

## CHAPTER 3

## *Presenting Methodology and Research Approach*

### OVERVIEW

Chapter 3 of the dissertation presents the research design and the specific procedures used in conducting your study. A research design includes various interrelated elements that reflect its sequential nature. This chapter is intended to show the reader that you have an understanding of the methodological implications of the choices you made and, in particular, that you have thought carefully about the links between your study's purpose and research questions and the research approach and research methods that you have selected.

Note that in the proposal's chapter 3, you project *what you will do* based on what you know about the particular methods used in qualitative research, in general, and in your tradition or genre, in particular; hence, it is written in future tense. In the dissertation's chapter 3, you report on *what you have already done*. You write after the fact; hence, you write in past tense. As such, many of the sections of chapter 3 can be written only after you have actually conducted your study (i.e., collected, analyzed, and synthesized your data).

To write this chapter, you need to conduct literature reviews on the methodological issues involved in qualitative research design.

You need to show the reader that you (a) have knowledge of the current issues and discourse, and (b) can relate your study to those issues and discourse. In this regard, you need to explain how you have gone about designing and conducting your study while making sure that you *draw supporting evidence from the literature* for the decisions and choices that you have made.

This chapter, which is usually one of the dissertation's lengthiest, is essentially a *discussion*, in which you explain the course and logic of your decision making throughout the research process. In practice, this means describing the following:

- The rationale for your research approach
- The research sample and the population from which it was drawn
- The type of information you needed
- How you designed the study and the methods that you used to gather your data
- The theoretical basis of the data-collection methods you used and why you chose these
- How you have analyzed and synthesized your data
- Ethical considerations involved in your study
- Issues of trustworthiness and how you dealt with these
- Limitations of the study and your attempt to address these

Following are the two sections that make up this chapter. Section I offers instruction on how to develop each section of chapter 3. Section II illustrates application by way of the example used throughout this book and gives you some idea of what a complete chapter 3 should look like. Note that Section I includes various “how-to” matrices, charts, and figures. Although not all of these may make their way into the main body of your final dissertation, they can and often do appear as “working tools” in the dissertation’s appendix.

## CHAPTER OBJECTIVES

### *Chapter 3 Objectives*

#### *Section I: Instruction*

- Identify the key components of the methodology chapter:
  - (a) Introduction and overview,
  - (b) research sample, (c) overview of information needed, (d) research design, (e) methods of data collection, (f) methods for data analysis and synthesis, (g) ethical considerations, (h) issues of trustworthiness, (i) limitations of the study, and (j) chapter summary.
- Provide explanation of how each component of the research methodology must be developed and presented.
- Show that you understand how all of the components combined form a logical, interconnected sequence and contribute to the overall methodological integrity of the study.

#### *Section II: Application*

- Presentation of a completed methodology chapter based on the content and process as described previously.

## SECTION I: INSTRUCTION

The dissertation’s third chapter—the methodology chapter—covers a lot of ground. In this chapter, you document each step that you have taken in designing and conducting the study. The format that we present for this chapter covers all the necessary components of a comprehensive methodology chapter. Universities generally have their own fixed structural requirements, and so we recommend that, before proceeding to write, you discuss with your advisor how to structure the chapter as well as the preferred order of the sections and how long each section should be. Most important, make sure (a) your sections are in a logical sequence, and (b) what you write is comprehensive, clear, precise, and sufficiently detailed so that others will be able to adequately judge the soundness of your study. Table 3.1 is a roadmap intended to illustrate the necessary elements that constitute a sound methodology chapter and a suggested sequence for including these elements.

As pointed out previously, although qualitative research as an overall approach is based on certain central assumptions, it is characterized by an ongoing discourse regarding the appropriate and acceptable use of terminology. Current thinking over the years has caused some qualitative researchers to develop their own terminology to more effectively reflect the nature and distinction of qualitative research, whereas others still borrow terminology from quantitative research. Throughout this chapter, we point out instances in which you should be aware of these differences so that you can make an informed choice.

### *Introduction and Overview*

The chapter begins with an opening paragraph in which you restate the study’s purpose and research questions and then go on

**Table 3.1** Roadmap for Developing Methodology Chapter: Necessary Elements

<p><b>1: Introduction and Overview</b> Begin by stating purpose and research questions. Go on to explain how the chapter is organized. Then provide a rationale for using a qualitative research approach, as well as a rationale for the particular qualitative tradition/genre you have chosen. Provide a brief overview of your study.</p>
<p><b>2: Research Sample</b> Describe the research sample and the population from which that sample was drawn. Discuss the sampling strategy used. (Depending on the qualitative research tradition, a sample can include people, texts, artifacts, or cultural phenomena.) In this section, describe the research site if appropriate (program/institution/organization).</p>
<p><b>3: Overview of Information Needed</b> Describe the kinds of information you will need to answer your research questions. Be specific about exactly what kind of information you will be collecting. Four general areas of information are needed for most qualitative studies: contextual, perceptual, demographic, and theoretical information.</p>
<p><b>4: Research Design Overview</b> This section outlines your overall research design/methodology. It includes the list of steps in carrying out your research from data collection through data analysis. The two sections that follow elaborate in greater detail on the methods of data collection and the process of data analysis. The narrative in this section is often augmented by a flowchart or diagram that provides an illustration of the various steps involved.</p>
<p><b>5: Data-Collection Methods</b> Explain that a selected literature review preceded data collection; although this informs the study, indicate that the literature is not data to be collected. Identify and present all the data-collection methods you used, and clearly explain the steps taken to carry out each method. Include in the discussion any field tests or pilot studies you may have undertaken. To show that you have done a critical reading of the literature, you may be required to discuss the strengths and weaknesses of each method of data collection used. In this regard, you may either include in this section what the literature says about each of the methods you will be using, or the literature on methods may be a separate section.</p>
<p><b>6: Data Analysis and Synthesis</b> Report on how you managed, organized, and analyzed your data in preparation to report your findings (chap. 4) and then how you went on to analyze and interpret your findings (chap. 5). It is important to note that this section of chapter 3 can thus be written only <i>after</i> you have written up the findings and analysis chapters of your dissertation.</p>
<p><b>7: Ethical Considerations</b> This section should inform the reader that you have considered the ethical issues that might arise vis-à-vis your study and that you have taken the necessary steps to address these issues.</p>
<p><b>8: Issues of Trustworthiness</b> This section discusses the criteria for evaluating the trustworthiness of qualitative research—credibility, dependability, and transferability. Moreover, you must indicate to the reader that you have a clear understanding of the implications thereof vis-à-vis your own study and the strategies you employed to enhance trustworthiness.</p>

(Continued)

Table 3.1 (Continued)

<p><b>9: Limitations of the Study</b> Cite all potential limitations and your means to address these limitations. The discussion should include problems inherent in qualitative research generally, as well as limitations that are specific to your particular study. Regardless of how carefully you plan a study, there will always be some limitations, and you need to explicitly acknowledge these.</p>
<p><b>10: Chapter Summary</b> A final culminating summary ties together all the elements that you have presented in this chapter. Make sure that you highlight all the important points. Keep your concluding discussion concise and precise.</p>

to explain the chapter's organization. You then proceed to discuss how your research lends itself to a qualitative approach and why this approach is most appropriate to your inquiry. Critical to a well-planned study is the consideration of whether a qualitative approach is suited to the purpose and nature of your study. To convey this notion to the reader, it is necessary to provide a rationale for the qualitative research approach, as well as your reasons for choosing a particular qualitative tradition—namely, case study or multiple case study, ethnography, phenomenology, biography, or grounded theory.

In your discussion, you begin by defining *qualitative inquiry* as distinct from quantitative research. Then you go on to discuss the values and benefits derived from using a qualitative approach; in other words, its strengths. You would not talk about its weaknesses here; you will do that in the last section of the methodology chapter called "Limitations." Make sure that this first section flows logically and that you structure your discussion well by using appropriate headings and subheadings. Once the overall approach and supporting rationale have been presented, you can move on to explain who the research participants are, the sampling strategies you used to select the participants, what kind of data were needed to inform your study, and the specific data-collection and data-analysis strategies employed.

### *The Research Sample*

In this section, you need to identify and describe in detail the methods used to select the research sample. This provides the reader with some sense of the scope of your study. In addition, your study's credibility relies on the quality of procedures you have used to select the research participants. Note that some qualitative researchers object to the use of the word *sample* in qualitative research, preferring terms such as *research participants* or *selected participants*. This is another example of the discourse among qualitative researchers that was mentioned previously.

Some research is site-specific, and the study is defined by and intimately linked to one or more locations. If you are working with a particular site, be it a particular place, region, organization, or program, the reader needs some detail regarding the setting. Although it is typically mentioned briefly in the beginning pages of chapter 1, in this section of chapter 3 you need to talk more specifically about how and why the site was selected.

After discussing the site, if applicable, you proceed to tell the reader about the research sample—the participants of your study. You also need to explain in some detail how the sample was selected and the pool from which it was drawn. This discussion should include the criteria used for inclusion in the sample, how participants were identified, how they

were contacted, the number of individuals contacted, and the percentage of those who agreed to participate (i.e., the response rate). You also need to discuss why the specific method of sample selection used was considered most appropriate.

