) used to study the change and how these measures will guide understanding of change in the system.

- **Limitations**

All studies have limitations to their validity, generalizability, and applicability. You have a responsibility to forewarn readers of the limitations and the reasons for them. Some limitations arise from boundaries to make the study manageable, such as studying only one subpopulation of interest, addressing only parts of a problem, or perhaps examining only short-term effects. Some limitations arise from accommodating ethical concerns. Others come from shortcomings in methodology. As Improvement Science emphasizes the change effort in the context of a bounded organization, generalizability is not a limitation of this research. However, questions of transferability may be addressed in
this section, as well as in Chapter 5. Explain in this section how you intend to mitigate any limitations of the methods or research design.

- **Results**

Before the results, if there were any differences in the composition of the sample or target population, note them here.

Organize the results by Research Question, unless your committee advises a different way. Each Research Question should have its own sub-heading. Generally, present the quantitative data first followed by the qualitative data. A synthesis of both types of data follows. Follow the guidelines for presentation of figures and tables and use APA style.

- **Summary of Results**

After you have addressed each research question, summarize the results across all questions.

- Recommendations for Future Improvement
- Recommendations for Future Research
Chapter 5: Discussion of the Results

Write an introduction that describes the purpose and organization of the chapter. This chapter includes your analysis of the results and the implications for practice and future research. Explain how this chapter fits in the Improvement Science framework (PDSA).

Suggested headings:

➢ Discussion of the Results

In this section, you provide an explanation of your findings. Note which results were particularly surprising to you, why they were surprising, and provide a plausible explanation for them. Describe to what extent your findings are consistent with prior research (either scholarly or practitioner) from Chapter 2. Discuss any unanticipated side effects from the study, as noted in the Improvement Science framework. What went well in the study? What did not? Address how to remedy any weaknesses in study design.

➢ Recommendations for Practice and Further Study

This may be in two sections, one on practice (future improvement) and one on future research. Begin by noting the implications for the organization itself. What are the next steps for this organization? These may include expanding the intervention to others (if a sample), further work with the participants of this study, or changes to policy or practices in the organization. If the study was conducted at one school, then discuss the implications for expanding this intervention to other schools in the district. Finally, discuss the implications for other schools or districts who wish to attempt this intervention.

In the next section, discuss the implications for future research. This could be research conducted at the site (by the organization) or research conducted by others. If you ran into difficulties with any aspect of conducting this study, suggest ways that future researchers could address these issues.

➢ Conclusion

Summarize the entire Dissertation in Practice in two to three succinct paragraphs.
Copyrighting the Dissertation

As the author of a written work, dissertation authors are entitled to certain rights under the law of copyrights. This law prevents others from taking credit for or profiting from work used without permission. Copyright applies only to the expression of ideas, not the ideas themselves. For a discussion of ideas, inventions, intellectual property, and patents, see the section on intellectual property below. You do not have to make any notification of copyright to be protected under the law; however, if you do make a notification, you may be afforded additional protections.

1. Basic Copyright Protection. Under the Copyrights Act of 1976 (PL 94-553), you automatically hold copyright privileges for your work without making notice or registration. For works created on or after January 1, 1978, this copyright extends from the moment of the work’s creation, through the life of the author, plus an additional 50 years after the author’s death.

2. You are entitled to basic copyright protections whether you register your copyright. There are, however, legal advantages to federal copyright registration. http://www.copyright.gov/circs/circ1.pdf. For a fee, you may submit your own copyright registration application to the U.S. Office of Copyright at http://www.copyright.gov.

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