In qualitative research, selection of the research sample is purposeful (Patton 1990, 2002). This type of sampling is sometimes referred to as *purposive sampling* (Merriam, 1998) or *judgment sampling* (Gay, Mills, & Airasian, 2006). The logic of purposeful sampling lies in selecting information-rich cases, with the objective of yielding insight and understanding of the phenomenon under investigation. This method is in contrast to the random sampling procedures that characterize quantitative research, which is based on statistical probability theory. Random sampling controls for selection bias and enables generalization from the sample to a larger population—a key feature of quantitative research. Remember, one of the basic tenets of qualitative research is that each research setting is unique in its own mix of people and contextual factors. The researcher's intent is to describe a particular context in depth, not to generalize to another context or population. Representativeness in qualitative research is secondary to the participants' ability to provide information about themselves and their setting.

As its name suggests, a qualitative researcher has reasons (purposes) for selecting specific participants, events, and processes. The purposeful selection of research participants thus represents a key decision in qualitative research. Thus, in this section, you need to identify and provide a brief rationale for your sampling strategy. The strategy that you choose depends on the purpose of your study, and you need to make that clear in your discussion. For example, in a phenomenological study, you might employ "criterion-based sampling." Criterion sampling works well when all the individuals studied represent

people who have experienced the same phenomenon. In a grounded theory study, you would choose the strategy known as *theoretical sampling* (or *theory-based sampling*), which means that you examine individuals who can contribute to the evolving theory. In a case study, you might use the strategy of *maximum variation* to represent diverse cases to fully display multiple perspectives about the cases. Appendix C presents an overview of the variety of purposeful sampling strategies used in qualitative research.

Once you have offered a rationale for your sampling strategy, you need to go on to discuss the nature and makeup of your particular sample. Describe who these individuals are, disclose how many individuals constitute the sample, and provide relevant descriptive characteristics (e.g., age, gender, occupation, level of education, etc.). It is helpful to include charts to augment and complement the narrative discussion. Providing information regarding selection procedures and research participants will aid others in understanding the findings. Having provided a description of the research sample and the setting, you are now ready to proceed to explain exactly what types of information you will need from the participants.

### *Overview of Information Needed*

This section briefly describes the kinds of information you need to answer your research questions and thus shed light on the problem you are investigating. Four areas of information are typically needed for most qualitative studies: contextual, perceptual, demographic, and theoretical. The following sections define the content and the specific relevancy of each of these areas.

#### *Contextual Information*

Contextual information refers to the context within which the participants reside or

work. It is information that describes the culture and environment of the setting, be it an organization or an institution. It is essential information to collect when doing a case study set in a particular site or multiple similar sites because elements within the environment or culture may, as Lewin (1935) reminds us, influence behavior. Lewin's fundamental proposition is that human behavior is a function of the interaction of the person and the environment. This theory is particularly relevant when one is trying to understand the learning behaviors of a discrete segment of a population in a particular organizational or institutional setting.

Given the nature of contextual information, such a review would provide knowledge about an organization's history, vision, objectives, products or services, operating principles, and business strategy. In addition, information on an organization or institution's leaders and its structure, organizational chart, systems, staff, roles, rules, and procedures would be included in this area of information. The primary method of collecting contextual information is through an extensive review of organization/institutional internal documents, as well as a review of relevant external documents that refer in some way to the organization or institution. Documentation can be of a descriptive and/or evaluative nature.

#### *Demographic Information*

Demographic information is participant profile information that describes who the participants in your study are—where they come from, some of their history and/or background, education, and personal information such as age, gender, and ethnicity. Such demographic information is needed to help explain what may be underlying an individual's perceptions, as well as the similarities and differences in perceptions among participants. In other words, a particular

data point (e.g., age) may explain a certain finding that emerged in the study.

Demographic information is typically collected by asking participants to complete a personal data sheet either before or after the interview or other data-collection methods take place. The information is then arrayed on a matrix that shows participants by pseudonym on the vertical axis and the demographic data points (age, gender, education, etc.) on the horizontal axis, as illustrated in Table 3.2. This demographic matrix, which is usually presented in the prior section, in which you discuss your research sample, can also later be used in conjunction with frequency charts. The latter, to be explained further later on, table the findings to help you with cross-case analysis, which is required later in the dissertation process. A sample completed participant demographics matrix appears as Appendix D.

#### *Perceptual Information*

Perceptual information refers to participants' perceptions related to the particular subject of your inquiry. Particularly in qualitative research when interviews are often the primary method of data collection, perceptual information is the most critical of the kinds of information needed. Perceptual information relies, to a great extent, on interviews to uncover participants' descriptions of their experiences related to such things as: how experiences influenced the decisions they made, whether participants had a change of mind or a shift in attitude, whether they described more of a constancy of purpose, what elements relative to their objectives participants perceived as important, and to what extent those objectives were met.

It should be remembered that perceptions are just that—they are not facts—they are what people perceive as facts. They are rooted in long-held assumptions and one's

Table 3.2 Participant Demographics

<i>Participant (by pseudonym)</i>	<i>Age</i>	<i>Male %</i>	<i>Female %</i>	<i>Ethnicity</i>	<i>Education</i>	<i>Years Enrolled In . . .</i>
Participant 1						
Participant 2						
Participant 3						
Participant 20						
<i>N</i> = 20						

own view of the world or frame of reference. As such, they are neither right nor wrong; they tell the story of what participants believe to be true.

### *Theoretical Information*

Theoretical information includes information searched and collected from the various literature sources to assess what is already known regarding your topic of inquiry. Theoretical information serves to:

- Support and give evidence for your methodological approach;
- Provide theories related to your research questions that form the development and ongoing refinement of your conceptual framework;
- Provide support for your interpretation, analysis, and synthesis; and
- Provide support for conclusions you draw and recommendations you suggest.

It is recommended that you create a matrix that aligns your research questions with the information you assess is needed and the methods that you will use to collect that information. Creating this type of alignment ensures that the information you intend to collect is

directly related to the research questions, therefore providing answers to the respective research questions. For planning purposes, the alignment indicates the particular methods you will use to collect the information. It is useful to array a table similar to Table 3.3, which illustrates how you might go about setting up such a matrix. A sample matrix showing a completed overview of information needed is presented as Appendix E.

### *Research Design*

Once you are clear about the information you need and the methods you will use to obtain that data, you are ready to develop and present your research design. Whatever combination of methods you choose to use, there is a need for a systematic approach to your data. The main objectives of this section are to identify and present the data-collection methods and explain clearly the process you undertook to carry out each method. Be sure to include in your discussion any field tests or pilot studies you may have undertaken to determine the usefulness of any instruments you have developed. Because the research design in qualitative research is flexible, also mention any modifications and changes you

**Table 3.3** Overview of Information Needed

<i>Type of Information</i>	<i>What the Researcher Requires</i>	<i>Method*</i>
<i>(a) Contextual</i> To provide context and background	Organizational background, history, and structure; mission; vision; values; products; services; organizational culture; leadership; staff and site description	Document Review, Observation
<i>(b) Demographic</i>	Descriptive information regarding participants, such as age, gender, ethnicity, discipline, etc.	Survey
<i>(c) Perceptual</i>	Participants' descriptions and explanations of their experiences as this relates to the phenomenon under study.	
<i>Research Question 1.</i> <i>Write out question</i>	<i>Write out what you specifically want to know regarding this question.</i> - -	Interview Critical Incidents Focus Group

*Do the same for all your subsequent research questions*

\*List of documents and instruments for all data collection methods should appear as appendices.

might have made to your design along the way. That is, describe all the steps that you took as you moved through the study to collect your data. Indicate the order in which these steps occurred, as well as how each step informed the next. The narrative can be accompanied by a flowchart or diagram that illustrates the steps involved. A sample research design flowchart appears in Appendix F.

Appropriate methods are derived from having done your analysis of the kinds of information you need to answer your research questions. The discussion of methods and process is preceded by a brief statement concerning your literature review. The purpose of this brief pre-data-collection literature review statement is to underscore: (a) the theoretical grounding for the study, (b) that the review of the literature was ongoing and related research was continually updated, and (c) that the conceptual framework

developed from the literature review was used to guide the data analysis, interpretation, and synthesis phases of the research. This literature review statement comes before the identification and description of methods because, although the literature review is ongoing, generating new information and supporting evidence, it is not a data-collection method per se. You are now ready to discuss the methods you will use in your study.

### *Methods of Data Collection*

Qualitative researchers are concerned about the validity of their communication. To reduce the likelihood of misinterpretation, we employ various procedures, including redundancy of data gathering and procedural challenges to explanation. These procedures, called *triangulation*, are considered a process of using multiple perceptions to clarify meaning. Keep in mind that the use

of multiple methods of data collection to achieve triangulation is important to obtain an in-depth understanding of the phenomenon under study. There are several methods used in qualitative research to choose from: interviews (often the primary method), summative focus groups, document review, observation, and critical incident reports. A variety of combinations of methods can be employed. Surveys and questionnaires, which are traditionally quantitative instruments, also can be used in conjunction with qualitative methods to provide corroboration and/or supportive evidence. Appendix G provides a summary overview of the qualitative data-collection methods from which to choose.

A common pitfall in writing this section is the tendency to describe the data-collection methods chosen as if they exist in a vacuum without explaining the logical connections among the methods you have chosen, your research questions, and your research approach. Following are the sequential steps that must be covered in this section. Be specific and precise in your discussion as you:

1. Describe each data-collection method you used.
2. Provide a rationale for each of the methods selected.
3. Provide complete information about how you used each method.
4. Describe how you developed each of your instruments.
5. Describe how you field tested your instruments.
6. Describe how you recorded and safeguarded your data.
7. Describe the steps you took to preserve confidentiality and anonymity of data.

A note of clarification: *Methodology* refers to how research proceeds and encompasses a

range of logistical, relational, ethical, and credibility issues. The term *methods* commonly denotes specific techniques, procedures, or tools used by the researcher to generate and analyze data. Unlike the overview of methodology discussed earlier, which reflects an overall research strategy, this section describes what the literature says about each of the methods you used in your study. In other words, you discuss how the instruments you have chosen are appropriate to your study, making use of the literature to support each of your choices.

To show that you have done a critical reading of the literature and to acknowledge that data-collection methods, although certainly useful, are not without some disadvantages, the discussion should include some detail regarding the strengths and weaknesses of each method. In your discussion, present the methods of data collection in the order in which you use them, and be sure to structure the discussion well by having a separate heading for each method.

Based on the research questions, specific data-collection methods are chosen to gather the required information in the most appropriate and meaningful way. Remember too that triangulation strengthens your study by combining methods. Having presented the methods that you have used to gather data, you are ready to go on and explain how the data have been recorded and managed, as well as your strategies for data analysis.

Because interviews are, in most cases, the primary method of data collection, it is useful at this point to explain how interview questions are developed. To carry out the purpose of your study, all the research questions must be satisfied. Therefore, designing the right interview questions is critical. To ensure that the interview questions are directly tied to the research questions, type out in bold font each of your research questions and then underneath each brainstorm three or four questions that will get at that research question. When

you have done this for each of your research questions, you should have a list of 12 to 15 interview questions. To do a preliminary test of your interview questions, think about all probable responses you might get from each interview question, and reframe the questions until you are satisfied they will engender the kind of responses that refer directly to the research questions. A sample of a completed interview schedule or interview protocol based on research questions is presented as Appendix H.

Constructing a matrix that lists the research questions along the horizontal axis and the interview questions down the vertical axis can further indicate the extent to which your interview questions have achieved the necessary coverage of your research questions. Table 3.4 is an illustration of this approach. This type of matrix, which allows a visual overview of the required coverage of the research questions via the interview schedule, in conjunction with pilot interviews, can help you further refine your interview questions.

### *Data Analysis and Synthesis*

In this section, you report on how you managed, organized, and analyzed your data

in preparation to write up and present your findings (chap. 4) and then how you went on to analyze and interpret your findings (chap. 5). Thus, it is important to note that this section of chapter 3 can be written only *after* you have written up the findings and analysis chapters of your dissertation.

The process of data analysis begins with putting in place a plan to manage the large volume of data you collected and reducing it in a meaningful way. You complete this process to identify significant patterns and construct a framework for communicating the essence of what the data revealed given the purpose of your study. Here your conceptual framework becomes the centerpiece in managing the data. The categories that comprise your conceptual framework become the repositories of your data. Thus, as you look at your raw data, categorize them within the construct of your conceptual framework and assign initial codes to relevant quotes. This iterative process of open coding leads to the ongoing refinement of what will become your final coding schema. Generally, include your coding schema or coding legend as an appendix. Appendix I is a completed coding scheme sample. In addition, it is useful to show the reader how your coding

**Table 3.4** Research Questions/Interview Questions Matrix

	<i>Research Questions</i>			
<i>Interview Questions</i>	1:	2:	3:	4:
1				
2				
3				
4				
5				

*Do the same for all your subsequent research questions.*

scheme developed. Appendix J offers such an illustration.

Therefore, the process of analysis is both deductive and inductive. The initial categories of your conceptual framework were deductively obtained from the literature. From your own experience and the data as they emerged from pilot tests, you begin to see patterns and themes. In this way, coding occurs inductively. As the coding schema continues to emerge, you must obtain inter-rater reliability by requesting colleagues, usually three, to read one of your interview transcripts to test your codes. Any discrepancies that result from the independent review by your colleagues must be discussed and reconciled with each of them. Such discrepancies may result in additional exploration of the data. Exploration of such discrepancies in which further clarification is needed will help you as the researcher to refine how you state your findings, as well as subsequent analysis and recommendations (Creswell, 1998). You also can have these same colleagues act as “devil’s advocates” or peer reviewers throughout data collection, analysis, and interpretation.

Computer software programs can be useful in both managing and analyzing your data. Various programs (e.g., *ATLAS ti*, *NUD.IST*, *NVivo*) enable the researcher to store, categorize, retrieve, and compare data. At the same time, there are other researchers who prefer to manage and analyze their data manually—to see visual displays of the data as they move through the analysis process. These researchers also are concerned with what they perceive as a limitation related to mechanical handling of data (Berg, 2004; Merriam, 1998), and so they may feel more comfortable using flip charts, tables, charts, and matrices. We are not suggesting one approach over the other because the method you select to manage and analyze your data is a matter of personal preference and depends on what you are most comfortable with and/or institutional requirements.

Whether you use a computer-based system or a manual one, the development of visuals—tables and/or figures—can be useful in helping you organize your thinking in preparation for writing. Aside from helping you develop your own thinking, visuals also are useful for displaying your data so your readers can better understand them. Various types of charts can be constructed, and you can indeed be quite creative in devising these charts. For presenting and analyzing findings, we have found three charts to be particularly effective: data summary tables, the analysis outline tool, and consistency charts.

Data summary tables, discussed in more detail in chapter 4, can help you in preparing to present the findings from the data. These tables are used for recording the number and types of participant responses, tracking the frequency of participant responses against the categories on your conceptual framework, and formulating overall finding statements with respect to each of your research questions. Sample data summary tables are presented as Appendices R through V.

To further help in the analysis and interpretation of findings, we suggest using what we call an interpretation outline tool. This tool, discussed in more detail in chapter 5, prompts you to probe beneath the surface of your findings to uncover the deeper meanings that lie beneath them. A sample interpretation outline tool appears as Appendix Y. Consistency charts, discussed further in chapter 4, help align your thinking with respect to how each finding can generate suitable conclusions and recommendations. A sample completed consistency chart is presented in Appendix Z.

Because qualitative research is, by its nature, flexible and because there are no strict guidelines and standards for qualitative analysis, every qualitative researcher will approach the analytic process somewhat differently. Therefore, it is necessary to

(a) provide a detailed description of how you went about analyzing your data, (b) refer to the matrices that you used to display your data, and (c) identify the coding processes used to convert the raw data into themes for analysis. Your description should include specific details about how you managed the large amount of data. Include information about the computer software, Post-it notes, index cards, flip charts, or other processes that you used. This list helps the reader clearly understand how and in what ways you reduced or transformed your data.

As a last point in this section, it is important that researchers understand what is meant by *synthesis of the data*. Whereas analysis splits data apart, synthesis is the process of pulling everything together: (a) how the research questions are answered by the findings, (b) how the findings from interviews are supported from all other data-collection methods, (c) how findings relate to the literature, and (d) how findings relate to the researcher's going-in assumptions about the study. This process is not linear; rather, you describe your findings, interpret and attach meaning to them, and synthesize throughout your discussion.

### *Ethical Considerations*

As researchers, we are morally bound to conduct our research in a manner that minimizes potential harm to those involved in the study. We should be as concerned with producing an ethical research design as we are an intellectually coherent and compelling one.

Colleges, universities, and other institutions that conduct research have institutional review boards (IRBs) whose members review research proposals to assess ethical issues. Although all studies must be approved by your institution's IRB committee, there are some unique ethical considerations surrounding qualitative research because of its emergent and flexible design. Ethical issues can indeed arise in all phases of the research

process: data collection, data analysis and interpretation, and dissemination of the research findings. For the most part, issues of ethics focus on establishing safeguards that will protect the rights of participants and include informed consent, protecting participants from harm, and ensuring confidentiality. As a qualitative researcher, you need to remain attentive throughout your study to the researcher-participant relationship, which is determined by roles, status, and cultural norms.

In this section of chapter 3, you need to show the reader that you have considered the ethical issues that might arise vis-à-vis your own study, you are sensitive to these issues, and you have taken the necessary steps to address these issues. In most instances, you will be talking in generalities; the potential issues that could arise apply to any qualitative research study and are usually not specific to your own. Because protection of human subjects is such an important issue in social science research, the main point is that you acknowledge and convey to the reader that you have considered and taken heed of the issues involved. Remember, informed consent is central to research ethics. It is the principle that seeks to ensure that all human subjects retain autonomy and the ability to judge for themselves what risks are worth taking for the purpose of furthering scientific knowledge. In this regard, it is important that you include in your appendix a copy of the consent form that you used in your study. A sample consent form appears in Appendix K.

### *Issues of Trustworthiness*

In quantitative research, the standards that are most frequently used for good and convincing research are validity and reliability. If research is valid, it clearly reflects the world being described. If work is reliable, then two researchers studying the same phenomenon will come up with compatible observations. Criteria for evaluating

qualitative research differ from those used in quantitative research, in that the focus is on how well the researcher has provided evidence that her or his descriptions and analysis represent the reality of the situations and persons studied. In this section of chapter 3, you need to clarify to the reader how you have accounted for trustworthiness regarding your own study.

As mentioned previously, qualitative research is characterized by an ongoing discourse regarding the appropriate and acceptable use of terminology. Current thinking has led some qualitative researchers to develop alternative terminology to better reflect the nature and distinction of qualitative research, whereas others still feel comfortable borrowing terminology from quantitative research. While some qualitative researchers argue for a return to terminology for ensuring rigor that is used by mainstream science (Morse, Barrett, Mayan, Olson, & Spiers, 2002), others object to the use of traditional terms such as *validity* and *reliability*, preferring instead *credibility* and *dependability*. This contrast is a matter of institutional and/or personal preference, and we recommend that you check with your advisor in this regard. Lincoln and Guba (1985) and Guba and Lincoln (1998), among others, belong to the latter camp, proposing various criteria for evaluating the trustworthiness of qualitative research:

1. **Credibility:** This criterion refers to whether the participants' perceptions match up with the researcher's portrayal of them. In other words, has the researcher accurately represented what the participants think, feel, and do? Credibility parallels the criterion of validity (including both validity of measures and internal validity) in quantitative research. Evidence in support of credibility can take several forms:

- a. Clarify up front the bias that you, as the researcher, bring to the study. This self-reflection creates an open and honest attitude that will resonate well

with readers. You should continually monitor their own subjective perspectives and biases by recording reflective field notes or keeping a journal throughout the research process.

- b. Discuss how you engaged in repeated and substantial involvement in the field. Prolonged involvement in the field facilitates a more in-depth understanding of the phenomenon under study, conveying detail about the site and the participants that lends credibility to your account.
- c. An aspect of credibility involves checking on whether your interpretation of the processes and interactions in the setting is valid. Typically, qualitative researchers collect multiple sources of data. The information provided by these different sources should be compared through triangulation to corroborate the researcher's conclusions.
- d. Triangulation of data-collection methods also lends credibility. Using multiple methods corroborates the evidence that you have obtained via different means.
- e. Present negative instances or discrepant findings. Searching for variation in the understanding of the phenomenon entails seeking instances that might disconfirm or challenge the researcher's expectations or emergent findings. Because real life is composed of different perspectives that do not always coalesce, discussing contrary information adds to the credibility of your account.
- f. To ensure that the researcher's own biases do not influence how participants' perspectives are portrayed, and to determine the accuracy of the findings, you can make use of "member checks," which entails sending the transcribed interviews or summaries of the researcher's conclusions to participants for review.
- g. Use "peer debriefing" to enhance the accuracy of your account. This process involves asking a colleague to examine

your field notes and then ask you questions that will help you examine your assumptions and/or consider alternative ways of looking at the data.

2. **Dependability:** This criterion parallels reliability, although it is not assessed through statistical procedures. Dependability refers to whether one can track the processes and procedures used to collect and interpret the data:

- a. Provide detailed and thorough explanations of how the data were collected and analyzed, providing what is known as an “audit trail.” Although it is not possible to include all of your data in the findings chapter, many qualitative researchers make it known that their data are available for review by other researchers.
- b. Ask colleagues to code several interviews, thereby establishing inter-rater reliability. This process of checking on the consistency between raters reduces the potential bias of a single researcher collecting and analyzing the data.

3. **Transferability:** Although qualitative researchers do not expect their findings to be generalizable to all other settings, it is likely that the lessons learned in one setting might be useful to others. Transferability is not whether the study includes a representative sample. Rather, it is about how well the study has made it possible for the reader to decide whether similar processes will be at work in their own settings and communities by understanding in depth how they occur at the research site. Thus, transferability refers to the fit or match between the research context and other contexts as judged by the reader. As a criterion of trustworthiness, transferability is assessed by the following factors:

- a. The richness of the descriptions included in the study give the discussion an element of shared or vicarious experience. Qualitative research is indeed characterized generally by

“thick description” (Denzin, 1989/2001). Thick description is a vehicle for communicating to the reader a holistic and realistic picture.

- b. The amount of detailed information that is provided by the researcher regarding the context and/or background also offers an element of shared experience.

This section of the dissertation’s chapter 3 addresses this central question: How do we know that the qualitative study is believable, accurate, and plausible? To answer this question, one must have some knowledge of the criteria of trustworthiness in qualitative research and the approaches to addressing these criteria. You need to discuss the criteria for evaluating the trustworthiness of qualitative research and to indicate to the reader that you have a clear understanding of the implications thereof vis-à-vis your own study. As the researcher, you are expected to display sensibility and sensitivity to *be* the research instrument. Begin this section by discussing what validity and reliability in qualitative research involves, using references from the literature to support your statements. Then go on to talk about the strategies that you have employed to enhance the trustworthiness of your own study vis-à-vis validity (credibility), reliability (dependability), and generalizability (transferability).

### *Limitations of the Study*

Confusion sometimes exists around the terms *delimitations* and *limitations*, and this issue deserves some clarification. *Delimitations* clarify the boundaries of your study. They are a way to indicate to the reader how you narrowed the scope of your study. As the researcher, you control the delimitations, and you should make this clear. Typical delimitations are selected aspects of the problem, time and location of the study, sample

selected, and so on. *Limitations* of the study expose the conditions that may weaken the study (Locke, Spirduso, & Silverman, 2000; Rossman & Rallis, 2003).

In this section of chapter 3, you cite potential limitations and your means of addressing/guarding against these limitations. Regardless of how carefully you plan a study, there are always some limitations, and you need to explicitly acknowledge these. This section describes the problems inherent in qualitative research and how you can control for these limitations to the extent possible. In most instances, you can control for limitations by acknowledging them. Limitations arise from, among other things, restricted sample size, sample selection, reliance on certain techniques for gathering data, and issues of researcher bias and participant reactivity. Discussing limitations is intended to show the reader that you understand that no research project is without limitations, and that you have anticipated and given some thought to the shortcomings of your research. Stating the limitations also reminds the reader that your study is situated with a specific context, and the reader can make decisions about its usefulness for other settings.

### *Chapter Summary*

The purpose of a final culminating summary is to tie together everything that you have presented in this chapter. Provide a short summary overview, making sure to cover all the sections of this chapter, recapping and highlighting all the important points. Keep the discussion concise and precise.

The application section that follows is a skeleton view of what a methodology chapter should look like. The methodology chapter, as evidenced from the prior instructions, is lengthy, and much detail is required in each section. In an actual dissertation, each section of this chapter would be more

thoroughly elaborated, and hence would require a much more extensive discussion.

## SECTION II: APPLICATION

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### CHAPTER III Methodology Introduction

The purpose of this multicase study was to explore with a sample of doctoral candidates their perceptions of why they have not managed to complete their dissertations. The researcher believed that a better understanding of this phenomenon would allow educators to proceed from a more informed perspective in terms of design and facilitation of doctoral programs. In seeking to understand this phenomenon, the study addressed five research questions: (a) On completion of their coursework, to what extent did participants perceive they were prepared to conduct research and write the dissertation? (b) What did participants perceive they needed to learn to complete their dissertation? (c) How did participants attempt to develop the knowledge, skills, and attitudes they perceived are necessary to complete the dissertation? (d) What factors did participants perceive might help them to complete the dissertation? (e) What factors did participants perceive have impeded and/or continue to impede their progress in working toward completing their dissertation?

This chapter describes the study's research methodology and includes discussions around the following areas: (a) rationale for research approach, (b) description of the research sample, (c) summary of information needed, (d) overview of research design, (e) methods of data collection, (f) analysis and synthesis of data, (g) ethical considerations, (h) issues of trustworthiness, and (i) limitations of the study. The chapter culminates with a brief concluding summary.

### ***Rationale for Qualitative Research Design***

Qualitative research is grounded in an essentially constructivist philosophical position, in the sense that it is concerned with how the complexities of the sociocultural world are experienced, interpreted, and understood in a particular context and at a particular point in time. The intent of qualitative research is to examine a social situation or interaction by allowing the researcher to enter the world of others and attempt to achieve a holistic rather than a reductionist understanding (Bogdan & Biklen, 1998; Locke et al., 2000; Mason, 1996; Maxwell, 2005; Merriam, 1998; Merriam & Associates, 2002; Patton, 1990; Schram, 2003; Schwandt, 2000). Qualitative methodology implies an emphasis on discovery and description, and the objectives are generally focused on extracting and interpreting the meaning of experience (Bogdan & Biklen, 1998; Denzin & Lincoln, 2003; Merriam, 1998). These objectives are contrasted with those of quantitative research, where the testing of hypotheses to establish facts and to designate and distinguish relationships between variables is usually the intent.

It was the researcher's contention that purely quantitative methods were unlikely to elicit the rich data necessary to address the proposed research purposes. In the researcher's view, the fundamental assumptions and key features that distinguish what it means to proceed from a qualitative stance fit well with this study. These features include (a) understanding the processes by which events and actions take place, (b) developing contextual understanding, (c) facilitating interactivity between researcher and participants, (d) adopting an interpretive stance, and (e) maintaining design flexibility.

### ***Rationale for Case Study Methodology***

Within the framework of a qualitative approach, the study was most suited for a case study design. As a form of research methodology, case study is an intensive description and analysis of a phenomenon,

social unit, or system bounded by time or place (Berg, 2004; Creswell, 1998; Merriam, 1998; Merriam & Associates, 2002; Miles & Huberman, 1994; Stake, 1994, 1995, 2000, 2001). As Merriam (1998) indicates, qualitative case study is an ideal design for understanding and interpreting educational phenomena. As she describes it,

A case study design is employed to gain an in depth understanding of the situation and meaning for those involved. The interest is in process rather than outcomes, in context rather than a specific variable, in discovery rather than confirmation. Insights gleaned from case studies can directly influence policy, practice, and future research. (Merriam, 1998, p. 19)

The present research fit well with Merriam's criteria because it sought to better understand why certain people who complete the coursework do not go on to complete the dissertation and hence do not graduate with a doctoral degree.

### ***The Research Sample***

A purposeful sampling procedure was used to select this study's sample. To yield the most information about the phenomenon under study, purposeful sampling is a method that is typical of case study methodology (Patton, 1990; Silverman, 2000). The researcher sought to locate individuals at a variety of universities. Thus, a snowball sampling strategy, sometimes referred to as network or chain sampling (Miles & Huberman, 1994; Patton, 2002), was employed, whereby participants were asked to refer other individuals whom they knew to be ABD. The criteria for selection of participants were:

- All participants were enrolled in a doctoral program for at least 3 years, and
- All participants completed the coursework and passed the certification examination.

A delimiting time frame of 3 years was decided on by the researcher to ensure adequate experience in a doctoral program. Purposeful sampling allowed for sampling across various

locations in the United States. The research sample included 20 individuals. Included in the sample were individuals from doctoral programs at nine universities, including Columbia University, Wayne State University, University of Massachusetts, University of Georgia, University of Southern California, University of Michigan, Rutgers University, Fordham University, and Northwestern University. Purposeful selection also was based on variation across certain distinguishing characteristics. Although participants were all ABD doctoral candidates, there were differences among them along the following parameters: length of time spent in doctoral program, university and discipline, gender, age, and occupation.

### ***Information Needed to Conduct the Study***

This multicase study focused on 20 doctoral candidates from nine universities located in different regions of the United States. In seeking to understand why these doctoral candidates have not obtained doctoral degrees, five research questions were explored to gather the information needed. The information needed to answer these research questions was determined by the conceptual framework and fell into three categories: (a) perceptual, (b) demographic, and (c) theoretical. This information included:

- Doctoral candidates' perceptions of what they needed to know and how they went about obtaining what they needed to conduct their research and complete their dissertations.
- Demographic information pertaining to participants, including years in program, doctoral program concentration/discipline, age, gender, and ethnicity.
- An ongoing review of the literature providing the theoretical grounding for the study.

### ***Overview of Research Design***

The following list summarizes the steps used to carry out this research. Following this list is a more in-depth discussion of each of these steps.

1. Preceding the actual collection of data, a selected review of the literature was conducted to study the contributions of other researchers and writers in the broad areas of higher educational programs and adult learning theory.
2. Following the proposal defense, the researcher acquired approval from the IRB to proceed with the research. The IRB approval process involved outlining all procedures and processes needed to ensure adherence to standards put forth for the study of human subjects, including participants' confidentiality and informed consent.
3. Potential research participants were contacted by telephone, and those who agreed to participate were sent a questionnaire by mail. The survey was designed to collect demographic as well as perceptual data.
4. Semistructured, in-depth interviews were conducted with 20 ABD doctoral candidates in nine universities located across the United States.
5. Interview data responses were analyzed within and between groups of interviewees.
6. Critical incident instruments were given to participants at the end of each interview to check data collected through other means. Of the 20 participants, 12 responded.
7. A focus group was conducted with six ABDs who were drawn from the pool of participants identified for this study to cross-check data from that group with the data collected through interviews.

### ***Literature Review***

An ongoing and selective review of literature was conducted to inform this study. Two topics of literature were identified: higher education doctoral programs and adult learning theory. The focus of the review was to gain a better understanding of what prompted participants to enroll in doctoral programs, the requirements and challenges inherent in these programs, and the effect on participants and the means they took to meet the requirements and overcome the challenges they faced.

***IRB Approval***

Following the literature review, the researchers developed and successfully defended a proposal for this study that included: the background/context, problem statement, purpose statement, and research questions outlined in chapter 1; the literature review included in chapter 2; and the proposed methodological approach as outlined in chapter 3.

***Data-Collection Methods***

The use of multiple methods and triangulation is critical in attempting to obtain an in-depth understanding of the phenomenon under study. This strategy adds rigor, breadth, and depth to the study and provides corroborative evidence of the data obtained (Creswell, 1998; Denzin & Lincoln, 2000). Therefore, this study employed a number of different data-collection methods, including survey, interviews, critical incident reports, and a focus group.

***Phase I: Survey***

Potential participants were contacted. Of those who were contacted to participate, three individuals declined. The 20 individuals who agreed to participate were sent a questionnaire by mail and were asked to return the completed forms by way of a self-addressed envelope. The questionnaire was designed to collect profile data and also asked participants their purposes for enrolling in a doctoral program. The survey appears as Appendix L.

An advantage of survey methodology is that it is relatively unobtrusive and relatively easily administered and managed (Fowler, 1993). It must be acknowledged, however, that surveys can be of limited value for examining complex social relationships or intricate patterns of interaction. In keeping with the qualitative research tradition, the surveys used in the present study included some open-ended questions that sought to tap into personal experiences and shed light on participants' perceptions. For the purposes of the present study, surveys had a distinct place in the study's methodological

design and served as a useful complement or adjunct to other data-collection methods.

***Phase II: Interviews***

The interview was selected as the primary method for data collection in this research. The interview method was felt to be of the most use in the study because it has the potential to elicit rich, thick descriptions. Further, it gives the researcher an opportunity to clarify statements and probe for additional information. Creswell (1994), Marshall and Rossman (2006), and Denzin and Lincoln (2003) state that a major benefit of collecting data through individual, in-depth interviews is that they offer the potential to capture a person's perspective of an event or experience.

The interview is a fundamental tool in qualitative research (Kvale, 1996; Merriam, 1998; Seidman, 1998). Kvale (1996) describes the qualitative research interview as an "attempt to understand the world from the subject's point of view, to unfold the meaning of peoples' experiences, to uncover their lived world..." (p. 1). As Patton (1990) similarly claims, "qualitative interviewing begins with the assumption that the perspective of others is meaningful, knowable, and able to be made explicit" (p. 278). The researcher's logic for using this data-collection method is that a legitimate way to generate data is to interact with people (i.e., talk to and listen to them), thereby capturing the meaning of their experience in their own words.

Although interviews have certain strengths, there are various limitations associated with interviewing. First, not all people are equally cooperative, articulate, and perceptive. Second, interviews require researcher skill. Third, interviews are not neutral tools of data gathering; they are the result of the interaction between the interviewer and the interviewee and the context in which they take place (Fontana & Frey, 2003; Rubin & Rubin, 2005; Schwandt, 1997).

*Interview Schedule of Questions and Pilot Interviews.* With guidance from her advisor, the researcher used the study's five research questions

as the framework to develop the interview questions. Matrices were constructed to illustrate the relationship between this study's research questions and the interview questions as they were being developed. Three doctoral colleagues were then asked to review and provide feedback to the researcher. Their comments were incorporated, and the researcher resubmitted the schedule of questions to her advisor. With the advisor's approval, two pilot interviews were conducted by phone. The preliminary themes that emerged from the pilot interviews revolved around reasons that individuals enroll in doctoral programs and their learning during the process. From the pilot interviews, a series of open-ended questions was developed, which enabled the researcher the flexibility to allow new directions to emerge during the interview. The final interview schedule is included as Appendix H.

*Interview Process.* The researcher sent individual e-mails to prospective participants describing the purpose of the study, inviting their participation, and requesting a convenient date and time for a telephone interview. The researcher sent confirming e-mails to the 20 individuals who agreed to be interviewed. The interviews took place between August and October 2006. Before the interview commenced, the interviewee was asked to review and sign a university consent form required for participation in this study (see Appendix I). All interviews were conducted telephonically and were tape recorded in their entirety. At the end of each interview, the interviewee was asked to complete and return by e-mail the critical incident instrument, which had been prepared by the researcher. On completion of the interview, the audio tape was transcribed verbatim.

### *Phase III: Critical Incidents*

The researcher selected critical incident instruments with the intention of corroborating interview data and, further, to allow the uncovering of perceptions that might not have been revealed through the interviews. Critical incident reports,

a data-collection method first formulated by Flanagan (1954), are useful because qualitative research methodology emphasizes process and is based on a descriptive and inductive approach to data collection (Bogdan & Biklen, 1998). Of particular importance is that written critical incident reports probe assumptions, allowing time for reflection (Argyris & Schon, 1996; Brookfield, 1991; Marshall & Rossman, 2006).

Although there is support in the literature for the use of the critical incident as an effective technique for enhancing data collection, with several authors noting its advantages (Bogdan & Biklen, 1998; Brookfield, 1986, 1987, 1991; Flanagan, 1954), the researcher was mindful of Brookfield's repeated caution that critical incidents cannot be the sole technique for collecting data. Critical incidents are too abbreviated to provide the rich descriptions that can be obtained in interviews and observations. A further concern regarding the use of critical incident reports has to do with the accuracy of data because this technique relies solely on the respondents' recall. A related concern is that, although reporting information that respondents perceive is important, the researcher may fail to report salient incremental data and the information, as such, may be incomplete.

The critical incident instrument was developed by the researcher and further refined by her advisor. The instrument was field tested in conjunction with the pilot interviews. The results of the field test called for minor revisions, and these were incorporated into a final critical incident form/instrument. This instrument is included as Appendix M.

The critical incident instrument was subsequently given to the 20 participants in this study at the end of each interview by the researcher. The instrument asked respondents to think about a specific time when they felt ill-prepared to conduct some part of the dissertation process. Specifically, participants were asked to briefly describe the incident, indicating who was involved, what they learned, and how they thought their learning would influence how they would handle similar situations in the future. Participants were

given a self-addressed envelope and were requested at the end of the interview to return completed critical incidents to the researcher as soon as possible. The researcher received 12 completed critical incidents from among the 20 participants. Although the researcher had hoped for a greater response, when analyzed, the returned critical incidents served as a "validity check" on some aspects of the data uncovered in the interviews.

#### *Phase IV: Focus Group*

Focus groups, or group interviews, possess elements of both participant observation and individual interviews, while also maintaining their own uniqueness as a distinctive research method (Morgan, 1997). A focus group is essentially a group discussion focused on a single theme (Kreuger, 1988). The goal is to create a candid conversation that addresses, in depth, the selected topic. The underlying assumption of focus groups is that, within a permissive atmosphere that fosters a range of opinions, a more complete and revealing understanding of the issues will be obtained. Focus groups are planned and structured, but are also flexible tools (Vaughn, Schumm, & Sinagub, 1996). Kreuger and Casey (2000) list various uses of focus groups, many of which fit well with this study's purpose. These are to: (a) elicit a range of feelings, opinions, and ideas; (b) understand differences in perspectives; (c) uncover and provide insight into specific factors that influence opinions; and (d) seek ideas that emerge from the group.

It must be acknowledged that focus groups, while serving a useful function, are not without disadvantages. Among these disadvantages is "group-think" as a possible outcome (Fontana & Frey, 2003). Furthermore, logistical difficulties might arise from the need to manage conversation while attempting to extract data, thus requiring strong facilitation skills.

One 1½-hour formative focus group was convened with six participants who were not part of the study sample. These participants were purposefully selected based on the established criteria. The purpose of this focus group interview was twofold:

(a) to augment the information obtained, and (b) to provide additional data to ensure trustworthiness and credibility. In the open-ended format that was used, the researcher asked the group to explore two issues. First, what did they feel helped them the most in the research process? Second, what challenges and obstacles did they encounter that impeded their progress?

The researcher contacted the 20 study participants seeking their interest in joining a focus group discussion. The study participants were advised of the purpose and were told that the discussion would be held over an Internet Conference Call System and would be audiotaped. Eleven of the 20 participants responded that they would be willing to join the discussion, and the first 6 respondents were selected. A general e-mail was sent by the researcher thanking the participants who had expressed interest. Following that, the researcher contacted each of the focus group members to schedule a convenient time to hold the discussion.

#### ***Methods for Data Analysis and Synthesis***

The challenge throughout data collection and analysis was to make sense of large amounts of data, reduce the volume of information, identify significant patterns, and construct a framework. In this regard, Merriam (1998) cautions researchers to make data analysis and data collection a simultaneous activity to avoid the risk of repetitious, unfocused, and overwhelming data.

The formal process of data analysis began by assigning alphanumeric codes according to the categories and descriptors of the study's conceptual framework. The researcher prepared large flip chart sheets. These sheets were color coded and taped on the wall. Each sheet identified the descriptors under the respective categories of the conceptual framework. As the process of coding the transcripts proceeded, new flip chart sheets were prepared to capture other themes as they emerged.

Before cutting and pasting coded participant quotations, the researcher shared samples of coded interviews with two colleagues. Discussion

with both colleagues confirmed the researcher's designations. The researcher also prepared written narratives on each of the sheets after all the data had been assigned. These narratives were helpful in cross-checking the data and served as a secondary analysis.

As a final step, to see whether there were any variables that would account for similarities or differences among participants, the researcher tested the coded data on the sheets against the frequency charts prepared for each finding and the numerically coded profile data on the participants. This step aided the researcher in her cross-case analysis of the data, which is described more fully later.

The coding process fragments the interview into separate categories, forcing one to look at each detail, whereas synthesis involves piecing these fragments together to reconstruct a holistic and integrated explanation. Overall, the researcher's approach was to come up with a number of clusters, patterns, or themes that were linked together, either similarly or divergently and that collectively described or analyzed the research arena. Toward this end, the researcher essentially followed a three-layered process in thinking about the data. First, she examined and compared threads and patterns within categories. Second, she compared connecting threads and patterns across categories. Third, the current work was situated with respect to prior research and was compared and contrasted with issues that had been raised by the broader literature. These three layers were not separate, but were interlocked and iterative throughout the synthesizing process.

Based on analysis and synthesis, the researcher was able to move forward and think about the broader implications of this research. Toward this end, she formulated several conclusions and developed various practical and research-related recommendations.

### ***Ethical Considerations***

In any research study, ethical issues relating to protection of the participants are of vital concern (Berg, 2004; Marshall & Rossman, 2006;

Merriam, 1998; Pring, 2000; Punch, 1994; Schram, 2003). A social science researcher is responsible for both informing and protecting respondents. The research process involves enlisting voluntary cooperation, and it is a basic premise that participants are informed about the study's purpose. The central issue with respect to protecting participants is the ways in which the information is treated. Although it was anticipated that no serious ethical threats were posed to any of the participants or their well-being, this study employed various safeguards to ensure the protection and rights of participants.

First, informed consent remained a priority throughout the study. Written consent to voluntarily proceed with the study was received from each participant. Second, participants' rights and interests were considered of primary importance when choices were made regarding the reporting and dissemination of data. The researcher was committed to keeping the names and/or other significant identity characteristics of the sample organizations confidential. Cautionary measures were taken to secure the storage of research-related records and data, and nobody other than the researcher had access to this material.

### ***Issues of Trustworthiness***

In qualitative research, trustworthiness features consist of any efforts by the researcher to address the more traditional quantitative issues of validity (the degree to which something measures what it purports to measure) and reliability (the consistency with which it measures it over time). In seeking to establish the trustworthiness of a qualitative study, Guba and Lincoln (1998) use the terms *credibility*, *dependability*, *confirmability*, and *transferability*, arguing that the trustworthiness of qualitative research should be assessed differently from quantitative research. Regardless of the terminology used, qualitative researchers must continue to seek to control for potential biases that might be present throughout the design, implementation, and analysis of the study.

### *Credibility*

The criterion of credibility (or validity) suggests whether the findings are accurate and credible from the standpoint of the researcher, the participants, and the reader. This criterion becomes a key component of the research design (Creswell, 2003; Creswell & Miller, 2000; Marshall & Rossman, 2006; Mason, 1996; Maxwell, 2005; Merriam, 1998; Merriam & Associates, 2002; Miles & Huberman, 1994). Seeking not to *verify* conclusions, but rather to *test the validity* of conclusions reached, entails a concern with both methodological and interpretive validity (Mason, 1996).

Methodological validity involves asking how well matched the logic of the method is to the kinds of research questions that are being posed and the kind of explanation that the researcher is attempting to develop. Dealing with this type of validity involves consideration of the interrelationship between the research design components—the study's purpose, conceptual framework, research questions, and methods. Interpretive validity involves asking how valid the data analysis is and the interpretation on which it is based. Although this step is somewhat dependent on methodological validity, it goes further in that it directs attention to the quality and rigor with which the researcher interprets and analyzes data in relation to the research design (Mason, 1996).

To enhance the methodological validity of the study, the researcher triangulated data sources as well as data-collection methods. Gathering data from multiple sources and by multiple methods yields a fuller and richer picture of the phenomenon under review. To enhance the interpretive validity of this study, the researcher employed various strategies. First, she clarified her assumptions up front, and the steps through which interpretations were made also were charted through journal writing. Second, the researcher used various participatory and collaborative modes of research, including the search for discrepant

evidence and peer review, which has been discussed at length by Lincoln and Guba (1985). This entails looking for variation in the understanding of the phenomenon and seeking instances that might challenge the researcher's expectations or emergent findings. Reviewing and discussing findings with professional colleagues was a further way of ensuring that the reality of the participants was adequately reflected in the findings.

### *Dependability*

Reliability in the traditional sense refers to the extent that research findings can be replicated by other similar studies. Qualitative research usually does not cover enough of an expanse of subjects and experiences to provide a reasonable degree of reliability. As argued by Lincoln and Guba (1985), the more important question becomes one of whether the findings are consistent and dependable with the data collected. As the researcher understood it, in qualitative research the goal is not to eliminate inconsistencies but to ensure that the researcher understands when they occur. Thus, it becomes incumbent on the researcher to document her procedures and demonstrate that coding schemes and categories have been used consistently.

Toward this end, inter-rater reliability (Miles & Huberman, 1994) was established by asking colleagues to code several interviews. Although coding was generally found to be consistent, there were certain instances where the raters made some inferences that could not be fully supported by the data. In these cases, the researcher reviewed the data and reconciled differences in interpretations. In addition, the researcher maintained an audit trail (Lincoln & Guba, 1985) that chronicled the evolution of her thinking and documented the rationale for all choices and decisions made during the research process. This trail, which Merriam & Associates (2002) describe as offering "transparency of method," depended on the researcher

keeping a journal as well as a record of memos that included detailed accounts of how all the data were analyzed and interpreted.

### *Confirmability*

The concept of *confirmability* corresponds to the notion of objectivity in quantitative research. The implication is that the findings are the result of the research, rather than an outcome of the biases and subjectivity of the researcher. To achieve this end, a researcher needs to identify and uncover the decision trail for public judgment. Although qualitative researchers realize the futility of attempting to achieve objectivity, they must nevertheless be reflexive and illustrate how their data can be traced back to its origins. As such, the audit trail (Lincoln & Guba, 1985) used to demonstrate dependability, including ongoing reflection by way of journaling and memo, as well as a record of field notes and transcripts, served to offer the reader an opportunity to assess the findings of this study.

### *Transferability*

Although generalizeability is not the intended goal of this study, what was addressed was the issue of *transferability* (Lincoln & Guba, 1985)—that is, the ways in which the reader determines whether and to what extent this particular phenomenon in this particular context can transfer to another particular context. With regard to transferability, Patton (1990) promotes thinking of “context-bound extrapolations” (p. 491), which he defines as “speculations on the likely applicability of findings to other situations under similar, but not identical, conditions” (p. 489). Toward this end, the researcher attempted to address the issue of transferability by way of thick, rich description of the participants and the context. Depth, richness, and detailed description provide the basis for a qualitative account’s claim to relevance in some broader context (Schram, 2003).

### *Limitations of the Study*

This study contains certain limiting conditions, some of which are related to the common critiques of qualitative research methodology in general and some of which are inherent in this study’s research design. Careful thought has been given to ways of accounting for these limitations and to ways of minimizing their impact. Unique features of qualitative research methodology present potential limitations in its usage.

Because analysis ultimately rests with the thinking and choices of the researcher, qualitative studies in general are limited by researcher subjectivity. Therefore, an overriding concern is that of researcher bias, framing as it does assumptions, interests, perceptions, and needs. One of the key limitations of this study is the issue of subjectivity and potential bias regarding the researcher’s own participation in a doctoral program first as a student and currently as a faculty member.

A related limitation was that interviewees may have had difficulty adjusting to the researcher taking on the role of interviewer, a phenomenon referred to by Maxwell (1996) as *participant reactivity*. Because a few of the participants knew the researcher, their responses may have been influenced or affected. They may have tried overly hard to cooperate with the researcher by offering her the responses they perceived she was seeking or which they perceived might be helpful to her. Alternatively, because of familiarity with the researcher, these few participants might have been guarded and therefore less candid in their responses.

Recognizing these limitations, the researcher took the following measures. First, she acknowledged her research agenda and stated her assumptions up front. Coding schemes were scrutinized by advisors and through peer review, as were coded documents and transcripts. To reduce the limitation of potential bias during data analysis, the researcher removed all participant names and coded all interview transcripts

blindly so as not to associate any material or data with any particular individual. To address the problem of participant reactivity, the researcher continued to reflect on how and in what ways she might be influencing participants. Furthermore, she made a conscious attempt to create an environment that was conducive to honest and open dialogue. Experience as an interviewer, as well as prior research experience, was helpful in this regard.

Aside from issues pertaining to bias and reactivity, a further major limitation of this study was that the research sample was restricted. Therefore, a critique of this research might be the limited possibility of generalizing this study to other groups and other programs. Although generalizability was not the intended goal of this study, what the researchers addressed is the issue of transferability (Lincoln & Guba, 1985). By way of thick, rich description, as well as detailed information regarding the context and background of the study, it was anticipated that knowledge could be assessed for its applicability and applied appropriately in other contexts.

### ***Chapter Summary***

In summary, this chapter provided a detailed description of this study's research methodology. Qualitative case study methodology was employed to illustrate the phenomenon of why some people who complete all the doctoral coursework do not go on to complete the dissertation, never obtain the doctoral degree, and hence remain ABD. The participant sample was made up of 20 purposefully selected individuals. Three data-collection methods were employed, including individual interviews, critical incidents, and a focus group. The data were reviewed against literature as well as emergent themes. Credibility and dependability were accounted for through various strategies, including source and method triangulation.

A review of the literature was conducted to devise a conceptual framework for the design and analysis of the study. A process analysis

enabled the key themes from the findings to be identified. Through a comparison with the literature, interpretations and conclusions were drawn, and recommendations were offered for both educational practice and further research. The intent was that this study would make a contribution to the understanding of doctoral students, current and future, with regard to their completing a dissertation. Additionally, it is hoped that this study will be of value to those educators who are responsible for doctoral programs.

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### **SUMMARY DISCUSSION FOR CHAPTER 3**

Writing the methodology chapter requires time, mind work, and a great deal of reflection about the nature of your inquiry. You most certainly want to present well-reasoned research that will illustrate the integrity of your study. Be sure to give careful thought to how you present the discussion, and, as always, remember to work from an outline. Your headings and subheadings in this chapter are contingent on your particular university's requirements. How well you present this chapter illustrates to the reader that you have carefully designed and produced a sound study based on the principles of qualitative research.

As emphasized throughout this book, writing a dissertation is not a linear process. Rather, it is an iterative and recursive one that requires much back and forth, reminder notes to yourself, and memos to change, revise, and update what you have already written. Chapter 3 is one of those chapters that must remain flexible and open to change right up to the very end. Frustration is inevitable, but don't despair! This is all part and parcel of managing and organizing the research and writing process.

## Chapter Checklist

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- ✓ Do you have a clear introduction to this chapter that includes your purpose statement (if required), as well as an explanation of how the chapter will be organized?
- ✓ Does the discussion have a logical flow?
- ✓ Does the discussion illustrate that you have a good understanding of the assumptions and principles of qualitative research?
- ✓ Do you offer a convincing argument for choosing a qualitative approach?
- ✓ Do you provide a convincing argument for the particular qualitative tradition or genre (or combination of traditions) that you have chosen?
- ✓ Have you made it clear how the research sample was selected from the population, as well as the specific criteria used in selection?
- ✓ Have you provided a sufficiently detailed description of the site and research sample?
- ✓ Have you discussed issues of access and consent?
- ✓ Is the information that is needed to conduct the study clearly and specifically outlined?
- ✓ Are you clear how and from whom the necessary information will be obtained?
- ✓ Is there a logical connection between the type of information needed and the methods you have selected to obtain that information?
- ✓ Are the data-collection methods sufficiently described? The description of each instrument should relate to the function of the instrument in the study and what the instrument is intended to measure.
- ✓ Have you provided a comprehensive literature review of the data-collection methods used and included details regarding the strengths and limitations of each method?
- ✓ Are the data-collection methods congruent with the problem being investigated and the specific qualitative tradition employed?
- ✓ Do you explain the procedures you use for recording, managing, and storing information?
- ✓ Has triangulation of the data-collection methods been achieved?
- ✓ Is the study's methodology/research design documented in sufficient detail? Have you described in chronological order each step taken in conducting the study?
- ✓ Is there a sequential progression inherent in the methodological design? That is, is the reader able to see how each stage of the study's design builds on and flows logically from the stage preceding it?
- ✓ Have you discussed all decisions made during the course of the study, and, if applicable, have you mentioned any changes or modifications in focus, direction, and design?
- ✓ If applicable, have you described all field tests or pilot tests that you have used?
- ✓ Are your methods of data analysis, synthesis, and interpretation sufficiently described and detailed?
- ✓ Are your methods of data analysis congruent with the principles of qualitative research?
- ✓ Are the ethical considerations that you have identified clear and acceptable, and have you discussed the procedures followed to address them?

## 90 | COMPLETING YOUR QUALITATIVE DISSERTATION

- ✓ Does your discussion of the key issues pertaining to trustworthiness in qualitative research show that you have a clear understanding of these issues?
- ✓ Does your discussion around trustworthiness show how you have considered and accounted for credibility, dependability, and transferability vis-à-vis your own study?
- ✓ Do you acknowledge potential limitations of your study?
- ✓ Do you indicate how you have attempted to address these limitations?
- ✓ Are headings and subheadings used effectively to structure and present the discussion?
- ✓ Does the discussion in each section flow logically?
- ✓ Are the transitions from one section of the chapter to another clear and logical? Have you made use of effective segues?
- ✓ Are tables, figures, and appendices used effectively and appropriately?
- ✓ Do tables and figures follow the format specified by your required style manual?
- ✓ Are the columns and rows of each table labeled correctly?
- ✓ Does the title of each table and/or figure indicate exactly (clearly and concisely) what the table or figure is intended to represent?
- ✓ Have you checked for institutional and/or program-related differences regarding the content and structure of chapter 3?
- ✓ Have you checked for institutional and/or program-related differences regarding the appropriate use of qualitative language and terminology?

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**ANNOTATED BIBLIOGRAPHY**

Berg, B. L. (2004). *Qualitative research methods* (5th ed.). Boston: Allyn & Bacon.

The author covers the entire research design process from sampling strategies to collecting, organizing, and making sense of qualitative data. This book provides a solid grounding in the mainstream qualitative methods, with chapter 2 providing a discussion of purposeful sampling and its many different types of strategies, and chapter 3 providing a thorough overview of ethical issues. Chapters 4 and 5 offer detailed information pertaining to interviews and focus groups. Chapter 11 provides an in-depth overview and description of content analysis—the basis of the qualitative analytical approach. There are extensive lists of references presented at the end of each chapter, which offer the reader a variety of primary sources. Overall, the book focuses on current issues in the world of social research, which include a serious concern about ethical behavior and a more reflexive and sensitive role for the researcher.

Creswell, J. W. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage.

Creswell uses the metaphor of a “circle of interrelated activities” to describe a process of engaging in activities that include but go beyond collecting data. In chapter 7, he introduces each activity: locating a site, sampling purposefully to obtain a research sample, collecting data (interviews, observation, document review, and audiovisual material), recording information, exploring field issues, and storing data.

Furthermore, he explores how each of these activities varies by tradition of inquiry. In chapter 8, Creswell discusses generally, as well as more specifically for each of the five traditions, the different procedures for data analysis and the representation of data in both narrative and visual forms. Chapter 10 focuses on the intricacies involved in the issue of trustworthiness: establishing standards of quality and verification.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2003). *Collecting and interpreting qualitative materials* (2nd ed.). Thousand Oaks, CA: Sage.

This comprehensive collection of chapters written by experts in the field covers a variety of qualitative methodological issues related to gathering, analyzing, and interpreting data. Unlike most of the other books recommended in this section's annotated bibliography, this book is not a "how-to" handbook. Rather, it uncovers and examines the philosophical and political implications of qualitative research methodology, addressing issues of equity and social justice. Part I includes discussion of data-collection methods, including interviews, observation, documents and material culture, and focus groups. Also included is a chapter on software and qualitative research. Part II includes discussion of issues pertaining to the practices of interpretation, evaluation, and representation.

Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing*. Thousand Oaks, CA: Sage.

Interviewing is an essential tool in the repertoire of any qualitative researcher, yet the hows and the whys of the interview process are not always easily understood. This book does a good job of explaining the theoretical underpinnings and practical aspects of the interview process. After examining the role of the interviewer in the research process, the author considers some of the key philosophical issues related to interviewing. He then takes the reader through what he calls "the seven stages of the interview investigation"—from designing a study to writing it up. Particularly useful are the chapters on analysis (chap. 11) and validity (chap. 13).

Marshall C., & Rossman, G. B. (2006). *Designing qualitative research* (4th ed.). Thousand Oaks, CA: Sage

These authors offer comprehensive instruction as well as outline the challenges involved in the design and conduct of a sound qualitative study. Chapter 4 offers useful guidelines about the various qualitative data-collection methods, with a particular focus on interviews, observation, and document review as primary methods. The authors also provide good discussion of secondary methods, including survey, life history, and narrative inquiry. The focus is on how to design a data-collection strategy by way of thoughtfully combining methods so that they build on and complement one another. Chapter 5 deals with recording, managing, and analyzing data. This chapter defends the value and logic of qualitative research and offers some useful insights and background reading around issues of trustworthiness in qualitative inquiry. Particularly useful are the exhaustive and well-organized bibliographies found at the end of each of these chapters.

Mason, J. (1996). *Qualitative researching*. Thousand Oaks, CA: Sage.

The intent of this book is to provide qualitative researchers with a set of tools and a mode of critical thinking to help them plan and develop a sound research design. It is based on the notion that qualitative researchers need to think and act strategically in

ways that combine intellectual, philosophical, technical, and practical concerns. Chapter 2 deals with questions about planning and designing a qualitative study. Chapters 3 and 4 cover the various methods for generating qualitative data: interviews, observation, and document analysis. The author uses the medium of posing questions around pertinent issues related to the choice and use of methods. These questions are not designed to probe qualitative research in the abstract, but represent the active thinking-and-doing skills required to make informed and thoughtful choices.

Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass.

The primary focus of this book is on qualitative research in general, with applications to case study as a secondary emphasis. Part I includes discussion of the different types of qualitative research and how to design a qualitative case study, including sample selection. Part II consists of four chapters that detail data-collection techniques: These chapters include how to record and evaluate interview data, how to conduct observations and record observation data in the form of field notes, and how to use documents, including their strengths and limitations. Chapter 6 illustrates the application of all three methods of data collection with regard to case study methodology. Chapter 10 in Part III deals with issues of trustworthiness and research ethics.

Morgan, D. L. (1997). *Focus groups as qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.

This book is an excellent guide to focus groups. It covers how focus groups compare with other qualitative methods of data collection, pointing out the strengths and weaknesses of this method and outlining the many uses of focus groups vis-à-vis qualitative research. The author offers clear instructions regarding how to plan a research design that includes focus groups, as well as how to actually go about conducting the group interview and analyze the data that are generated.

Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.

Patton's classic book brings together theory and practice, offering many useful strategies for designing and conducting qualitative studies. Examples serve to clarify and deepen understanding of the qualitative research process in its many facets. Especially useful are the sections on the defining characteristics of qualitative research, the variety of qualitative research traditions, sampling procedures, methods and techniques of data collection (there are detailed and thorough chapters dealing with observation and interview), data analysis and interpretation (including computer-assisted analysis), ethical issues, and criteria for enhancing credibility. Patton is one of the forebearers of qualitative research. This often-quoted book set the standards for the field in the 1980s and 1990s. Recently revised, it brings readers up to date with the variety of current perspectives about (as well as the variety within) qualitative inquiry.

Robson, C. (2002). *Real world research: A resource for social scientists and practitioner-researchers* (2nd ed.). Malden, MA: Blackwell.

This book deals with qualitative design issues and data-collection methods. The book is wide ranging and offers the reader an appreciation of the complexities and issues involved in designing, carrying out, analyzing, and reporting on different kinds of studies. Particularly useful for dissertation writers are discussions in Part III around

the use of surveys/questionnaires, interviews, observation, and document analysis, and instruction in Part IV around preparing for data analysis and synthesis. This text, which emphasizes the importance of a flexible research design for qualitative inquiry, is a useful reference to use along the way as you conduct your research and begin to write the dissertation.

Seidman, I. (1998). *Interviewing as qualitative research: A guide for researchers in education and the social sciences*. New York: Teachers College Press.

Most qualitative research employs interviewing as a primary method of data collection. This book is a concise yet one of the most informative overviews on the art of interviewing, with the author offering concrete examples of interviewing techniques, as well as discussion of the complexities involved, including technical, logistical, and ethical issues. What are especially useful are the guidelines to analyzing and interpreting interview data, which are presented in the final chapter. Here the author gives clear instruction on how to manage the data (interviews usually generate an enormous amount of text), as well as studying, reducing, analyzing, and interpreting the text. Particularly helpful are the suggestions regarding transcription, as well as the different ways in which interview data can be displayed. In this regard, the author discusses two basic ways in which to do this: creating profiles and developing themes.

Vaughn, S., Schumm, J. S., & Sinagub, J. (1996). *Focus group interviews in education and psychology*. Thousand Oaks, CA: Sage.

This book illustrates the specific steps to take in conducting focus groups in educational and psychological settings. By way of numerous examples, the authors explain how to prepare for focus groups: create a moderator's guide, select a setting, and understand, analyze, and interpret the focus group findings. This book is extremely reader-friendly; it is clearly written, and instructions and guidelines are easy to follow. Each chapter contains numerous procedural tables, as well as ideas for applications of trial runs of the techniques discussed.

